



# 10th World Congress of Cognitive and Behavioral Therapies

1-4 June 2023  
COEX, Seoul, Korea

*Global CBT Dissemination, Accessibility and New Technology*

**Abstract Book**

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Korean Association of  
Cognitive Behavioral Therapy



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## WCCBT 2023 Abstracts

The 10<sup>th</sup> World Congress of Behavioural and Cognitive Therapies will be held at the COEX, Seoul, Korea from 1 to 4 June, 2023 with the theme of "Global CBT Dissemination, Accessibility, and New Technology."

In this abstract book, delegates can find the abstracts of the Invited Addresses, Symposia, Open Papers, Panel Discussions, and Posters as well as the abstracts for the Workshops, Skills Classes, Technical Demonstrations, and Local Programs.



# 10th World Congress of Cognitive and Behavioral Therapies

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# Foreword

This volume contains the abstracts for the presentations that were made up the WCCBT 2023 Scientific Programme, and as such showcases the breadth and depth of material enjoyed by delegates attending the congress. Some of this content, such as the invited addresses, invited plenary addresses, pre-congress workshops, and some in-congress workshops were invited by the Scientific Steering Committee (Younghee Choi, Philip Tata until February 2023 then Simon Blackwell thereafter, Alvin Lai Oon Ng, and Hyunsik Kim), with the rest submitted by congress delegates and accepted following evaluation by the Scientific Committee. The Digital CBT Symposium was put together by the co-chairs of the Organising Committee, Kyongmee Chung and Kee-Hong Choi.

The WCCBT 2023 Scientific Programme is organized into 17 streams reflecting different areas of research and clinical practice. Interestingly, the stream receiving the most submissions was “Dissemination, Accessibility of CBT and Digital Therapeutics”, mirroring the overarching theme of the conference, “Global CBT Dissemination, Accessibility and New Technology” and potentially indicating that this is indeed one of the areas undergoing the most development in CBT currently. However, this was not the only prominent theme at the congress and a glance through the program will show that the whole range of work relevant to CBT was very well represented.

In particular, the influence of the location of the congress can be seen: Not only is there an excellent representation of work from researchers and clinicians from all over Asia, and Korea especially, but the content reflects the combination of Eastern traditions (e.g. mindfulness) and cutting-edge digital innovation that characterizes the host city of Seoul.

The abstracts here represent not only the content of the 10th world congress but also a unique snapshot of the current status of CBT globally in 2023 - we hope you enjoy reading this impressive and inspiring body of work.

**Younghee Choi**, Seoul, Korea

**Simon Blackwell**, Bochum, Germany




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I.

# Research

※ Contents and presenters of presentation may slightly differ from what is described in the abstracts that were collected at the preliminary stage of program development.



Lotte World Tower is a towering architectural marvel in Seoul, South Korea, standing as a symbol of modernity and offering breathtaking views of the cityscape, exceptional entertainment, and luxurious amenities.

# INVITED OPENING ADDRESS

## Invited Opening Address

### **A Personal History of Aaron T Beck**

Judith Beck, The Beck Institute for Cognitive Behavior Therapy, USA

Aaron T. Beck, M.D., developed Cognitive Therapy (also known as Cognitive Behavior Therapy (CBT)), in the 1960s and 1970s and continued to refine his theories and treatment until he passed away at the age of 100 in 2021. In this presentation, I will trace his development from neurology resident to psychiatrist, from psychoanalyst to researcher, from developer of psychopathology scales to developer of a revolutionary new system of psychotherapy. I will describe how his work, rejected by traditional psychotherapists, gradually gained acceptance over the years as the body of research demonstrating the efficacy of CBT undeniably grew and expanded. I will also describe Dr. Beck's final professional passion: developing, implementing, and researching Recovery-Oriented Cognitive Therapy for individuals with schizophrenia, other serious mental health disorders, and chronic and complex outpatient conditions. He was not only one of the giants in the field of mental health—but also an amazing researcher, teacher, and mentor.

# INVITED PLENARY ADDRESS

## Invited Plenary Address 1

### **Schema Therapy for Children and Adolescents (ST-CA)**

Christof Loose, Praxis for Psychotherapy & Centre for Schema Therapy Dusseldorf, Germany

Ursula Neumann, Clinics and Institute of the University of Duisburg-Essen, Germany

#### 1. Who the Plenary Address is aimed at

: Psychotherapists and Counsellors with experience in CBT for Children and Adolescents – no prior knowledge about Schema Therapy is required for participation in the Plenary Address

#### 2. Background

: Schema Therapy (ST) is an integrative, evolving model for psychotherapy that combines aspects of cognitive, behavioural, psychodynamic, and gestalt models, drawing on attachment and developmental theory. ST places emphasis on the childhood origins of many psychological problems, with 'Early Maladaptive Schemas' defined as self-defeating emotional and cognitive patterns that develop in early childhood.

#### 3. Learning Objectives

: In this Plenary Address, first the schema therapeutic conceptual model, and some practical approaches like working with drawings, finger puppets, mode cards, chair work, and imagery are briefly outlined by Christof Loose.

Ursula Neumann will present the inpatient schema-/modebased therapy in a 16-year-old adolescent with school absenteeism and demonstrate how schema therapeutic techniques can be adapted to the specific needs of school avoiding patients with internalizing symptoms.

#### 4. Teaching Methods

: In the centre of the Plenary Address are training and practice units, encompassing schema therapeutic strategies that have proven successful in schema- and mode-driven CBT of childhood and adolescence.

#### 5. Invited Plenary Address Chair

: Christof Loose, PhD., Clinical Psychologist, Psychotherapist for Children and Adolescents (CBT), Schema Therapist for Children & Adolescents, Adults, Advanced Certification, Trainer, Supervisor, according to International Society for Schema Therapy (ISST e.V.), works in his own Private Practice, is affiliated with the Heinrich-Heine-University, Department Clinical Psychology, Germany 2012-2017, research activity in ST-CA (e.g. Schema-Questionnaire for Children, DISC), Chair of the subcommittee Working Group in ST-CA 2013-2017, editor/author of ST-CA books and Video-Learning (DVD), conducts workshops and seminars in ST-CA, worldwide. More info about ST-CA: [www.schematherapy-for-children.de](http://www.schematherapy-for-children.de).

#### 6. Background Readings

: Loose, C. Graaf, P. Zarbock, G., & Holt, R.A.(Editors)(2020). Schema Therapy with Children and Adolescents: A Practitioner's Guide. UK: Pavilion Publishing and Media Ltd.

# INVITED PLENARY ADDRESS

## Invited Plenary Address 2

### **Expanded CBT and Meditation: SPECTRUM Therapy**

Jeong-Ho Chae, The Catholic University of Korea, Korea

Since the modern wave of Cognitive behavior therapy is characterized by a broad platform for theoretical and practical diversity, the incorporation of various traditional meditation methods may contribute to the expansion and evolution of CBT. In particular, there have been recent advances in the transdiagnostic approach, which seeks to identify and intervene with common treatment elements for various mental disorders. The SPECTRUM therapy was developed to modularize the different components of interventions in clinical settings with relatively limited resources to ensure that critical intervention components are addressed. The SPECTRUM is acronym for Sequential, Practical, Eclectic, Comprehensive, Transdiagnostic, Resilient, Uniformed and Meditative. SPECTRUM is consisting with 7 modules (Acceptance, Change, Communion, Strength, Wisdom, Soma, and Transcendence) that utilize rigorous meditative techniques. If clinicians implement the SPECTRUM therapy in clinical settings, they will be able to provide appropriate interventions without missing important treatment components of psychiatric disorders.

### **Mindful Self-Analysis and Its Psychotherapeutic Application**

Yonghan Park, Park's Psychiatric Clinic, Korea

In clinical practice, in order to clearly understand the patient's state of mind and lead to treatment, the therapist must have an objective and neutral position, which is not an easy task.

In this respect, the therapist's self-analysis is very important. Through mindfulness training, the Buddha taught that bare attention can objectively dis-identify and observe oneself and one's mind.

In Korea, since 10 years ago, the Korean Association of Meditation in Medicine (KAMM) was established by psychiatrists, and it developed training program to strengthen mindfulness and began to use it as a basis for psychiatric clinical treatment.

Through training that strengthens the power of mindfulness, the therapist will be able to clearly understand and correct the cognitive process that creates pain, change the perspective of looking at oneself and the world, and restore a sense of presence. Likewise, in the course of treatment, it leads patients to mindful self-analysis, helping them to change and recover.

### **Experiencing Ultimate Reality through Buddhist Meditation and its Psychotherapeutic Applications**

Hyunsoo Jeon, Jeon Hyunsoo Psychiatric Clinic, Korea

To know the properties of our mind and body, we have to observe them as they are. There are two kinds of reality: conventional and ultimate reality. Ultimate reality has its own inherent characteristics, which can't be broken down any further, and therefore doesn't change. To observe conventional reality we can use eye, ear, nose, tongue, body, and ordinary consciousness, but to observe ultimate reality we have use a special method, eye of wisdom. Eye of wisdom can be made by concentration or absorption developed by concentration meditation. Ultimate reality consists of ultimate materiality and mentality. I experienced concentration meditation based on Early Buddhism. After it I saw and knew ultimate materiality and mentality, dependent origination, the true nature of ultimate materiality and mentality. Every moment our mind arises and disappears. There are two kinds of mind: wholesome and unwholesome mind. Each mind affects us. With wise attention, wholesome mind arises, with ignorant attention unwholesome mind arises. Wholesome mind leads to unhealthy mentality and unwholesome mind leads to healthy mentality. When we understand dependent origination we can accept whatever happens to us and react in healthy or wise way.



# INVITED PLENARY ADDRESS

## **Buddha's Teachings Found in Cognitive Behavior Therapy**

Younghee Choi, Metta Institute of Cognitive Behavior Therapy, Korea

Traditional Cognitive Behavior Therapy helps people to understand what thoughts are at the center of their suffering (automatic thoughts) and where they come from (schema) so that a person's pain is expressed in emotions, sensations, and behavioral pain. It teaches finding and changing thoughts and schemas to help people escape the pain. On the other hand, the recently evolved cognitive behavioral therapy (e.g., ACT, DBT, MBCT, etc.) teaches people to accept the pain they cannot change no matter how hard they try and to use energy to live their lives that, are very similar to the Buddha's teachings in that it emphasizes acceptance and mindfulness. The Buddha's teachings include these Cognitive Behavioral Therapies in great detail. Through this symposium, the presenter will compare and explain the Buddha's representative teachings that helped humans escape suffering in the context of change and acceptance.

# INVITED PLENARY ADDRESS

## Invited Plenary Address 3

### **Doing CBTs in the Era of Neuroscience: A Mechanism-based Treatment Approach**

Freedom Leung, Shaw College, Chinese University of Hong Kong, Hong Kong

Advances in neuroscience research in the past few decades have enabled clinicians to develop a much better understanding of how human mind works in different psychological disorders. In psychiatry, Insel (2014), the ex-director of NIMH in the US, advocated a paradigm shift toward “precision medicine for psychiatry”. He argued that clinical interventions for any psychiatric disorder should be based on the precise understanding of the pathophysiological mechanisms of the disorder and how different interventions may correct the condition. Following Insel’s arguments, I’ll integrate recent findings from neuroscience on how human mind works in different psychological disorders, and propose a neuroscience-based treatment model for CBT. Treatment of adjustment stress-related disorders will be used to illustrate how this neuroscience-based model of CBT works in clinical practice.

## IPA03 Symposium

### Exploring the Evolution of Cognitive Behavioral Therapy Through Research

### **Long Term Neurobehavioral Consequences of Traumatic Brain Injury in Bangladesh: Scope of CBT**

Md. Shahanur Hossain, University of Dhaka, Bangladesh

Marzia Al-Hakeem, University of Dhaka, Bangladesh

David A Quinn, University of Dhaka, Bangladesh

M. Mahmudur Rahman, University of Dhaka, Bangladesh

Traumatic Brain Injury (TBI) is one of the major cause of death and disability. Even if medical advancements save more lives, devastating consequences to cognition, emotion and behaviour cannot avoided, with associated costs to the health economy. CBT is a globally evidenced based treatment for mental health problems and has been adapted for use in neurorehabilitation and neuropsychotherapy. Therefore, neuropsychologically informed CBT is a necessary treatment modality for TBI survivors to mitigate the negative impact of brain injury and to maximize quality of life and well-being. Bangladesh as a densely populated country, with a high incidence of TBI, within the context of where institutionalized neurorehabilitation is just developing. However, there are hundreds of clinical psychologists who are well trained in CBT and working with psychiatric clients, who present a potential resource for TBI rehabilitation. Neurophobia is a common barrier among Bangladeshi psychologists, unfamiliar with the principles of CBT (TBI) or this clinical population, and therefore, nearly all TBI survivors are not receiving psychological treatment for their post TBI adjustment issues. In this context, the current study was designed to explore the long term neurobehavioral consequences among TBI survivors and its potential impact on quality of life. A total of 250 TBI survivors were recruited from neurosurgery department of a tertiary level hospital in Dhaka City. Initially all the participants had completed a structured neuropsychological interview during their acute phase of recovery. In the follow up assessment session at least six months post injury, 133 out of 250 survivors completed a self-rating, and 91 family members completed proxy-rating neurobehavioral scale. They participated in a telephone interview designed according to frontal system behaviour questionnaire for Bangladesh (FrSQBa). Pre and post injury status regarding the apathy (A), Disinhibition (D), Executive Dysfunction (ED) and Theory of Mind (ToM) were assessed by FrSQBa. Telephone interviews also assessed perceived general mental health issue of survivors, together with the burden on family members. In descriptive analysis, it was found that post-TBI neurobehavioral problems in each domain (A, D, ED ToM) were significantly elevated, according to both self and proxy rating. Post-TBI apathy, disinhibition, executive dysfunction and problems with ToM were

# INVITED PLENARY ADDRESS

found among 67%, 44%, 66% and 60% of TBI survivors respectively. On average, around 60% TBI survivors suffer from neurobehavioural problems, with around 20% prior to injury. These neurobehavioral changes lead to family burden, reported by more than 80 % of the family members, and around 70 % of them believe that mental health treatment is required for their family member. It is suggested that, in Bangladesh, more than half of TBI survivors could benefit from neuropsychological treatment with CBT (TBI) to meet this essential and widespread clinical need. Future studies could evaluate the effectiveness of CBT(TBI) within this population.

## **Integrating Neuroscience in CBT: Scope and Challenges in India**

Susmita Halder, St. Xavier's University, India

Cognitive Behavioral Therapy (CBT) has shown to be an effective form of psychotherapy in treating various psychological disorders. It is one of the most common psychotherapy approaches adopted by therapists. However, its efficacy and acceptance in the Indian population is mixed. The delivery of CBT by trained professionals usually follows the set standard guidelines, with certain augmentation of additional supportive techniques. It may be hypothesized that cultural differences in symptom presentation and interpretation of emotions may impact the effectiveness of CBT in India. There might be an underlying apprehension on part of clients as well as therapist on the treatment outcome of CBT, as many of them engage in convincing each other rather than understanding the process of their emotional problems manifest. It is suggested that developing culturally sensitive neuropsychological approaches to CBT is essential. One approach is to integrate cognitive processing techniques, such as cognitive bias modification and cognitive reappraisal, which can directly target the cognitive biases and negative thought patterns that underlie many psychological disorders. Therefore, developing culturally sensitive neuropsychological approaches to CBT is essential.

This approach has the potential to provide a more accessible and effective form of psychotherapy to individuals struggling with mental health problems in India. The approach while looks promising to enhance treatment outcomes, it comes with its own challenges unique to Indian population. The session discusses on the prospects of integrating neuroscience-based modules in different phases of the CBT process. Also its acceptance and efficacy across the population, including different age groups, gender, and educational background and other factors with specific challenges in India.

## **Bringing Neurocognitive Models of Emotional Disorders from the Laboratory to the Clinic: Developing a Neuroscience and CBT Emulsion in Singapore**

Kean J. Hsu, National University of Singapore, Singapore

Renewed emphasis has been placed on the importance of behavior in the study of neuroscience and psychopathology (Niv, 2023). Neurocognitive models, which integrate cognitive and behavioral processes into theoretical models of psychopathology based on neuroscience findings, are one approach to leveraging insights from neuroscience and clinical psychology together in service of characterizing and intervening on mental health challenges. Such work can span the full translational science pipeline, from basic experimental psychopathology work in the laboratory to implementation of interventions in the clinic. Drawing upon neurocognitive models allows clinical psychological science to blend two fields of study that have traditionally been siloed in the context of treatment: neuroscience and psychotherapy. Yet most of this work has been conducted in Western contexts; examples of how such approaches can be deployed and gain traction in other cultural contexts like Southeast Asia may be valuable given the urgent and under-addressed mental health needs of local communities. Consequently, in this presentation we will showcase efforts to draw upon neurocognitive models of depression to address cognitive dysfunction in depression and related psychopathology (e.g., comorbid anxiety). This work includes translational science efforts ranging from experimental psychopathology work examining cognitive bias modification in the laboratory to incorporating approaches for improving neurocognitive functioning into brief psychotherapeutic interventions. Current research projects and future directions will be showcased.

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## Invited Plenary Address 4

### **Transdiagnostic Approaches for the Cognitive Behavioural Treatment of Emotional Disorders**

Peter Norton, Cairnmillar Institute, Australia

Transdiagnostic approaches to the cognitive-behavioural treatment of anxiety and emotional disorders has undergone considerable growth since the initial theoretical models and trials were in the early 2000s. Although transdiagnostic approaches have shown efficacy across multiple open trials, RCTs, and meta-analyses, continuing empirical investigation is required. The current symposium brings together leading and emerging transdiagnostic researchers to examine new updates in outcomes and key treatment development directions in transdiagnostic CBT for emotional disorders. In the first paper, Black, Johnston, Bevan, and Dagleish report the outcomes and feasibility of a novel transdiagnostic modular intervention for comorbid mood, anxiety, and stressor-related disorders. Results suggest that the intervention was acceptable, with encouraging effect size estimates for the co-primary outcomes. The second talk, by George, Roberge, Provencher, and Norton, investigated the role of comorbid depression during tCBT for anxiety disorders in primary care settings. Results provided preliminary support for the effectiveness of Transdiagnostic Cognitive Behaviour therapy for those with both a principal anxiety disorder and comorbid depression in symptom reduction. In the third presentation, Galea, Wade, Salvaris, Yap, and Lawrence examined the acceptability of a modified transdiagnostic CBT intervention for adult anxiety that also targeted anxiety maintaining parenting behaviours and cognitions in anxious adults parenting an anxious child. Six themes emerged showing the intervention was perceived as beneficial and effective for reducing parents' own anxiety and managing bidirectional anxiety maintaining factors in the parent-child dyad. The final paper of this symposium is by Chapdelaine, Vasiliadis, Provencher, Roberge and Norton, who report the results of an economic evaluation of the cost-effectiveness of transdiagnostic group cognitive behavioural therapy for anxiety disorders. From limited societal and health system perspectives, this first economic evaluation of transdiagnostic CBT shows favourable cost-effectiveness results. The symposium concludes with a general discussion of future research directions in transdiagnostic CBT.

### **The HARMONIC Trial: A Randomized Controlled Feasibility Trial of a Novel Transdiagnostic Modular Intervention for Comorbid Mood, Anxiety and Stressor-Related Disorders**

Tim Dagleish, University of Cambridge, UK

#### BACKGROUND

Common mental health problems are a significant cause of distress and disability worldwide. Comorbidity between such disorders is common and contributes to substantial rates of treatment failure in the context of existing single-diagnosis treatment protocols, creating a need for evidence-based treatments designed to effectively address complexity and comorbidity. Shaping Healthy Minds is a transdiagnostic, modular intervention which can efficiently address common factors underlying multiple diagnoses, and which employs a formulation-driven approach to module selection, allowing a standardized protocol to be delivered in a flexible and person-centred way taking account of individual complexity.

#### METHOD

We compared Shaping Healthy Minds to psychological treatment-as-usual (N=42) in a randomized controlled feasibility trial (the HARMONIC trial). All participants met criteria for at least two mood, anxiety or stressor-related diagnoses, and were offered up to 20 sessions of individual treatment. Co-primary outcomes at post-treatment and 3-month follow-up were self-reported depression and anxiety symptoms, disability, and functional impairment. Secondary outcomes included cost-effectiveness and process measures.

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## RESULTS

The intervention proved acceptable and a later-stage, fully-powered efficacy trial feasible, with encouraging effect size estimates for the co-primary outcomes. We also established the feasibility of collecting demographic, cognitive and behavioural data to assess cost-effectiveness and potential mediators and moderators of outcome.

## DISCUSSION

The results of this feasibility trial will inform a future large-scale trial of Shaping Healthy Minds. Transdiagnostic, modular interventions may be an effective approach to the treatment of complex and comorbid mood, anxiety and stressor-related disorders.

## **Economic Evaluation of Transdiagnostic Group Cognitive Behavioural Therapy for Anxiety Disorders Versus Treatment As Usual**

Pasquale Roberge, Université de Sherbrooke, Canada

Limited access to evidence-based psychological interventions is a widespread problem. Amongst others, barriers on the individual (e.g., costs) and organizational levels (e.g., lack of human and financial resources) have been noted as contributing factors. Nonetheless, many individuals express a preference for psychotherapy, and cognitive behavioral therapy (CBT) is the most empirically supported for anxiety disorders. Transdiagnostic CBT (tCBT) is a promising approach to enhance the dissemination of CBT by using a single protocol to address a variety of anxiety disorders. For research findings to influence clinical practice, decision-makers must support the intervention. Economic evaluations measure the effectiveness of an intervention against the costs of producing those results, a key consideration for informed decision-making. This piggy-back economic evaluation is based on a community-based multicentric and pragmatic randomized controlled trial (Roberge et al., 2022). The objective of this study was to evaluate the cost-effectiveness of tCBT added to treatment as usual (tCBT+TAU) compared to usual care (TAU) on an 8-month time horizon (Chapdelaine et al., 2022). The base case scenario included quality-adjusted life years (EQ-5D-5L) and costs from the healthcare system perspective. Alternative scenarios notably included using anxiety-free days as an effectiveness outcome and costs from the limited societal perspective. Data were self-reported. Incremental cost-effectiveness ratio (ICER) and the probability of cost-effectiveness were calculated. Moderators of the cost-effectiveness of the intervention were also assessed. The tCBT+TAU group (n=117) had, on average, more QALYs, and higher costs from the health system perspective than the TAU group (n=114). The ICER was inferior to Can\$50,000, which is a frequently used willingness-to-pay threshold in Canada. At this same threshold, the probability of tCBT+TAU being cost-effective was estimated at 97%. The number of anxiety comorbidities moderated the cost-effectiveness. These results provide strong evidence to stakeholders suggesting tCBT as a cost-effective intervention from the health care system and restricted societal perspectives.

## **“If Mum Can Do, Then I Can”: Joint-Exposure Therapy for Children and Parent Dyads With Anxiety Disorders**

Katherine Lawrence, Monash University, Australia

Salvaris\*, Galea\*, Wade, Yap & Lawrence examined the acceptability of a modified transdiagnostic CBT intervention for children and their parents both experiencing clinical anxiety. The intervention was designed to target anxiety-maintaining parenting behaviours and cognitions in the parent while concurrently treating the child's anxiety, with joint sessions dedicated to shared graded exposure activities. Qualitative interviews with 10 child-parent dyads indicated that both the children and their parents perceived the intervention to be beneficial for reducing their own individual anxiety, as well as managing bidirectional anxiety maintaining factors in the parent-child dyad. The findings indicate that exposure therapy (widely accepted as key to treating anxiety) delivered in a systemic context should be routinely considered by clinicians and researchers.

\*joint first authors

# INVITED PLENARY ADDRESS

## **Transdiagnostic Cognitive Behavioural Therapy for Anxiety Disorders: The Role of and Impact on Comorbid Depression**

Peter Norton, Cairnmillar Institute, Australia

Transdiagnostic Cognitive Behaviour Therapy (tCBT) was introduced to improve limitations in traditional therapy such as cost and access to trained therapists. It has been established as an effective and efficacious treatment for anxiety disorders, though there has been little research focussed on the role of depression. Furthermore, other studies in this area were conducted in highly controlled settings, making the findings limited in generalisability. The current study investigated the role of comorbid depression during tCBT for anxiety disorders in primary care settings. Results of multi-level ANOVAs indicated no significant difference in anxiety outcomes regardless of whether there was a comorbid depression diagnosis in the tCBT condition, and that individuals with a comorbid depression diagnosis experienced significantly greater reduction in anxiety severity than those without. Depression symptom severity decreased to a significantly greater extent in the tCBT condition than in TAU when the outcome measure of Patient Health Questionnaire was utilised as the outcome measure, but this was not mirrored when the Clinician Severity Rating was utilised as the outcome measure. This study provides preliminary support for the effectiveness of Transdiagnostic Cognitive Behaviour therapy for those with both a principal anxiety disorder and comorbid depression in symptom reduction.

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## Invited Plenary Address 5

### **WHO's Work To Scale Psychological Interventions**

Mark van Ommeren, World Health Organization, Switzerland

Around 1 in 3 people in the world with depression or psychosis receive (formal) mental health care. A review of treatment coverage for major depressive disorder found that minimally adequate treatment ranged from 23% in high-income countries to 3% in low- and lower-middle-income countries.

WHO has recommended psychological interventions and promote task-sharing through its Comprehensive mental health action plan 2013–2030, the mhGAP programme, the Universal Health Coverage (UHC) compendium and the 2022 World mental health report: Transforming mental health for all.

A wide range of psychotherapeutic interventions have been found effective for people suffering depression and anxiety. There has been substantial path-breaking research over last 20 years in low-, middle-, and high-income countries showing that a range of existing evidence-based interventions can be modified to implement them at scale. Such modified versions include brief non-specialist-delivered individual and group versions of existing evidence-based psychological treatments (including CBT). They also include guided and unguided self-help approaches with materials drawing from CBT principles, delivered through recommended books or online programs. WHO has contributed in the last decade through publishing a range of psychological intervention manuals years, such as for adults: Individual and Group Problem Management Plus (PM+) (which involved core CBT skills such as problem-solving and behavioural activation), Thinking Healthy (CBT for perinatal depression delivered by CHWs), Self-Help Plus (based on ACT), Group Interpersonal Therapy; and for young adolescents: (forthcoming) EASE (based on CBT)). This work has been informed by large, well-published RCTs in low- and middle-income countries (LMIC). The fact that these guides are open access is having a large impact on the take up of psychological interventions in these countries

Health and social care systems need to take up the responsibility for scale-up of these kinds of interventions. But given that care often does not involve licensed specialists, focused attention on clinical governance is required, that is ensuring that organizations are accountable for high quality standard of care. The WHO-UNICEF EQUIP project – which includes tools for evidence-based competency assessment – can play a key role in ensuring evidence-based competency assessment of non-specialized workers delivering these interventions.

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## Invited Plenary Address 6

### **Development of CBT in South and Southeast Asia: Examples from Indonesia, Pakistan and Thailand**

Firdaus Mukhtar, Universiti Putra Malaysia, Malaysia

CBT is a relatively new psychological practice in South and Southeast Asia where the biomedical approach is still the primary method of treatment for mental health issues. This symposium that follows from the Invited Plenary Address on CBT development in Malaysia, brings together speakers from three Asian countries, Indonesia, Pakistan and Thailand to discuss the development of CBT in their respective countries. Muhammad Irfan from Peshawar Medical College, Pakistan, who is also the Director of Research and Innovation for the Asian Cognitive Behavioral Therapies Association will set the stage by providing an outline of ACBTA's plan for the advancement of CBT using research, drawing from his experiences in Pakistan and from international collaborations. Areas for research development include adapting CBT for different cultures; comparing CBT between countries; cross-cultural effectiveness of CBT; CBT for specific populations; evaluating online CBT interventions and comparing these in different countries and cultures. Ultimately, the goal of research development would be to better understand how CBT can be effectively used to improve mental health outcomes across different cultures and populations. Representing Indonesia, Ahmad Gimmy Prathama Siswadi and Insan Firdaus will speak on the history of CBT stemming from the development of psychological science as a discipline in Indonesia since the mid-1950s. Initially focused on psychological assessment, applied psychology grew into counselling and psychotherapy. Ahmad Gimmy will dwell more on the development of CBT based on his institution, Universitas Padjajaran, particularly with regards to its partnership with the Nederlandse Vereniging Psychotherapie (NVP) and Rino Groep from the Netherlands in developing competencies for clinical psychologists in various psychotherapeutic modalities. This also led to increased interdisciplinary collaboration between psychology, medical science, and bio-medical fields to study the neurophysiological and emotional impact of CBT. Additionally, CBT has been designated as a required technique for clinical psychologists in Indonesia by the Indonesian Clinical Psychology Association and the Indonesian Ministry of Health. Thailand is represented by Nuttorn Pityaratstian, who was the first person in the country to graduate from full CBT training program in 2006. He will provide a brief history of CBT development in Thailand where with the first CBT Diploma Program commenced at Chulalongkorn University in Bangkok in 2014. This has led to more than 100 fully-trained CBT therapists in Thailand. The CBT Alliance of Thailand was established in 2016 to connect CBT therapists and professionals. Several books, manuals, workbooks about CBT in Thai language have been published. CBT has become a household name and it is not uncommon now for people with mental health issues to search for "CBT service or therapist" instead of "psychiatric care" in Thailand. This symposium would wrap up with a discussion on how South and Southeast Asian countries, together with the ACBTA collaborate on developing regional research and training on culturally adapted CBT for their respective countries.

## IPA06 Symposium

### **Development of CBT in South and Southeast Asia: Examples from Indonesia, Pakistan and Thailand**

### **Exploring the Evolution of Cognitive Behavioral Therapy Through Research**

Muhammad Irfan, Peshawar Medical College, Pakistan

Cognitive Behavior Therapy has proven its efficacy in treating a wide range of mental health issues. However, these interventions are underpinned by Western values and need adapting to the cultural and religious needs of clients from Non-Western cultures. This creates



# INVITED PLENARY ADDRESS

vast opportunities for research in CBT around the globe, especially in Asian countries, most importantly in the Low-and Middle-Income Countries. This talk will outline Asian Cognitive Behavior Therapies Association's plan for the advancement of Cognitive Behavior Therapy using research as one of the main tools. The possibility of potential research ideas includes Adapting CBT for different cultures; Comparing CBT across countries; Cross-cultural effectiveness of CBT; CBT for specific populations; Evaluating online CBT interventions and comparing these in different countries and cultures etc.

On top of these, there are planned workshops, webinars and other events to promote this cause. Ultimately, the goal of this research would be to better understand how CBT can be effectively used to improve mental health outcomes across different cultures and populations.

## **CBT in The Clinical Setting: Indonesia's Experience**

Ahmad Gimmy Prathama Siswadi, Universitas Padjadjaran, Indonesia

Insan Firdaus, CBT Indonesia, Indonesia

Psychological science has undergone significant development in Indonesia since the mid-1950s and early 1960s with the establishment of psychology programs at several universities including the University of Indonesia (UI), University of Padjadjaran (UNPAD), and Gadjah Mada University (UGM). Initially, psychology education was primarily focused on assessment, with limited emphasis on systematic therapy and reliance on psychological counseling and practitioner' subjective experience. In response to the need for evidence-based interventions, the psychology department of Padjadjaran University collaborated with the Nederlandse Vereniging Psychotherapie (NVP) and Rino Groep from the Netherlands in 2007. This collaboration aimed to improve the competencies of clinical psychologists in Indonesia through the integration of Cognitive Behavioral Therapy (CBT) with other therapeutic approaches including Client Centered Therapy, Solution Focused Behavior Therapy, Systemic Therapy, Psychodynamic Therapy, and Clinical Case Formulation- Integrative Therapy. The introduction of CBT by UNPAD, NVP, and Rino Groep in Indonesia has resulted in increased education and training in psychotherapy, and the publication of related master theses, including Mindfulness Based Cognitive Therapy (MBCT) and Positive Cognitive Behavioral Therapy (CBT). Research has also been conducted to examine the effectiveness of CBT in treating chronic kidney failure patients undergoing hemodialysis. The cognitive triangle concept from CBT, which encompasses changes in emotions, cognition, and behavior, has been integrated into various form of psychological interventions applied in the clinical field in Indonesia. This has also led to a rise in interdisciplinary collaboration between psychology, medical science, and bio-medical fields to study the neurophysiological and emotion impact in CBT patients. Additionally, CBT has been designated as a required technique for clinical psychologists in Indonesia by the Indonesian Clinical Psychology Association and the Indonesian Ministry of Health. However, despite the initial impact of the collaboration between UNPAD, NVP and Rino Groep, according to our knowledge, no further systematic initiatives have been established to support the development of CBT in Indonesia. The formation of an education and association to support clinicians interested in applying CBT methods is crucial to advance the field of psychology in Indonesia.

## **The Development of CBT in Thailand**

Nutorn Pityaratstian, Chulalongkorn University, Thailand

CBT is a relatively new psychological practice in Thailand. The presenter was the first person in the country who graduated from full CBT training program in 2006. It was not until 2014 when the first CBT Diploma Program was commenced at Chulalongkorn University in Bangkok. After the program started, CBT has been disseminated impressively. So far, there are more than 100 fully-trained CBT therapists in Thailand. The CBT Alliance of Thailand was established in 2016 to connect CBT therapists and professionals. Several books, manuals, workbooks about CBT in Thai language have been published. CBT has become household name here and it's not uncommon now for people with mental health issues to search for "CBT service or therapist" instead of "psychiatric care. This presentation will outline a general history of CBT in Thailand and its current developments.

# INVITED ADDRESS

## Invited Address 02

### **Storm Warning: Attention to Processes of Change is Destined to Fundamentally Change Our Field**

Steven Hayes, University of Nevada, USA

For nearly 150 years normative concepts have dominated scientific approaches to psychology. These concepts are deeply embedded in our field of CBT and evidence-based intervention, into our world culture, and our own minds as we discuss disorders, personality, assessment, and research methodology. Even school children learn about averages and standard deviations; about bell curves and their own percentile rankings in many areas, falsely believing these facts predict their futures. Practitioners are forced to learn lists of signs and symptoms of supposed latent diseases that somehow are never found to be diseases and that tell the practitioner little to nothing about the trajectories of the lives we serve nor how to change those trajectories. In this talk I will show how and why behavioral science has failed us as practitioners, and describe what to do about it. Our problems are the direct result of the biases of early statisticians, which blinded them to a lethal error in normative models as they apply to individuals. I will suggest that in the era of a process-based approaches to CBT this needs to end, and I will describe a new and much more clinically relevant “idionomic” approach to diagnosis and case-conceptualization as a solution. I will show how redefining evidence-based therapy in terms of processes of change will disrupt our field but will also make it more relevant to the day to day world of clinical practice. I will show how process-based approaches within the CBT tradition such as Acceptance and Commitment Therapy (ACT) provide positive examples of a new way forward.

### **Understanding and Treating Post-traumatic Stress Disorder: A Cognitive Approach**

Anke Ehlers, University of Oxford, UK

Ehlers and Clark (2000) suggested that PTSD develops if trauma survivors process traumatic events in a way that lead to a sense of serious *current* threat. The perceived threat can be internal (e.g., 'I am a bad person') or external (e.g., 'I will be attacked again') and has two sources: First, people with chronic PTSD show excessively negative appraisals of their traumas and/or trauma sequelae. Second, the nature of trauma memories leads to easy cue-driven trauma memories that lack the awareness of the self in the past. Furthermore, the patients' appraisals motivate a series of unhelpful coping behaviours and cognitive strategies that are intended to reduce the sense of current threat but maintain the disorder. The presentation will review studies testing these factors. Cognitive Therapy for PTSD (CT-PTSD) uses this model to develop an individualized case formulation. Procedures aim at updating trauma memories (i.e., accessing worst moments of the trauma and actively incorporating information that updates their meanings) and training patients to discriminate between the stimuli that were present during the trauma (*then*) and the innocuous triggers of re-experiencing symptoms (*now*). Unhelpful appraisals and cognitive and behavioural coping strategies are modified. Randomised controlled trials in adults and children and dissemination studies showed that CT-PTSD is highly acceptable, and more effective than self-help or equally credible nontrauma-focused psychological treatments. A recent clinical trial found that a therapist-assisted internet-delivered version of CT-PTSD (iCT-PTSD) is also highly effective, and superior to a comprehensive therapist-assisted internet-delivered stress management therapy focusing on teaching a wide range of coping strategies.

# INVITED ADDRESS

## Invited Address 04

### **The Current State of Cognitive Behavior Therapy in Japan: A 35-Year Retrospective**

Yutaka Ono, National Center for Cognitive Behavior Therapy and Research, Japan

In this presentation, I will share my personal experience with cognitive-behavioral therapy (CBT) and the process of introducing it to Japan with my colleagues. To promote the use of CBT, it is essential to demonstrate its efficacy to medical and mental health professionals, as well as provide training. To this end, we conducted a randomized controlled trial (RCT) to demonstrate the therapeutic effectiveness of CBT, leading to its inclusion in public health insurance coverage.

In addition to disseminating CBT in medical settings, it is useful to introduce it in various settings, such as local communities, workplaces, and schools, to enable its effective utilization. For instance, together with my colleagues, I have been promoting the usefulness of CBT to the people of Japan by providing support for suicide prevention activities that utilize CBT and for improving the mental well-being of residents in times of disaster. Looking back, these efforts have significantly contributed to the recognition and acceptance of CBT in Japan.

As a result, in the past decade, the Japanese government has provided support for training therapists in CBT. However, the number of CBT therapists in Japan remains limited. For this reason, we are exploring the possibility of using digital tools such as the internet and chatbots developed based on the concept of CBT. In my presentation, I will touch on this point and discuss how digital tools can be leveraged to expand the accessibility and reach of CBT.

# INVITED ADDRESS

## Invited Address 05

### **Innovating CBT and Answering New Questions: The Role of Internet-delivered CBT**

Gerhard Andersson, Linköping University, Sweden

Internet changed many aspects of our lives and also facilitated treatment trials with the advent of internet-delivered cognitive behaviour therapy (ICBT). Now ICBT has existed for almost 25 years and the aim of this talk is to describe the background and also show how ICBT has made it possible to innovate CBT by having larger samples, better data quality and also purer treatment contents as the role of the therapist becomes less critical and usually involves guiding patients. In the talk I will give examples of new trials and treatment programs for various conditions and clinically relevant problems. Examples include poor self-esteem in adolescents and young adults, loneliness, dealing with a crisis in life, and also several examples of how ICBT can be transferred and adapted for different languages and cultures. In sum, research now clearly shows that guided ICBT can be as effective as face-to-face CBT and that innovation can occur more rapidly. While being cost-effective and scalable ICBT is still rarely offered in most places in the world but examples of implementation projects will be presented. I will conclude with suggestions for future research and practice including the possibility to use artificial intelligence to adapt treatment material.

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## Invited Address 06

### **Cultural and Familial Aspects of Anxiety and Depression in Young People**

Cecilia Essau, University of Roehampton, UK

Anxiety and depression are among the most common mental disorders and affects up to 32% of young people in the general population. In addition to being prevalent, anxiety and depression tend to co-occur highly with numerous other mental disorders. When left untreated, anxiety and depression that begin early in life can become chronic and are often associated with a negative course and outcome. Despite the presence of effective interventions for anxiety and depression, the number of young people with these disorders who received mental health services is low.

Family factors such as parenting controlling and family dysfunction have been reported to be consistent factors in the development and maintenance of these disorders. Although these findings have enhanced our understanding of anxiety and depression, little is known about the extent to which they can be generalized to young people who live in other cultures. In this lecture, I will present findings of some of our cross-cultural studies on the prevalence, mental health literacy, and factors related to anxiety and depression in young people and how we use these findings to develop a culture-sensitive prevention/early intervention program ("Super Skills for Life": SSL). SSL is a trans-diagnostic treatment protocol that is based on the principles of cognitive behaviour therapy, behavioural activation, and social skills training. SSL is developed in an effort to increase access to evidence-based prevention/early intervention for young people with anxiety and/or depression, especially in low- and middle-income countries. By utilising a 'train-the-trainer approach', the SSL training has built the capacity and shaped the practice of 25,000 practitioners in 21 countries.

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## Invited Address 07

### **Cultural Adaptation of Cognitive Behavior Therapy**

Farooq Naeem, University of Toronto, Canada

Evidence-based therapies, such as Cognitive Behaviour Therapy (CBT) are recommended for various emotional and mental health problems. However, Western cultural values underpin CBT, and for it to be effective for clients from diverse backgrounds, it should be culturally adapted. It has been suggested that cultures differ in core values, for example, Individualism-Communalism, Cognitivism-Emotionalism, Free will-Determinism and Materialism-Spiritualism. We developed the Southampton adaptation framework to culturally adapt CBT. This framework has been used to culturally adapt CBT in England, Pakistan, the Middle East, China, Kenya and Canada for common to severe mental health problems. More than 20 RCTs have been conducted to test therapy adapted through the Southampton adaption framework. Our work highlighted the need to gather information to increase awareness of cultural, spiritual and systematic factors to inform assessment and engagement, which are the significant barriers to delivering therapy to this group.

In this talk, I will describe the historical background of cultural differences, how cultural differences are relevant to therapy, a brief description of the Southampton adaptation framework and the field's current state.

# INVITED ADDRESS

## Invited Address 08

### **Realising the Mass Public Benefit of Psychological Therapies: Science, Politics and Economics**

David M Clark, University of Oxford, UK

Effective psychological therapies have been developed for all common mental health problems and the public shows a preference for psychotherapy over medication. However, in most countries' medication is much more widely available. This talk outlines the history and development of the Improving Access to Psychological Therapy (IAPT) programme that has made psychological therapy for anxiety disorders and depression much more widely available in England and is now being copied in many other countries. We will cover the combined economic and clinical arguments that underpin IAPT and show how learning from the massive dataset has enabled IAPT services to become more effective.



# INVITED ADDRESS

## Invited Address 09

### **Schema Therapy for Personality Disorders**

Arnoud Arntz, University of Amsterdam, Netherlands

In the last decades the interest in Schema Therapy as a treatment for personality disorders and other personality related problems has rapidly increased. Undoubtedly the appealing model of Schema Therapy as well as the empirical evidence for its effectiveness and acceptability has contributed to this. In this invited address I will share recent developments in theory, research and practice of schema therapy. More specifically,

I will address the following issues:

The reformulation of the theory by an international workgroup. This reformulation has led to the formulation of new early maladaptive schema's, such as "Unfairness" and "Incomprehensible World". Moreover, the relationship between early maladaptive schema's and schema modes has been reconsidered, and the reformulated model has been systematically applied to all schema's, leading to a wider set of schema modes. This helps to understand and treat wider ranges of personality psychopathology. Tests of the new model are set up in international collaboration, from all continents, so that the applicability of the theory can be tested in many cultures.

The latest findings of research into the effectiveness of Schema Therapy. A specific issue is the effectiveness of group Schema Therapy. While in many countries there is, for (assumed) efficiency reasons, a strong push to deliver treatment in group formats, there is limited research comparing group with individual and mixed formats. Some of the latest research finding will be shared.

The importance of the "Healthy Adult" schema mode in the recovery process will be discussed. It turns out that recovery from personality disorder related problems is not only the reduction of maladaptive schemas and modes, but also the growth of functional schemas and modes.

# INVITED ADDRESS

## Invited Address 10

### **Digital Mental Health: Opportunities and Challenges**

Sabine Wilhelm, Harvard Medical School, USA

Our field has come a long way in establishing Cognitive Behavioral Therapy (as an empirically supported treatment for a wide range of mental health problems). Nevertheless, we have also faced challenges expanding timely access to affordable, high-quality care. These challenges include a mental health crisis in the context of a provider shortage, the high cost of mental care, and personal treatment barriers, including the stigma associated with seeking face-to-face mental health treatments.

We are entering an exciting period in which emerging technologies offer novel solutions to these barriers. Technology-based solutions such as internet and smartphone app-based treatments are easy to scale, relatively inexpensive, and have shown promising results. I will discuss technology-enabled solutions to our field's challenges. I will also caution the audience that, as we venture into exciting new domains for research and treatment, we must stay attentive to the potential pitfalls of these emerging technologies. These include issues of ethics and data privacy, a lack of empirical support for many technology-based treatments, low rates of engagement, and a wide research to clinical implementation gap. I will conclude with suggestions for approaching these potential pitfalls effectively.

# INVITED ADDRESS

## Invited Address 11

### **Evidence-based Parenting and Family Intervention for all Families and the Promotion of Children's Mental Health and Wellbeing across the Lifespan: Progress and Future Directions**

Matthew Sanders, University of Queensland, Australia

A population based, multilevel system of evidence based parenting support is needed to reduce the prevalence rates of social, emotional and behavioural problems of children and young people and to reduce child maltreatment. A blending of universal and targeted interventions for vulnerable and high risk groups, need to be culturally informed and have a good ecological fit to local context. Learnings stemming from four decades of research and development, dissemination and scaling of the Triple P system of evidence-based parenting support are discussed. Contemporary challenges, potential solutions and future opportunities are identified to promote program implementation with both fidelity and flexibility, conditions needed for sustained deployment of programs and the use of technology to improve population reach of interventions. Adoption of a lifespan perspective in parenting and family intervention and the use of non traditional contexts to engage parents and carers in parenting programs is discussed along with evidence supporting a systems-contextual approach to program deployment.

# INVITED ADDRESS

## Invited Address 12

### **Working with Emotions in Cognitive Behavioral Therapy**

Jung-Hye Kwon, Korea University, Korea

Converging evidence from neuroscience and cognitive psychology indicates that there is complex interactions and interdependence between cognition and emotion. Based upon the closely connected cognition-emotion interactions, many CBT therapists acknowledge the relevance of emotional processes in CBT. It was recommended that the effectiveness of treatment can be enhanced with the integration of both cognitive and emotional processes. In this presentation, clinical and empirical evidence will be reviewed to examine whether the outcome of treatment is positively related to emotional processes in CBT. Emotional processing theory will be used as a guiding construct and strategies of working with emotions in CBT will be presented. Effective ways to use standard CBT techniques (e.g., hot cognitions, exposure, imagery) and experiential techniques will be discussed in promoting emotional processing in CBT. Lastly, important questions regarding with whom and when emotional processing should be encouraged will be addressed.

# INVITED ADDRESS

## Invited Address 13

### **The Dirtroad to Psychopathology: Disgust-based Mechanisms and their Relevance for CBT**

Peter de Jong, University of Groningen, Netherlands

Disgust is a defensive emotion that is characterized by pervasive avoidance and escape tendencies. Although disgust is typically conceptualized as an adaptive emotion, it can become highly dysfunctional when it is elicited by “the wrong” stimuli, when the threshold for experiencing disgust is (too) low, or when people experience feelings of disgust as being highly aversive. Until recently, disgust received only scant attention in clinical psychological science and has even been framed as “the forgotten emotion in psychopathology”. This situation is changing with a rapidly growing scientific interest in disgust as a relevant factor in mental disorders. This presentation will provide a concise review of this emerging research, illustrate how disgust-based mechanisms might contribute to the development and persistence of various disorders (e.g., eating disorders, OCD, PTSD, sexual dysfunctions), and address the potential implications for clinical interventions.

# INVITED ADDRESS

## Invited Address 14

### **Emotion in Therapy**

Stefan Hofmann, Philipps University Marburg, Germany

Emotions are critical aspects of mental health. Although conventional treatments for emotional disorders are generally effective interventions, many people still suffer from residual emotional distress, such as anxiety, depression, and anger problems. Moreover, contemporary treatments that have focused primarily on negative affect rarely leads to lasting improvements in positive affect, quality of life, and happiness. Recent scientific evidence and theoretical models of emotions can enrich the therapeutic strategies when treating emotional disorders. These strategies range from adaptive and flexible intrapersonal and interpersonal emotion regulation strategies to various mindfulness-based practices. In the case of anxiety disorders, modern emotion theories clarify the mechanism of exposure procedures and the role of avoidance strategies. These insights can inform the treatment for emotional disorders.

# INVITED ADDRESS

## Invited Address 15

### **CBT in China: Challenges in Dissemination and Accessibility**

Jianping Wang, Beijing Normal University, China

Cognitive Behavioral Therapy (CBT) is a prominent evidence-based psychotherapy approach in contemporary clinical practice. Originating from the Western cultural context, its theoretical foundations and clinical techniques have distinct Western cultural features. However, it remains unclear whether the cultural differences between Western and Eastern cultures may affect the delivery and effectiveness of CBT in China. This presentation will explore the accessibility and challenges of CBT in China from a cultural perspective. Chinese culture shares commonalities with Western philosophy, providing fertile soil for the introduction of CBT to China and promoting its thriving development. Since 2009, four CBT professional organizations have been established in China, providing professional training to practitioners while attaining significant progress in academic research and digital technologies. Nevertheless, the introduction of CBT to China has encountered challenges related to its cultural adaptation. Widespread misconceptions from the public about the psychology counseling industry and doubts from novices may hinder further advancement of CBT in China. The presenter will discuss challenges encountered in adapting CBT techniques, such as treatment alliances, emotion regulation, behavioral interventions and feedback, in the Chinese context. Furthermore, the presenter will share her own experiences and insights of adapting CBT into a different culture. Overall, this presentation aims to engage in dialogue with CBT practitioners worldwide on promoting the cultural compatibility of CBT to empower collaborative work globally towards a broader future of the approach.

# INVITED ADDRESS

## Invited Address 16

### **Reimagining the Treatment of Eating Disorders in a Post-Pandemic Environment**

Tracey Wade, Flinders University, Australia

Eating disorders doubled between 2000 and 2018 with the global rate of eating disorder prevalence increasing from 3.4% of the population to 7.8%. Since the emergence of COVID, the further overall incidence of eating disorders has increased by 15-3%. This increase has particularly been noted in children and young people, escalating demand for services which has translated to a quadrupled time on waitlists for treatment between 2019/20 and 2021/22. Younger onset has been noted with increases in paediatric inpatient admissions reported globally, associated with higher symptom severity than prior to COVID. Eating disorders in youth often go undetected for long periods of time given low levels of primary health screening and a societal bias toward encouraging weight loss and "clean eating": an analysis of 32 studies of community samples of children and adolescents aged 6 to 18 years screened with the SCOFF showed that 22.36% had disordered eating. Early intervention is essential for the treatment of eating disorders in children given the rapid and catastrophic medical instability that occurs, typically requiring expensive inpatient care, and to successfully prevent a sequelae of other catastrophic events into adulthood. This talk will focus on moving our focus to early intervention in youth with disordered eating and eating disorders, using a range of interventions and platforms.



# INVITED ADDRESS

## Invited Address 17

### **Tackling Suicide in People with Psychosis - We All Need to Talk about It**

Gillian Haddock, University of Manchester, UK

People experiencing psychosis, such as those with a diagnosis of schizophrenia, have high rates of persistent suicidal thoughts and behaviours. The impact of these for those experiencing them and for their families and friends is immense, resulting in substantial distress and disruption to all aspects of life. Suicidality also has a huge impact on those delivering mental health services, with high levels of support required to prevent and reduce the risk associated with suicide. Treating suicidality in addition to the ongoing psychotic symptoms such as hallucinations and delusions is a global mental health priority.

Psychological treatment for psychosis using cognitive-behavioural approaches is fairly well established, with a large evidence base attesting to its effectiveness. In addition, there are psychological therapies and treatments which have been developed specifically to reduce the impact of suicidal thinking and behaviours, however, they have not been widely evaluated in people with a diagnosis of schizophrenia and their implementation to date has been extremely limited.

This keynote will describe some of the theoretical underpinnings relating to applying cognitive-behavioural approaches to working with suicidality in people with a diagnosis of schizophrenia. A programme of work which has focused on the development of a treatment which directly targets those factors which underpin suicidal ideation and behaviour in people with psychosis will be described. Some of the key issues relating to implementation of such approaches amongst service users and staff will be discussed.

# INVITED ADDRESS

## Invited Address 18

### **Stabilizing Chaos: Fostering Psychological Resilience in the Wake of Crises, Adversity, and Trauma**

Lata McGinn, Yeshiva University, USA

The COVID-19 pandemic is an unrelenting global crisis that has unleashed a cascade of events across the world and a mental health tsunami, the likes of which we have not seen. The Russian invasion of Ukraine is also leading to unimaginable loss, destruction, and disruptions in its wake for the people of Ukraine, for surrounding regions in Europe, and the world. Climate changes leading to increasingly severe and unpredictable weather patterns including hurricanes, floods, droughts, are wreaking emotional havoc and community destruction. For many in our communities who continue to be impacted, the risk for developing clinically significant psychological symptoms such as chronic anxiety, grief, depression, and PTSD is high.

Based on the concept of human resilience, Psychological First Aid (PFA) is a universal evidence-based approach that helps people effectively cope in the aftermath of adverse events and crises and helps reduce the emergence of clinically significant symptoms. Research demonstrates that resilience is the most common outcome in the face of adversity but that the risk of developing clinically significant symptoms depends on several factors including the severity, chronicity, and proximity of the crisis faced as well as the personal vulnerabilities we bring to the table. For those who develop psychological illnesses, a variety of specialized interventions exist such as prolonged exposure, cognitive processing therapy, and cognitive therapy. Understanding how the traumatic events impact us, who is at risk for developing psychological illnesses, and learning the differences between normative and pathological symptoms is the next step in managing the aftermath of such crises.

This presentation will provide professionals with the necessary information to understand traumatic events what factors lead to risk and resilience, and how evidence-informed strategies can be helpful in building resilience mental in the aftermath of the pandemic and other adverse and traumatic crises that are common in our lives, prevent onset of clinically significant symptoms and foster adaptive coping.

Learning Objectives:

At the conclusion of this webinar, participants will be able to:

1. Understand what constitutes adverse and traumatic events
2. Learn about common trauma reactions and risk and resilience factors
3. Understand Psychological First Aid (PFA) during crises, adverse and traumatic events to build resilience.

# INVITED ADDRESS

## Invited Address 19

### **Why Do Specific Mental Disorders Increase During Adolescence?**

Ronald Rapee, Macquarie University, Australia

Several, specific mental disorders have their peak or initial onset during adolescence including social anxiety disorder, eating disorders, and major depression. While research into risk factors often focuses on very early risk such as parenting or temperament or on non-developmentally specific risk such as stressful life events, there has been little evaluation of factors responsible for onset of these disorders during this specific developmental window. We recently published a theoretical model of the development of mental disorders that we refer to as the “social-emotional” disorders, during the early to mid-adolescent period. Alongside this model we have been collecting annual data on a sample of 500 young people beginning from around 11 years of age to 17 years. In this talk I will present our theoretical model of adolescent developmental influence on social-emotional disorders and will summarise a sampling of some of our emerging empirical results from this cohort study. I will begin with a summary of some of the patterns of change in social-emotional symptoms and key risk factors across the adolescent years. I will then describe three or four empirical analyses that look at the prediction of social-emotional disorders from preceding risk factors across adolescence. Some of the risks I will specifically explore include changes in sleep, self-concept, peer relationships, and early pubertal onset. The results will help to inform future developments in early intervention aimed specifically at adolescents.

# INVITED ADDRESS

## Invited Address 20

### **Cognitive Behavior Therapy for Regret**

Robert Leahy, The American Institute for Cognitive Therapy, USA

Although regret is a central element in depression, procrastination, indecision, self-criticism, worry, rumination, and avoidance, it has received little attention in the CBT literature. In contrast, regret has been a focus in decision theory and research indicating that when people make decisions they often anticipate the possibility of post-decision regret and, therefore, attempt to minimize this experience. Regret is not always a negative process. Insufficient regret processes result in impulsive behaviour and failure to learn from past decisions. During manic episodes there is underutilization of anticipatory regret. We will view regret as a self-regulatory process where too much regret or too little regret may be problematic. Although people often believe that they will more likely regret taking new action, research indicates over time there is greater regret for actions not taken. Affective forecasting—that is, overprediction of emotion following events in the future—often contributes to anticipatory regret, with predictions leading to beliefs in greater impact of events than is warranted by the facts. In addition, some decision makers have idealized beliefs about decisions, rejecting ambivalence as an inevitable part of the trade-offs underlying decision-making under uncertainty. Specific decision styles are more likely to contribute to regret, including maximization, emotional perfectionism, intolerance of uncertainty, and overvaluation of “more” information rather than relevant information. In this presentation we will examine how regret is linked to hindsight bias, maximization rather than satisfaction strategies, intolerance of uncertainty, rejection of ambivalence, refusal to accept trade-offs, excessive information demands, and ruminative processes. Specific techniques will be elaborated to balance regret with acceptance, future utility, and flexibility to enhance more pragmatic decision processes, reverse ruminative focus on the past, and replace self-criticism with adaptive self-correction.

### **Infidelity: Is it Possible to Rebuild Trust Following Infidelity?**

Mehmet Sungur, Istanbul Kent University, Türkiye

Many things in life catch our eyes, but only a few of them catch our hearts and souls such as infidelity. Only a few things in life may be as painful as encountering infidelity. Infidelity is the violation of the standards and expectations of the relationship that emerges as the consequence of an emotional or physical relationship with another person(s).

Being unfaithful is a choice people make and deception comes as the consequence following infidelity. Most of the spouses perceive infidelity as a major threat to the continuation of the relationship and report that their marriage would be over if they ever face infidelity. However, in real life a considerable amount of couples continue their marriage despite the affair. Can these couples rebuilt trust and intimacy following the trauma of the infidelity. The answer depends on the perception of the affair both by the injured and participating (the one who was unfaithful) partners and how they manage the stages following the discovery of the affair.

This keynote will be a presentation to address the stages that the couple are likely to go through if they choose to stay together despite the pain of infidelity. Rebuilding intimacy and trust is a painful path that requires to pass through three stages. The initial stage is about the steps to be taken to cope with the crises that emerges immediately after the discovery of the affair. The second stage is giving a meaning to the affair to improve understanding that made the relationship vulnerable to infidelity and the final stage is how to move forward to get beyond the hurt to rebuild trust again.

We appreciate the warmth only if we have experienced the cold, the light only if we have experienced darkness and therefore sometimes the beauty and wisdom of happiness can only be appreciated through the experience of misery. Sometimes the misery of infidelity may be the driving force for future happiness.

# INVITED ADDRESS

## Invited Address 22

### **Conceptualizing Beliefs, Emotions and Behavior from a Collectivistic Lens: Insights from Clinical Practice and In-depth Case Studies of North Indian Low Income Men and Women**

Nimisha Kumar, SGT University New Delhi, India

The existing Cognitive Behavioural Therapy models are often perceived and criticized as being 'western' and hence not suitable for Eastern populations. In response, there have been concerted efforts towards 'cultural adaptation', 'cultural responsiveness' and 'de-colonization' of mental health intervention models for use with Asian and LMIC populations, who are known to be 'culturally different' and much more heterogeneous than the western and HIC ones. The terms 'individualistic' and 'collectivistic' have been frequently used to describe the dominant cultural orientation of people in western and eastern societies respectively. However, with the advent of globalization and large scale migration for survival or better life opportunities, very few parts of the world have remained purely representative of any one particular cultural type. The rapid technological advancements and digitalization have also added to the growing inclusiveness of the world. In fact, it may be conceptually and practically beneficial to conceptualize individualism and collectivism as dynamic and lying on a continuum, rather than as mutually exclusive categories. In addition, various socio-demographic factors such as age, gender, education and social status as well as individual factors such as experience and temperament also play a big role in framing the cultural lens with which one views the world.

Individuals who have been born and brought up in a largely relational-interdependent milieu tend to view themselves and their world very differently from those who are a product of a largely individualistic-independent upbringing. This difference in worldviews holds immense implications for cognitive-behavioural intervention models, as they are ever evolving to scientifically incorporate the diversity of human experience. However, instead of forever trying to adapt these models to make them more suitable for diverse populations and have continued dependence on a vertical transfer of knowledge, it may be a better idea now to develop newer frameworks that are based on cross-fertilization of knowledge from East to West. A sensitization to the individualistic-collectivistic continuum as well as culturally-rooted systems of alleviating suffering will positively impact the assessment and conceptualization of mental health problems in culturally diverse populations. Viewing emotions, beliefs and behavior with a collectivistic lens will add to the richness of Cognitive Behavioural models and interventions.

Since, the pool of knowledge on which the collectivistic ways of feeling, behaving and thinking are based can be quite challenging to access through the cognitive route alone, an attempt was made to understand this predominantly sensory-intuitive worldview through focused conversational interviews, real-life observation and indigenous cultural knowledge sources such as stories, anecdotes, and traditional healing practices of low income men and women whose present and previous generations have migrated from different areas in Northern India to the capital city of Delhi for employment opportunities. This preliminary data was then triangulated with some of the existing literature related to the topic, to come to a better understanding of the world-view and psycho-pathology in this low income culturally diverse migrated population group.

This talk will highlight key aspects of this understanding and discuss possible implications for more inclusive CBT practice, research and training in contemporary and future times.

# INVITED ADDRESS

## Invited Address 23

### **Increasing Access to CBT for Child Anxiety Disorders**

Cathy Creswell, University of Oxford, UK

Anxiety problems are common and have a particularly early age of onset, with many people first experiencing difficulties as preadolescents. However, despite CBT being the only psychological therapy with a robust evidence base for child anxiety problems, very few children who experience problems with anxiety access CBT.

Given the substantial impairments caused by child anxiety problems, in home, school and wider life, for both children and parents it is critical that we generate an ambitious approach to ensure that children and families can access effective treatment when they first need it, and, even better, for those who we know are at increased risk to access prevention.

In this talk I will give an overview of recent studies that provide promising solutions for widescale access to prevention and treatment for preadolescent anxiety problems, including through school-based support and novel online interventions that can overcome traditional barriers and fit around families' busy lives. I will take a particular focus on how parents can efficiently be supported and empowered to help their children, and hope to dispel some of the prejudices that parents face when their children struggle with mental health problems along the way.

# INVITED ADDRESS

## Invited Address 24

### **Reimagining CBT Therapist Training Through the Lens of Experience**

Christine Padesky, Center for Cognitive Therapy, USA

Drawing on her research and 45 years of international experience as a CBT instructor, Dr. Padesky summarizes what she has learned about the circumstances and experiences that contribute to effective therapist training. She offers practical guidance on how to design and structure training experiences that therapists will find rewarding, want to attend, and that increase the likelihood they will adopt evidence-based psychotherapy practices. Finally, she combines her lens of experience with opportunities provided by technology to reimagine what clinical training could look like to address the diverse needs of trainees practicing in many different cultural and clinical contexts.



# INVITED ADDRESS

## Invited Address 25

### **How Can We Integrate Cognitive Behavioral Therapy, Schema Therapy, and Mindfulness Psychotherapy to Train Our Clients as Self-healers?**

Younghee Choi, Mettaa Institute of Cognitive Behavior Therapy, Korea

As the Fellow of ACT (Academy of Cognitive Therapy) and ISST (International Society of Schema Therapy) certified Schema therapist, the presenter tried to develop Trans-diagnostic Integrated Psychotherapy. The presenter started from the cognitive model based on Aaron Beck's cognitive theory and tried assimilating different theories and techniques among the existing evidence-based psychotherapies. With cognitive behavioral therapy, several thousands of my patients learned how to solve their own problems as the self-therapist, but still, many patients do not respond well to CBT, and we call them treatment-resistant cases which usually have co-morbid problems, primarily personality disorders.

Studies about personality disorders showed that unique schemas were developed from the childhood experiences and emotional temperaments. Contents of these schemas (core beliefs) produce automatic thoughts in the specific situations and these automatic thoughts were not responding well to CBT. That was why schema-focused therapy was developed, mainly by Jeffrey Young. With Schema Therapy, the presenter could help more patients with Personality Disorders who did not respond well with CBT.

Even with the powerful effectiveness of schema therapy, the presenter still needed something more to help patients suffering from unchangeable problems. Naturally, the presenter found a "third wave" of cognitive and behavioral therapies, including ACT (Acceptance and Commitment Therapy) and MBCT (Mindfulness Based Cognitive therapy), which expanded the concepts to other disorders and/or added novel components and mindfulness exercises. The presenter owed a lot from Jon Kabat Zinn for learning mindfulness.

Through this lecture, the presenter will introduce CASH (Change and Acceptance Self Healing) program which is based on the integration of CBT, schema therapy, and mindfulness approaches and show the effectiveness of CASH program with the result of investigated symptoms of depression and anxiety along with the changeability of thoughts and attitudes after completion of 9-sessions of CASH program.

At the heart of the entire group format therapy at Mettaa Institute includes 6 weeks of CASH program. After patients, complete group CBT, patients are re-evaluated, and much-improved patients who acquired various therapeutic skills would stop therapy. Patients who needed more treatments would enter the individual sessions of schema therapy that would last one to three years with weekly or bi-weekly sessions. Some patients who needed mindfulness training would receive eight weeks of Vipassana Meditation class.

For the past 30 years, I have worked with my patients, students, colleagues, and supervisors. When I had encountered obstacles, those were challenging problems that I needed to find out solutions.

# INVITED ADDRESS

## Invited Address 26

### **Devising and Disseminating Novel Transdiagnostic Treatments to Improve Mental Health and Sleep Health**

Allison Harvey, University of California Berkeley Research, USA

Mental health problems remain common, chronic, and difficult to treat. A promising path to improving outcomes includes the translation of basic science into interventions that are safe, powerful, and scalable.

In this talk, I will describe three interlinked themes.

First, we have harnessed findings from cognitive science and education to improve patient memory for the content of treatment. This is important as poor memory for treatment is common and is associated with worse treatment outcome. Surprising results from an efficacy study that included 176 patients will be presented. This study tested the memory support intervention as an adjunct to cognitive therapy for depression.

Second, prior research has tended to treat specific sleep problems (e.g., insomnia) in specific diagnostic groups (e.g., depression). Yet real life sleep and circadian problems are often not so neatly categorized, particularly in mental illness where features of insomnia often overlap with delayed sleep phase, irregular sleep-wake schedules, and even hypersomnia. In the hope of addressing this complexity, and grounded in basic sleep and circadian science, the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (TranS-C) was developed. TranS-C is transdiagnostic in two ways: It addresses a range of sleep and circadian problems across a range of mental and physical health problems. The results from RCTs that tested TranS-C for high-risk youth ( $n = 176$ ) and adults diagnosed with a severe psychological disorder ( $n = 121$ ) will be described.

Finally, it takes many years to translate a small portion of original research into routine practice settings. Eliminating this large time gap is a key reason for the importance of implementation science for the future of our field. I will describe and illustrate the exciting possibility of integrating implementation science questions into various types of research in the service of more rapidly closing the gap.

# INVITED ADDRESS

## Invited Address 27

### **CBT is Good, but Not Yet Good Enough: How CBT Can Be Developed and More Effectively and Widely Deployed Across the World**

Paul Salkovskis, Harris Manchester College Oxford, UK

As CBT approaches “middle age”, it is clear that it has made remarkable progress and is now the leading form of therapy for psychological problems and beyond. This should be celebrated, and as a consequence CBT should be more widely disseminated. However, with “maturity” comes the risk of stagnation and complacency and cultural arrogance. In this session, I will consider three aspects of past and future development of CBT in terms of what should “stop, start, continue”. I will describe the successful recipe for progress and evolution which has characterised CBT, consider the emerging problems “baked-in” to the CBT approach and suggest changes that are needed to tackle some of the global challenges therapists and health care systems now face. Progress has been achieved by a combination of balance, flexibility and innovation, but this can be difficult to achieve. Examples will be drawn from anxiety disorders including OCD and Health anxiety. Despite the clear value of CBT for specific disorders, many of the problems we seek to help require a different way of thinking.

# INVITED ADDRESS

## Invited Address 28

### **Reward Sensitivity as a Treatment Target for Depression and Anxiety**

Michelle Craske, University of California, USA

Threat and reward sensitivity are fundamental processes that become dysregulated in the context of vulnerability to, or expression of, anxiety and depression. Treatments have traditionally targeted reductions in threat sensitivity with limited effects upon reward mechanisms. Investigation of reward sensitivity is essential for our understanding of psychopathology and for targeted treatment approaches. I will present two related lines of my research on this topic. First, I will present our latest findings regarding neural, behavioral and subjective features of reward hyposensitivity (specifically in domains of reward anticipation-motivation, response to reward attainment, and reward learning) that correlate with and predict anxiety, depression and anhedonia. These findings led us to develop a treatment that specifically targets reward hyposensitivity, termed Positive Affect Treatment, which we have shown to be more effective than cognitive behavioral therapy that specifically targets negative affect and threat sensitivity. I will present our replication study in anxious, depressed and extremely low positive affect individuals, where the symptomatic outcomes occur in parallel with changes in target measures of reward anticipation-motivation and attainment. I will also present findings from virtual reality technologies for delivering aspects of Positive Affect Treatment. Second, building upon the work of others who have demonstrated the role of dopaminergic signaling and reward-related relief mechanisms in extinction learning, I will present our latest evidence regarding neural, behavioral and subjective correlates of anhedonia in the context of Pavlovian fear conditioning and related paradigms. Further, I will present evidence for interference with prediction error throughout exposure therapy (as a clinical proxy of extinction) as a function of anhedonia. I will conclude with a treatment model that incorporates reward targets to augment inhibitory retrieval models of exposure for fear and anxiety.

### **How Effectively can We Work for the Dissemination of Cognitive Behavior Therapy in “CBT Emerging Societies”**

Yuji Sakano, Sapporo CBT & EAP Center, Japan

Since the last three decades, exploration of evidence-based interventions for treating various psychological problems has advanced so much. At the same time, efforts towards the delivery of evidence-based psychosocial interventions have been discussed under the important agenda regarding “dissemination” of evidence-based interventions, and dissemination has been an important subject that has been discussed over and over again in the CBT world. Through various effort for dissemination of CBT, the CBT has been prevalent in various contexts as an effective psychosocial intervention so as many benefits to patients.

However, the level of dissemination of CBT is not equally achieved in the world and still a challenge of inequality exists. Over recent three decades of progress in CBT has clearly created regional disparities. For example, while CBT has made significant progress in some countries in America, Europe and Oceania, unfortunately, the progress is still low developed in many countries in Asia and Africa. The reason why such difference made would be the difference of region, socioeconomic status of each country, national/domestic contextual, development of social systems such as health care and education within a country, characteristics of local community, cultural/subcultural and religious background, or many other factors we need to consider. The level of dissemination of CBT also varies because of issues such as how values of CBT are acceptable for society, or how accessibility to CBT for patients is established, which are also related to regional differences.

Among these factors, cross-cultural and educational perspectives are very important for the dissemination of CBT. It seems to be an implicit assumption in the evidence-based practices that there is a culture-free and universal mechanism of the causes and cures of psychological problems. In order to establish the evidence-based practices as standardized treatment system, it is necessary for us to follow universal common diagnostic criteria like DSM, which is “manualized” ways of treatment. However, we should keep in mind that psychopathology is influenced by cultures, that is, no psychosocial problem/disorder is culturally immune. For instance, individualism/collectivism as a cultural context gives much influences on psychosocial adaptation, and cultures also contribute how people’s emotional lives to be shaped. When we consider the dissemination of CBT in various cultural settings, we should not ignore these cultural perspectives in addition to the standardized criteria, such as meaning of culture-bound distress, culture-specific classification of disorders, and role of indigenous psychotherapy. Furthermore, it is important to create educational settings as the basis of CBT; how to provide educational system of basic cognitive behavioral psychology, and how to motivate young scholars to involve as future scientific practitioners in each cultural setting.

Although CBT has many advantages in improving the psychological problem itself, which is clear for the low recurrence rate and preventive viewpoint, the rate of transfer of innovative treatments from research clinics to community practice has been quite slow in CBT emerging society. Hence, it is important to make an effort to accelerate the process from research clinics to the community more effectively.

The purposes of this presentation are to:

- (a) overview definitions of dissemination briefly,
- (b) point out the necessity to think about dissemination issues in consideration of regional and cultural differences, as background of my presentation,
- (c) illustrate the process of dissemination and implementation of CBT in Japan as “past emerging society of CBT” and explore contributing factors relating to the development of CBT, and
- (d) point out significant meanings of (1) education of basic psychology in higher education system, (2) stimulating intellectual curiosity for students and young clinicians, and (3) continuing education and training for health professions, aiming future promotion of dissemination and implementation of CBT in different cultural background in a coming decade.

The tactics to promote further dissemination of CBT especially in CBT emerging societies will be discussed.

# INVITED ADDRESS

## Invited Address 30

### **CBT in the Post- Pandemic World: Realigning Models of Care for Emerging Realities**

Keith Dobson, University of Calgary, Canada

The field of the cognitive and behavioral therapies is now more than 50 years old. The CBTs have made foundational contributions to the domain of psychopathology and our understanding of mental health, and innumerable developments for both mental and physical health care. Recent challenges to global health, in part spurred by the recent pandemic have actually increased the awareness of and need for evidence-based and targeted treatments such as those offered by the CBTs. In this address, the President of the World Confederation of Cognitive and Behavioral Therapies will discuss some of the emerging realities for the future of healthcare, and will suggest ways in which the CBTs can evolve to confront these realities. Included in the topics to be discussed are the evolution of models of CBT, the relative role of the CBTs and psychosocial interventions in general within the healthcare industry, particular areas of likely growth for the CBTs, the grim reality of the epidemiology of mental disorders and the resulting crisis in access to care, and the issue of effective modes of delivery. The presentation will conclude with speculation about several future global challenges, and how realigned CBT models may be able to address these emerging circumstances should they arise.

# INVITED ADDRESS

## Invited Address 31

### **(How) can Mindfulness Help in Challenging Times?**

Susan Bögels, University of Amsterdam, Netherlands

These are challenging times. The world is facing an eco-apocalypse, while human and animal pandemics, (civil) wars, political and financial crises, natural disasters, and refugees ask for our attention.

Both mental and chronic somatic disorders are on the rise, in (young) adults and children. These disorders go hand in hand and exacerbate each other. The number of people needing mental health care is on the rise, as is the use of psychopharmacology. Burnout is on the rise, not only in clients, but also in their therapists. The Covid pandemic has contributed to the rise of mental health problems and the lack of mental health care, but mental health, especially in young people, already decreased pre-covid.

We can control many risk factors in order to reduce our chances to develop certain diseases, but we cannot avoid the air we breathe. 90% of children worldwide are affected by air pollution, which will impact their mental and physical health. One-fifth of the world population will need to flee because of climate change. Countries will close their borders, and trauma will rule and be passed on to the next generations.

Does treating anxiety disorders and depression even makes sense given the state the world is in? And how do we treat (young) people with eco-anxiety and eco-despair?

Perhaps it is in this context that third wave treatments, like mindfulness, have become popular. They are more context based. They are more value based. What makes a life worth living? Meditation can help us realize the interdependence of all beings. Recognizing our suffering. Connecting ourselves with other beings who suffer too. Cultivating compassion for suffering. Reaching a deeper understanding of the causes of suffering. Asking forgiveness for what we did to our planet. More process- than goal focused. Body and mind as mutually dependent.

However, a recent well-conducted large trial in the UK (Kuyken et al., 2022) did not find mindfulness on school to be effective for young people, and especially not for those who need it most: young people with anxiety and depression. Also, the dose-response relation of mindfulness on anxiety and depression is complex, as higher doses of mindfulness did not predict better outcome (Stromeier, 2020).

In this keynote, I will investigate the question whether and how mindfulness can help in challenging times from multiple perspectives.

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## Invited Address 32

### Introduction to Compassion Focused Therapy

Paul Gilbert, University of Derby, UK

#### THIS TALK IS FOR

This talk is for people who are interested in learning about the origins and nature of compassion focused therapy, how it is an integrative approach to psychotherapy, and how it might be applied to different mental health problems.

#### SCIENTIFIC BACKGROUND

Compassion focused therapy (CFT) is rooted in an evolution informed, biopsychosocial approach to understanding of the origins of our mental functions. It explores the way motives, emotions, cognitive competencies and behaviours are sources of mental health difficulties. Experiencing caring, particularly but not only in early life, is linked to various psychophysiological processes, such as the vagal nerve, oxytocin and various neuro circuits that are important for emotion and self-regulation. Difficulties in the early attachment process can compromise these processes and hence emotion and self-regulation. CFT helps clients to harness the psychophysiological processes of the care motivational system as a framework for the therapeutic processes. This workshop introduces some of the basic processes of compassion and how to use them therapeutically including the recognition that some clients have fears and resistances to compassion.

We will explore

- The basic conceptual framework of CFT in terms of basic motives, emotional regulation systems cognitive competencies and behaviours
- The link between the evolution of caring behaviour particularly but not only via attachment and the cultivation of a compassionate mind
- Some practises for the development of a compassionate mind and self-identity
- Applying CFT principles to mental health difficulties.

#### WORKSHOP FORMAT

- PowerPoint presentations
- video presentations
- case discussions
- personal practises

#### LEARNING OUTCOME

- Insight into the nature of compassion focus therapy
- Awareness of the value of an evolution and biopsychosocial based models
- The link between compassion and the evolution of attachment
- The distinction between compassion focused therapy and compassionate mind training
- Basic compassionate mind training exercises

Paul Gilbert, FBPsS, PhD, OBE is Professor of Clinical Psychology at the University of Derby and honorary visiting Prof at the University of Queensland. He was Consultant Clinical Psychologist for over 40 years the UK National Health Service. He has researched evolutionary approaches to psychopathology with a special focus on mood, shame and self-criticism in various mental health difficulties for which Compassion Focused Therapy was developed, with increasing evidence of effectiveness. He was made a Fellow of the British Psychological Society in 1993, president of the BABCP 2002-2004, and was a member of the first British Governments' NICE guidelines



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for depression. He has written/edited 24 books and over 300 papers and book chapters. In 2006 he established the Compassionate Mind Foundation as an international charity with the mission statement To promote wellbeing through the scientific understanding and application of compassion. In 2011 he was awarded an OBE by the Queen in recognition of his services to mental health.

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# DIGITAL CBT SYMPOSIUM

## Digital CBT Symposium 01 Application of CBT on Digital (Online)

### **Development and Dissemination of Mood Lifters Mental Wellness Program**

Patricia J. Deldin, University of Michigan, USA

Mood Lifters is an innovative, paradigm-shifting, science-based, peer-led, group, mental wellness program that was designed to be an accessible, effective, affordable and available mental health program. In efficacy, effectiveness and RCT trials, on average, participants significantly reduced their anxiety, depression and stress and improved their relationships, positive affect and sleep. Built to be scalable to millions of people, Mood Lifters is a new strategy that can help with the world-wide mental health care crisis.

### **Digital-Based Treatment for Mental Health with a Focus on CBT**

Thomas Insel, Vanna Health, USA

Over the past five years, there has been an explosion of investment, innovation, and interest in digital mental health. New companies are providing access to care with convenience, democratizing both psychotherapy and medication treatments. While increased access is important, increased quality will be essential for improving outcomes. This presentation will focus on the steps needed to improve quality and the opportunity for innovation to impact population health.

### **Development of Interactive and Game-based Treatment**

Adam Gazzaley, Akili Interactive, USA

A fundamental challenge of our global healthcare system is the development and distribution of effective treatments to enhance cognition in those suffering from diverse psychiatric and neurological conditions. Dr. Gazzaley will describe the use of custom-designed, closed-loop video games to achieve cognitive benefits in both healthy individuals and patients. This approach has now yielded the first FDA-approved video game for any clinical condition. He will share with you the next stage of his research program, which integrates these digitally-delivered treatments with the innovations in artificial intelligence, virtual reality, multimodal physiological recordings, and non-invasive electrical brain stimulation to enhance cognition. He will also share a hypothesis about the potential for synergistic interactions between closed-loop video games and CBT.

### **Development of User-Centered and Personalized Digital Mental Health Services**

David C. Mohr, Northwestern University, USA

Dr. David C. Mohr is a Professor of Preventive Medicine at Northwestern University and the founder and director of the Center for Behavioral Intervention Technologies (CBITs). His research focuses on designing and implementing digital mental health treatments that can be seamlessly integrated into people's daily lives and effectively implemented in real-world settings. Dr. Mohr and his team developed Intellicare, a suite of 14 mobile apps that provide accessible and evidence-based mental health support, targeting specific symptoms such as stress, anxiety, and sleep problems, and using personalized machine learning algorithms to adapt the app

# DIGITAL CBT SYMPOSIUM

experience to each user. Additionally, he explores the use of sensor data from devices like smartphones to identify behaviors, states, and environmental conditions that can be used to develop more effective and user-friendly digital mental health tools.

## **Development of A.I. Chatbot for Mental Health Care**

Jose Hamilton, Youper, USA

This lecture will explore the innovative development of AI chatbots designed to provide mental health care using Cognitive Behavioral Therapy (CBT) techniques. We will delve into the history, underlying technology, current challenges, as well as their potential for expanding mental health care access. Attendees will gain insight into the future of personalized, cost-effective, and stigma-free mental health support through AI-driven CBT chatbots.

# DIGITAL CBT SYMPOSIUM

## Digital CBT Symposium 02

### Development of Digital Treatment Based on Cognitive Behavioral Therapy in Korea

#### **Development of CBT-I Based Digital Therapeutics**

Yujin Lee, Welt, Korea

Digital technologies have had profound changes on all walks of life like how we communicate, share information, and create. Now they are having an impact in healthcare, too. The latest example is digital therapeutics (DTx): medical treatments to address health conditions via a combination of software and communications. So far DTx are in use or being tested in growing number of diseases and conditions: type 2 diabetes, obesity, dementia, substance abuse, insomnia, depression, hypertension and more. The concept first started from the idea – how can we provide more access to a proven therapy? So from the beginning, it was a very patient-centered approach. Internet-based and app-based CBT-I is an attractive solution to challenges of scalability. As of today, there are numerous studies of insomnia digital therapeutics (DTx) such as Somryst, Sleepio, and Somnio, suggesting that DTx can be an optimal choice for patients with chronic insomnia.

PilLowRx addresses the underlying cause of chronic insomnia by guiding patients to modify their thought processes and behavior to achieve better sleep. PilLowRx's underlying mechanism, cognitive behavioral therapy for insomnia, or CBT-I, is the guideline-recommended first-line therapy for insomnia.

PilLowRx content includes mechanisms of action of sleep restriction, stimulus control, cognitive therapy, sleep hygiene, and relaxation therapy. It's content encourages engagement, active learning, and promote behavioral change.

In the future, what we expect to see in the next phase of the product is more personalized tailored solutions. Meaning that compared to relatively manual interactions of the first phase of DTx products, we aim to have more integration of sensor-based biomarkers that feeds into the treatment algorithm therefore providing more personalization which is another key features of DTx products.

#### **Development of CBT-Based Digital Therapeutics for Multidisciplinary Musculoskeletal Pain Management**

Chi Hyun Choi, EverEx, Korea

Although psychological factors play an important role in managing musculoskeletal pain, various factors such as time, location, and cost often hinder patients from accessing optimal care. In the development of digital therapeutics for musculoskeletal disorders, it is essential to consider the complementary roles of cognitive behavioral therapy and rehabilitation exercises. Treatment goals should encompass not only pain reduction, but also strengthening rehabilitation motivation and improving treatment adherence.

#### **Development of New Medical Intervention, Digital Therapeutics(DTx) for Atopic Dermatitis and Eating Disorder**

Boram Kim, Huray, Korea

Atopic dermatitis and Eating disorder are accompanied by not only physical symptoms but also psychological symptoms and can be worsened by wrong thinking and behaviors. The treatment intervention through cognitive behavioral therapy(CBT) is expected to change patient's thinking and behaviors to improve symptoms and prevent worsening of diseases. We are developing evidence-based, software-driven therapeutic intervention services which are based on CBT that aim to improve symptoms of diseases and quality of life.

# DIGITAL CBT SYMPOSIUM

## **Introduction to Digital Therapeutics: AttnKare-D and BlueKare-D by Hippo T&C (ADHD and MDD)**

Tai M. Chung, Hippo T&C, Korea

As digital therapeutics (DTx) gains prominence, a promising function is the provision of personalized treatment as it allows the targeting of specific symptoms of disease. This presentation will briefly touch upon my view of digital therapeutics and introduce AttnKare-D (ADHD assessment software) and BlueKare-D (MDD treatment software) developed and serviced by Hippo T&C. The characteristics and functions of the products will be presented. Lastly, I will explain common pitfalls and methods to overcome these difficulties.

## **B-ACT: Behavioral Activation-Based Digital Therapeutics for Depression**

Kyu-Man Han, Rowan, Korea

Behavioral activation (BA) is a first-line psychological treatment for depression, and it is recognized as a stand-alone, evidence-based therapy for depression. BA interventions can be effectively delivered in various formats, including Internet-based interventions. Recently, several formats of Internet-delivered BA have been developed, and clinical studies have reported its significant therapeutic effect on depressive symptoms compared to control conditions. In this talk, we introduce behavioral activation-based therapeutics (B-ACT), a smartphone-based application for BA developed by Korea University Team and ROWAN. B-ACT targets younger patients, particularly adolescents aged 13–18 years and adults aged 19–39 years with mild-to-moderate levels of major depression, who are capable of understanding or completing digital intervention. B-ACT provides inspiration and motivation for planning and engaging in more activities with pleasure and mastery sensation, thereby facilitating the core components of BA, including activity-mood monitoring, functional analysis, and scheduling of activities. B-ACT has a seven-week course comprising core therapeutic components of well-validated BA treatment protocols using interactive media and a user-friendly interface. In the B-ACT, implemented artificial intelligence-based model provides personalized recommendations of activities according to user's preference of activities, lifestyle, and value profiles to achieve maximal improvement of depressive symptoms. B-ACT uses a unique list of validated activities with antidepressant effects, and the activity catalog and all the psychotherapeutic contents implemented in B-ACT are tailored to the Korean sociocultural context without compromising the original contents of evidence-based interventions. To support personalized insight into the self-reported data, B-ACT provides pages with the visualization of statistics for mood rating, ranking of most frequent activities with positive emotions, and their profiles of value domains. In the B-ACT, value-based activities, user's balance in value domains, and value-directed goal settings are emphasized because empirical studies on BA have suggested that value-based activities maximize the acceptability of the BA, patient satisfaction, and, ultimately, their effectiveness for symptom improvement. For contingency management, B-ACT has several strategies, including reward setting by users, several gamification components, and gentle push notifications as reminders. Identifying external and internal barriers and teaching to troubleshoot are essential therapeutic elements in BA. B-ACT provides several therapeutic contents, including teaching problem-solving and mindfulness skills to overcome the internal and external barriers of the BA. Finally, B-ACT encourages users to make a personalized plan for relapse prevention.

## **PanicDoc™, Digital Therapeutics of Panic Disorder based on Standard Cognitive Behavioral Therapy**

Deung Hyun Kang, SMD Solutions, Korea

Panic Disorder is an anxiety disorder characterized by unexpected and repeated episodes of intense fear accompanied by physical symptoms. Cognitive behavioral therapy (CBT) for panic disorder is the effective treatment modality. The standard CBT for panic disorder

# DIGITAL CBT SYMPOSIUM

is composed of psychoeducation, cognitive restructuring of catastrophic misinterpretation, relaxation technique, Interoceptive exposure, In vivo graded exposure to feared stimuli etc. PanicDoc™ copiously digitalized conventional standard CBT into digital therapeutics. Last year, Korean FDA released the digital therapeutics approval guideline for treating panic disorder based on PanicDoc™. We hope that PanicDoc™ will be used when you do CBT for your patient to monitor their compliance and panic symptoms.

### **Augmentation and Modular Approaches within Contemporary CBT Treatment**

Scientific and technological advances are changing the face of CBT, such that contemporary CBT delivery is likely to involve many different treatment components. Here, speakers from four different institutes across two countries will integrate clinical expertise with recent research to consider two key features of contemporary CBT delivery; augmentation and modular treatment approaches.

First, Camilla Nord will present results from a pre-registered, transdiagnostic meta-analysis ([https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=236403](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=236403)) evaluating whether the addition of behavioural, pharmacological, or somatic (e.g. brain stimulation) interventions immediately before, during, or after psychological therapy sessions can augment treatment effects (In Press, *Nature Mental Health*). Across 108 studies (N=5,889), acute augmentation of psychological therapy significantly reduced the severity of mental health problems. Particular promise was seen for novel pharmacological strategies such as psychedelic-augmented psychological therapy. Results will be also considered in the context of how computational approaches to disentangle the mechanisms of psychological therapy might elucidate new strategies for augmentative interventions (<https://psyarxiv.com/jmnek/>).

Second, Caitlin Hitchcock will consider how memory processes may influence the efficacy of CBT, and present findings from three pre-registered experiments (<https://osf.io/t6vx2/>) evaluating memory-based enhancements for CBT in individuals with major depression (N=148). Results suggested that delivering trait-level memory interventions as a first-step treatment module is likely to be more beneficial than in-the-moment induction techniques delivered immediately before CBT sessions. Implications for the addition of memory-based augmentations to regular service delivery will be discussed.

Next, Melissa Black will introduce a modular, transdiagnostic CBT protocol, Shaping Healthy Minds (published trial protocol is available at <https://bmjopen.bmj.com/content/8/8/e024546.abstract>). Findings suggest that modular approaches allow for standardised, yet flexible treatment that is personalised to the individual concerns, and that there are challenges with module selection for each client to ensure goodness-of-fit between the therapy and the individual clinical presentation. Compared to universal approaches, modular approaches like Shaping Healthy Minds could provide a model for working efficiently with comorbidity by protocolising a highly complex formulation process.

The final paper will be presented by Patrick Smith, who will introduce an early-stage pilot trial of a novel, therapist-supported, internet-delivered Cognitive Therapy for young people (iCT-YP) with PTSD (published trial protocol available at <https://pubmed.ncbi.nlm.nih.gov/35314471/>). Therapy is delivered entirely remotely in a modular format, via smartphone and computer, augmented with therapist support via phone.

The symposium concludes with a discussion led by senior clinicians, Tim Dalgleish and Anna Bevan, who will consider how augmentation and modular approaches might be used in the future to enhance service delivery, patient engagement, and treatment effects.

Challenges for wider dissemination into clinical practice will be discussed.

## **'Boosting' Psychological Therapy Using Acute Pharmacological, Psychological, and Somatic Interventions: A Transdiagnostic Meta-Analysis**

Camilla Nord<sup>1\*</sup>, Beth Longley<sup>2</sup>, Quentin Dercon<sup>2</sup>, Veronica Phillips<sup>1</sup>, Julia Funk<sup>3</sup>, Siobhan Gormley<sup>1</sup>, Rachel Knight<sup>1</sup>, Alicia Smith<sup>1</sup>, Tim Dalgleish<sup>1</sup>

<sup>1</sup> University of Cambridge, UK

<sup>2</sup> University College London, UK

<sup>3</sup> LMU Munich, Germany

### BACKGROUND

At least half of all patients with mental health disorders do not respond adequately to psychological therapy. Whilst many studies have explored long-term combination treatments, experimental medicine studies in humans and animals suggest that acutely enhancing specific biological or psychological mechanisms before, during, or after psychological therapy may also improve treatment outcomes. These approaches range from the pharmacological (e.g., psychedelic compounds) to psychological (e.g. cognitive training) to somatic (e.g. brain stimulation, or exercise). Trials of acute augmentations have focussed almost exclusively on single diagnostic categories. In a recent paper (Nord et al., In Press, Nature Mental Health), we test whether this new approach to combination treatment shows efficacy across diagnoses.

### METHOD AND RESULTS

We searched Medline, PsycINFO, and Embase for controlled studies published between database inception and 25th May 2022. We conducted a pre-registered random-effects meta-analysis (PROSPERO CRD42021236403). We identified 108 studies (N=5,889). Acute augmentation significantly reduced the severity of mental health problems (Hedges'  $g=-0.27$ , 95% CI= $(-0.36, -0.18)$ ;  $p<0.0001$ ). Subgroup analyses revealed that pharmacological, psychological, and somatic augmentations were each effective, but varied in effect size. Notably, augmentations using psychedelics, MDMA, and cannabis had a large significant effect (Hedges'  $g=-0.84$ , 95% CI= $(-1.26, -0.42)$ ;  $p=0.0009$ ). We also classified each study into clinical categories using the Hierarchical Taxonomy of Psychopathology (HiTOP), a transdiagnostic approach for classifying psychiatric disorders. This revealed that transdiagnostic augmentations were efficacious for Fear and Distress dimensions (Fear: Hedges'  $g=-0.26$ , 95% CI= $(-0.40, -0.12)$ ;  $p=0.0004$ ; Distress: Hedges'  $g=-0.28$ , 95% CI= $(-0.44, -0.13)$ ;  $p=0.0008$ , with 'Fear' encompassing traditional categories of phobias, panic, and social anxiety, and 'Distress' encompassing dysphoria, suicidality, and generalised anxiety disorder, among others).

### DISCUSSION

Our analysis suggests that augmenting specific therapy sessions with medication or brain stimulation interventions (among others) could improve clinical response to psychological therapy. More broadly, it suggests an 'acute augmentation' approach may be helpful transdiagnostically, at least for Fear and Distress dimensions of psychopathology. Recent efforts have been made to characterize the 'active ingredients' of mental health treatment: that is, the aspects of an intervention that drive clinical effect. This approach may hold particular potential for uncovering novel acute augmentation strategies-- interventions targeting specific 'active ingredients'. For example, computational approaches have been used to disentangle the mechanisms of psychological therapy (<https://psyarxiv.com/jmnek/>), an approach that might elucidate new strategies for augmentative interventions via 'computational psychotherapy'.



## **Autobiographical Memory-Based Augmentation for CBT Tasks: Findings From Three Experiments With Those Experiencing Major Depressive Disorder**

Caitlin Hitchcock\*

*University of Melbourne, Australia*

Individuals with depression typically remember their past in a generalised manner, at the cost of retrieving specific event memories. This may impair engagement with cognitive behavioural therapy (CBT) tasks that use concrete episodic information to challenge maladaptive beliefs, potentially limiting their therapeutic benefit. Study 1 demonstrated that an episodic specificity induction increased detail and specificity of autobiographical memory in people with major depression, relative to control conditions (N=88). We therefore examined whether the induction enhanced the efficacy of CBT tasks that depend on episodic memory – cognitive reappraisal (Study 2, N=30), evidence gathering (Study 2, N=30), and planning behavioural experiments (Study 3a, N=30). Across all three tasks, there were no significant differences in emotion- or belief-change between the specificity and control conditions. Although the induction temporarily enhanced specificity in depressed individuals, it did not significantly boost the efficacy of CBT tasks theorised to benefit from the use of specific mnemonic information. Implications for memory-based augmentations for CBT will be discussed.

## **The Benefits and Challenges of Transdiagnostic, Modular Approaches for Comorbid and Complex Mental Health Problems: Learnings from the HARMONIC Trial**

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### **BACKGROUND**

Common mental health problems are a significant cause of distress and disability worldwide. Comorbidity between such disorders is common and contributes to substantial rates of treatment failure in the context of existing single-diagnosis treatment protocols, creating a need for evidence-based treatments designed to effectively address complexity and comorbidity. Although useful in many contexts, a drawback of universal approaches is the inability to tailor selection of treatment elements to the particular presentations of individual clients. Shaping Healthy Minds is a transdiagnostic, modular intervention which can efficiently address common factors underlying multiple diagnoses, and which employs a formulation-driven approach to module selection, allowing a standardized protocol to be delivered in a flexible and person-centred way taking account of individual complexity. This presentation will focus on the practicalities, benefits, and challenges associated with transdiagnostic modular interventions, drawing on experiences from the HARMONIC Trial to illustrate.

### **METHOD AND RESULTS**

The protocol for HARMONIC Trial of Shaping Healthy Minds is available (<https://bmjopen.bmj.com/content/8/8/e024546.abstract>) and the main trial results will be presented in another symposium. Findings suggest that modular approaches allow for standardised, yet flexible treatment that is personalised to the individual concerns, and that there are challenges with module selection for each client to ensure goodness-of-fit between the therapy and the individual clinical presentation.

### **DISCUSSION**

Modular interventions are more challenging to deliver than universal protocols, requiring algorithms to match module delivery to the separate requirements of each client, but this in principle comes with a better goodness-of-fit between the therapy and the individual

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clinical presentation. Different approaches to decision-making in modular treatments will be discussed, including collaborative case formulation, decisional balance worksheets and individual dynamic assessments of symptom networks. Compared to universal approaches, modular approaches like Shaping Healthy Minds could provide a model for working efficiently with comorbidity by protocolising a highly complex formulation process.

## Therapist-Supported Online Cognitive Therapy for Post-traumatic Stress Disorder (PTSD) in Young People

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### OBJECTIVES

Effective face-to-face therapies for PTSD in young people are available, but most young people with PTSD do not access them. Digital therapy has potential to make evidence-based interventions more widely accessible to young people. We have developed a digital version of Cognitive Therapy for PTSD in young people (iCT-PTSD-YP), which is delivered via a website and smartphone App, with therapist support. The objective of this study is to gauge the acceptability, feasibility, and initial clinical effect of iCT-PTSD-YP.

### METHODS

We ran an early-stage pilot randomised controlled trial (RCT) comparing iCT-PTSD-YP to a Wait List (delayed treatment) condition. Young people (12-17 years old) were eligible to participate if their primary problem was PTSD following exposure to a single traumatic event. Individual patient level randomisation allocated participants in a 1:1 ratio minimising according to sex and baseline symptom severity. The primary study outcomes were data on feasibility and acceptability including recruitment, adherence, retention, and safety. The primary clinical outcome was PTSD diagnosis at 16 weeks post randomisation.

### RESULTS

We recruited and randomised N=31 young people. The majority were female. The most common traumatic events were direct exposure to sexual or physical assault, usually occurring 1-3 years prior to study enrolment. In this talk we report data relevant to our pre-set thresholds for our feasibility metrics including rates of recruitment, consenting, retention, and data completeness. We also report initial data on clinical efficacy.

### **New Directions in Autism Research and Treatment**

Autism is a neurodevelopmental condition that is characterized by differences in social communication and interaction, as well as the presence of restricted or repetitive behaviors or interests. Beyond these core differences, autistic individuals often experience a myriad of mental health challenges, such as anxiety, depression, emotion regulation difficulties, and often receive psychosocial treatments. Fortunately, adaptations of evidence-based interventions like cognitive behavior therapy (CBT) have been shown to be effective in addressing co-occurring mental health challenges in this population. However, despite growing empirical support for CBT for autistic individuals, much work is needed in innovating CBT approaches to meet the diverse needs of this population and to more effectively disseminate CBT. In this vein, it is crucial to identify individual differences in factors that can be more effectively targeted in CBT in this population, as well as to adapt and refine CBT approaches across the lifespan, particularly for autistic adults who have been historically underrepresented in autism intervention research. This is especially important to achieve from the neurodiversity perspective, recognizing and embracing many different ways in which autistic individuals experience and interact with the world around them. Consistent with this year's Congress Theme focusing on dissemination of contemporary CBT as well as interventions targeting diverse individual and population characteristics, this symposium will highlight recent advances as well as future directions in innovating CBT interventions to meet the diverse needs of individuals on the autism spectrum: First, Dr. Youngshin Kim will present on trends and recent advances in the understanding patterns of comorbid conditions in autistic populations, highlighting in the epidemiologically ascertained community samples. Dr. Erin Kang will present recent research on factors underlying autism characteristics, such as cognitive inflexibility and emotion dysregulation, as treatment targets of CBT for autistic youth. Dr. Vanessa Bal will present on refining assessment methods and adapting mental health interventions for adults on the spectrum. The symposium will conclude with Dr. Sohyun "Sophy" Kim's presentation on the future directions in autism research and treatment from the neurodiversity perspective to inform and improve mental health care for autistic individuals.

### **Clinical Characteristics and Comorbid Conditions of Epidemiologically Ascertained Samples of ASD**

Young Shin Kim\*

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The current estimate for the prevalence of autism spectrum disorders ranges from 1-2.6% in school-age children. This wide variability, which has been reported between countries and within the same country, reflects differences in diagnostic definitions, sample size and case ascertainment methods, in particular, – whether the cases were ascertained from clinical settings or from the non-clinical, community setting. The total population-based Korean ASD prevalence study demonstrated that while 0.8% of children with ASD had received educational and/or clinical services (clinical ASD population), 1.8% of children with ASD were unrecognized and untreated in the community, despite their significant functional impairment (non-clinical ASD population). Furthermore, this 1.8% non-clinical ASD population had phenotypes that were distinct from the clinical population with regard to ASD severity, IQ, sex ratio, and comorbid conditions. These findings have been replicated in subsequent studies conducted in different populations using similar case identification methods. These findings have important implications for the development and administration of targeted interventions for the comprehensive phenotype characteristics of ASD.

## Identifying Mechanisms Underlying Autistic Characteristics and Anxiety as Treatment Targets in CBT

Erin Kang\*, Rachel McDonald, Farah Mahmud, Mary Isaac Cargill, Britney Jeyanayagam, Sadaf Khawar

Montclair State University, USA

There is a marked heterogeneity in clinical presentation in autism, and autistic individuals often experience significant levels of co-occurring mental health challenges. Anxiety, in particular, occurs at 2-5 times greater in autistic youth than in youth with other health care needs (Kerns, Rast, & Shattuck, 2020). Better understanding of mechanisms underlying autism characteristics and co-occurring anxiety can have a significant impact in aiding assessment and treatment addressing various challenges in this population. Cognitive inflexibility (CI), characterized as difficulty shifting thoughts and attention according to changing situational demands, and emotion dysregulation (ED), defined as reduced ability to regulate emotional experiences in response to changing environmental stimuli, are two transdiagnostic factors that relate to many forms of psychopathology, and are linked to increased vulnerability to internalizing symptoms and behavioral challenges in autistic youth (Conner et al., 2022; Hollocks et al., 2022). Given the unique and varying presentations of anxiety among autistic individuals, researchers have indicated the critical need for evidence-based interventions, like cognitive behavioral therapy (CBT), to be adapted for autistic individuals and their specific cognitive differences (Kester & Lucyshyn, 2018; Stark et al., 2021). Thus, further research on the specific mechanisms involved in the development of anxiety in this population can help inform targeted treatments.

Participants included 44 verbally-fluent youth (Mage=10.14, SDage=3.03; MIQ=108.91, SDIQ=22.3; 62% white; 50% male) and their parents. Twenty-two youth met the criteria for autism spectrum on the Autism Observation Diagnostic Schedule-2 (ADOS-2; Lord et al., 2009). Parents completed measures of cognitive flexibility (Flexibility Scale; Strang et al., 2017), emotion regulation (Emotion Dysregulation Inventory [EDI]; Mazefsky et al., 2014), and anxiety symptoms (Anxiety Scale for Children with Autism Spectrum Disorder; Rodgers et al., 2016).

In the current sample, autistic youth presented with more severe symptom profiles of CI and ED, and across specific aspects of ED (i.e., ED reactivity [ED-R] and ED dysphoria [ED-D]; all  $ps < .04$ ), but not anxiety, than non-autistic youth. ADOS-2 comparison scores correlated significantly with CI as well as both ED-R and ED-D ( $r > .33$ ,  $p < .03$ ). Anxiety symptoms related to ED-D and CI ( $r > .40$ ,  $p < .01$ ), but not with ED-R. CI was associated with ED-R and ED-D ( $r > .57$ ,  $p < .001$ ). Path analysis revealed significant direct effects of ED-R and ED-D on CI ( $\beta = .23$ ,  $p < .02$ ;  $\beta = .24$ ,  $p < .03$ , respectively) and full mediation by CI on the relationship between ED-R/ED-D and anxiety ( $\beta = .35$ ,  $p < .01$ ). Our results indicate that autistic youth experience more severe ED and CI than non-autistic youth, consistent with current literature (Geurts et al., 2009; McDonald et al., in prep). Overall, CI and ED relate to both autism characteristics and anxiety symptoms; however, our results also suggest a specific role of affective experience of ED in anxiety. Moreover, while ED has historically been regarded as a predictor of anxiety, this relationship may be more nuanced and mediated by factors such as CI. Taken together, CI is a prime treatment target for youth with anxiety, particularly among autistic youth. Furthermore, the more severe ED presentation observed among autistic youth emphasizes CI as a transdiagnostic treatment target for anxiety in autism. CBT is well-positioned to address both CI and ED, which may be especially pertinent for autistic youth (Lackner et al., 2022; Nazarzadeh et al., 2015; Scarpa & Reyes, 2011; Suva et al., 2009). As such, CBT interventions that integrate CI and ED may help to address the unique presentation of observed among autistic youth and have considerable potential for addressing the unmet mental health needs in this population.

## Adaptation of Two Behavioral Activation Programs to Support the Mental Health of Autistic Adults

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High rates of co-occurring depression and anxiety in autistic adults are clearly documented, with estimates of 23-27% exceeding rates of 1-12% in the general population (Hollocks et al., 2018; Kessler et al., 2012). Autistic stakeholders have identified mental health as a priority research area, highlighting a need for research on psychological therapies to be adapted for and led by autistic adults (Benevides et al., 2020). Behavioral Activation (BA) may be well-suited for autistic adults because of its focus on setting concrete, value-guided activities (Kerns et al., 2016). Value-guided activities may counter depression through provision of daily structure, contributing to a sense of purpose or identity, promoting a sense of control or autonomy, or increasing opportunities for social connection and/or leisure (Bal et al., 2022). Goal-directed behaviors may also serve as a mechanism of change for autistic adults (Bal et al., 2022).

Many different evidence-based BA protocols exist and provide starting points for adaptation for autistic adults. BeatIt (Jahoda et al., 2017) is an individual 12-week treatment with an emphasis on increasing engagement in meaningful activities. Originally adapted for adults with intellectual disability and depression, BeatIt affords many features that have been recommended for autistic adults, such as incorporation of visual supports and structured sessions. In addition, involvement of supporters (i.e., another adult that the client agreed to have work with them to implement changes) is intended to assist in identifying and addressing barriers to engagement in activities. Another program, Group Behavioral Activation Treatment (GBAT; Chu et al., 2009) is a 10-week treatment with an emphasis on clients learning to conduct self-assessments and practice problem solving and exposure to promote activities that help them to achieve valued goals. Originally designed for adolescents with anxiety, depression or anger, its transdiagnostic approach and focus on concrete, meaningful goals make it particularly appropriate for autistic adults that may have multiple co-occurring psychiatric diagnoses. In addition, its group-delivery intentionally provides opportunities to practice generalization of skills through practice implementation of strategies with other members.

While both BeatIt and GBAT aim to increase activation by decreasing avoidance and increasing opportunities for positive reinforcement, each treatment approaches this in a somewhat different manner. Thus, successful adaptation of both has the potential to provide greater options for autistic adults to choose an approach that fits their specific needs. This presentation will describe data from a series of feasibility trials assessing acceptability and preliminary efficacy of BeatIt (NCT05030610, n=13) and two GBAT groups (NCT04788212, n=5; NCT05512221, n=4).

Overall, preliminary results support ongoing adaptation and research for both interventions. Responses from the post-intervention satisfaction surveys indicated that most participants felt positively about the benefit of each treatment. On average, participants in both interventions showed a reduction in depressive symptoms on the PHQ-9, but more mixed results on other outcome measures. Participant feedback and ongoing adaptations of these interventions will be discussed.

## Neurodiversity and Intervention for ASD

So Hyun Kim\*

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Neurodiversity movement has grown enormously in the last decade in western cultures, led by autistic individuals as well as individuals with other conditions such as ADHD, learning disability, and Tourette's syndrome. Although neurodiversity movement is a political movement based on social justice, it has made huge impact in research and clinical practice for and with neurodivergent individuals

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across the world. With increased awareness about ASD and other mental health conditions in South Korea, we are also seeing some changes in the field of treatment research and clinical practice to increase acceptance and inclusion capacities. In this talk, we will explore the core tenets of neurodiversity movements and their implications for research and clinical practice around interventions of ASD and other neurodivergent conditions.

First, neurodiversity movement has shifted our paradigm of various neurodevelopmental conditions from pathologizing to empowering. Many neurodiversity advocates have argued that the differences between neurodivergent and neurotypical individuals in their thoughts, behaviors and feelings are normal variations and those are core to their identities. Thus, those conditions are not to be remediated or eliminated, but empowered. Second, advocates have also suggested that our treatment outcome research is biased as positive or optimal outcomes often reflect judgement or values of clinicians and researchers. How and who define optimal outcomes? Therefore, many neurodivergent individuals have raised their voice to take a more central role in shaping treatment research questions, delivering research projects, interpreting the results, and disseminating the findings. As represented by the mission of many neurodivergent movement, "Nothing about us without us," engagement of key stakeholders including neurodivergent individuals as well as their families through every stage of research has thus become one of the priorities in the advocacy agenda.

Based on these core principles of neurodiversity movement, the talk will suggest some future directions that the treatment research can take for neurodivergent individuals. The intervention field for ASD has gone through various transformations. During the 1980's amidst disability rights movements in the US, there was a tremendous push for inclusion of individuals with disabilities in the educational and community systems. Therefore, to support neurodivergent individuals across various environments, another form of intervention such as the Naturalistic Developmental Behavioral Intervention (NDBI) has been developed. Since then, the field of intervention for ASD and other neurodivergent conditions have made concerted efforts to create intervention models that have social validity that can have impacts across various naturalistic settings and routines with the involvement of parent and stakeholder, while focusing on positive strategies for behavior change and skill acquisition (Schuck et al., 2021). Therefore, future intervention models should find ways respect the neurodiversity movement's aim to secure acceptance and inclusion. If our objective is to promote well-being and quality of life, we need transparency and partnership with key stakeholder to define outcomes in intervention research. More individualized and personalized approaches with the understanding of development and familial/cultural contexts align well with the need to respect and empower individual differences for neurodivergent populations.

Finally, although neurodiversity movement has many core values that can make positive impacts on the field, a balanced view is necessary. It will be important to recognize the populations that are not represented well by neurodiversity movement (e.g., those with profound autism; Lord et al., 2022) and develop and promote services and intervention to address their needs. Although some may argue that behavioral principles should never be used on humans, more careful and respectful approaches that combine the tenets of neurodiversity movement as described above and evidence-based therapeutic techniques could empower neurodivergent individuals.

### **Increasing Accessibility: Applications of Brief Interventions: Do They Work and for Whom?**

In the current climate, there is a sustained and unrelenting demand on mental health services to offer more timely and cost-effective psychological interventions to increasing numbers of people. As services have been grappling to provide evidence-based interventions with limited psychological resources, this symposium aims to offer insight into how a select few services around the world are using research and expertise to develop and apply innovative brief interventions. The services in this symposium aimed such interventions towards a variety of mental health conditions (e.g., depression, psychosis) in different settings delivered, in some cases, by junior/non-psychologists. Not only is the role of the psychologist changing in these services, but so is the application of behavioral and cognitive therapies in general.

In the first presentation, Eunbyeol Lee, will present a multi-site, randomized control trial examining the effect of a 10-session brief behavioral activation (BA) delivered by community mental health professionals (or paraprofessionals) for those suffering from depressive disorders and schizophrenia. This talk introduces BA as a promising treatment option for chronic and severe mental disorders and presents its feasibility and efficacy based on a community-based multi-site randomized control trial.

In the second presentation, Katherine Parkin will present the outcome measures of 1) Distress Tolerance, 2) Anxiety Management and 3) Behavioral Activation which are the core modules of Brief Psychological Interventions (BPIs). BPIs were developed in the Cambridge Adult Locality Teams (CALTs) and continue to be delivered by non-psychologists in secondary adult mental health service to patients with moderate to severe mental health problems (Roberts et al., 2021; Wright et al., 2020). In the fourth presentation, Rachel Maciag will present a qualitative service improvement project exploring the experiences of the paraprofessionals trained and supervised to deliver the BPIs in CALTs (Maciag et al., 2022).

In the third presentation, Stephanie Casey will present the results of a service evaluation that examined the remote delivery of a brief psychological intervention teaching distress tolerance skills (DT-BPI) in response to services needing to adapt their provision during the global pandemic. Pre- and post-intervention outcome data will be presented and compared to face-to-face delivery.

The symposium will offer a thought-provoking session assessing the feasibility and potential benefits of designing and using such new ways of working across various mental health conditions. Brief interventions are designed to provide patients with building blocks to acquire the necessary psychological knowledge and skills to reduce their symptoms. The presenters aim to introduce ways of applying components of CBT (e.g., behavioral activation, exposure) to treat patients with moderate to severe mental health conditions. For those patients requiring further CBT, with brief interventions presented in this symposium, the outcomes related to patients' symptoms and utilization of services will be examined.

The symposium will highlight ways in which services can deliver brief interventions that focus on tailoring CBT components to meet the demands of reducing long waiting lists for evidence-based treatments, reducing the costs associated with training and delivery, and providing succinct, acceptable interventions to patients.

## Treating Community-Dwelling Individuals with Chronic and Severe Mental Disorders – Using Behavioral Activation to Reconnect with Positive Reinforcement

Eunbyeol Lee<sup>1\*</sup>, Jihye Oh<sup>2</sup>, Yun Ji Cha<sup>1</sup>, Yeoul Han<sup>1</sup>, Na-Ri Hwang<sup>3</sup>, Ho-Jun Seo<sup>3</sup>, Kee-Hong Choi<sup>1</sup>

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Evidence-based brief psychosocial intervention receives grand attention for the quality care and cost-effectiveness of mental health services. Behavioral activation (BA), which is an evidence-based and cost-effective treatment for depression, would be a promising candidate treatment option not only for depressive disorders (DD) but also for negative symptoms of schizophrenia (SZ). Based on the idea that both patients with depression and negative symptoms commonly show inactivity and reduced rates of positive reinforcement, BA was applied to individuals with negative symptoms in SZ and exhibited feasibility and preliminary efficacy in prior pilot studies (Choi et al., 2014; Mairs et al., 2011). Furthermore, given its brevity and strong empirical support, BA would be suitable for service delivery by community mental health professionals (or paraprofessionals) with adequate training. This talk introduces BA as a promising treatment option for chronic and severe mental disorders (i.e., DD and SZ) and explains its feasibility and efficacy based on community-based multi-site randomized controlled trials. For multi-site trials, mental health professionals were trained with a 10-session brief BA manual for DD and SZ. BA was delivered in a group or individual format once a week for 10 weeks by trained professionals and treatment fidelity was checked by the authors. Seventy-five patients with DD and 84 patients with SZ were recruited. Sixty-four DD patients and 70 SZ patients who met the inclusion criteria were randomly assigned to either the BA+TAU (n=31 for DD, n=38 for SZ) or the TAU-only group (n=33 for DD, n=32 for SZ). Depressive symptoms of DD patients and negative symptoms of SZ patients were measured utilizing clinical interviews and self-report questionnaires at baseline, end of the intervention, and six-month follow-up (FU). BA was well accepted by community-dwelling individuals with DD and SZ. Intention-to-treat analyses indicated that compared to the TAU condition, the BA+TAU group was associated with a large improvement at post-treatment in targeted symptoms (depressive symptoms in DD and negative symptoms in SZ). However, the significant treatment benefits were not maintained at the six-month FU. The results suggest that BA would be a promising time-limited and structured psychological intervention for DD and SZ with the merit of easy dissemination. Future trials are needed to examine the factors involved in sustaining improvement.

## Brief Psychological Interventions (BPIs) for Moderate to Severe Mental Health Conditions: Outcomes from a Service Evaluation

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### BACKGROUND

There is growing pressure on mental health services to offer more timely and cost-effective psychological interventions to increasingly more people (NHS England, 2015; O'Conner et al., 2017). In order to address issues of limited psychology resources, an innovative practice was piloted in two state-funded community mental health teams in Cambridge, United Kingdom. These services work with patients with moderate to severe mental health conditions.

This service innovation involved developing, delivering and evaluating 'Brief Psychological Interventions' (BPIs). BPIs are manualised, short-term interventions (8-10 sessions), delivered by non-psychologists (such as support workers), with regular supervision from qualified psychologists.

The talk presents findings from an evaluation of the introduction of BPIs in these community mental health teams.



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## METHOD

Based on pre-existing CBT and DBT components, three BPIs were developed, namely: 1) Anxiety Management; 2) Distress Tolerance; and 3) Behavioural Activation. Key components of BPIs included psychoeducation on maintenance cycles; goal-setting; understanding, accepting and validating emotions; thought challenging; behavioural experiments; tackling avoidance; graded exposure; relaxation; mindfulness; emotion regulation; and staying well.

BPIs were offered to patients with various presentations and co-morbidities (including depression, anxiety, PTSD, OCD, schizophrenia). Suitable patients were allocated for a BPI within 4 weeks as opposed to waiting times of 12+ months for CBT in the service. Clinical psychologists provided staff training and fortnightly group supervision.

Pre- and post-intervention measures of anxiety (GAD-7), depression (PHQ-9), wellbeing (sWEMWBS), and functioning (WSAS) were completed, as well as presentation-specific measures where appropriate (DTS; DERS).

## RESULTS

Outcomes are reported from patients who were offered the three BPIs (Anxiety Management, n=91; Behavioural Activation, n=45; and Distress Tolerance, n=82), including pre- and post-intervention clinical outcomes where available. Results relating to Anxiety Management and Behavioural Activation cover a two year period (March 2017-19), and results relating to Distress Tolerance cover a one year period (March 2017-18). Outcomes suggest these interventions offer real promise, with general improvements across all outcomes. In addition, patients report benefitting from these types of interventions, suggesting they are acceptable.

## DISCUSSION

There is increasing interest in the use of brief, psychologically-focused interventions within mental health services; however, the majority of previous research had been conducted in primary care settings, typically with individuals experiencing mild to moderate mental health difficulties.

In contrast, this project evaluated BPIs for anxiety, depression and distress intolerance within a secondary care adult mental health service, including patients with a range of moderate to severe mental health problems. Even with this patient group with more complex needs and presentations, BPIs were found to be effective overall. This is a really promising finding for this patient group and allows services to more effectively deploy limited psychology resources.

BPIs offer a number of benefits but most importantly they enable more patients to promptly receive psychological intervention.

Standalone BPIs seem to facilitate improvements in symptoms and wellbeing, as well as allowing services to identify patients who are likely to benefit further from longer-term CBT, either in primary or secondary care, or other sectors (e.g. charity-based services).

Future directions: BPIs were developed in the Cambridge Adult Locality Teams (CALTs) and continue to be delivered by non-psychologists in these services, with other services considering delivering them too. For full intervention evaluation details, see: Wright et al. (2020) and Roberts et al. (2021).

## **An Evaluation and Comparison of a Remote Distress Tolerance Brief Psychological Intervention (DT-BPI) to Face-to-Face Delivery in a UK Community Mental Health Team for Moderate to Severe Mental Health Problems**

Dr Stephanie Casey<sup>1\*</sup>, Dr Thomas Mundy<sup>2</sup>

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In response to an ever-increasing demand for mental health treatment, community services in the United Kingdom have developed compact alternatives often using the “active ingredients” of longer-term therapies like Cognitive Behavioural Therapy and Dialectical

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Behaviour Therapy. Research has highlighted that Brief Psychological Interventions (BPIs) in mental health teams treating moderate to severe difficulties are effective when being delivered face to face by non-psychologists (Roberts et al., 2021; Wright et al., 2020). This service evaluation aimed to examine the remote delivery of a brief psychological intervention teaching distress tolerance skills (DT-BPI) in response to services needing to adapt their service provision during the global pandemic.

Pre- and post-intervention outcome data is explored for sixteen participants who received remote DT-BPI. Comparisons are made to a group of sixteen participants who previously completed face to face DT-BPI in the same community team. The results indicated that both groups showed a change in the direction of improvement following the DT-BPI. There were reliable improvements and clinically significant change across several outcome measures for both groups. Whilst this is a small-scale initial evaluation, the results are encouraging as it highlights the potential benefits of a remotely delivered BPI in a secondary care mental health service in the UK. This new way of working warrants further exploration to continue to improve access to cost-effective psychological treatment.

## **Paraprofessionals Delivering Brief Psychological Interventions: Qualitative Accounts of Training and Supervision**

Rachel Maciag\*

*Salomon's Institute, Canterbury and Christchurch University, UK*

**Aim:** In response to the ever-increasing demand for access to mental health provisions both in and outside primary care settings in the United Kingdom, there have been innovative studies examining brief interventions. Services may be increasing efforts to train and supervise non-psychologists to deliver brief, low-intensity psychological interventions. It is essential to consider non-psychology mental health workers' experiences in acquiring and providing new interventions. This qualitative improvement project aimed to learn about mental health workers' experiences receiving training and supervision to provide brief psychological interventions.

### **METHODS**

All providing mental health workers in two secondary adult mental health community teams in the east of England completed a semi-structured interview, which was transcribed and subjected to thematic analysis. Eleven staff members were interviewed. The roles of those involved in the study were paraprofessionals, including Support, Time Recovery Workers, Peer Support workers, and Assistant Psychologists. The analysis followed the framework suggested by Braun and Clarke (2006). **Results:** Self-directed learning helped build their understanding of the interventions, and repeating procedural skills helped build their confidence. Shadowing, peer support, and the availability of supervising psychologists emerged as important factors in learning. Following the skill acquisition stage, many described increased comfort with working flexibly and reported being patient-centered in their approach. Mental health workers described natural uncertainties arising from learning a new intervention, demonstrating self-reflection over their practice. **Discussion:** This qualitative improvement project provides evidence that recognized learning processes and models in developing therapists' skills are also applicable to non-psychologists with little experience.

## **New Frontiers in Digital Mental Health: Delivering Targeted, Relevant, Effective and Accessible Services**

The emergence of the COVID-19 pandemic led to a rapid acceleration in the development and use of digital technologies in the provision of treatment and support for mental health. Public health measures to control the spread of the virus significantly restricted access to face-to-face mental health services, necessitating rapid uptake of digital health services in response to growing demand, but within the context of a limited evidence-base in terms of acceptability, feasibility and effectiveness. Emerging research has highlighted some of the challenges for digital mental health interventions around its effective implementation, access, and meaningful client engagement, highlighting the urgency of research into the design and implementation of digitally based intervention in mental health.

This symposium presents a collection of papers that highlight the diverse application of digital technologies to mental health support focusing on a range of psychological targets for intervention, integrating expert and lived experience perspectives, and providing empirical evidence for the feasibility and effectiveness of these interventions. Starting with the first paper (Blackie et al.), which is an Expert Delphi study exploring expert clinician's experience with treating complex PTSD via digitally based interventions. The paper synthesises the key design and clinical considerations, including therapeutic models and adjustments, facilitators and barriers to engagement and ethical considerations to provide recommendations for effective and safe delivery of digitally based interventions for those with complex PTSD. The next three papers within the symposium focus on implementation and effectiveness of telehealth interventions. The second paper (Doron et al.) presents initial findings on the effectiveness of a brief transdiagnostic CBT based telehealth intervention targeting the transition between autonomous and higher order reasoning processes, while the third paper (Ludlow et al.) provides initial evidence for the effectiveness of a brief CBT-based intervention in reducing pandemic-related anxiety and depression in youth. The final paper in the symposium (Brydon et al.) presents data from a feasibility study exploring the acceptability, implementation challenges and outcomes in delivering telehealth counselling in residential aged care aimed at reducing depression, anxiety and loneliness.

It is hoped that the symposium will stimulate practitioners and clinical researchers to consider the ways in which digital technologies can be designed and delivered for mental health support.

## **Digital-Based Interventions for Complex Post-traumatic Stress Disorder**

**Meg Blackie\***, Glen Bates, Elizabeth Seabrook, Maja Nedeljkovic

*Swinburne University of Technology, Australia*

During the COVID-19 pandemic, the use of digital-based interventions (DBIs) became common practice, including for the treatment of psychiatric conditions which had previously rarely been treated using DBIs, such as Complex Post-Traumatic Stress Disorder (cPTSD). Resulting from prolonged/repeated trauma usually involving an interpersonal component, cPTSD is a trauma response which goes beyond that of PTSD. In addition to the symptoms characteristic of PTSD (re-experiencing of the trauma, avoidance of reminders, and hypervigilance), those experiencing cPTSD may also experience deficits in interpersonal relatedness, emotional regulation, and their concept of self. As shown repeatedly in the literature, DBIs for PTSD appear to be effective in reducing symptoms, overcoming treatment barriers, and reducing treatment costs. To date however, there is limited empirical evidence (pre or post-COVID) to indicate whether these interventions have been designed in ways that are most effective, engaging, and safe to provide treatment to those experiencing cPTSD. This gap in the literature is partially due to cPTSD only recently having been included as a diagnosis separate to PTSD, within the latest revision of the International Classification of Disease (ICD-11). The current research therefore, presents the findings from an Expert Delphi Study investigating expert clinicians' experience with treating cPTSD via DBIs during the pandemic; including what was effective, what adjustments needed to be made and how, what barriers were encountered, what safety measures were taken, and any service delivery and/or safety measures that should be considered moving forward. Summarised suggestions for providing effective and safe DBIs for cPTSD will be presented.

## Targeting the Transition Between Autonomous and Higher Order Reasoning Processes: Initial Evidence for a Brief Transdiagnostic Telehealth Intervention

Guy Doron\*, Roy Marko

*Reichman University (IDC) Herzliya, Israel*

### INTRODUCTION

The significant comorbidity between mental disorders such as general anxiety disorder (GAD), depression, and obsessive compulsive disorder (OCD) has led researchers to investigate potential processes that are common to these disorders. Cognitive behavioral therapy (CBT) researchers have mostly focused on higher reasoning processes that load heavily on working memory and relate to hypothetical thinking (Type 2) including rumination, and self-criticism. Other researchers have targeted rapid autonomous processes (Type 1) that are less controllable and aware than Type 2 processes such as attention biases and implicit associations. In this study, we investigated whether an intervention aimed at increasing participants' ability to decouple Type 1 from Type 2 processes would be associated with decreased engagement in maladaptive thinking patterns including rumination and self-criticism. We also assessed whether such reduction would be associated with decreased GAD depression and OCD symptoms.

### METHOD

An open trial (n=27; Mage=26.93; 66.7% female) using a 5-week treatment protocol ('Did It' protocol) consisting of socratic questioning, motivational interviewing and response prevention strategies was used to delay the transition between Type 1 and Type 2 processes. Measures of anxiety (GAD-7; Spitzer et al., 2006), depression (PHQ-9; Kroenke, & Spitzer, 2002) and OCD (OCI-R; Foa et al., 2002) symptoms, as well as rumination (Ruminative response scale; RRS; Treynor et al., 2003), self-criticism (Forms of self-criticizing/attacking and self-reassuring scale; FSCRS; Baião et al., 2015) and self-critical rumination (Self-Critical Rumination Scale; SCRS; Smart et al. 2016) were taken prior to each session and at one month follow up.

### RESULTS

Medium-large effect size reductions were found from baseline to follow-up in depression (Cohen's  $d=-0.53$ ), GAD (Cohen's  $d=-0.71$ ) and OCD (Cohen's  $d=-1.07$ ) symptoms controlling for age and gender. Large effect size decreases were found on all maladaptive thinking measures (Cohen's  $d$  ranging from  $-0.72$  to  $-1.34$ ) except for the self-reassurance subscale of the FSCRS (Cohen's  $d=-.34$ ).

## Cognitive Behaviour Therapy for Pandemic-Related Anxiety and Depression in Youth: An Observational Study

Chris Ludlow\*

*Swinburne University of Technology, Australia*

### BACKGROUND

Although studies have examined the efficacy of cognitive behaviour therapy for adolescents experiencing depression and anxiety during the COVID-19 pandemic, research has yet to evaluate a theory-informed intervention for pandemic-related psychopathology in this population.

### METHODS

An observational study was conducted to evaluate a novel therapy for adolescents reporting pandemic-related psychopathology. To meet inclusion criteria, participants had to experience psychological symptoms attributable to, or exacerbated by, the COVID-19

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pandemic, as determined by self-report and clinician judgement. A sample of 15 adolescents (M age 16.07, SD = 1.75, range 13 – 18; 86% female) commenced six sessions of psychological therapy. The primary outcome was pre- to post-change in psychiatric symptoms, with secondary outcomes including pandemic-related fears, behavioural withdrawal, and intolerance of uncertainty.

## RESULTS

Participants reported a significant decrease in psychiatric symptoms from pre- to post-treatment (Hedges'  $g = .82$ ) in an intention-to-treat analysis, with 60% of participants demonstrating reliable improvement by the end of treatment. Pandemic-related fears also decreased (Hedges'  $g = .72$ ), but other secondary outcomes remained unchanged at the end of the intervention.

## CONCLUSIONS

This observational study provides evidence for the potential benefits of adapting cognitive behaviour therapy to meet the mental health needs of adolescents living through a pandemic.

## **Telehealth Counselling in Residential Aged Care to Reduce Depression, Anxiety, and Loneliness: A Feasibility Study**

Aida Brydon\*, Sunil Bhar

*Swinburne University of Technology, Australia*

The prevalence of mental health issues among aged care residents is high, however remain under-treated in residential aged care facilities. The use of telehealth to deliver mental health services to aged care residents is an emerging model of care in this sector and has the potential to increase the accessibility of psychological services. The purpose of this study was to investigate the feasibility and efficacy of a telehealth counselling service for older adults residing in aged care.

Using data collected through routine service delivery of an Australian telehealth counselling service for residential aged care, this feasibility study employed a single-arm design. Outcomes were examined before receiving counselling, and upon completion of counselling. Data was collected from May 2020 to May 2022. Aged care residents were either self-referred to the service, or were referred by others (e.g. aged care staff, family members, general practitioners). Counselling was delivered by supervised mental health trainees who were completing their master's in psychology, counselling or social work. Intervention feasibility was assessed on a five a priori-determined domains. Depression, anxiety and loneliness symptoms were included as efficacy outcomes.

Two-hundred and fifty-three aged care residents received counselling services through the telehealth clinic, with 3231 counselling sessions delivered. Service users received 14 sessions each on average, with sessions 42 minutes in length on average. The most frequently used therapeutic intervention was supportive counselling. Both residents and referrers were satisfied with the service, and there was a low attrition rate. Telehealth counselling was associated with a statistically significant decrease in depression and anxiety symptoms. While levels of self-reported loneliness trended towards improvement, there was no statistically significant difference. Telehealth counselling within residential aged care was found to be feasible and acceptable to aged care residents and referrers. Telehealth counselling shows preliminary efficacy in reducing anxiety and depression symptoms. A larger randomised control trial is warranted.

### **Advances in Understanding the Relationships Between Attention and Worry**

Worry forms a core cognitive component of a range of anxiety and mood disorders with worry frequently experienced as distressing, uncontrollable, intrusive thoughts serving to exacerbate psychological distress. Worry is believed to share a reciprocal relationship with attention control whereby lower attention control may be associated with worse worry, and higher worry in turn has the potential to diminish attention control. A related attentional process, biased attention to threat, has also been causally implicated in worry. This symposium brings together research at the nexus of understanding relationships between worry, attention and their potential negative and positive effects on psychological wellbeing and performance. Research to be presented by Dr Frances Meeten of the Institute of Psychiatry, Kings College London (United Kingdom) explores how best to quantify relationships involving worry and attention control. Specifically, this research considers the strength and direction of associations between worry and attention control when determined using alternative self-report, as compared to objective behavioural tasks, with findings carrying important implications for researchers seeking to quantify these measures. Dr Lies Notebaert of the University of Western Australia (Australia) will present findings from research that considers the potential for worry-related cognitions to be either maladaptive or adaptive, depending on the controllability of event/s under consideration. This experimental research examined how attention toward controllable versus uncontrollable events potentially predicts worry that is focused on either controllable or uncontrollable events. Findings indicated that attention to controllable threats predicted worry when control over the impending danger was still possible (i.e. 'adaptive' worry), holding potential implications for mitigating worry by aligning attention to controllable threats. Consideration of the potential costs and benefits of worry is further extended in the research of PhD candidate Alannah Horton. This research examines whether measures of attention control assessed either at rest or under conditions of worry, potentially mediate the relationship between worry and performance under stress (university exams). Her findings suggest that only attention control assessed under worry was a significant moderator, and the direction of the effect of worry on academic performance changed depending on the individual's level of attention control. Specifically, for those with high attention control, higher worry was associated with better performance, while for those with lower attention control, higher worry predicted worse performance, suggesting that the impact of worry on performance may vary as a function of attention control. Finally, Dr Ya-Chun Feng of the National Sun Yat-sen University (Taiwan) will present findings from a study that sought to determine the impact of enhancing attention control, and selectively directing attention, on worry. The study developed and implemented a computer-based training task that seeks to simultaneously enhance attention control and increase attention toward neutral information. Preliminary results showed evidence for a near transfer effect in the enhancement of attention control and reduced negative thoughts during a worry assessment task following training. The results indicate that training targets combined cognitive processes may be helpful in reducing worry. The symposium will conclude with a discussion of the applied implications of these research findings and interesting new research directions highlighted through these results.

### **Examining the Relationship Between Worry and Attentional Control Measures**

**Frances Meeten\***, David Spalding

*King's College London, Institute of Psychiatry, Psychology and Neuroscience, UK*

Generalised anxiety disorder (GAD) is characterised by cognitive symptoms such as excessive and uncontrollable worry and difficulty concentrating. GAD is also associated with somatic symptoms of anxiety such as muscle tension, restlessness, and fatigue. Anxiety has been associated with impaired top-down attentional control (e.g. the ability to ignore distracting information/shift attention between tasks). However, one hypothesis is that it is the process of worry specifically that impacts adversely on attentional control. The present

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study further explores the relationship between anxiety, worry, and attentional control in a sample of university students from Australia and the UK. To better understand the role of attentional control in anxiety and worry, attentional control is examined using both a self-report measure (the Attentional Control Scale (ACS); Derryberry & Reed, 2002) and a behavioural task (the Attentional Network Test (ANT); Fan et al., 2002). Based on prior literature showing that worry is associated with depleted attentional control, we predicted that worry would significantly mediate the relationship between a measure of GAD and attentional control. We discuss the findings of this study in relation to our theoretical understanding of the processes that maintain GAD and in relation to the broader question of how effectively psychological processes of interest can be measured.

## **The Relationship Between Worry and Academic Performance: Examining the Moderating Role of Attention Control**

Alannah Horton\*, Annelise Pring, Daniel Rudaizky, Patrick Clarke

*Curtin University, Australia*

### BACKGROUND

Worry is frequently associated with reduced cognitive performance which may be due to the tendency for worry to consume attention control resources. To gauge the propensity for worry to compromise real-world cognitive performance it may be important to assess attention control under conditions of acute worry that more closely resemble real-world performance. This study examined whether attention control assessed at rest or under acute worry moderates the relationship between worry and academic performance.

### METHODS

Worry (Penn State Worry Questionnaire) and academic performance (examination grades) were assessed in 87 undergraduate students, with attention control (antisaccade performance) measured at baseline and following a worry induction.

### RESULTS

When assessed under acute worry, attention control significantly moderated the relationship between worry and academic performance ( $p = .05$ ,  $f^2 = 0.14$ ). For participants with low attention control, higher worry predicted lower academic performance, while this relationship was reversed for those with higher attention control.

### CONCLUSIONS

This suggests that worry may shape performance according to attention control levels. While the moderating effect of attention control was observed only when assessed under worry, the effect did not differ significantly from non-worry assessment. The present results provide preliminary evidence that attention control assessed under worry better predicts real-world performance.

## **Preliminary Findings of a Combined Cognitive Bias Modification Targets Attention Control and Attention Bias**

Ya-Chun Feng<sup>1\*</sup>, Yuan-Ru Chang<sup>1</sup>, Xue-You Guo<sup>1</sup>, Hao-Yun Cheng<sup>1</sup>, Bo-Cheng Kuo<sup>2</sup>, Colette Hirsch<sup>3</sup>

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Training paradigms that aim to enhance attention control ability have been developed to reduce emotional symptoms. Previous studies

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have shown the effectiveness of enhancing attention control and reducing emotional symptoms, e.g., depression and anxiety (Edwards et al., 2022; Koster et al., 2017). However, some only found limited training effects on reducing worry. For example, only worriers with a greater increase in attention control showed a greater reduction in negative intrusions after training (e.g., Fox et al., 2015; Grol et al., 2018). The results indicated the training might not benefit every worrier, so it needs some enhancement. Given that impaired attention control may occur when individuals face emotional information (Hayes et al., 2008), training with emotional stimuli may bring better emotional transfer outcomes in the real world, i.e., reducing emotional distress. Moreover, top-down attention control and bottom-up attention bias likely compete via mutual inhibition (Hirsch & Mathews, 2012). In this case, the effectiveness of attention control training also relied on the extent of negative attention bias. If individuals have strong negative attention bias, the enhanced attention control ability from the training may not be enough to help them disengage from the negative information; thereby, their worries persist. To address these potential issues, a computer-based training that enhances attention control and attention toward neutral information simultaneously was developed in the current study. The near transfer (attention control and attention bias) and far transfer effects (worry level) of the training were examined to see whether this new training has the potential to be an advanced intervention for worry. Negative thoughts during a worry induction task were assessed before and after the three-week training program. Preliminary results showed evidence for a near transfer effect in enhancing attention control and reduced negative thoughts during a worry induction task following training. More findings and implications will be discussed in the presentation.

## **Attentional Bias to Threat in Worry About Controllable and Uncontrollable Events**

Lies Notebaert\*

*Centre for the Advancement of Research on Emotion, University of Western Australia, Australia*

People worry about a range of different issues, and there are large individual differences in how much we worry and what we worry about. Worry can be more adaptive when it concerns future events we have control over. Such worry can be differentiated from more maladaptive worry about events over which we have little control. Little is known about the attentional processes that underpin the tendency to worry about more and less controllable events. In this study, we test the novel hypothesis that to the extent people can align attention to threat cues to suit variation in the controllability of the danger signalled by these threat cues, they may also be better at restricting their worrying to situations over which they have a high degree of control, rather than to also worry when they have little control. Participants (N=67) completed a task measuring attentional bias under conditions of high versus low control over the danger signalled by a threat cue (i.e. alignment). Next, they underwent a speech-related worry induction task which signalled a possible future negative (social evaluative) event. Worry was assessed at a time when they had control over this negative event and at a time where control was no longer possible (unproductive worry). Consistent with the hypothesis, the highest level of attentional bias alignment was observed in those who worried more before the speech (when they had control) relative to after the speech (when they could no longer control the outcome). These findings have important implications for how attentional mechanisms can be targeted in the prevention and treatment of worry-related psychopathology.



## Recent Advances in Mindfulness-Based Interventions

Mindfulness-based interventions (MBIs) for mental health seek to train recipients to sustain their attention either on benign or neutral stimuli (for example, their breathing) or on the present moment, while managing potentially diverting internal (thoughts, feelings) or external distractions. There is strong evidence now that this domain-general skill helps or ameliorates symptoms across a range of mental health difficulties; for example, Mindfulness-Based Cognitive Therapy in the prevention of depressive relapse.

In this symposium we explore some of the new directions that MBIs have taken, to illustrate their breadth and potential. After a short Introduction by Convenor Tim Dalgleish (Cambridge), Maris Vainre et al. will present the results from their recently-completed meta-analysis of randomised controlled trials (RCTs) of MBIs for adults in the workplace with outcomes of mental health and work productivity, and the results of their recent RCT (protocol: doi:10.1136/bmjopen-2021-050951)\*. Julieta Galante et al. will then present the outcomes of an individual participant data meta-analysis of MBIs for mental health promotion in adults across all non-clinical settings for diverse outcomes including mental health and domains of cognition (protocol: doi:10.1136/bmjopen-2021-058976). Tim Dalgleish et al., will overview the findings of the recent MYRIAD trial evaluating a MBI in a large scale RCT in 85 UK secondary schools in young adolescents as a universal prevention for depression, social, emotional and behavioural functioning and wellbeing, before discussing the new 2-year follow-up data, collected following the peak of the COVID pandemic (protocol: doi:10.1186/s13063-021-05213-9). Rachel Knight et al. will then present their recently-completed RCT comparing training in a single core MBI skill—Psychological Decentering—against an active control, for mental health in older adolescents with current mild to moderate current symptoms (protocol: doi:10.1136/bmjopen-2021-056864).

The lessons and pathways forward for MBIs in novel settings and populations will then be reviewed by Discussant Susan Bogels.

\*Potential mechanistic mediators from this study are presented in a different symposium

## Could Mindfulness-Based Programmes Improve Work Performance?

**Maris Vainre<sup>1\*</sup>, Tim Dalgleish<sup>1</sup>, Tia Bendriss-Otiko<sup>2</sup>, Fabiana Mariscotti<sup>3</sup>, Candelaria Martinez-Sosa<sup>2</sup>, Athina Sideri<sup>4</sup>, Peter Watson<sup>1</sup>, Christina Haag<sup>5</sup>, Quentin Dercon<sup>1</sup>, Julieta Galante<sup>6</sup>, Caitlin Hitchcock<sup>7</sup>**

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### BACKGROUND AND AIMS

Mindfulness-based programmes (MBPs) are increasingly used in occupational settings and are suggested to improve work and academic performance despite scarcity of evidence regarding the effects and mechanisms of mindfulness training for workplace performance.

### METHODS

We conducted two studies. First, in the systematic review and meta-analysis, we synthesised randomised controlled trials (RCTs) assessing the impact of MBPs on adults' academic and work performance. The pre-registered primary outcome was task performance (PROSPERO: CRD42020191756). Secondary outcomes were contextual performance, adaptive performance, and counter-productive work behaviours. We conducted pairwise random-effects meta-analyses using Hedge's *g*s within the four work performance dimensions.

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Second, in the randomised controlled feasibility trial, 242 employees from 8 employers were randomised to four weeks of either light physical exercise or mindfulness training online (1:1 allocation). The primary outcome was work performance at post-intervention, measured using the Work Role Functioning Questionnaire. Outcomes were collected at baseline, post-intervention and 12-week follow-up. The trial was pre-registered (NCT04631302) and its protocol published.

## RESULTS

A total of 47 studies (5041 participants) were included in the systematic review and meta-analysis, all but one with high risk of bias. MBPs were not found to improve task performance ( $k = 7$ ,  $n = 454$ , Hedge's  $g = 0.52$ , 95% CI  $-0.03$  to  $1.07$ ,  $p = 0.059$ ) up to 4 weeks after the intervention compared to passive control groups. However, MBPs improved adaptive performance and contextual performance. Comparisons with active control groups were insufficient for meta-analysis. Confidence in the review results according to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach is low to very low. In the RCT, 122 employees were randomised to mindfulness ( $M = 44.22$ ,  $SD = 11.13$  years, 86% female) and 120 to light exercise (age  $M = 45.15$ ,  $SD = 10.24$ , 83% female). Analysis of outcome data is ongoing. We will present preliminary findings.

## **Effectiveness of a Universal School-based Mindfulness Training Programme Compared with Normal School Provision in Preventing Mental Health Problems and Promoting Well-being: Results of the MYRIAD Cluster-Randomised Controlled Trial at the Primary Endpoint and at Post-COVID Follow Up**

Willem Kuyken<sup>2</sup>, Tim Dalgleish<sup>1\*</sup>, Sarah-Jayne Blakemore<sup>3</sup>, Sarah Byford<sup>4</sup>, Tamsin Ford<sup>5</sup>, Obioha Ukoumunne<sup>6</sup>, Mark Williams<sup>2</sup>

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## BACKGROUND

Adolescence is when mental health problems typically arise, providing a developmental window for prevention. Research has demonstrated the effectiveness of mindfulness training in adults, but to date no large trials have evaluated its effectiveness in young people. This trial evaluated the effectiveness and cost-effectiveness of universal school-based mindfulness training (SBMT).

## METHODS

This parallel, cluster randomised trial recruited schools offering standard social-emotional teaching. Schools (clusters) were randomised 1:1 to either continue this provision (control) or offer mindfulness training (intervention; SBMT), stratified by school size, quality, type, deprivation and region. Three co-primary outcomes (risk for depression, social-emotional-behavioural functioning, and well-being) at one-year follow-up were compared between trial arms using the intention-to-treat principle. Economic evaluation took a health and social care perspective, assessing cost-effectiveness in terms of quality adjusted life years (QALYs). Trial registration ISRCTN86619085.

## FINDINGS

Eighty-five schools were recruited in academic years 2016/17 and 2017/18, with 43 randomised to SBMT and 42 to control. One control school dropped out soon after randomisation. This talk will present data on our analysis of 84 schools and 8,376 participants for our primary endpoint along with two year post-COVID follow-up data.

## Training Psychological Decentering: Results from a Novel Low-Intensity Intervention to Improve Mental Health in Adolescence

Rachel Knight<sup>1\*</sup>, Marc Bennett<sup>1</sup>, Tim Dalgleish<sup>1</sup>, Sarah-Jayne Blakemore<sup>3</sup>, Willem Kuyken<sup>5</sup>

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### INTRODUCTION

Adolescence is a critical period for development, and often coincides with the onset of mental ill health. Thus, it is a favourable period in which to intervene with individuals vulnerable to psychological difficulty. This could be achieved through training of specific “active ingredients” which have been suggested to drive change in psychological therapy. Psychological decentering, which describes the ability to voluntarily adopt an objective self-perspective from which to notice internal, typically distressing, stressors (eg, difficult thoughts, memories and feelings), may be one such ingredient. However, it is unclear if decentering can be trained at a young age and if this might reduce psychological distress.

### METHODS

Adolescents, recruited from schools in the UK and Ireland (n=57 per group, age range=16–19 years), were randomised to either complete 5 weeks of decentering training, or an active control group involving light physical exercise and cognitive training. The primary outcome was a self-reported decentering inventory, the Experiences Questionnaire. The secondary mental health outcomes included self-reported inventories of depression and anxiety symptoms, and psychological well-being. Initial statistical analysis used between-group analysis of covariance to estimate the effect of training condition on self-rated inventories, adjusted for baseline scores.

Preliminary Results: In this talk we report primary and secondary outcomes of the trial, both at an interim time point after 3 weeks of training, and post-training. Data was analysed by the trial statistician, who was blinded to condition, using an intent-to-treat model. Further implications of the outcomes will also be discussed.

## Individual Participant Data Systematic Review and Meta-Analysis of Randomised Controlled Trials Assessing Adult Mindfulness-Based Programmes for Mental Health Promotion in Non-clinical Settings

Tim Dalgleish\*

MRC Cognition and Brain Sciences Unit, University of Cambridge

### INTRODUCTION

Mindfulness-based programmes (MBPs) are widely used to prevent mental ill-health that is becoming the leading global cause of morbidity. Evidence suggests beneficial average effects but wide variability. We aimed to confirm the effect of MBPs on psychological distress, and to understand whether and how baseline distress, gender, age, education, and dispositional mindfulness modify the effect of MBPs on distress among adults in non-clinical settings.

### METHODS

We conducted a pre-registered systematic review and individual participant data (IPD) meta-analysis (PROSPERO CRD42020200117). Thirteen databases were searched in December 2020 for randomised controlled trials satisfying a quality threshold and comparing in-

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person, expert-defined MBPs in non-clinical settings with passive control groups. Two researchers independently selected, extracted, and appraised trials using the revised Cochrane Risk-of-Bias Tool (RoB2). Anonymised IPD of eligible trials were sought from collaborating authors. The primary outcome was psychological distress (unpleasant mental or emotional experiences including anxiety and depression) at 1 to 6 months after programme completion. Data were checked and imputed if missing. Pairwise, random-effects, two-stage IPD meta-analyses were conducted. Effect modification analyses followed a within-studies approach. Public and professional stakeholders were involved in the planning, conduct and dissemination of this study.

## PRELIMINARY RESULTS

Fifteen trials were eligible, 13 trialists shared IPD (2,371 participants representing 8 countries, median age 34 years-old, 71% women, moderately distressed on average, 20% missing outcome data). In this talk we report comparison of MBPs with passive control groups, at one- and six-months post-intervention, alongside relevant sensitivity analyses and analysis of possible moderating variables.

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### Neural Mechanisms of CBT

Cognitive behavioral therapy (CBT), which is evidence-based, well-structured, and highly effective in the short term. Neuroscience-based CBT and the like have converged into a new wave of CBT. In the past few years, great progress has been made in the study of the neural mechanisms of CBT, but the neuroscientific mechanisms of action of CBT are still unclear, and although there are relevant studies, the results are not uniform. In this symposium, brain mechanisms of both CBT and new CBT technologies were included. The first presenter, Chun Wang will report a meta-analysis of the neuroimaging effect of CBT on psychiatric disorders. The report will give an insight into the mechanisms of neurological effects of CBT in brain networks. The second presentation by Jian Gao and Zhen Wang will present whether concurrent application of transcranial direct current stimulation (tDCS) and ERP (tDCS+ERP) could result in higher therapeutic efficacy than ERP alone in treating OCD patients, and the possibility that computational simulation of tDCS current distribution based on individual's cranial anatomy and EEG-based brain state analysis could predict the therapeutic effect of tDCS+ERP treatment. The following two presentations will deal with the neural mechanisms of mindfulness-based interventions. The third presentation, Qing Fan will report a randomized controlled trial with 6-month follow-up on mindfulness-based cognitive therapy for unmedicated obsessive-compulsive disorder. After that, the neural mechanisms of mindfulness will be further reported. The final presentation of this symposium will be presented by Qianwen Xu, who will report the results of a meta-analysis of neural mechanisms of mindfulness-based interventions in different populations and modalities. In the end, the symposium will conclude with a general discussion of the future research on the neural mechanisms of CBT.

### Meta-Analysis of Neural Mechanisms of CBT

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#### BACKGROUND

Cognitive behavioral therapy (CBT) is a first-line psychotherapeutic treatment that has been recommended for psychiatric disorders. Prior neuroimaging studies have provided preliminary evidence suggesting that CBT can have an impact on the activity of brain regions and functional integration between regions. However, the results are far from conclusive. The present article aimed to detect characteristic changes in brain activation following CBT.

#### METHOD

Studies included in the meta-analysis were required to examine functional activation changes between pre- and post-CBT, and then divided into subgroups according to different task paradigms. An activation likelihood estimation algorithm (ALE) was performed in the different meta-analyses to identify whether brain regions showed consistent effects. Finally, used the spatial correlation values between independent components and the template to categorize the brain regions identified in ALE-analyses into the eight functional networks.

#### RESULTS

For the ALE meta-analysis, the left anterior cingulate (ACC) and the left precuneus were found to have decreased activation following CBT. The present review revealed default mode network (DMN) and salience network (SN) were the most relevant among the eight functional networks.

#### CONCLUSION

The results revealed that the altered activation in the prefrontal cortex were key regions related to the effects of CBT. Therefore, CBT may modulate the neural circuitry of emotion regulation. This finding provides recommendations for the rapidly developing literature.

## Concurrent tDCS Augmented ERP Treatment of OCD

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### OBJECTIVE

Despite cognitive behavioral therapy (CBT) with exposure-response prevention (ERP) is widely used in the treatment of obsessive-compulsive disorder (OCD), the treatment failure rate was around 50%. The present study aims to examine whether the concurrent application of transcranial direct current stimulation (tDCS) and ERP (tDCS+ERP) could result in higher therapeutic efficacy than ERP alone in treating patients with OCD, while the possibility that EEG-based brain state analysis and MRI-based tDCS electric field (EF) simulation could predict the therapeutic effect of tDCS+ERP treatment.

### METHODS

In the present randomized, double-blind, controlled trial, 45 patients with OCD were recruited. All patients received either active (1.5mA) or sham (0 mA) anodal tDCS on the frontal lobe during ERP treatment in eight 20-minute sessions over two months.

### RESULTS

Intention-to-treat analysis revealed that tDCS+ERP improved the efficacy of ERP for the treatment of OCD. Specifically, the ERP response rate was 64.6% (14/22) for patients with OCD who received active tDCS and 26.1% (6/23) for those who received sham tDCS. Post hoc t-tests indicated that the percent reduction Y-BOCS scores were significantly larger in the active group than that in the sham group after the 4th and 8th tDCS+ERP. The brain states analysis indicated that the changes in microstate class A (MS-A) occurrence positively correlated with the final Y-BOCS reduction. Such changes after the first tDCS+ERP could consistently predict the final Y-BOCS reduction. The individualized EF simulation revealed that the mean EF strength in the dorsolateral prefrontal cortex and the inferior frontal cortex was correlated with treatment efficacy. Meanwhile, they consistently correlated with changes in the MS-A occurrence.

### CONCLUSION

Concurrent tDCS could significantly enhance the therapeutic efficacy of ERP for treating OCD, and this enhancement effect could potentially be predicted by changes in brain states and the mean EF strength in various brain regions.

## RCT Research on MBCT for Unmedicated Obsessive-Compulsive Disorder and Neuroimaging of Brain Network of Internal and External Meditation

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### INTRODUCTION

Selective serotonin reuptake inhibitors (SSRIs) and cognitive behavioural therapy (CBT) with exposure and response/ritual prevention

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(ERP) are now the first-line treatments for obsessive-compulsive disorder (OCD). However, a part of OCD patients develop resistance to them. Mindfulness treatment has emerged as a novel and promising approach for the treatment of OCD. This was the first randomized controlled trial (RCT) designed to compare the efficacy of mindfulness-based cognitive therapy (MBCT) on unmedicated OCD with that of the first-line treatment for OCD (SSRIs) or a placebo, as well as to analyse the treatment acceptability and safety of MBCT. After that, the neural mechanisms of mindfulness were further explored. Since research has found mindfulness practice can improve our cognitive and motivational functioning, the regions of interest (ROI) were identified as left frontoparietal attention network (LFPN), right frontoparietal attention network (RFPN) and sensory-motor network (SMN).

## METHOD

In study one, a total of 123 unmedicated OCD patients with mild to moderate symptoms were randomly assigned into SSRIs group, MBCT group or psycho-education group (PE group), respectively. They were intervened for 10 weeks. The Yale–Brown Obsessive-Compulsive Scale (Y-BOCS) grade was the primary outcome, and Hamilton Depression Scale-24 (HAMD-24) and Hamilton Anxiety Scale (HAMA) grades were secondary outcomes to be measured at baseline, mid-intervention, post-intervention and 14, 22, and 34 weeks of follow-up. In study two, 21 healthy participants were divided into two groups: Beginner Group (BG, N=8, total mindfulness practice duration ≤20 hours) and Skilled Group (SG, N=13, practice duration >20 hours). Using fMRI scanning, we compared the difference between BG and SG on activation of ROI in “internal meditation condition (mindfulness of breathing)”, “external meditation condition (mindfulness of sound)” and “Eyes-open/Eyes-closed resting states condition”

## RESULTS

In study one, significant differences were detected in the treatment responses among SSRIs group, MBCT group and PE group. Notably, treatment responses were significantly better in the former two groups than that of PE group, although we did not identify significant differences between SSRIs group and MBCT group. Observed until 6 months of follow-up, there were no significant differences in treatment response among three groups. No AE was recorded in MBCT group. In study two, during meditation and resting state, SG’s right inferior parietal lobule in LFPN and left inferior parietal lobule in RFPN showed significantly more neural activation compared to BG. Increased activity of SMN was found during mindful attention in SG than BG, especially during internal attention phases. What’s more, significantly different activation in SMN was found in SG: the highest activation was found during internal attention meditation, followed by external attention meditation and the lowest during resting state.

## DISCUSSION

MBCT is effective in the treatment of unmedicated OCD with mild to moderate symptoms comparable to that of SSRIs, which contributes to maintain the treatment outcomes at follow-up. The neuroimage study showed that long-term mindfulness training can expand the activation range of attention network (FPN), and promote the activation of SMN in healthy people. Future studies could explore how mindfulness practice results in changes in attention and self-regulation in OCD patients.

## Meta-Analysis of Neural Mechanisms of Mindfulness-Based Interventions

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## BACKGROUND

Neuroimaging studies have provided preliminary evidence that mindfulness-based interventions (MBIs) can affect brain activity and its structure, but heterogeneous results across studies and lack of generally accepted neuroimaging understanding. The purpose of this paper is to detect the brain regions that undergo longitudinal consistent changes in brain structure or function after MBIs and to describe

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the connectivity characteristics of these regions and their functional characteristics.

## METHODS

The present study employed activation likelihood estimation (ALE) to meta-analyze studies in the literature using whole brain magnetic resonance imaging (MRI) or positron emission tomography (PET) before and after MBIs, and meta-analytic connectivity modeling analyses (MACMs) were conducted to examine the co-activation patterns in brain regions identified in ALE-analyses.

## RESULTS

The most consistent alterations in MBIs were found in the right medial superior frontal gyrus (SFG). Significant increased activation was found in the salience network (SN) in task state. Significant co-activation in resting state was found in the left putamen, bilateral precentral gyrus, left lingual gyrus, left inferior temporal gyrus (ITG) and right medial SFG.

## CONCLUSIONS

These results suggest that MBIs mainly improved functional activity in the SN in the task state; the consistent area of alteration after MBIs was located in the right medial SFG, which may indicate a broad and fundamental role of MBIs in emotion regulation. The co-activation pattern of these brain regions suggests that the mindfulness process is supported by large-scale brain-region interactions.



### **Experiences and Advancements in the Dissemination of Internet-Delivered Cognitive Therapy for Social Anxiety Disorder (iCT-SAD)**

Individual face-to-face cognitive therapy has been shown to be efficacious for social anxiety disorder (SAD) across a range of randomised controlled trials. However, it remains the case that access to such treatment remains limited in clinical settings around the world.

Successful dissemination, both domestic and international, typically involves many elements, including therapist training to deliver the treatment, consideration of a range of treatment delivery formats, adaptation for use with different age groups such as children and adolescents, and the translation and/or cultural adaptation of treatment content. This symposium will focus on each of these elements, outlining the speakers' experiences of, and the latest developments in, disseminating a therapist-guided internet-based format of cognitive therapy for SAD (iCT-SAD). It will incorporate work with both adults and adolescents, and include the outcomes of projects to disseminate the treatments in the UK, Hong Kong, and Japan.

The first speaker (David M. Clark) will introduce iCT-SAD and summarise its development to date. This presentation will outline the results of a recent study implementing iCT-SAD in routine clinical practice settings in the UK. The second speaker (Graham R. Thew) will outline the approach taken to disseminate the iCT-SAD treatment in Hong Kong, including approaches to therapist training, treatment adaptation, and evaluation. It will consider how initial findings from these studies are now being developed to address empirical questions that would aid further dissemination. The third speaker (Naoki Yoshinaga) will present the translation and cultural adaptation process used to generate a Japanese version of iCT-SAD, and the subsequent preliminary evaluation of the treatment in Japan. The presentation will consider how cultural adaptation might be needed during the development process, and whether the preliminary findings are similar to those observed in the UK and Hong Kong. The fourth speaker (Eleanor C. Leigh) will present qualitative findings from a schools-based randomised controlled trial of an adapted version of iCT-SAD for use with adolescents (OSCA). Her talk will present findings from qualitative interviews with young people and consider implications for implementation and wider-scale dissemination.

Overall this symposium aims to summarise the latest advances and offer reflections on the processes involved in disseminating iCT-SAD. At a time when online therapies have the potential to play a significant role in addressing the global mental health crisis, it will outline some of the key challenges and opportunities that researchers and clinicians face in taking this work forward.

### **Dissemination of iCT-SAD into Routine Mental Health Services in the United Kingdom**

David M. Clark\*

*University of Oxford, UK*

Cognitive therapy for social anxiety disorder (CT-SAD) based on the Clark and Wells (1995) model is an effective treatment that has been shown to compare favourably with several other active interventions and is recommended by a number of national healthcare guidelines across the world. To improve the access and reach of this treatment, our group developed an internet-delivered version of the treatment that faithfully implements the procedures and techniques of CT-SAD using an online format. Internet-delivered cognitive therapy for social anxiety disorder (iCT-SAD) is a modular programme that includes core modules given to all patients, as well as a range of additional modules on specific fearful beliefs that allow treatment to be tailored to each patient. Therapists provide support via brief weekly phone calls, messaging, and occasional webcam calls.

This presentation will provide an overview of the iCT-SAD programme and its evidence to date, including a recent RCT (Clark et al., 2022, Psychological Medicine), which compared iCT-SAD to its face-to-face equivalent (CT-SAD) and waitlist controls. The results indicated that iCT-SAD showed large treatment effects comparable to those of face-to-face CT-SAD but requiring substantially less therapist time per patient. Following this initial demonstration of efficacy, the next step was to examine iCT-SAD in routine clinical practice settings. Many

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promising interventions do not achieve successful implementation in real-world contexts, so we aimed to evaluate the outcomes of iCT-SAD when delivered in UK NHS Talking Therapies (formerly Improving Access to Psychological Therapies) services by local therapists. The presentation will share the results of this implementation study, which treated 193 patients across six clinical services, and examined whether results differed based on the level of therapist qualification. It will consider how the findings compare to those from the randomized controlled trial, and what they suggest for the next steps in disseminating the treatment.

## **Implementing and Evaluating Internet-Delivered Cognitive Therapy for Social Anxiety Disorder (iCT-SAD) in Hong Kong**

Graham Thew\*

*University of Oxford, UK*

Internet-delivered psychological therapy interventions may be particularly suited to international dissemination because much of the treatment content is written down and fixed within an online programme. This means that following translation and cultural adaptation as required, it may be easier to deliver treatments consistently and in ways that closely adhere to the original protocol. However, the number of studies examining the process and outcomes of the international dissemination of internet interventions is currently small, and this is an important step if wider global access to evidence-based psychological therapies is to be achieved.

This presentation will outline the approach taken to disseminating a UK-developed programme, internet-delivered cognitive therapy for social anxiety disorder (iCT-SAD), to Hong Kong. It will describe the approach taken for training local therapists and piloting the programme (Thew et al., 2019, JMIR Formative Research), and the results of a randomised controlled trial comparing iCT-SAD delivered in English, to a waitlist control group (Thew et al., 2022, Internet Interventions). It will also review the findings of a study examining one specific component of the treatment, videofeedback, and how this compares between UK and Hong Kong samples (Wild et al., 2023, Journal of Affective Disorders).

The presentation will reflect on the advantages and disadvantages of implementing the treatment without translation or cultural adaptation as an initial step. It will also outline the current and future directions of this work, considering issues of scalability and sustained service provision.

## **Transporting UK-Developed Internet-Delivered Cognitive Therapy for Social Anxiety Disorder (iCT-SAD) to Japan**

Naoki Yoshinaga\*

*University of Miyazaki, Japan*

Efforts to improve access to psychological treatments by training new therapists have been made around the world, but the impact of expanded training can be improved further by applying therapist-guided internet interventions. Internet-delivered cognitive therapy for social anxiety disorder (iCT-SAD) is a therapist-guided modular online treatment developed in the UK, and the original English-language version of iCT-SAD has shown strong efficacy in the treatment of SAD in randomized controlled trials in the UK (Clark et al., Psychol Med, 2022) and Hong Kong (Thew et al., Internet Interv, 2022). The UK trial also demonstrated that clinical outcomes observed in iCT-SAD condition were comparable to face-to-face CT, while requiring substantially less therapist time per client. However, it is not yet known whether iCT-SAD can retain its high efficacy once the treatment contents have been translated and adapted for a different culture such as Japan.

In order to make iCT-SAD more suitable for the Japanese context, we translated and adapted the treatment content and materials from English to Japanese. The Japanese treatment material was then evaluated using a guided self-study approach with six Japanese clients

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with SAD, where electronic versions of the Japanese modules were emailed and used independently by clients between 14 weekly in-person treatment sessions with their therapist. Based on feedback from participants and the positive clinical outcomes observed in this guided self-study treatment, it was concluded that the iCT-SAD treatment content had been successfully translated and culturally adapted (Yoshinaga et al., *J Behav CognTher*, 2021).

We then embedded the finalized treatment material into a full online Japanese iCT-SAD program, and examined the preliminary efficacy and acceptability of the translated and culturally-adapted iCT-SAD with 15 Japanese clients with SAD through a multi-center, single-arm, pre-post study design (Yoshinaga et al., *JMIR Form Res*, in press). Although controlled studies are needed for more robust comparisons, results of this pilot trial suggest that translated and culturally adapted iCT-SAD shows promising initial efficacy and acceptability in the treatment of SAD with Japanese clients. This is evidenced by the excellent clinical outcomes obtained in treatment using the Japanese iCT-SAD modules (within-group pre-post Cohen's  $d$  for social anxiety = 3.66), the low dropout rate from the treatment, a strong level of participant engagement in the program, and the positive feedback provided by participants, all of which is comparable to what was observed in the English-language program in the UK and Hong Kong studies. Furthermore, in line with the previous UK and Hong Kong studies, Japanese iCT-SAD required less therapist contact time per client (8.97 hours) compared to face-to-face CT (18-21 hours), representing a time saving of 50-58% compared to an equivalent treatment.

Drawing on recent work with the iCT-SAD program, the presentation will introduce our careful translation process of iCT-SAD of how we adapted and modified the details of the program, and present its preliminary results in Japanese clinical settings.

## **Young People's Experience of an Internet-Delivered Therapist-Assisted Version of Cognitive Therapy for Adolescent Social Anxiety Disorder (OSCA): Qualitative Findings from a Randomised Controlled Trial**

Eleanor Leigh\*, David M Clark

*University of Oxford, UK*

### **BACKGROUND**

Social anxiety disorder (SAD) is a debilitating condition that usually begins in adolescence. We recently demonstrated preliminary efficacy of an internet-delivered therapist-assisted version Cognitive Therapy for Social Anxiety Disorder (SAD) for adolescents called OSCA. Here we report on the helpfulness, support and overall acceptability of OSCA from the perspective of trial participants.

### **METHODS**

Participants were 17 young people aged 15-18 years who had participated in a trial of Online Social anxiety Cognitive therapy for Adolescents (OSCA). Post-treatment, participants completed an online treatment acceptability questionnaire and took part in a semi-structured interview to gain an understanding of their experience of OSCA.

### **RESULTS**

Overall, there was a high rate of treatment satisfaction. Core aspects of the treatment were viewed as most helpful, including behavioural experiments even though participants found them challenging. Participants found the online nature of the treatment helpful, allowing for easier communication with the therapist, regular encouragement from the therapist, and the ability to go back to their treatment and view their progress. Challenges were, for some, the quantity of content and practical issues around scheduling the short weekly calls with their therapist.

### **CONCLUSIONS**

This study suggests that young people felt helped and supported by OSCA.

### **Aversive Conditioning Across Clinical Disorders**

Learning theory and experimental human fear conditioning work respectively provide the theoretical and empirical basis of many core CBT elements. In this symposium, we focus on recent insights in how people suffering from anxiety, PTSD, and chronic pain conditions may show altered aversive learning processes compared to healthy controls, how differences in these learning processes may influence the onset, maintenance and treatment of psychopathology, which factors influence aversive learning and which novel intervention targets have potential to restore these learning processes to improve treatment of psychopathology and ill health.

First, Dr. Meulders will present various experiments in people with chronic pain and healthy controls, demonstrating the role of overgeneralization in chronic pain disability. Second, Dr. Lommen will present prospective findings in a high-risk professional sample testing the predictive value of extinction learning, fear generalization and avoidance learning in PTSD symptom development. Third, Dr. Michael will present a series of studies on the effect of high COVID-related stress levels on fear learning and symptom development. Further, she will present data on the potential of glucose administration to increase the effectiveness of psychotherapy for anxiety symptoms by facilitating fear extinction and consolidation. Fourth, Dr. Khalifa will present a study on how adding bilateral alternating stimulation (BAS) during fear extinction may facilitate fear extinction learning and shows how MOSAIC therapy (alternating eye movements and stimulation for brain integration) is equally effective as EMDR therapy. Finally, the integrative discussion will be led by Dr. Craske, in which we will critically reflect on the current status of aversive learning theories in the etiology, maintenance and treatment of psychopathology and will discuss the potential of these insights to improve the prevention and treatment of psychopathology and ill health.

### **Overgeneralization of Pain-Related Fear and Avoidance and Its Role in Chronic Pain Disability**

Ann Meulders\*

*Health Psychology, KU Leuven, Belgium*

Accumulating evidence shows that pain-related fear is often more disabling than the pain itself, and contributes to the transition from acute to chronic pain disability. Growing evidence suggests that pain-related fear is acquired via associative learning. In the clinic, however, spreading of fear and avoidance is observed beyond movements/activities that were associated with pain during the original pain episode. From an associative learning perspective, one mechanism accounting for this spreading of fear is stimulus generalization. We propose that overgeneralization may play a role in the etiology and/or maintenance of chronic pain disability by spreading of unnecessary protective behaviors. In this talk, I will present a series of experiments showing (1) differences in generalization of pain-related fear and pain-expectancy between chronic pain patients and healthy pain-free controls, (2) that these protective responses persist despite corrective feedback in patients but not in healthy controls (reduced extinction), (3) and (3) that overgeneralization of instrumentally acquired pain-related avoidance behavior also exists in people with high levels of trait anxiety and chronic pain.

### **The Role of Fear and Avoidance Learning in Posttraumatic Stress Disorder**

Miriam Lommen\*

*University of Groningen, Netherlands*

#### **BACKGROUND**

Individual differences in fear and avoidance learning have been associated with anxiety-related psychopathology. More specifically,

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patients with anxiety- and trauma related pathology show decreased fear extinction learning, enhanced fear generalization learning and deviant avoidance learning. Most studies include correlational studies leaving the causal direction of these associations unknown. Longitudinal studies on PTSD provide us with the opportunity to test whether these learning deficits are a consequence of PTSD symptomatology or rather a pre-trauma vulnerability factor that puts individuals at risk to develop PTSD.

## METHOD

A fear conditioning paradigm, a fear generalization paradigm and an avoidance learning task were conducted in a sample of 529 firefighters at the baseline assessment of a 2-year prospective study. PTSD symptoms and stressor severity were repeatedly assessed with self-report questionnaires (at baseline, 6 months later and at 1 year).

## RESULTS

Reduced extinction was associated with higher PTSD symptom severity at baseline, but did not predict PTSD symptom severity at follow-up. Avoidance learning was not related to PTSD symptomatology at baseline or follow-up. Increased fear generalization, however, was related to higher PTSD symptomatology at follow-up.

## DISCUSSION

Increased generalization learning showed to be predictive of PTSD symptom development in a sample of fire fighters, whereas extinction and avoidance learning were not. Interventions targeting increased fear generalization might be of specific interest for (primary) prevention of PTSD. The results also indicate that extinction and avoidance learning might not be general risk factors of PTSD for all individuals, and multiple factors seem to be relevant and influencing each other, emphasizing the need for more prospective studies unraveling these complex relationships.

## POTENTIAL IMPLICATIONS

Deeper understanding of pre-trauma vulnerability factors of PTSD will help us understand better why some people develop PTSD after a traumatic event while others do not? The findings may give rise to more research on effective interventions targeting generalization learning that can be used in clinical practice as prevention, specifically in high risk populations, or to improve PTSD treatment.

## **Dysfunctional Fear: Which Circumstances Promote Its Acquisition and Its Extinction?**

Tanja Michael\*, Diana Ferreira de Sa, Alexander Hauck, Edith Friesen, Roxanne Sopp

*Saarland University, Germany*

Fear learning is known to be an important mechanism underlying both functional and dysfunctional fear. An important knowledge gap exists regarding the question which learning environments result in dysfunctional fear. To address this gap, two studies will be presented investigating whether high background stress levels augment adverse fear learning mechanisms and promote symptom development. Experiment 1 examined the relationship between COVID-related stress and fear generalization. Participants underwent a standard differential fear conditioning paradigm utilising an aversive film clip as unconditioned stimulus (US). The results show that high COVID-related stress is associated with poorer performance in stimulus discrimination and greater levels of fear. In Experiment 2, participants took part in a fear learning paradigm with high ecological validity in which everyday objects were paired with an aversive film clip. Results reveal that COVID-related stress is associated with post-film intrusion and rumination load. These effects were mediated by the strength of fear acquisition. Taken together, the findings are in line with the assumption that stress puts people at risk for dysfunctional fear learning and symptom development.

It is widely assumed that fear extinction is an important factor in successful psychotherapies for anxiety disorders. Thus, it is hoped that

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the effectiveness of therapies can be improved by implementing enhanced fear extinction procedures. To examine the potential of glucose as an adjunct to therapy, we investigated in two differential fear conditioning experiments its effects on extinction learning. Participants received either a drink containing glucose (glucose group) or a drink containing saccharine (placebo group) before extinction (Study 1) or after extinction (Study 2). Preliminary analysis revealed that participants in the glucose group showed lower startle and skin conductance responses than participants in the placebo group during extinction (Study 1) and in the retention test (Study 2). Taken together, the results show faster and more stable extinction learning due to administration of glucose in healthy subjects, thereby providing initial evidence for an adjuvant use of glucose in the treatment of anxiety disorders.

## Effect of Bilateral Alternating Stimulation on Fear Extinction

Stéphanie Khalfa\*, Déborah Flatot-Blin

*Laboratoire de Neurosciences Cognitives, CNRS, France*

Bilateral alternating stimulation (BAS) as used in EMDR therapy for PTSD allows desensitization of the emotions associated with the traumatic memory. In order to understand the mechanism of action of these BAS, a model of PTSD, that of fear conditioning/extinction has been used in mice (Wurtz et al., 2017) and humans. The addition of BAS during fear extinction allowed for the facilitation of fear extinction learning through the activation of a brain network involved in memory processing, emotions, perceptions, sensations, and self-perception (Rousseau et al., 2021). Based on these fMRI findings, the neural model of stochastic synchronization was constructed to explain the action of BAS in EMDR. This model has made it possible to propose another way of using BAS in PTSD, and thus to build a new therapy for PTSD that avoids confrontation and exposure to the traumatic memory, the MOSAIC therapy (alternating eye movements and stimulation for brain integration) (Khalfa & Poupard, 2020). This therapy seems to be much more pleasant for PTSD patients and just as effective as EMDR therapy. MOSAIC therapy thus seems to avoid the risks of abreaction and dissociation for patients, and the risks of vicarious trauma for psychotherapists.

Khalfa S, Poupard G. MOSAIC: A New Pain-Free Psychotherapy for Psychological Trauma. *Am J Psychother.* 2021 Mar 1;74(1):40-43.

Rousseau PF, Boukezzi S, Garcia R, Chaminade T, Khalfa S. Cracking the EMDR code: Recruitment of sensory, memory and emotional networks during bilateral alternating auditory stimulation. *Aust N Z J Psychiatry.* 2020 Apr 9:4867420913623.

Wurtz H, El-Khoury-Malhame M, Wilhelm F, Michael T, Beetz EM, Roques J, Reynaud E, Courtin J, Khalfa S, Herry C. Preventing long-lasting fear recovery using bilateral alternating sensory stimulation: a translational study. *Neuroscience* 2016; 321: 222-235.

## Novel Approaches to Understanding and Treating OCD

Obsessive Compulsive Disorder (OCD) is a debilitating illness affecting nearly 3% of the population. Research has demonstrated the efficacy of Cognitive-Behavioural Therapy (CBT) treatments for most individuals, with some evidence for long term positive outcomes. Such approaches emphasise the role of specific beliefs in the development and maintenance of the symptoms, proposing these as targets for treatment. However, outcomes vary, dropout/relapse rates remain generally high, and for many, effective treatments remain inaccessible. Further, emerging research indicates that the onset of the COVID-19 pandemic has presented additional challenges in terms of the experience and treatment of OCD, although the interaction between COVID-19 related factors and OCD symptoms is lacking. This highlights the need for further research into other factors that may impact on the development or treatment of the disorder as well as develop new more accessible modes of delivering evidence-based treatments. This symposium brings together four studies addressing some of these issues in the treatment of OCD.

Drawing on the emerging evidence of the role of self-beliefs in the development and maintenance of OCD symptoms and related beliefs, the first paper (Yang, et al.) examines the relationship between the feared self, obsessive beliefs, and OCD symptoms. The two studies use an experimental design to manipulate the levels of responsibility and sense of feared self and measure their effects on OCD symptoms. The findings support the role of feared self in OCD and related beliefs, extending current understanding of the disorder and providing additional potential targets for treatment. The role of self is further investigated in the second paper (Jager et al.), which explores the relationship between the self and identity and the experience of intrusive thoughts in OCD. This study uses ecological momentary assessment methods to gather data from individuals with OCD about the relationship of intrusive thoughts to their self-concept and identity. This study will provide valuable insights into the subjective experience of OCD and will help to develop a better understanding of the role of self and identity in the development and maintenance of the condition. The third paper (Hoppe, et al.) examines the impact of COVID-19 related stress on the exacerbation of OCD symptoms among expecting and new parents. Employing a cross-sectional design, the study examines relationship between COVID-19 related stress, obsessive-compulsive beliefs, and OCD symptoms in this population. This study provides new insights into the impact of stress on OCD symptoms and the moderating role of obsessive beliefs that can assist with the development of strategies for reducing the impact of stress on OCD symptoms among this particularly vulnerable population. Finally, the fourth paper (Doron et al.) examines the effectiveness of a mobile app, OCD.app - Anxiety, Mood & Sleep, in reducing OCD symptoms. The study use real-world data gathered from users of the app to examine the effectiveness of the app in reducing OCD symptoms. This study provides support for the potential role of mobile apps for reducing OCD symptoms and supporting effective treatments.

It is anticipated that the symposium will provide valuable insights into the nature of OCD and will help to inform the development of more effective and accessible treatments for the condition.

## Experimental Investigation into the Relationship between Feared Self, Responsibility and OCD Symptoms

Yoon Yang<sup>1\*</sup>, Jeremy Anglim<sup>1</sup>, Richard Moulding<sup>2</sup>

<sup>1</sup> Deakin University, Australia

<sup>2</sup> The Cairnmillar Institute, Australia

Feared self could increase one's risks of developing OCD, but past studies on feared self have been largely questionnaire-based, leaving the direction of this relationship unclear. Two online experiments were conducted to clarify the relationship between feared self and OC symptoms by priming sense of morality and responsibility. In the first study, A total of 78 participants (27 female, M age = 29.85, SD = 9.8) were included in the final data set. A half of the participants had their feared self primed firstly via an unscrambling task where participants were asked to make meaningful sentences out of a set of jumbled words and secondly, via a writing task about moral trans-

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gressions. The response time for these tasks was recorded as a measurement of moral deliberation. Further, self-relevance was primed by presenting the tasks in first person for a half of the participants. The word sentence association test for OCD was used to measure a threat interpretation bias. Psychological scales, the Fear of Self Questionnaire and the Obsessive-Compulsive Inventory-Revised, were employed to test one's feared self levels and OC symptom levels. It was found that one's pre-existing level of feared self is linked to threat interpretation bias, discomfort, and urge to act in OC-relevant situations. Primed sense of feared self and self-relevance also showed significant links to changes in OC-relevant symptoms.

In the second study, a total of 175 participants (40 male) were recruited. Participants aged between 18 and 65 (M age = 28.05, SD= 9.3). Participants were randomly allocated to either increased sense of responsibility or control conditions where the participants' sense of responsibility was primed using a message that highlights the clinical importance of their performance. Then participants were further randomised into three vignette groups related to decision-making in an OCD-neutral situation, a moral dilemma, and vignettes related to responsibility to prevent harm. Participants were required to identify spelling and grammatical errors and once they finish, they were prompted with a message that asked them if they would like to go back and check their answers. Those in the increased sense of responsibility condition were reminded of the clinical importance of their task performance. Participants were then presented with six OCD-relevant vignettes and rated their level of discomfort. Overall task completion time, the number of checks, and the level of discomfort were recorded as the dependent variables of this study. The responsibility manipulation did not lead to significant variance in outcome variables. While participants' existing level of feared self measured was significantly associated with checking behaviour, the feared self manipulation did not lead to significant increase in checking behaviour. However, feared self manipulation led to increased discomfort. These findings contribute experimental support for the role of feared self, however further studies are needed to investigate different effects of feared self and its relationship with other OC-relevant factors.

## The Role of Self and Identity in the Experience of Intrusive Thoughts

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This study was the first of its kind to examine the daily frequency of non-clinical OCD-relevant unwanted mental intrusions and how this may be related to retrospective reports of self-beliefs and one's tendency to conceal aspects of the self/symptom dimensions, and OC phenomena; it also examined the relationships between characteristics of intrusions (themes, intensity, and associated distress) reported in the moment (Aim 2). Fifty-four participants (64.82% female; Mage = 34.76; SD = 13.95) completed online baseline measures of OCD symptoms and related phenomena, and subsequently reported momentary experiences of state depressed mood and intrusions up to 5 times per day (at semi-random intervals) over 14 days. Descriptive statistics and exploratory between-person correlational analyses provided broad support for the validity of using cross-sectional measures in non-clinical samples but suggested the experience of intrusions in this population may be underreported. Hierarchical linear models exploring the dynamics surrounding momentary experience of intrusions at the within-person level also offered support for the role of feared self and, to some extent, concealment in OCD symptoms.

## The Interaction between Obsessive-Compulsive Beliefs and COVID-19 Related Stress in the Exacerbation of OCD Symptoms among Expecting and New Parents

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Perinatal Obsessive Compulsive Disorder (pOCD) is characterised with the emergence or exacerbation of obsessive-compulsive symptoms during the perinatal period (conception to 12 months postpartum). Emerging research has indicated increase in prevalence



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and symptomology of pOCD during the COVID-19 pandemic indicating potential impact of COVID-19 stressors on pOCD symptoms. This study investigated the relationship between COVID-19 stress, obsessive beliefs and pOCD symptoms in a global sample of perinatal parents (N = 299) during the COVID-19 pandemic. Participants completed an online survey. As hypothesised, the results showed significant positive correlations between COVID-19 stress and obsessive beliefs and OCD symptoms, and provided further confirmation for the positive relationship between OCD beliefs and symptoms. Importantly, OCD beliefs moderated the relationship between COVID-19 stress and pOCD symptoms, with decreasing influence of OC beliefs at high levels of COVID-19 stress. Results support cognitive-behavioural explanation of pOCD development, supporting the importance of stress in symptom development. Furthermore, this study showed the complex interaction between environmental stressors and individual vulnerabilities in symptom development and severity, warranting more research to inform treatment interventions.

## **Reducing Obsessive Compulsive Disorder (OCD) Symptoms Using a Mobile App: Examining Real World Data of “OCD.app - Anxiety, Mood & Sleep”**

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### BACKGROUND

Obsessive compulsive disorder (OCD) symptoms may be disabling for both clinical and subclinical populations. Cognitive behavioral therapy (CBT) is considered the gold standard treatment for OCD symptoms. However, only some individuals receive such treatments. Barriers to CBT treatments may include high cost, limited accessibility to trained professionals and stigma. Mobile health (mHealth) apps may help overcome some of these barriers and have been shown to be effective in reducing OCD symptoms. However, interventions shown to be effective in randomized controlled trials (RCTs) may be less effective in real world settings.

### METHODS

Real world data of “OCD.app - Anxiety, Mood & Sleep” users was collected from October 2020 to June 2022. Users’ OCD symptoms, trait and state mood scores were evaluated at baseline (T0; n=46,955), payment barrier (T1; n=13,568), and at the final level (T-final; n=1,732).

### RESULTS

Dropout rates were higher for women and associated with younger age. Medium effect size reductions in OCI-R scores from T0 to T1 (Cohen’s d = 0.37) and medium-large (Cohen’s d = 0.66) reductions from T0 to T-final were found. Effects remained when controlling for demographic data and mood and were strongest for users with severe OCD symptoms. Clinically significant improvement (OCI-R change  $\geq 21$ ) was found in 15.9% of users with severe OCD symptoms. Although stable user traits were prominent moderators of change following short-term use, app usage indicators were more notable over longer training periods.

### CONCLUSIONS

Real world data supports the effectiveness of OCD.app for reducing the full range of OCD symptoms.

### **Personality Disorders: Research on Personality Pathology and Interventions From a Tertiary Mental Health Center in India**

There is growing literature on personality disorders in recent years in India. The symposium covers major research carried out in a tertiary care center in India. There are five presenters covering their research in psychopathology and psychotherapy. The first presentation by Manjula will cover the prevalence, the demographic and clinical characteristics, the nature of presentation (dimensional vs categorical), understanding of their personality problems, the service utilization, experiences in clinical services - stigma, non-disclosure etc) and therapy experiences from the Indian context.

In the second paper, Poornima Bhola draws on experiences from a group of studies on borderline personality presentations. A developmental psychopathology lens is used to discuss the formulation and use of a pre-therapy assessment framework encompassing symptom patterns, mentalizing, attachment, emotion regulation, trauma and comorbid profiles. Additionally, the clinical value of newly developed vignette measures of parental mentalizing and mentalizing across diverse interpersonal contexts will be discussed.

The third presentation by Alafia offers an understanding of personality pathology using the alternate model of Personality Disorders. Findings on metacognition, interpersonal functions and affect dysregulation across the personality disorders will be presented. Lastly, implications and future directions with regards to metacognition and interpersonal relationships will be discussed.

The fourth presentation by Apoorva Shrivastava reports results of an exploratory study on youth with Cluster B personality disorders and their parents. The presentation will cover the findings on parenting, psychopathology, affect regulation and interpersonal functioning present in youth and their parents, highlighting the disagreement in perception of parenting in both the groups. The variables that were found to influence the perception of parenting in youth and parenting experiences in their parents will be highlighted.

Intervention studies for personality disorders are relatively unexplored in India. While there is one published case study on CBT with a client having Anxious Avoidant personality disorder, to the best of our knowledge there are no research trials on intervention for PD in India. The last presentation will highlight researcher experiences of an ongoing and the first intervention study for individuals having cluster C personality disorders in India. The presentation will focus on the challenges faced, strengths and limitations of doing an intervention study for PDs in the country as well as future directions for the same.

### **Presentation of Personality Disorders at a Tertiary Mental Health Setting in India**

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Personality disorders (PD) are highly common in the individuals' receiving treatment from psychiatric settings in India. There is growing interest in PD among the researchers in the country. Though there are attempts to assess the diagnostic and etiological factors, and carry out interventions, the literature is scanty in this area. The paper attempts to throw light on the clinical presentation of personality disorders, the socio-demographic features, understanding of the disorder by the individuals with PD and experiences in the hospital setting.

The data is collated across the studies conducted at a tertiary mental health hospital in India. Additionally, the data from the published studies from India were used to corroborate and supplement the information gathered from our studies. In the clinical practice largely ICD-10 is used for diagnostic purposes though DSM-IV/V is used for research purposes. In the research studies the Semi-structured interview schedules are used for establishing the diagnosis in addition to the clinical diagnosis made by the clinician based on the ICD-10.

Some of the salient features of the socio-demographic details are as follows: About 5% of the psychiatric patients met criteria for the diagnosis of PD among 2260 patients. The prevalence ranged between 1-5% across studies on patient population. Most patients with PD are young adults and the average age ranged between 22-27 yrs. More than 35% of the sample had a minimum of graduate level

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education and about the similar percentage had post graduate or school education. Females were higher in percentage compared to males; a large number of them came from urban background, nuclear families and belonged to middle and lower middle class socio-economic status. Around 35% each were either students or were involved in professional jobs.

More than half the sample was on medication and undergoing psychotherapy for axis 1 disorders such as depression, OCD, anxiety disorders, PTSD, ADHD, and substance use. The average duration of illness was 5 yrs. The most frequently reported axis 1 disorder is depression (about half the sample). The highest reported PD is Borderline followed by avoidant and OCPD. Likewise, Cluster B was highest followed by cluster C and A. Traits of negative affect, detachment, antagonism and psychoticism were similar between Cluster B and Other PDs. However, Cluster B PDs scored significantly higher on Disinhibition trait compared to Other PDs. More than 60% of the sample with PD had parents having personality disorder traits.

With respect to knowledge about the diagnosis less than 30% were aware of their personality diagnosis. Most of them named the symptoms of axis 1 disorders rather than axis 2 issues. They attributed their problems to their childhood trauma, parenting (authoritarian, hostile), and abuse. They felt that the mental health professionals did not give adequate information on their diagnosis. They identified the consequences of the problems on interpersonal relationships, thinking styles and emotional difficulties. The presentation will elaborate on their lived experiences with respect to self, others, coping and help seeking.

## **Cluster C Personality Intervention Research: Experiences from an Indian Study**

**Tavleen Kohli\*, Munivenkatappa Manjula**

*National Institute of Mental Health and Neurosciences (NIMHANS), India*

Psychotherapy is the first line of treatment for individuals having Personality Disorders (PD) making research on the same essential. Research on personality interventions so far is mostly designed as comparative trials or pre-post assessment of specific interventions (Kramer et al., 2022). Among the PD intervention research, Cluster B with its dramatic presentation has gained the most attention over the years, leaving disorders within cluster C PDs to be somewhat neglected and research on them is scarce. Interventions such as interpersonal psychotherapy, cognitive behavior therapy, short-term and long-term psychodynamic psychotherapy, time-limited supportive-expressive therapy, Acceptance, and Commitment Therapy and clarification-oriented psychotherapy have displayed some effectiveness for cluster C PDs in bringing about changes in symptoms of axis 1 concerns such as depression and anxiety as well as recovery from cluster C PD diagnosis. However, these studies have been criticized for their methodological limitations as well as the nature and focus of the therapeutic intervention.

Personality intervention research inherently poses various challenges. Some of them are related to diagnostic heterogeneity of personality disorders, the long-term and intense nature of therapy requiring specifically skilled therapists, limited inclusion of societal context while explaining results, and limited knowledge of process-related issues, especially mechanisms of change which makes it difficult to ascertain what works for which patient group. Along with this measurement of outcomes is also a challenge when using self-report assessment tools.

Intervention studies for personality disorders are relatively unexplored in India. While there is one published case study on CBT with a single client having Anxious Avoidant personality disorder (Bhattacharya, 2015), to the best of our knowledge there are no research trials on intervention for PD in India. The presentation will highlight the researcher's experiences of an ongoing and the first intervention study using schema therapy for individuals having cluster C personality disorders in India using a case series design. It will focus on the cultural modification, and challenges faced, in doing the intervention study in the country as well as future directions for the same.

### **Current Issues in Building an Integrated Social Support System for Chinese Children and Adolescents with Psychological Needs**

China is placing more importance into young people's psychological wellbeing. Increasing resources are invested trying to ensure professional and effective work in all stages of psychological services, from school-based psychological evaluations to post-treatment follow-ups with the family. However, the cooperation among different forces encounters unique difficulties compared to western mental health social support system for children and adolescents. Therefore, the symposium will unfold from three perspectives: schools, hospitals, and private mental health institutions, where presenters can share their respective experience within the sector, and raise future directions for Asian countries of similar cultural and social background. The first presentation (Shen) will talk about the current inadequacy in school's practice with relevant data, including risk-averse goals, lack of training and resources for school counselors, the influence of grades-oriented mentality, and the potential long-term effects shown in the psychological assessment for university students. The second presenter (Wang) will lay out the issues faced by private institutions, where the ambiguity of roles within the social support system makes them difficult to provide aid. Wang will share the geographical variation in terms of the need for psychological social supports, and the type of resources that is abundant within the private institutions. Furthermore, private institutions can take the role of mass level psychological education, especially for family members of the child patient. The third presenter (Li) will talk about how the young patient's parents can influence the accessing and maintaining of clinical help. Some unique cultural and generational issues and data will be presented. The final presenter (Yin) will explain the current practice in the medical sector, where hospitals face difficulties in the dropout rates of young patients. The transfer and referral of young patients from school to medical care does not have national standards. Yin will also present a pilot project that combine school assessments, parent communication and cognitive behavioral therapy in medical care, using a case management method where one therapist will be the main connection for all cross-sector resources and members. Current data from over 10 pilot hospitals will be discussed. All presenters are practicing cognitive behavioral therapists in different sectors in China. The primary aim of the talk is to discuss the adoption of western type of social support system shows inconsistent effect and raises new problems. Specific adjustments and more tryouts may be necessary, and the current data and experience are worth sharing.

### **Current Practices and Limitations in School-Based Mental Support System for Chinese Children and Teenagers**

Xiaomeng Shen\*

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School-based mental support system runs as the primary source of help for Chinese teenagers with psychological difficulties. Most provincial policies require middle schools to maintain a certain number of full-time psychological counselors or teachers that routinely provide services like psychological education, basic mental assessments, and individual therapy for students. However, the quality of the school-based services is unsatisfactory for several reasons. Firstly, the student-counselor ratio is significantly lower in less developed regions, and schools tend to deprive and trivialize the role of psychology teachers and reallocate limited resources towards improving student grades and the university enrolment rate. Secondly, even within schools of sufficient psychological staff, the lack of standardized qualification and the overall lack of psychological education in the management team may result in a large proportion of the school-based counselors do not have adequate training or knowledge for the job. Therefore, the downside of these limitations is gradually appearing. University psychological assessments for the first years show increasing number of students with existing or potential diagnosis of psychological disorders and higher suicidal tendencies. Relevant data will be discussed in the symposium. In order to provide help for as many teenagers as possible with limited resources, school-based mental support system compromised by implementing a risk-aversion policy, where the primary goal is to screen for self-harm and suicidal risks, ensuring students of higher risks can be helped in time. When school-based mental support system is at capacity, the spillover demand will go to clinical sectors and market-based institutions.

## **The Role of Market-Based Institution in Chinese Teenagers' Mental Support System**

Wenbo Wang\*

*Zisu Psychological Counseling Services, China*

For teenagers, schools are providers of fundamental psychological support resources, while market-based institutions serve as an effective supplement to schools. However, this complementary system is operating with difficulty. The number of private institutions have rapidly increased in the past decade, but they are smaller in scale and unevenly distributed geographically. But due to the lack of a certification system, administrative department in charge of education do not have enough foundation to establish official transferring channels. As a result, schools lack official channels to refer teenagers who are in need of psychological help to matching market-based institutions. At the same time, 67.89% of institutions experience a lack of clients, while 60.79% of institutions promote themselves through social media. Furthermore, as consumers, parents usually lack the ability to discern the competence of therapists, which leads to situations where institutions often violate the Ethics Code in their promotions. This ultimately results in vicious competition between institutions with different degree of expertise.

## **Current Experience and New Attempts of Integrated Psychological Intervention for Youth in Chinese Psychiatric Hospital**

Weizhen Yin\*

*The Affiliated Brain Hospital of Guangzhou Medical University, China*

In China, lots of patients who want to be treated in Grade A psychiatric hospitals. For children and adolescents, it is no exception. In addition, schools and counseling agencies are constantly referring patients with difficulties to Grade A hospitals. However, there is a limited number of staff in Grade A psychiatric hospitals. This leads to a conflict between demand and supply. In order to meet the needs of patients as far as possible, some new attempts have been made in a Grade A psychiatric hospitals in Guangzhou. Through these new attempts, an integrated support system for children and adolescents with psychological needs is being established. The new system is divided into three categories, and the three categories have a progressive relationship with the effort required by the staff. The first category is single-completion assessment and psychological intervention programs interview assessment. This takes the staff about an hour per patient. The goal of this category is to help patients identify major problems and appropriate interventions. The second category is group psychotherapy for children and their parents. Group psychotherapy is designed specifically for children, but also for parents. Groups for children are designed according to the characteristics of the illness. For example, for youth with mood disorders, there are emotion management groups, interpersonal interaction groups, family relationship regulation groups, parent psychoeducation groups and parenting support groups. All groups for youth are designed for 8 or 12 sessions. At the end of a group session, each patient is given a group summary and a follow-up intervention plan. In groups designed for parents, parents are taught how to support and help their children outside the treatment room, and are encouraged to actively communicate with the school to create supportive environments for their children. The third category is individual psychotherapy or single family psychotherapy. Individual and single-family treatments take up the most time of staff, so they are offered only to the most difficult patients. The system has received a lot of positive feedback from patients and other institutions in China. This integrated system may be a reference for other institutions that lack sufficient psychotherapy professionals in the world.

### **Future-Oriented Mental Imagery in Psychopathology (Treatment)**

We have the capacity to form mental images of past and anticipated future events (“seeing in the minds-eye”). This capacity is indispensable for survival, for example, by generating predictions based on past experiences. However, it can also be maladaptive, as is the case in psychopathology. Research has shown that recurrent vivid and unpleasant mental imagery about fear-provoking events is involved in psychopathology, but mental imagery is typically not targeted in standard cognitive behavioral therapy. Previous research has mostly focused on mental imagery of aversive memories in psychopathology, while future-oriented mental imagery seems crucial in anticipating future outcomes and guiding behavior. Therefore, in this symposium, novel research on the role of future-oriented mental imagery in psychopathology as well as relatively new treatment approaches aiming to modulate negative future-oriented mental imagery are presented.

In the first talk, Julie Ji will present results from the first ecological momentary assessment study investigating the real-time temporal relationship between non-suicidal self-injury (NSSI) imagery frequency and content as predictors of NSSI urge and behavior. Participants were young people that reported at least 5 episodes of NSSI behavior over the past 12 months as well as current NSSI ideation or behavior. Findings suggest that “flashforward” mental imagery is not simply epiphenomenal to, and may constitute a cognitive driver of, NSSI behavior. In the second talk, Elze Landkroon will present data investigating how people with high public speaking fear, compared to people with low public speaking fear, assess aversive memories and future-oriented mental imagery related to public speaking (exp 1) and whether future-oriented positive mental imagery of public speaking helps individuals with public speaking fear to start exposure in virtual reality (exp 2). The results demonstrate that individuals with high public speaking fear assess future-oriented mental imagery of public speaking more negatively than individuals with low public speaking fear. Moreover, future-oriented positive mental imagery of public speaking can reduce (anticipatory) anxiety before and during exposure in virtual reality. In the third talk, Bart Endhoven will present new (pilot) data from a randomized controlled trial examining whether eye movements desensitization and reprocessing (EMDR) therapy, relative to supportive counselling, reduces the emotionality and vividness of threat-related future-oriented mental imagery, distress, and credibility of threat beliefs. In the final talk, Jonathan Huppert will present data examining future-oriented imagery rescripting (IR) and future-oriented imaginal exposure (IE) in a single case design. Eight individuals diagnosed with social anxiety disorder and seeking treatment participated. Daily diary and weekly data on symptoms and mechanisms were collected throughout the trial for all 8 participants. Half of the participants received four 90-120 minute sessions of IR first and then four sessions of IE, and half received in the reverse order. The symposium concludes with a general discussion on future-oriented mental imagery in psychopathology treatment and future research directions by Iris Engelhard.

### **Investigating the Role of Flashforward Mental Imagery in Non-suicidal Self-Injury Using Ecological Momentary Assessment**

Julie Ji<sup>1\*</sup>, Penelope Hasking<sup>2</sup>, Michael Kyron<sup>3</sup>, Lisa Saulsman<sup>3</sup>, Rodrigo Beccera<sup>3</sup>, Ashleigh Lin<sup>4</sup>, Emily Holmes<sup>5</sup>

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Non-suicidal self-injury (NSSI) is a transdiagnostic condition prevalent in young people. Imagination-based mental enactment of NSSI (flashforward NSSI imagery) has been proposed as a cognitive factor implicated in the volitional stage of NSSI. This talk will present the first real-time study assessing the prevalence, content, and subjective and objective functional impact of NSSI imagery on NSSI and

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behaviour. An ecological momentary assessment (EMA) study was conducted with N = 43 young people aged 17-24 with a history of NSSI and current ideation or behaviour. Participants received survey prompts seven times a day over 14 days via the mobile phone app SEMA3. Each survey asked participants to report on NSSI urge, behaviour, as well as NSSI imagery occurrence, content, temporal focus, and subjective and motivational impact. Cross-sectional and cross-panel lagged analyses of the relationship between NSSI imagery, urge, and behaviour will be presented. Findings indicate that “flashforward” mental imagery (mentally pre-experiencing and planning an upcoming NSSI episode) is ubiquitous during times of high urge. Further, NSSI imagery occurrence predicted urge and behaviour across time. Findings suggest flashforward NSSI imagery may not be epiphenomenal, and instead may constitute an amplifier of NSSI urge and behaviour. Monitoring “flashforward” imagery frequency and content may constitute a useful clinical target, although more mechanistic research is required to understand the functional impact of flashforward NSSI imagery on NSSI.

## Enhancing Future-Oriented Positive Mental Imagery in Individuals with Public Speaking Fear

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### INTRODUCTION

Exposure treatment is recommended for anxiety disorders, but many patients do not start treatment. Patients often suffer from negative mental images that reflect previous aversive experiences or feared future situations. Interventions aimed at changing these negative mental images may potentially make it easier to engage in exposure. In experiment 1, we examined how individuals with high public speaking fear, compared to individuals with low public speaking fear, rated memories and mental images about future situations related to public speaking. In experiment 2, we examined whether future-oriented positive mental imagery helps people with public speaking fear to engage in exposure.

### METHOD

In experiment 1, participants (20 high and 20 low public speaking fear) were asked to imagine and describe in as much detail as possible a future situation about public speaking and to rate the most aversive image of this situation. They were also asked to recall an aversive memory about public speaking, to describe this memory and to rate its most aversive image. In experiment 2, participants with public speaking fear (N = 43) were assigned to a future-oriented positive mental imagery group or a control group with no task. After assessing their willingness and anxiety to present in virtual reality (VR), the positive mental imagery group received an audio-guided future-oriented positive mental imagery exercise on public speaking, and the control group proceeded directly with the experiment. Then, all participants again assessed their willingness and anxiety to present in VR and gave a presentation in VR while indicating their distress levels every minute.

### RESULTS

Experiment 1 showed that participants with high versus low public speaking fear described the future scenario with more negative details, while there were no group differences in describing the memory. Participants with high public speaking fear rated the most aversive images as more emotional and experienced higher associated distress than participants with low public speaking fear. Experiment 2 showed that anticipatory anxiety decreased in the positive mental imagery group, but not in the control group. Also, distress levels during exposure were lower in the positive mental imagery group than in the control group, but the groups did not differ in willingness to engage in exposure.

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## DISCUSSION

Individuals with high public speaking fear can be distinguished from individuals with low public speaking fear primarily by how they describe and assess future anxiety-relevant situations. Future-oriented positive mental imagery of public speaking can reduce anticipatory anxiety and distress during exposure in VR. Future research can further optimize the intervention, for example by personalizing the script, and investigate whether this intervention can increase exposure willingness in patients with anxiety disorders. Future-oriented positive mental imagery holds promise to prepare individuals for exposure to anxiety-relevant situations. Reference: Landkroon, E., van Dis, E. A., Meyerbröker, K., Salemink, E., Hagedaars, M. A., & Engelhard, I. M. (2022). Future-oriented positive mental imagery reduces anxiety for exposure to public speaking. *Behavior Therapy*, 53(1), 80-91. <https://doi.org/10.1016/j.beth.2021.06.005>

## **Reducing Negative Past and Future Mental Imagery in Anxiety Disorder Prior to Exposure-Based Therapy**

**Bart Endhoven\***, Iris Engelhard

*Utrecht University, Netherlands*

## INTRODUCTION

Exposure-based treatment is recommended for patients with anxiety disorders, but many patients do not benefit sufficiently from it. Negative mental imagery involving future and past events is commonly reported by patients and can reduce a person's willingness to use exposure. Laboratory research has shown that such imagery can be modulated by dual-task interventions, which are used in Eye Movement Desensitization and Reprocessing (EMDR) therapy. In a randomized clinical trial, we examined whether EMDR therapy, relative to supportive counselling, reduces the vividness, distress, and encapsulated beliefs of threat-related imagery and increases exposure-willingness.

## METHODS

Patients with panic disorder or social anxiety disorder completed an interview related to past and future mental imagery of threat and questionnaires measuring imagery phenomenology and willingness to use exposure. Next, four 90-minute sessions of EMDR therapy or supportive counselling were provided and measurements were repeated.

## RESULTS

Bayesian informative hypotheses testing will be used in our preliminary data to test whether EMDR therapy, relative to supportive counselling, reduces the vividness, distress, and encapsulated beliefs of threat-related imagery and increases willingness to use exposure.

## CONCLUSION

Findings and potential clinical implications will be discussed at the conference.



## Imaginal Exposure and Imagery Rescripting of Future-Oriented Fears in Social Anxiety: A Single Case Series

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Both imaginal exposure (IE) and imagery rescripting (IR) have been proposed as methods to manage flash-forward, future-oriented catastrophic imagery. In this clinical case series, we examine a single case series with five participants diagnosed with social anxiety disorder (SAD) who received both interventions in a randomized crossover design. We also explored the potential mechanisms of change involved in these interventions, such as the modification of maladaptive schemas and thought fusion beliefs.

After establishing a stable baseline, individuals were administered psychoeducation about negative imagery as a maintenance factor in social anxiety and built an idiosyncratic model on the basis of an elaboration of Clark and Wells's model of SAD. Then, they were randomly assigned to receive either four sessions of IE or four sessions of IR, followed by another two-week baseline period. After that, they switched to the other intervention for another four sessions. Individuals were assessed for another two weeks post-treatment, after which a final summary treatment session was also administered.

The Liebowitz Social Anxiety Scale (LSAS) was assessed as the primary outcome at baseline, after each intervention phase and at post-treatment by an independent evaluator who was blind to the treatment condition. The secondary outcome measures were the Social Phobia Inventory (SPIN), the Brief Fear of Negative Evaluation Scale (BFNE), the Thought Fusion Instrument (TFI), and the Brief Core Schema Scale (BCSS). We also collected daily diary data on thought fusion, BFNE and schema.

The results showed that two participants had clinically significant and reliable improvement in LSAS scores during IE (one who received IE first) and no further improvement during IR. However, one participant had clinically significant and reliable worsening during IE and then improvement during IR (but not to a level lower than baseline). Another participant had clinically significant and reliable improvement during IR (administered first) and no further improvement during IE. The last participant did not show any reliable change in either phase. Weekly self-report of the SPIN revealed that both of the participants who received IR first had clinically significant change only during IR, whereas only one of three of the participants who received IE first did, and they had significant change in both phases. The daily diary data indicated that thought fusion, BFNE, and negative schema significantly decreased during the first intervention phase only, regardless of intervention.

Time-lagged analyses found that reductions in maladaptive schemas were associated with increases in SPIN scores at one-week and one-day lag but decreases in symptoms within the same time window. We also found that reductions in thought fusion beliefs were associated with reductions in SPIN scores at one-day lag but not for one-week lag.

In conclusion, this clinical case series provides preliminary evidence that both IE and IR can be effective interventions for reducing negative imagery and social anxiety in some individuals with SAD. However, the results also suggest that there may be individual differences in response to these interventions, and that some patients may benefit more from one than the other. The potential mechanisms of change involved in these interventions may include the modification of maladaptive schemas and thought fusion beliefs, which may have different, even contradicting, temporal effects on symptom improvement. Future research should replicate these findings with larger samples and compare these interventions with other evidence-based treatments for SAD.

### **Conditioned Reflex Control Technique(CRCT) and Its Effectiveness on Addiction**

The Conditioned Reflex Control Technique (CRCT) is a treatment for repeated problematic behaviors devised in 2006 by Shinji Hirai, MD, psychiatrist of the National Hospital Organization Shimofusa Psychiatric Medical Center and the president of the Conditioned Reflex Control Technique Association. CRCT bases its phenomenon on Pavlov's classical conditioning theory to explain why pathological behaviors are repeated even with various pharmacological and cognitive behavioral treatments. CRCT was initially designed to help drug addictions, but now it is widely used for alcoholism, sexual problems, kleptomania, pathological gambling, eating disorder, obsessive compulsiveness, self-harm, and so on. Daedong hospital introduced CRCT in 2018 for the first time in Korea.

The first presentation(Park, S.) will introduce the basic theory behind CRCT and how each stage proceeds. CRCT has four stages. The first stage, Key-Word-Action(KWA), helps patients to build a neutral stimulus setting. Patients reset their reflexes for gambling desire in a controlled environment. The Pseudo stage induces target behavior intentionally to help decrease reflex by repeating addiction behavior without its rewards. Naturally, patients become less reactive to various stimulations, which before led them to gambling behavior. The third is the Imagination stage. Patients repeat several regular days of addiction and become neutral to their urge-triggering stimuli. These three stages take approximately three months to complete in an in-patient setting, but the duration varies by treatment environment. The final stage is the Maintenance stage. This is a lifelong stage of preserving negative stimulation's effect and maintaining the operability of the targeted reflex chain. By finishing each stage, patients showed reduced urges for gambling behaviors and, more importantly, didn't have to fight against their desire.

The second presenter(Lee) will present the effectiveness of CRCT on alcohol and illegal substance abuse cases. Then, the last part of the symposium(Park, M.) will report various cases of CRCT: gambling disorder, Obsessive-Compulsiveness disorder(OCD), pornography addiction, self-harm, and so on.

### **Mechanism of Conditioned Reflex Control Technique(CRCT)**

Sang Woon Park\*

*Daedong Hospital, President, Korea*

All living organisms adapted to environments to survive through evolution. The basic needs to survive are defense, nutrition (feeding), and reproduction. Only mankind has two behavioral centers: the First Signal System that all living organisms share. This system repeats past successful behavior and fixates such behavior as reflexes. The Second Signal System, only found in mankind, allows humans to think and create successful social behaviors for the future. When one receives a stimulus, two systems compete, and the winning system is presented by behavior. In CRCT, addiction is viewed as a condition of irresistible reflex (the First Signal System) that human will (the Second Signal System) can never take over. The treatment goal of CRCT is to develop a new chain of reflexes that weakens the previous chain of addictive behaviors.

## **Effectiveness of Conditioned Reflex Control Technique(CRCT) on Alcohol and Substance Abuse**

Min Soo Lee\*

*Daedong Addiction Center, Assistant Manager, Korea*

Conditioned Reflex Control Technique (CRCT) is a treatment strategy to develop a break by weakening neuronal activities stimulated by the First Signal System. This technique consists of 4 stages, and each stage has different work and goals to meet. Patients need to complete the stage to enter the next. Among various problems, alcohol and substance use disorders are representative disorders rising from the excessive operation of the First Signal System.

The presentation consists of patients diagnosed with alcohol and substance use disorders. All patients were encouraged to complete the stages of CRCT. In addition, they participated in a treatment group for all CRCT participants once a week. In each stage, patients were asked to complete scales to measure cravings for their stimulants. After performing CRCT, all patients reported having less desire and cravings, and all successfully maintained a substance-free state.

These cases illustrate the effectiveness of CRCT for alcohol and substance use. With this treatment technique, we hope to offer patients with addiction new and practical aid.

## **Conditioned Reflex Control Technique in Gambling Disorder and Other Behavioral Addictions**

MyeongHyun Michelle Park\*

*Daedong Hospital, Korea*

CRCT has four stages. The first stage, Key-Word-Action(KWA), helps patients to build a neutral stimulus setting. Patients reset their reflexes for gambling desire in a controlled environment. The second stage induces target behavior intentionally to help decrease reflex by repeating addiction behavior without its rewards. Naturally, patients become less reactive to various stimulations, which before led them to gambling behavior. In the third stage, patients repeat several regular days of addiction and become neutral to their urge-triggering stimuli. After completing each stage, patients enter into the lifelong stage of preserving the effect of negative stimulation and reducing targeted reflex chain operability. Not every stages are required to complete to have a therapeutic effect. Cases with gambling disorders and other behavioral addictions will be presented to show the effectiveness of CRCT. This technique will support patients to stop performing repeated problematic behaviors.

### **Cognitive Behavior Therapy in Lesser Explored Clinical Conditions: Cultural Perspectives and Challenges From Bangladesh and India**

Cognitive Behavior Therapy (CBT) is an evidence-based treatment for Depressive and anxiety spectrum disorders. Despite a Western base, CBT has gradually gained acceptance in Asian culture and countries which have conventionally showed an inclination towards pharmacotherapy as well as traditional systems of medicine. As the span and scope of CBT has increased, the use of CBT has also been tested for conditions apart from depression and anxiety. The advent of behavioral medicine has opened the applications of psychotherapeutic management, including CBT for conditions conventionally consulted for pharmacological treatment only. However, the use of CBT in conditions apart from most common clinical conditions, comes with its own challenges unique to client's cultural and sociodemographic background.

The symposia will try to emphasize on the increased span of applications and utility of CBT in South - Asian countries, primarily perspectives from India and Bangladesh. Presentation will elaborate the use of CBT in different clinical conditions, other than the usual ones, e. g. infertility, insomnia, acquired brain injury and psychosis which are relatively less in frequency in terms of referrals as well as reporting in scientific literature from South Asia. The speakers will highlight the scope of CBT in these conditions and challenges from perspective of clients as well as therapists from Bangladesh and India.

In behavior medicine domain, case studies will be presented on application of CBT in the conditions of insomnia and infertility in women. Depression is commonly reported in women with infertility; however, the overall profile may appear different from depression. Fertility clinics may be focusing primarily on treatment of infertility, and secondary psychological issues in the process might get ignored or poorly addressed. The first speaker will detail the management of psychological issues secondary to infertility. She further will discuss the utility of CBT in Insomnia, which though has gathered good evidence base, but is far from being included in standard management of insomnia.

The next part of sessions will focus on the use of CBT in acquired brain injury (ABI) and psychosis. In this regard, speakers will focus on utility of CBT in ABI with case studies, and modifications of CBT process suitable for schizophrenia with special emphasis on comparing Western and South Asian perspectives.

While the growing implication of CBT looks promising in these lesser explored conditions, the real-world applications come with unique opportunities as well as challenges. Researchers and practitioners recommend customizing the therapy framework as per the client's cultural background. This may be more complex compared to conventional management of anxiety and depressive conditions. The fourth speaker takes on these perspectives as experienced in Bangladesh and India. The symposium concludes with discussion on customizing CBT for management of these lesser reported conditions with take home points.

### **Applications of CBT in General Medical Conditions**

Susmita Halder\*

*St. Xavier's University Kolkata, India*

Cognitive Behavior Therapy (CBT) is a psychotherapeutic approach that has been widely accepted as an evidence-based treatment for psychological disorders such as depression and anxiety. It is based on the idea that the way people think about and interpret events and situations can affect their emotions and behaviors. CBT aims to change negative thought patterns and maladaptive behaviors, leading to better emotional regulation and coping strategies. CBT has gradually gained acceptance in Asian cultures, which traditionally preferred pharmacotherapy and traditional medicine. However, the use of CBT in less common conditions, such as infertility and insomnia, presents unique challenges based on cultural and sociodemographic factors. Infertility is a condition that affects millions of couples worldwide, and it is often associated with psychological distress, including depression and anxiety. Women with infertility may feel a sense of loss

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and hopelessness, and the psychosocial consequences of infertility vary across cultures. Therefore, cultural perspectives must be taken into account when managing secondary psychological issues. CBT can be used to change negative thought patterns and behaviors related to infertility, leading to better emotional regulation and coping strategies. In addition, CBT can help reshape maladaptive behaviors and improve planning for future implications and treatment. Insomnia is a condition characterized by difficulty falling asleep or staying asleep, resulting in poor quality sleep and daytime fatigue. Non-pharmacological interventions for insomnia have gained popularity in recent years, and CBT has emerged as an effective treatment option. However, its further utility in the standard management of insomnia is not yet included. CBT for insomnia aims to change negative thought patterns and behaviors related to sleep, leading to better sleep hygiene and improved coping strategies. In non-Western cultures, cultural adaptations are necessary to ensure the effectiveness of CBT for insomnia. Presentation will focus on case studies that highlight specific measures in CBT for insomnia that are more acceptable in Indian culture. The use of CBT for insomnia, in particular, presents unique challenges in non-Western cultures, and cultural adaptations are necessary to ensure its effectiveness. It has gained acceptance in Asian cultures, but still it is not widely practiced mode of psychotherapy for less common conditions such as infertility and insomnia. Overall, CBT has proven to be a valuable treatment option for various psychological and physical conditions. Practitioners must be aware of cultural and sociodemographic factors that may affect the effectiveness of CBT and modify their approach accordingly. The case studies are highlighting the importance of cultural adaptations in CBT and provide practical examples of how to modify CBT for infertility and insomnia in non-Western cultures, particularly in India.

## **Whether CBT Can Help Brain Tumour Survivor on the Way to Recovery of Their Brain Injury**

**Dr. Shahanur Hossain, Tamima Tanjin\***

*University of Dhaka, Bangladesh*

Brain tumour is one of the most common causes of Acquired Brain Injury after which cognitive, emotional and behavioural consequences are inevitable. Recovery from brain tumour involves surgery and sometimes chemo and radiotherapy which also escalate the level of brain damage. Therefore, primary and secondary damage due to the brain tumour is a big source of distress and dysfunction which may decrease the wellbeing in survivor's life. CBT can be helpful to accept new reality by altering the thought process and by promoting the healthy coping mechanism. Therefore, the current study was designed to explore whether CBT can help brain tumour survivor on the way to recovery of their Brain Injury. This is a longitudinal process study where psychological treatment outcome has been studied for more than 5 years of a 21 years old brain tumour survivor having diagnosis of primary CNS lymphoma at his age 15. He had gone through neurosurgery, chemotherapy and radiotherapy as part of his medical treatment and subsequently return to his school being medically stable after three months post-surgery. He lost his consciousness during final exam at 16 months post surgery and then he referred for psychotherapy. Neuro-CBT formulation was developed after clinical assessment and neuropsychologist testing. He had serious challenges in cognitive, emotional and behavioural functioning which were being influenced both by brain damage and maladaptive schema developed by his negative experiences during early childhood and school age. His negative schema, maladaptive thinking and coping behaviour were treated by different techniques of CBT. After getting 20 regular sessions he started to attend follow up session. He completed his school and college successfully and now continuing his undergraduate in economic. He is still under follow up treatment to promote his mental growth and wellbeing. It could be concluded from this longitudinal case study that even after having the high risk of recurrence Neuro-CBT can successfully help the brain tumour survivor to promote positive prognosis by promoting adaptive thinking, positive self-esteem and healthy life style.

## **Effectiveness of CBT in the Management of Schizophrenia in Bangladesh. A Proposed Study**

Tamima Tanjin\*, Dr. Shahanur Hossain

*Clinical Psychology, University of Dhaka, Bangladesh*

Schizophrenia is a type of severe mental disorder that causes abnormal thinking and perception. Two of the main symptoms are delusion and hallucinations. It might compel the need for drugs to control symptoms and therapy, usually cognitive behaviour therapy (CBT). The need for psychological therapies for schizophrenia is increasingly acknowledged. Schizophrenia persists in around 1% of the population in Bangladesh. Around 300 psychiatrist and 90 clinical psychologists are offering mental health services for 170 million people in Bangladesh. In this country mental health problem has the least priority in health and economic sector. Specifically in the case of schizophrenia, medication is assumed to be the only treatment option. Access to mental health services is very limited, stigma and prejudice are very high, people's mind set is guided by medical model, all of which motivate the family of a schizophrenic to choose either antipsychotic medical treatment or no treatment. But there are many factors (like stress) which cause, maintain and relapse schizophrenia. Clients with this disorder need mental support as well as emotional support to feel better which is important aspect for them. Importance of psychological treatment mostly is not understood by patient, their family and sometimes by the doctor as well. In this context the current study has been planned to see the effectiveness of psychological treatment (CBT) in the management of schizophrenia. Specifically, it will be explored that whether CBT can be helpful in early stage as well in active phase and in residual phase of schizophrenia. Around 20 patients with mild schizophrenic symptoms will be drawn for group A, another 20 with active schizophrenia (group B) and another 20 with residual schizophrenic symptoms (group C) will be recruited for this study. Age will be ranged from 16 to 60 years for all group of sample. A standard CBT protocol will be utilized by the researcher herself as the intervention for each group. SAPS and SANS (The Scale for Assessment of Positive and Negative Symptoms), (translated Bangla version) will be used as the outcome measures of this study. Effectiveness will be analysed following within group and between group data analysis procedures. Current study will give us insight whether CBT can help in the management of schizophrenia in different stages and level which will ultimately be helpful to improve the progressive and to minimize the relapse by enhancing the quality of life. There are reported evidence of the efficacy of cognitive behaviour therapy approach from studies using both series of single-case experiments and small controlled trial in different countries. In Bangladesh context, the present attempt has been taken to see the evidence of the CBT effectiveness with schizophrenic population.

## **Integrating CBT in Primary Health Care: Cultural Perspectives, Challenges, and Future Direction**

Akash Mahato\*

*Amity University Kolkata, India*

The awareness regarding mental health issues and the need to intervene through a biopsychosocial perspective has seen a positive change in non-western part of the globe in recent decades, with India and Bangladesh being no exception. Both the countries have shared a common history for a pretty long time and there are lot of similarities in their health care delivery systems. While the rising number of clients in mental health clinics in cities suggests a growing acceptance of psychotherapy including CBT in the urban mass; the scenario may not be the same in primary health care in rural set ups. While the primary health care system in both the countries struggle with huge patient inflow and less than required trained health care professionals, the health care policies in each of these countries have strived to provide mental health services at primary level.

Despite these efforts, delivery of non-pharmacological therapeutic interventions particularly CBT to common mass might not be uniform, which primarily is influenced by socio demographic, economic as well as health beliefs of the clients. Even after keeping aside the

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infrastructural limitations, use of CBT for the conditions within behavioral medicine domain has seen a mixed reception even in urban population. It is postulated that hard core health beliefs, prevailing cultural health seeking patterns are a deterrent for seeking psychotherapy, CBT in particular for these conditions. The session will highlight the issues with India and Bangladesh in perspective, and possible customization required to suit delivery of CBT in primary health care in rural as well urban set ups.

### **What Works for Whom in Children and Adolescents with Anxiety Disorders: Towards Personalisation of Treatments**

On average, 50% of children treated for anxiety in clinical trials remain symptomatic, even with enhanced treatments. To date, research has largely failed to look at specific effects for the individual. Attempts to personalise mental health treatments have been well behind the rest of medicine, where personalised medicine has been explored with real impacts on treatment developments and, ultimately, survival rates. The iconic question asked by Gordon Paul – “What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances which treatments work for whom” – was asked 55 years ago, and we are still not much closer to the truth in the field of child mental health.

In this symposium, we will present four papers, proposing different approaches to answering the “What works for Whom” question in the context of CBT for children and young people with anxiety disorders.

First, Maaïke Nauta will present a study on WHAT works: can we find treatment ingredients that are associated with better outcomes in a meta-regression analysis. After systematic searches of randomised controlled trials for children with anxiety disorders, 61 studies were identified, all treatment manuals were coded for the presence of various treatment ingredients. Then, treatment outcome was related to the presence of treatment ingredients. Next, Lizel Bertie will focus on “for WHOM” and will show how certain child and parent characteristics are predictive of treatment outcome, and how these may influence individual treatment decisions. She will present two studies, one systematic review on potential moderators of treatment outcome, and a second in which they investigated response patterns of 1483 children with an anxiety diagnosis at any assessment point following treatment. They identified three clinically meaningful subgroups and baseline factors shown to predict changes in response patterns, increasing our understanding of what the risk profiles of these alternative response groups may entail. Our third speaker is Bas Kooiman who will then provide examples of how treatment modules can be assigned to individuals based on their baseline profile, including symptoms, transdiagnostic factors, and shared decision making with an expert by experience. He will show how data-based assignment of treatment modules is associated with patient preferences in about 100 individuals who participated in a randomised controlled trial for the prevention of relapse in youth with a remitted anxiety or mood disorder. Finally, Jennifer Hudson will present PADDY, an international Platform on Anxiety Disorder Data in Youth. In this project, we have harnessed existing data (and subsequent power) from existing clinical trials to answer the question about the combination of moderators in a more convincing way, a major step in answering the WHAT works for WHOM question. At this moment, 70 studies have been included from different centers and countries from all over the world, representing over 5000 participating children. Extending previous methodological research, we demonstrate the feasibility of establishing the largest international database to date.

In all, our symposium wishes to get closer to answering the “What works for Whom” question for children and young people with anxiety disorders.

### **Which (Set of) Treatment Ingredients Are Associated with Better Outcomes in CBT for Childhood Anxiety Disorders? A Meta-Regression Analysis**

Maaïke Nauta\*

*University of Groningen, the Netherlands*

So far, most studies on moderation have focused on identifying individual characteristics to predict treatment outcome. An additional approach to study variance in treatment outcome, is to look into treatment characteristics and treatment ingredients that may be predictive of better treatment outcomes. Through systematic review, we identified 61 studies on CBT outcome in childhood anxiety disorders (representing  $n=5755$ ). We studied the treatment manuals used in each individual trial and rated the treatment characteristics as well as the presence of treatment ingredients. Parent and child rated improvement on anxiety symptomatology was extracted



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from each trial. Then, a meta-regression analysis was performed to identify treatment characteristics and ingredients associated with treatment outcome. In general, trials including referred children were associated with less treatment gains than those recruiting participants. Those treatments that explicitly included modelling and relapse prevention strategies had better outcome, whereas those using reward systems had slightly less beneficial outcomes. Clinical implications will be discussed, as well as the potential of taking the evaluation of treatment characteristics and ingredients to a next level in the context of an individual patient data format.

## **Personalising Treatment for Minimal Responders Following CBT for Childhood Anxiety**

Lizel Bertie\*

*Black Dog Institute, University of New South Wales, Sydney, Australia*

Immediately following a course of CBT for paediatric anxiety disorders, a substantial number of children continue to experience significant impairment. Little is known about youth who demonstrate minimal response or diverse patterns of symptom change following treatment. In order to move towards personalisation of treatment for youth with anxiety disorders, we attempted to first identify different response trajectories and the differences between response groups, and second to connect pre-treatment characteristics to a likely response trajectory. Utilising a large, archived dataset collected from ten clinical sites, we examined the patterns of response for 1483 children with an anxiety diagnosis at any assessment point following treatment. Growth curve models assessed treatment response trajectories and examined predictors including pre-treatment demographic, clinical and parental factors, as well as treatment factors. We identified three clinically meaningful subgroups and baseline factors shown to predict changes in response patterns, increasing our understanding of what the risk profiles of these alternative response groups may entail.

## **Multimodal Personalization with Shared Decision Making for StayFine: Individualized App-Based Relapse Prevention for Anxiety and Depression in Young People**

Bas Kooiman<sup>1\*</sup>, Suzanne Robberegt<sup>2</sup>, Casper Albers<sup>1</sup>, Claudi Bockting<sup>3</sup>, Yvonne Stikkelbroek<sup>2</sup>, Maaïke Nauta<sup>1</sup>

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<sup>2</sup> *Depression Expertise Centre-Youth, GGZ Oost Brabant, Netherlands*

<sup>3</sup> *Amsterdam University Medical Centres, location AMC, Netherlands*

Tailoring interventions to the individual has been hypothesised to improve treatment efficacy. Personalization to target specific underlying mechanisms might improve treatment effects as well as adherence. Data-driven personalization of treatment, however, is still in its infancy. This paper will describe an innovative type of data-driven personalization of treatment in the context of Stayfine, a guided app-based relapse prevention intervention for participants in remission of anxiety and depressive disorders for 13 to 21-year-olds (n=70). Participants follow six modules, including three fixed modules, starting with psycho-education and cognitive restructuring, and ending with creating a personal relapse prevention plan based on all modules. In-between they follow 3 of 5 chosen modules, with options including enhancing positive affect, behavioural activation, exposure, sleep and wellness. The 4-step personalization approach, with each step indicating separate modules, consists of (1) prior diagnoses (diagnostic interview), (2) transdiagnostic psychological factors (online self-report questionnaires), (3) individual symptom networks (ecological momentary assessment, based on a two-week diary with six time points per day) and subsequently (4) patient preference based on shared decision making with a trained expert by experience. This innovative type of personalization approach for relapse prevention interventions is detailed and critically evaluated, based on theoretical underpinnings and (in)congruence between data-driven advice and participant preference, using available data.

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Results will give insight on method-based differences between personalization techniques to indicate interventions, and consequently the extent to which they should be combined for future interventions.

## **Establishing PADDY – A Platform on Anxiety Disorder Data in Youth**

**Jennie Hudson<sup>1\*</sup>, Lizel Bertie<sup>1</sup>, Maaïke Nauta<sup>2</sup>, Bas Kooiman<sup>2</sup>, Gemma Sicouri<sup>1</sup>, Deanna Francis<sup>1</sup>**

<sup>1</sup> *Black Dog Institute, University of New South Wales, Sydney, Australia*

<sup>2</sup> *Groningen University, Netherlands*

In this presentation the team will describe the methods used to establish a new knowledge database called PADDY (Platform for Anxiety Disorder Data in Youth) to move the field of childhood anxiety research towards personalisation. PADDY will be hosted on a secure cloud storage solution and will include a synthesised dataset of existing and consenting clinical trials of treatments for children with anxiety disorders. This work will provide the foundation for newer statistical techniques, such as machine learning, applied not only to overcome current methodological challenges, but to provide evidence-based strategies for clinical decision-making. We will describe the methods (systematic review) and processes (collection, treatment, and management of secondary data) followed in establishing PADDY. We also discuss the challenges inherent in this endeavour, along with strategies to overcome potential barriers to execution. Extending previous methodological research, we demonstrate the feasibility of establishing the largest international database of child mental health clinical trial to date.

## Sudden Gains in Psychotherapy: New Theoretical Understanding and Empirical Findings

Sudden gains are rapid reductions in symptoms that occur between consecutive treatment sessions (Tang & DeRubeis, 1999). Sudden gains were initially investigated in cognitive therapy for depression among adults but have since been found in a range of treatments, disorders, and across the lifespan (see Aderka, Nickerson, Bøe, & Hofmann, 2012 for a review). Individuals who experience sudden gains during treatment have been consistently found to have better outcomes compared to individuals who do not experience sudden gains (Aderka et al., 2012; Shalom & Aderka, 2020).

In the present symposium, we will present a revised theory of sudden gains (Aderka & Shalom, 2021). The theory views sudden gains as stemming from naturally occurring fluctuations in symptoms rather than from specific therapeutic interventions. Based on this view, treatment is considered a context in which sudden gains occur rather than a cause of sudden gains. In addition, the theory addresses the processes occurring following the experience of sudden gains. Based on the Tang & DeRubeis (1999) theory as well as studies identifying cognitive changes following sudden gains (e.g., Bohn et al., 2013), and increases in alliance following sudden gains (e.g., Lutz et al., 2012), the theory suggests that sudden gains are followed by upward spirals of improvement. The Revised Theory extends previous theoretical accounts by suggesting that upward spirals occur only when sudden gains are actively processed in therapy in the post-gain session. The second presentation will describe a recent empirical study examining this theory titled "Intraindividual variability in symptoms consistently predicts sudden gains". In this study, we examined data from a randomized controlled trial (RCT) of prolonged exposure therapy for posttraumatic stress disorder (PTSD) in children and adolescents ( $n = 63$ ), an RCT of cognitive and behavioral therapies for obsessive-compulsive disorder (OCD) in adults ( $n = 91$ ), and psychodynamic therapy delivered under routine clinical conditions in a naturalistic setting for diverse disorders ( $n = 106$ ). In all 3 datasets, we examined whether a measure of variability in symptoms occurring during the first sessions could predict sudden gains. Variability in symptoms significantly predicted sudden gains in all 3 datasets and correctly classified 81.0%, 63.8%, and 76.9% of individuals to sudden gain or non-sudden gain status in the 3 datasets (respectively). This suggests that intraindividual fluctuations can predict sudden gains.

The third presentation will describe a recent empirical study examining intraindividual variability in symptoms during wait-list and its potential to predict the occurrence of sudden gains during treatment for social anxiety disorder (SAD). We used the same measure of variability described in the previous presentation and found that it predicted the occurrence of 83% of the sudden gains in treatment. This provides further support for the utility of intraindividual variability as a predictor of sudden gains.

The fourth presentation will describe a large RCT ( $n = 182$ ) of internet-delivered treatment for SAD. In this RCT, large reductions in symptoms between consecutive sessions were identified "live" as treatment was ongoing. Once reductions meeting criteria were identified, sudden gains were randomized to either receive processing based on the components described in the revised theory, or to continue treatment as usual (i.e., no processing beyond acknowledging the gain). Results indicated that sudden gains that were processed resulted in significantly greater reductions in symptoms at post-treatment and follow-up compared to sudden gains that were not processed. Change during treatment (or follow-up) for individuals with sudden gains that were not processed did not significantly differ from change in treatment for individuals with no sudden gains. These findings highlight the role of processing of sudden gains in facilitating and maintaining long-term therapeutic change.

## A Revised Theory of Sudden Gains in Psychological Treatments

Idan M. Aderka\*, Jonathan Shalom

*University of Haifa, Israel*

Sudden gains were first defined and quantified by Tang and DeRubeis (1999) and were found to predict treatment outcome in cognitive

therapy for depression. Since that seminal paper, over 100 examinations of sudden gains have been published and sudden gains have been found to be ubiquitous in psychological treatments and to consistently predict better treatment outcomes across a multitude of disorders and contexts (see Shalom & Aderka, 2020 for a review). The research on sudden gains has seen considerable growth over the past 20 years. However, the theory behind sudden gains (which addresses processes leading to sudden gains, and processes resulting from sudden gains) has never been revised. Based on the empirical research which has accrued over the last 20 years, we present an empirically-based revision of the theory of sudden gains. The theory views sudden gains as stemming from naturally occurring fluctuations in symptoms rather than from specific therapeutic interventions. Based on this view, treatment is considered a context in which sudden gains occur rather than a cause of sudden gains. In addition, the theory addresses the processes occurring following the experience of sudden gains. Based on the Tang & DeRubeis (1999) theory as well as studies identifying cognitive changes following sudden gains (e.g., Bohn et al., 2013), and increases in alliance following sudden gains (e.g., Lutz et al., 2012), the theory suggests that sudden gains are followed by upward spirals of improvement. The Revised Theory extends previous theoretical accounts by suggesting that upward spirals occur only when sudden gains are actively processed in therapy in the post-gain session.

## **Intraindividual Variability in Symptoms Consistently Predicts Sudden Gains: An Examination of Three Independent Datasets**

Jonathan G. Shalom<sup>1\*</sup>, Eva Gilboa-Schechtman<sup>2</sup>, Dana Atzil-Slonim<sup>2</sup>, Eran Bar-Kalifa<sup>2</sup>, Ilanit Hasson-Ohayon<sup>2</sup>, Patricia van Oppen<sup>3</sup>, Anton J. L. M. van Balkom<sup>3</sup>, Idan M. Aderka<sup>1</sup>

<sup>1</sup> *University of Haifa, Israel*

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<sup>3</sup> *VU University Medical Center and GGZ inGeest, Netherlands*

Sudden gains are robust predictors of outcome in psychotherapy. However, previous attempts at predicting sudden gains have yielded inconclusive findings. The aim of the present study was to examine a novel, trans-diagnostic, trans-therapeutic predictor of sudden gains that would replicate in different settings and populations. Specifically, we examined intra-individual variability in symptoms. We examined data from a randomized controlled trial (RCT) of prolonged exposure therapy for posttraumatic stress disorder (PTSD) in children and adolescents ( $n = 63$ ), an RCT of cognitive and behavioural therapies for obsessive-compulsive disorder (OCD) in adults ( $n = 91$ ), and psychodynamic therapy delivered under routine clinical conditions in a naturalistic setting for diverse disorders ( $n = 106$ ). In all 3 datasets, we examined whether a measure of variability in symptoms occurring during the first sessions could predict sudden gains. Variability in symptoms was found to be independent of total change during treatment. Variability in symptoms significantly predicted sudden gains in all 3 datasets and correctly classified 81.0%, 69.2%, and 76.9% of individuals to sudden gain or non-sudden gain status (respectively). The present study represents the first examination of variability in symptoms as a predictor of sudden gains. Findings indicated that sudden gains are significantly predicted by intra-individual variability in symptoms, in diverse settings, contexts and populations. Advantages of this predictor, as well as clinical and research implications are discussed.

## **Predicting Sudden Gains before Treatment Begins: An Examination of Pretreatment Intraindividual Variability in Symptoms**

Jonathan G. Shalom\*

*University of Haifa, Israel*

Sudden gains during psychotherapy have been found to be ubiquitous in psychological treatments and to consistently predict better treatment outcomes across a multitude of disorders and contexts (Shalom & Aderka, 2020). Intraindividual variability in symptoms

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during treatment was suggested as a trans-therapeutic and trans-diagnostic predictor of sudden gains (Shalom et al., 2018). The present study examined this predictor when measured before the start of treatment. We examined data from a preregistered randomized controlled trial (RCT) of Internet-delivered cognitive-behavioral therapy (CBT) for social anxiety disorder (SAD). We measured variability in symptoms both within-treatment and before treatment (i.e. during waitlist). Intraindividual variability in symptoms significantly predicted sudden gains both when measured before treatment or within-treatment and correctly classified 84% and 83% of individuals to sudden gains versus non-sudden gains status, respectively. Intraindividual variability in symptoms can predict sudden gains in Internet-delivered treatment for SAD, thus supporting its trans-diagnostic and trans-therapeutic nature. Predicting sudden gains before treatment begins using intraindividual variability supports the Natural Fluctuations theory of sudden gains (Aderka & Shalom, 2021) and has implications for treatment planning and clinical decision making.

## **Processing of Sudden Gains in Psychotherapy: A Novel Experimental Manipulation**

Idan M. Aderka\*

*University of Haifa, Israel*

The present study examined processing of sudden gains in therapy. Specifically, we examined a large randomized controlled trial of internet-delivered treatment for social anxiety disorder ( $n = 182$ ). In this trial, large reductions in symptoms between consecutive sessions were identified “live” as treatment was ongoing using the first two criteria for sudden gains. Once sudden gains were identified, they were randomized to either receive processing based on the components described in the revised theory, or to continue treatment as usual (i.e., no processing beyond acknowledging the gain). Results indicated that sudden gains that were processed resulted in significantly greater reductions in symptoms at post-treatment and follow-up compared to sudden gains that were not processed. Change during treatment (and follow-up) for individuals with sudden gains that were not processed did not significantly differ from change in treatment for individuals with no sudden gains. These findings highlight the role of processing of sudden gains in facilitating and maintaining long-term therapeutic change.

### **Interpretation Bias in Pain and Chronic Health Conditions**

In this symposium, we will describe the latest findings relating to the role of interpretation biases in pain. There has been an increase in research interest in the role of interpretation biases in pain over the past five years. Our first paper presented by Jemma Todd will summarise an up-to-date meta-analysis that confirms that interpretation biases do exist in people who have chronic pain conditions compared to those who do not. However, the majority of the literature is with people with heterogenous chronic pain conditions, who do not have underlying medical conditions. Further, it remains unclear to what extent interpretation biases are associated with pain-related outcomes and other psychosocial constructs. In this symposium, we examine evidence for the role of interpretation biases in other chronic conditions where currently there is a paucity of research. Our symposium confirms the presence of interpretation biases in people with rheumatoid arthritis (RA) (n = 164; second paper presented by Jack Boyse) and endometriosis (n = 873; third paper presented by Brydee Pickup) compared to people without these conditions. Further, we find evidence to suggest that interpretation biases are associated with pain severity. In our fourth paper presented by Stefan Michalski, we present data on interpretation biases in 800 participants with one of four medical conditions (diabetes, respiratory disease, cardiac conditions and rheumatic conditions), we find evidence that interpretation biases are associated with anxiety, and in those with pain (n = 464) interpretation biases are associated with a range of pain-related outcomes, including healthcare utilisation. In our final paper presented by Louise Sharpe, we investigate the clinical implications of these preceding papers, presenting the results of a large randomized controlled trial of cognitive bias modification of interpretation (CBMI) in people with chronic pain (n = 288). Results show that CBMI when administered remotely was effective in improving pain and fear associated with pain, although not on a range of other secondary outcomes. We conclude that the study of interpretation biases is important and has real potential to guide large-scale interventions for a range of increasingly common chronic physical conditions which have pain as a common symptom.

### **Interpretation Bias and Pain: A Systematic Review and Meta-Analysis**

Jemma Todd, Brydee Pickup\*, Daelin Coutts-Bain, Louise Sharpe

*The University of Sydney, Australia*

A review conducted by Schoth & Liossi (2016) found that people with chronic pain displayed significantly greater interpretation bias than those without pain, signifying that interpretation bias could potentially play a role in the development of chronic. However, their review only included 7 studies, of which 4 were able to be meta-analysed. The field of interpretation bias research has expanded rapidly since then, therefore warranting an updated review. Therefore, the present review had the following aims: 1) To determine the degree to which people with acute and chronic pain show a greater interpretation bias than those without pain, 2) to explore the association between interpretation bias and both acute and chronic pain outcomes, and 3) to assess the effectiveness of interpretation bias interventions for improving pain outcomes. A total of 23 articles were retrieved, which were predominantly cross sectional in their assessment of interpretation bias, with 2 interventions. We found significant effects for interpretation bias between pain and pain free groups, as well as an association between interpretation bias and pain outcomes. The interventions were effective in improving pain outcomes in chronic pain, and acute experimental pain. These findings suggest that interpretation bias is not only closely aligned with pain outcomes, but also appears to play a causal role in pain. Interpretation bias may therefore be a useful tool in the detection and treatment of pain-related disability, particularly given the ease of assessment and potential for scalability. Nonetheless, the role of interpretation bias in health conditions featuring pain is still unknown, and further longitudinal and intervention is needed to better understand the mechanisms of interpretation bias and pain.

## Interpretation Bias in Rheumatoid Arthritis

Jack Boyse\*

*University of Sydney, Australia*

People with chronic pain tend to interpret ambiguous information as health-related, more so than people without. In this study, we aimed to investigate whether people with rheumatoid arthritis (RA) exhibit this interpretation bias, and whether it is associated with fear of disease progression (FoP). The interpretation biases of people with RA (n = 164) were compared to an age and gender-matched control group. We hypothesized that: (1) people with RA would have larger interpretation biases than people without; (2) those who scored in the clinical range for FoP would have larger interpretation bias than those who did not; (3) interpretation bias would moderate the relationship between pain severity and FoP, and (4) interpretation bias would explain variance in FoP above and beyond other established predictors. Our results confirmed that people with RA were more likely to interpret ambiguous information as health-related compared to people without RA. This effect was more pronounced for the RA subgroup with clinically significant FoP than those scoring in the normal range. We did not find evidence to suggest interpretation bias moderated the relationship between pain and FoP, or that interpretation bias added to the variance of other known predictors of FoP. Our results indicate that interpretation bias is common amongst people with RA and is associated with FoP. Further research is required to illuminate the exact nature of this relationship.

## Interpretation Bias in Endometriosis

Brydee Pickup\*, Louise Sharpe, Jemma Todd

*The University of Sydney, Australia*

Endometriosis-related pain has been predominantly medically managed which has hindered understanding of psychological factors involved in these pain experiences. Models of chronic pain highlight the biased interpretation of ambiguous information as health threat related (interpretation bias) as an important process in the development and maintenance of chronic pain. Whether interpretation bias may also be similarly implicated in endometriosis-related pain is unclear. The current study aimed to address this gap in the literature by (1) comparing interpretation biases between a sample of participants with endometriosis and a control sample of participants without medical conditions and pain, (2) exploring relationships between interpretation bias and endometriosis-related pain outcomes, and (3) exploring whether interpretation bias moderated the relationship between endometriosis-related pain severity and pain interference. The endometriosis and healthy control samples comprised 873 and 197 participants, respectively. Participants completed online surveys assessing demographics, interpretation bias, and pain-related outcomes. Analyses revealed that interpretation bias was significantly stronger among individuals with endometriosis relative to controls, with a large effect size. Within the endometriosis sample, interpretation bias was significantly associated with increases in pain-related interference, however, interpretation bias was not associated with any other pain outcomes and did not moderate the relationship between pain severity and pain interference. This study is the first to evidence biased interpretation styles among individuals with endometriosis, and to show this bias is associated with pain interference. Whether interpretation bias varies over time, and whether this bias can be modified through scalable and accessible interventions to alleviate pain-related interference are avenues for future research.

## **The Relationship between Health-Related Interpretation Biases and Pain Outcomes in Chronic Health Conditions**

Stefan Carlo Michalski\*, Louise Sharpe, Bethany Richmond, Rachel Menzies, Joanne Shaw

*The University of Sydney, Australia*

Health-related interpretation biases have been found in people who experience chronic pain compared to those who do not. While pain is a symptom of a range of chronic conditions, it is largely unknown whether interpretation biases are also associated with pain in the context of chronic disease. We recruited 796 participants with one of four chronic health conditions: cardiac conditions, respiratory conditions, diabetes, or rheumatic disease. Participants completed an ambiguous words paradigm, measures of psychopathology, death anxiety, and measures of pain and related outcomes. Interpretation biases were significantly associated with anxiety, stress, and death anxiety. For the 472 participants who experienced pain as a symptom of their illness, interpretation bias was also associated with pain severity, pain interference and health-care use, but not pain-related distress. The correlations were in the small range. Nevertheless, the fact that interpretation bias had consistent relationships across domains of both psychopathology and pain-related outcomes is noteworthy. These results suggest that cognitive bias modification for interpretation could have a role in a range of chronic health conditions.

## **Can Cognitive Bias Modification for Interpretation Improve Pain?**

Louise Sharpe\*, Emma Jones, Poorva Pradhan, Jemma Todd, Ben Colagiuri

*The University of Sydney, Australia*

Cognitive Bias Modification for Interpretation (CBM-I) is an effective intervention for anxiety, but there is only a single trial in people with chronic pain. The aim of this randomised-controlled trial (RCT) was to test CBM-I with and without psychoeducation for people with chronic pain. We randomized 288 participants to four groups comprising treatment (CBM-I vs placebo) with or without psychoeducation. One hundred and eighty-three participants (64%) completed four, 15-minute training sessions over two weeks. The co-primary outcomes were pain interference and pain intensity. We also measured interpretation bias, fear of movement, catastrophizing, depression, anxiety and stress. Participants with more psychopathology at baseline were more likely to drop out, as were those allocated to psychoeducation. Intention-to-treat analyses using linear mixed models regression were conducted. Training effects of CBM-I were found on interpretation bias, but not a near-transfer task. CBM-I improved both primary outcomes compared to placebo. For pain interference, there was also a main effect favouring psychoeducation. The CBM-I group improved significantly more than placebo for fear of movement, but not catastrophizing, depression or anxiety. CBM-I reduced stress but only for those who also received psychoeducation. This trial shows that CBM-I has promise in the management of pain, but there was limited evidence that psychoeducation improved the efficacy of CBM-I. CBM-I was administered entirely remotely and is highly scalable but future research should focus on paradigms that lead to better engagement of people with chronic pain with CBM-I.



### **Multi-Method Examination of Transdiagnostic Processes in Obsessive-Compulsive Disorder**

Research has identified multiple cognitive processes that appear to underlie and maintain symptoms of obsessive-compulsive disorder (OCD). Although these are highly relevant to the disorder, it is also recognised that these processes are not unique to OCD. This symposium aims to provide an update from the latest cognitive research in OCD, with a particular emphasis on evidence obtained using different methodological approaches. The first presenter will describe a study where they found preliminary evidence that a fear-of-self, the fear of who one could be or become, predicts attentional bias towards OCD-relevant images. The second presenter will share findings from a qualitative study demonstrating a relationship between negative beliefs about losing control and OCD symptoms in a clinical sample. The third presenter will present on results showing that experimental manipulations of moral disgust can influence contagion-related cognitive distortions and symptoms of contamination fear. The fourth presenter will cover results from a longitudinal study examining the links between OCD symptom severity and models of the self and others as described in attachment theory. Findings revealed that models of the self, which capture aspects of perceived efficacy and control over the environment, were more consistently related to OCD symptom severity, and that scores on this same attachment dimension improved after undergoing formulation-based cognitive-behavioural therapy. The final presenter will review the evidence for individuals with OCD having diminished access to their internal states, which is proposed to increase their seeking of external proxies for these states (i.e., compulsions). This collection of studies highlights the impressive progress of cognitive research in OCD, as well as the variety of methodologies that are available for future investigations. A better understanding of these cognitive processes has the potential to refine cognitive-behavioural models and therefore treatment of obsessive-compulsive and related disorders.

### **Fear-of-Self and Its Association with Attentional Bias towards Obsessive-Compulsive Images**

Shiu Fung Wong<sup>1\*</sup>, Xiongbin Chen<sup>1</sup>, Briana Kennedy<sup>2</sup>, Frederick Aardema<sup>3</sup>

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<sup>3</sup> *University of Montreal, Canada*

A fear of who one could be or become (i.e., fear-of-self) is proposed to cause and maintain obsessive-compulsive phenomena, including hypervigilance towards triggers of obsessional doubts. For example, having a feared self that is violent might be associated with biased attention towards knives in the kitchen. Recent research has identified different dimensions of the feared self that are relevant to obsessive-compulsive and related disorders (a feared corrupted, culpable, and malformed self). The current study aimed to examine the relationship between specific dimensions of the feared self and thematically-congruent obsessional images (i.e., triggers). One-hundred and eighty seven participants completed a self-report measure of feared self-perceptions as well as the Emotion-Induced Blindness task, a measure of attentional bias. Results from multiple regressions indicated that fears of a corrupted self significantly and uniquely predicted attentional bias towards all obsessional images, as well as images related to compulsive checking and unacceptable thoughts. Unexpectedly, the feared corrupted self also significantly and uniquely predicted attentional bias towards images related to depression and neutral images, but not towards images related to anxiety. In conclusion, there was some support for a novel cognitive-behavioural theory of obsessive-compulsive disorder which emphasises the centrality of a fear-of-self in its phenomenology.

## **At the Mercy of Myself: Exploring Clinical and Non-clinical Accounts of Losing Control**

Kenneth Kelly-Turner\*, Adam Radomsky

*Concordia University, Canada*

Concerns about the likelihood, consequences, and meaning of losing control are commonplace across anxiety-related disorders (e.g., OCD, Social Anxiety Disorder, Panic and Agoraphobia). However, several experimental studies have suggested that non-clinical samples also believe that they can and will lose control under the right circumstances. Understanding overlaps between clinical and non-clinical beliefs about the nature and consequences of perceived losses of control can help us to better understand the continuum of negative beliefs about losing control. The present study used thematic analysis to identify common beliefs about losing control regardless of psychopathology. Twenty-one participants, half of whom met criteria for at least one anxiety-related disorder, were interviewed about their beliefs about losing control. All 21 participants reported that losing control was indeed possible. Losses of control were defined as multifaceted cognitive-behavioural processes and were seen as negative considering the perceived consequences of the losses. Commonly described consequences were harm to oneself or others, powerlessness, and unpleasant emotions during (e.g., sadness, frustration, anxiety) and following (e.g., regret, shame, humiliation) a loss of control. These results suggest that the experience of losing control is common and that negative beliefs about losing control may only become problematic when the losses are defined as personally significant. These results offer important insight into what is common among clinical and non-clinical beliefs about losing control and inform how these beliefs might be worth targeting in cognitive and behavioural interventions.

## **Can Immorality Be Contracted? A Closer Look at Moral Disgust**

Catherine Ouellet-Courtois\*, Adam S. Radomsky

*Concordia University, Canada*

### **BACKGROUND AND AIMS**

While the role of disgust in obsessive-compulsive disorder (OCD) with contamination fear has received extensive empirical attention, little research focus has been brought to the role of moral disgust in OCD. Considering that morality concerns often colour symptoms of contamination fear in OCD, the aim of this study was to examine the types of cognitive and behavioural reactions that are elicited by moral disgust in comparison to core disgust elicitors, and to examine the moderating effects of both contact contamination and mental contamination symptoms.

### **METHODS**

In a within-participants design, 148 undergraduate participants provided appraisals of sympathetic magic, thought-action fusion and mental contamination, as well as urges to engage in compulsive or neutralizing behaviour in response to core disgust and moral disgust elicitors, as well as to general anxiety elicitors, all presented via vignettes. The Vancouver Obsessional Compulsive Inventory – Contamination Subscale and the Vancouver Obsessional Compulsive Inventory – Mental Contamination Scale were used to measure symptoms of both contact and mental contamination.

### **RESULTS**

Using moderation mixed linear models (MLM), it was found that both core disgust and moral disgust elicitors triggered greater appraisals of sympathetic magic and behavioural urges than anxiety control elicitors. In addition, moral disgust elicitors provoked greater appraisals of thought-action fusion and mental contamination than all other elicitors. These effects were amplified when symptoms of contact and mental contamination fear were greater.

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## CONCLUSIONS

These results suggest that individuals endorse magical contagion beliefs that immorality can be contracted in the same way as physical germs, and that these magical contagion beliefs are positively associated with symptoms of contamination fear. These findings underline how moral disgust can act as a vulnerability factor to contagion-related cognitive distortions and symptoms of contamination fear.

## **Models of the Self and Others within Attachment: An Examination of Associations with Obsessive-Compulsive Symptoms and of Changes during Cognitive-Behavioural Therapy**

Jean-Philippe Gagné\*, Jesse Renaud, Gail Myhr

*McGill University, Canada*

## INTRODUCTION

Attachment theories posit that attachment security can be conceptualized on the basis of positive and negative views of the self and others. Because beliefs shown to play a role in the development and maintenance of obsessive-compulsive disorder (OCD) mostly pertain to the self (e.g., one's control and responsibility over the environment), we first aimed with this study to examine links between OCD symptom severity and attachment through the lens of the models of the self and others. This framework proposes that individuals have dimensional beliefs about the self and others (stemming from childhood), that range from negative to positive. Models of the self are linked to self-worth and control, whereas models of others relate to others' availability and supportiveness. The second aim of this study was to assess whether these self-other attachment dimensions would change with formulation-based cognitive-behavioural therapy (CBT).

Hypotheses: It was hypothesized that OCD symptoms would be negatively associated with the self dimension, but unrelated to the others dimension. Similarly, it was hypothesized that scores on the self dimension, but not on the others dimension, would improve with formulation-based CBT.

## METHOD

Sixty-four participants with a primary diagnosis of OCD (76.55% of participants had at least one comorbid diagnosis) were selected from a databank associated with an ongoing prospective study collecting data from patients assessed at an outpatient CBT unit. Participants completed the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) and Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994) at pre- and post-CBT. At baseline, participants also completed the OCD subscale of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis & Lazarus, 1994). Given past findings indicating that correlations between attachment and OCD symptoms are sensitive to assessment method, both attachment measures were included in the analyses.

## RESULTS

As expected, the self dimension, as assessed by the RSQ, was significantly negatively correlated to OCD symptom severity—whereas the others dimension was shown to be unrelated. No significant correlations emerged when using the RQ though. As predicted, from pre- to post-CBT, scores significantly improved on the self dimension, but not on the others dimension, when using the RQ—but no significant improvements were noted with the RSQ. Participants had received, on average, 17.81 (SD = 8.53) sessions of CBT.

## CONCLUSION

Results suggest that beliefs about the self as conceptualized in attachment theories may be related to OCD symptom severity, likely due to the conceptual overlap between these beliefs and those involved in cognitive models of OCD (e.g., low perceived control). Beliefs about the self may also improve as a result of formulation-based CBT, with emphasis on case conceptualization. Negative beliefs about the self may be worth assessing and accessing in CBT to allow patients to better understand the origins of their symptoms and to help

them learn that behaving according to these beliefs may no longer apply in the current context. Of note, differences in results emerged based on measurement method (as noted in past work) and so findings should be interpreted with caution.

## **Difficulties in Accessing Internal States as a General Cross-Diagnostic Deficit**

Noam Sarna\*, Reuven Dar

*Tel Aviv University, Israel*

Many situations in life require us to access our internal states. For example, when learning for an exam, we might try to evaluate how well we understand the material; When deciding what and when to eat we might gauge our hunger and our preferences for particular foods; In an intimate relationship, we may ask ourselves how close we feel to our partner. For most of us, accessing an internal state is a transparent process that constantly occurs and guides our behavior without awareness. What happens, however, when one has difficulty accessing an internal state? In a novel model of obsessive-compulsive disorder (OCD), we suggest that many OCD symptoms can be traced to difficulty accessing internal states. Evidence supporting this hypothesis was obtained with regards to several internal states, including muscle tension, emotions, interoception, and a sense of understanding. In the case of OCD, we suggest that people who experience difficulty accessing internal states may seek “proxies” as substitutes for the inaccessible internal states, paradoxically leading to worsening their difficulty. Here, we propose that difficulty accessing internal states is related to a range of psychopathological symptoms and, therefore, should be viewed as a general cross-domain deficit. We present preliminary data on difficulty in accessing internal states in relation to alexithymia and eating disorders. Finally, we present work progress on a new trans-diagnostic measure designed to assess the subjective importance of accessing internal states.

## Overcoming Barriers to Working With Trauma Survivors

Despite robust evidence for the efficacy of trauma-focused CBT (e.g., cognitive processing therapy (CPT), prolonged exposure therapy (PE)), there are well-documented barriers to working with trauma survivors (e.g., treatment avoidance by both patients and clinicians). Overcoming those barriers requires a multi-pronged approach that considers the characteristics of patients, therapeutic models, and organizational settings. The research presented in this symposium offers insights and recommendations for addressing those challenges. The first speaker (Parkin) will highlight challenges in investigating adverse childhood experiences. The research presented in this presentation utilized the Secure Anonymised Information Linkage (SAIL) Databank, a national database comprising electronic records for 1.1 million young people in Wales, UK. The presentation will touch on the benefits (and challenges) of routinely-collected electronic record data vs. research data and consider how to work with such data when exploring topics such as trauma, adversity and childhood mental health problems. The second speaker (Wright) will present ways to improve outcomes in the first line of treatments for trauma, specifically PE and CPT. Wright will provide evidence that delivering PE and CPT in time-condensed or “massed” formats can reduce barriers to care and potentially mitigate the factors that limit outcomes. This presentation discusses lessons learned from providers across diverse settings who are experienced in both delivering massed PE and CPT. The third speaker (Fina) will present the organizational needs when implementing PE (e.g., posttraumatic stress disorder (PTSD)) screening procedures, measurement-based care, and system outcome measures. The fourth presenter (Horwitz) uses text analysis of written statements by military service members with PTSD before and after “massed” treatment to explore the association of language use and treatment response. Results will explore how linguistic analysis can provide clues to some of the ‘hidden’ barriers among trauma survivors. The fifth speaker (Cross) will present the challenges of ‘recovered’ or imagined trauma memory during trauma therapy. The presentation will review the current literature on recovered memories and offer guidance for therapists in working effectively with recovered memories.

## Not Quite Plain SAILing: Challenges and Solutions for Exploring Adverse Childhood Experiences (ACEs) in Routine Data Sources

Katherine Parkin<sup>1\*</sup>, Ryan Crowley<sup>1</sup>, Efthalia Massou<sup>1</sup>, Marcos Del Pozo Baños<sup>2</sup>, Yasmin Friedmann<sup>2</sup>, Ann John<sup>2</sup>, Anna Moore<sup>1</sup>

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This talk presents challenges, limitations and mitigations when trying to measure various adverse childhood experiences (ACEs) and associated childhood mental health problems in routinely-collected data. This project utilised the Secure Anonymised Information Linkage (SAIL) Databank, a national databank relating to the population of Wales, UK, and consisting of electronic records for 1.1 million young people. Through this databank, we brought together data from 18 databases in order to understand young people’s interactions with health (acute and community), education and social services, as well as their exposures to different ACEs.

Challenges discussed in the presentation include accessing the data, linking data from disparate systems, mapping ACE variables to routinely-collected variables, data missingness and its informativeness, and data quality. Some of the solutions and mitigations found to aid this process are also presented.

From this session, audience members will learn about a national databank of routinely-collected data, the benefits and challenges of routinely-collected electronic record data vs research data, and some reflections on how to work with this type of data when exploring topics such as trauma, adversity and childhood mental health problems.

## **Time-Condensed Trauma-Focused Therapy for PTSD with Military and Civilian Populations: Advantages and Challenges**

Edward Wright\*

*Massachusetts General Hospital/Harvard Medical School, USA*

Both prolonged exposure therapy (PE) and cognitive processing therapy (CPT) have strong evidence for their effectiveness in reducing symptoms of posttraumatic stress disorder (PTSD). However, barriers to access prevent some individuals from receiving these first-line treatments. Furthermore, data from clinical trials suggests that there is still opportunity to improve outcomes, particularly with military patients. Delivering PE and CPT in time-condensed or “massed” formats may reduce barriers to care and potentially mitigate some factors that limit outcomes. PE and CPT have now been implemented across a range of tempos (e.g., multiple sessions per day across one week, one session per day for three weeks) and to multiple target populations, in a variety of contexts from individual therapy alone to full intensive outpatient programs. Condensing the course of treatment has advantages for both patients and providers, including quicker time to recovery, less opportunity for avoidance, and improved treatment completion rates. The time-limited nature of massed treatment also creates accompanying challenges, such as less time to practice homework and greater impact when factors delay or disrupt progress. This presentation discusses lessons learned from providers across diverse settings who are experienced in both delivering massed PE and CPT and managing such programs, primarily with military populations. Clinical and administrative considerations for integrating massed treatment into traditional practice will be reviewed.

## **Beyond Individual Outcomes in PE Delivery: Considerations for Program Evaluation and Monitoring**

Brooke Fina\*

*University of Texas Health Science Center at San Antonio, USA*

There is robust evidence supporting the effectiveness of Prolonged Exposure therapy (PE) and Cognitive Processing Therapy (CPT) in reducing posttraumatic stress disorder (PTSD) symptoms across patient populations and trauma exposure types. While individual outcomes are important, they do not capture the full picture of evidence-based treatment program success. This presentation will address lessons learned from a large national training program of mental health clinicians in community settings in the United States, The STRONG STAR Training Initiative. The STRONG STAR Training Initiative has trained over 2000 clinicians in PE and CPT since 2017. This presentation highlights practical considerations such as organizational support, PTSD screening, clinical case consultation, clinician adherence, and the importance of ongoing monitoring and feedback to continuously improve program delivery and ensure sustainability of evidence-based treatments for PTSD. The presentation discusses “REAIM” as a practical model for PTSD treatment program evaluation.

## **Dilemmas Working with ‘Recovered’ Memories**

Eleanor Cross\*

*Traumatic Stress Service, South West London and St Georges’ NHS Foundation Trust, UK*

Details of traumatic events previously forgotten or unknown, can surface during the process of trauma therapy. There is much controversy whether such memories are ‘recovered’ or imagined. This can lead to several dilemmas for both client and therapist, with the possibility of generating false memories. For the client, it can be unsettling not knowing whether new memories are real or not real,

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especially when this may change important meanings about themselves or others, and their impact on relationships. For clinicians, it may raise important safeguarding and legal dilemmas, and the possibility of being blamed for inadvertently implanting or influencing memories.

There is much debate about the concept of 'recovered' versus 'false' memories. Memories are known to be both malleable and fallible, recalled differently over time and often indistinguishable from 'real' memories in both content and quality. The answer to the question: 'did this really happen to me?', is unlikely to be found, but when the distress associated is both high and real, how as therapists do we work with these new images?

When recovered memories create anxiety for both clients and clinicians, this may create avoidance on both sides in addressing distressing images that are driving the current sense of threat central to PTSD. The risk here is that therapists then with-hold evidence-based therapies that have the best likelihood of improving PTSD symptoms. The British Psychological Society (Frankland, & Cohen, 1999) produced guidance for therapists working clinically with recovered memories. Murray and El-Leithy (2022) take this guidance further, dedicating a chapter to working with recovered memories in their recent book: *Working with Complexity in PTSD*.

The focus of this workshop is to provide clinical examples of working therapeutically with recovered memories in PTSD, exploring openly with clients about the dilemmas that arise. We will focus on how to provide psychoeducation about the accuracy of images or bodily sensations, in a way that both takes them seriously but avoids drawing conclusions about the historical truth of such memories; formulation and conversations about living with uncertainty; focus on meanings and impact on relationships; and working with safeguarding and legal issues.

## What Do Words Say about Who Gets Better: Text Analysis of Impact Statements

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### BACKGROUND

Although originally designed to treat posttraumatic stress disorder (PTSD) among survivors of sexual assault, cognitive processing therapy (CPT) has become a common and effective trauma-focused treatment choice for veterans and service members experiencing PTSD and other psychopathology. CPT includes elements of education, exposure, and cognitive behavioral therapy. Cognitive elements focus specifically on working through "stuck points," or unhelpful beliefs surrounding a traumatic event that often hinder recovery. To facilitate identification of stuck points as well as to initiate processing of the traumatic event, patients write an impact statement at the onset of treatment outlining the personal meaning and impact of the trauma. An additional impact statement is often written at the end of a course of CPT, lending patients the opportunity to incorporate restructured thoughts and reflections.

Various studies have examined the types of cognitions present in impact statements, demonstrating reductions in over-accommodation (i.e., extreme adjustments to beliefs about oneself or the world in response to trauma) and assimilation (i.e., incorporation of trauma into current understandings of oneself or the world) over the course of CPT. Other studies on impact statements have investigated changes in cognitions in correlation with treatment response. One showed that treatment responders display more accommodated and fewer overaccommodated cognitions, while another showed that changes in self-blame-related cognitions precede changes in PTSD symptoms.

While studies on impact statements thus far have employed manual qualitative coding approaches, much can be learned from the implementation of computerized text analysis tools such as the Linguistic Inquiry and Word Count (LIWC) and the Meaning Extraction Method (MEM). Unlike traditional qualitative analytic methods, these tools analyze not just the content, but the structure of language. Results can then reveal key components of an individual's underlying psychological state.

The current study employs both LIWC and MEM to analyze impact statements written at the beginning and end of CPT delivered

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in a 2-week intensive clinical program for veterans struggling with PTSD and other psychopathology. Text analysis is used to discern how impact statement language changes pre- and post- treatment, and how changes in language use correspond with changes in symptomology.

## METHOD

The current study was conducted as a quality improvement initiative at the Home Base Program at Massachusetts General Hospital/ Harvard Medical School. Impact statements were collected from patients who were enrolled in the 2-week intensive outpatient clinical program and engaging in CPT (up to 8 sessions of CPT). In addition to daily individual trauma-focused psychotherapy, patients engaged in a variety of interdisciplinary interventions, including group therapy, mindful movement sessions, and expressive arts. Patients completed psychological assessments at pre- and post-treatment. For the current study, the PTSD Checklist for DSM-5 (PCL-5) was used to assess symptoms of PTSD, and the Patient Health Questionnaire (PHQ-9) assessed symptoms of depression.

## RESULTS

Impact statements analyzed using LIWC and MEM. LIWC and MEM results from pre-treatment impact statements will then be associated with changes in PCL-5 and PHQ-9 scores in order to identify whether particular aspects of language can predict treatment response. Furthermore, LIWC and MEM results will be compared at pre- and post-treatment.

## CONCLUSION

Through potentially identifying predictors of treatment response, this study could contribute to the literature surrounding clinician decision-making between various trauma-focused treatment options. Furthermore, uncovering the aspects of language that tend to change from pre- to post-treatment could facilitate understanding the mechanisms of change in trauma-focused treatments.



### **Low Intensity CBT Intervention in China**

Cognitive Behavioral Therapy (CBT) has been gaining popularity as a low intensity intervention for mental health issues in China. In a low intensity setting, individuals may participate in self-help resources, such as reading materials or online modules, or attend brief therapy sessions with a trained clinician. In this symposium, five speakers will present the current research status of low intensity CBT in China. Specifically, Dr. Zhongfang Fu will present a study on the effectiveness of a self-help digital CBT intervention among Chinese university students to help them tackle depressive symptoms. Then Dr. Pan will bring us the continuous work their team has done among Chinese adult ADHD groups with group CBT. Dr. Xinfeng Tang will demonstrate their well-established stepped CBT-based treatment protocol on social anxiety among the Chinese university students who come from rural China. Our fourth speaker Dr. Suqin Tang will give us a talk on a pilot study on internet-based CBT focusing on grief in the Chinese population with loss. Lastly, we invited a speaker from a counseling service to depict the barriers they face and their preliminary evidence in the real life when implementing routine outcome measurement in the clients look for help online in China. We hope this symposium will give you a tip of iceberg in the research of low intensity CBT intervention in China.

### **Low Intensity Psychological Intervention in Bridging the Mental Health Gap in China**

Zhongfang Fu\*

*Peking University, China*

Common mental disorders can have substantial impairment on the quality of life of affected persons. The under-resourced regions in China are affected disproportionately due to the tremendous lack of mental health care service, which is defined as the mental health gap. A series of studies set out to explore potential accessible routes that might facilitate bridging the mental health gap in China. We will present (meta-analytic) studies that may provide the necessary evidence to underpin this process of narrowing or even closing this gap. The effectiveness of digital interventions for all types of mental health problems and conditions in developing countries have been studied and described. For depression specifically, the leading psychological theories of depression onset, and the effectiveness, and working mechanism of a digital intervention have been investigated. The main findings will be discussed from scientific and clinical perspectives. Clinical and research implications are addressed to inform the relative stakeholders.

### **Application of CBT in Medicated Adults with ADHD in the Chinese Population**

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#### **OBJECTIVE**

We aimed to investigate the presence of maladaptive cognitions, emotional distress, and quality of life (QoL) impairments in medicated adults with attention-deficit/hyperactivity disorder (ADHD), and the effectiveness of group CBT for ADHD adults in the above dimensions, both after treatment and in the long-term follow-up.

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## METHODS

98 ADHD participants (ADHD group) and 98 healthy controls (HC group) were recruited at baseline (T1). The ADHD core symptoms (ADHD-RS), emotional symptoms (SAS and SDS), maladaptive cognitions (DAS), and life quality (QoL-psychological domain) were rated. Adults with ADHD were then randomly allocated to the CBT combined with medication (CBT+M) group or the medication (M) only group. The above outcome measures were also obtained after 12 weeks of CBT treatment (T2), and at the 48-week follow-up (T3) in the CBT+M group and the M-only group.

## RESULTS

Results found that the ADHD group showed elevated scores of ADHD-RS, SAS and SDS, and DAS, and lower score of QoL-psychological domain than the HC group ( $p < 0.001$ ). ADHD in the CBT+M group outperformed the M-only group in the reduction of emotional symptoms, and improvement of QoL both at T2 and T3. The reduction of DAS score in the CBT+M group outperformed the M-only group only at T3. All the effect sizes were small to medium ( $d = 0.339$  to  $0.694$ ).

## CONCLUSION

Our study confirmed that the medicated adults with ADHD still have more maladaptive cognitions, emotional problems as well as poorer QoL. The effectiveness of CBT is again verified in our study in reduction of ADHD core symptoms, associated emotional symptoms, maladaptive cognitions, and life quality, both after treatment and in long-term follow-up, suggesting the importance of CBT as an adjunct to medication in ADHD adults.

## Effectiveness of Internet-Based Intervention for Chinese Individuals with Prolonged Grief: A Pilot Study

Suqin Tang\*

*Shenzhen University, China*

Internet-based intervention has been implemented in various mental health issues in China, yet feasible tools tackling mental health consequences following bereavement are still lacking. Our team has developed a WeChat mini program, Healing Grief, to help Chinese bereaved individuals better adjust to the loss. Based on Cognitive Behavioral Therapy and the Dual Process Model for bereavement, the intervention protocol integrates mood monitoring, cognition reconstruction, meaning reconstruction, behavioral activation, and mindfulness techniques and alternates loss-oriented and restoration-oriented coping strategies. Six modules, namely Understanding My Grief, Saying Goodbye, Living the Moment, Rebuilding the Bond, Facing Together, and Searching for Meaning, were developed and each module includes two sessions. Bereaved individuals were advised to complete the twelve sessions in a given sequence twice a week for six weeks. Participants aged eighteen and/or above and with prolonged grief symptoms were assessed for prolonged grief, posttraumatic stress, depressive, and anxiety symptoms, posttraumatic growth, grief rumination, and dual process coping before and after the intervention. Forty-four participants completed the baseline assessment and thirty of them completed the post-intervention assessment. All participants spent 9.78 minutes in each session and the dropped-out participants completed four sessions on average. After the intervention, participants reported significant reductions in symptoms of prolonged grief, posttraumatic stress, depression, and anxiety. Ruminations on injustice, counterfactuals, and others' reactions, as well as loss-oriented coping, also significantly decreased. On the other hand, significant increases were observed in posttraumatic growth and restoration-oriented coping. The pilot study shows that Internet-based intervention for prolonged grief could be feasible and effective for Chinese bereaved individuals.

## **The Training Camp, the Internet-Based Low Intensity Intervention in China**

Wenbo Wang\*

*Zisu Psychological Counseling Services, China*

Due to the rapid development of the Chinese internet industry and the uneven development levels among different regions, the Training Camp has emerged as a rapidly developing form of psychological service. The Training Camp is a mixed form of psychological service that has developed on the basis of recorded video courses, often incorporating live broadcasts, online community interaction, and homework to address the problem of low participation rates in recorded video courses.

In this symposium, the speaker will share the characteristics of the Training Camp format, as well as how to use this resource as a CBT individual therapist to assist in cognitive-behavioral individual therapy.

## **Development of a Prevention Program (Joymaster Club) for Social Anxiety in Chinese College Students**

Xinfeng Tang\*

*Renmin University of China, China*

Social anxiety is prevalent in the Chinese college students and most individuals with elevated symptoms are not receiving adequate professional help. We are designing a CBT-based program called the Joymaster Club, which consists of three levels of prevention, to help Chinese college students cope with social anxiety. In the first level of prevention (Joymaster Seminar), we plan to deliver a 3-hour seminar on social anxiety to help university students improve their knowledge about social anxiety, reduce stigma and increase their willingness to seek help. The second level of prevention is a 2-day workshop (Joymaster Workshop), which is essentially a psychoeducational prevention program for social anxiety, with a group size of around 20-30 people. The third level of prevention (Joymaster Group) is a weekly psychotherapy group, which runs for about 12 weeks for students with significant social anxiety symptoms. The program will train non-specialists (e.g., peer counsellors) in the college to deliver the mental health service. We are currently working on the prevention manuals.

## Reaching Unmet Mental Health Needs Through Technology-Delivered CBT: Three-Way Collaboration Between Practitioners, Industry, and Governments in Japan

Digital mental health technology has great potential to overcome the challenges of implementing psychotherapy and disseminating mental health care for undertreated people. The theme of this year's WCCBT, "Global CBT Dissemination, Accessibility and New Technology," focuses on the application of digital technology to CBT as one of the strategies to disseminate and implement CBT for those who currently have unmet needs due to various limitations. Research on mental health care with digital technology is being actively conducted around the world, and its efficacy is being acknowledged (Cuijpers et al., 2023). In Japan, especially after the COVID-19 outbreaks, industry, academia, and government have been working together on mental health care by applying digital technology to deliver appropriate support to people with unmet needs (e.g., Sakata et al., 2022). Therefore, this symposium will focus on various initiatives using digital technology from the three perspectives of companies, universities/educational institutions, and governments. As the first speaker, Masatsugu Sakata will present an overview of research progress on the evidence of digital CBT interventions in Japan. Second, Saori Chikami will introduce the development of mHealth apps through close collaboration between industrial, academic, and government organizations. The third presenter, Hikari N. Takashina will introduce an effort to confirm the effectiveness of CBT using a videoconferencing system to reach those who are particularly at risk of experiencing a digital divide. Following these presentations, Yoshimura Kensuke, as the first designated discussant, will lead the discussion on mental health care using digital technology from a medical perspective, and Tomoya Koyama, as the second designated discussant, will lead the discussion on mental health care using digital technology from an industrial perspective. The present symposium will be chaired by Hironori Kuga and Hikari N. Takashina. This symposium will focus on the latest topics and issues relating to mental health care using digital technology in Japan, and consider the future of mental health care using digital technology from three perspectives: industrial, academic, and government.

## Optimal Smartphone Intervention for Subthreshold Depression: Accumulating iCBT Evidence in Japan

Masatsugu Sakata\*

*Kyoto University School of Public Health, Japan*

Internet-delivered CBT (iCBT) interventions can potentially improve accessibility for the unmet mental health population. Especially subthreshold depression is regarded crucial population that needs to receive appropriate care in current public health research literature. Subthreshold depression causes significant dysfunction (Bertha et al., 2013), and the population-based disease burden is as much as major depression (Cuijpers et al., 2007). Moreover, subthreshold depression is a significant risk factor for the onset of major depression (Lee et al., 2019). In addition, several psychological interventions for this population could prevent the onset of depression (Cuijpers et al., 2021). However, people with subthreshold depression don't often seek professional help compared with severe depression patients. iCBT has the potential to reach and deliver care for this population. Though, most internet mental health interventions are assessed as low-quality and lack evidence in current Japan (Takashina et al., 2021; Yamamoto et al., 2022). Therefore, I review and overview iCBT evidence for subthreshold depression, including our investigation on optimal CBT components.

Firstly, I'll review current iCBT evidence for subthreshold depression and major depression. On major depression, a large amount of iCBT evidence has accumulated. The current series of individual participant network meta-analyses (IPD-NMA) revealed effective components and delivery forms for depression (Karyotaki et al., 2021; Furukawa et al., 2021). Our team also conducted randomized controlled trials (RCTs) on iCBT for several clinical populations (e.g., drug-resistant depression patients: Mantani et al., 2017; Patients with a fear of breast cancer recurrence: Akechi et al., 2022) and proved their efficacies. On the other hand, current IPD-MA showed iCBT also promise for

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subthreshold depression (Reins et al., 2021). However, the effective components for this population are still unclear.

Secondly, I'll introduce our large-scale factorial trial of iCBT for subthreshold depression among Japanese students (Healthy Campus Trial: HCT; Uwatoko et al., 2018; Sakata et al., 2022). In developing iCBT for subthreshold depression populations who don't want to spend time on a typical CBT package, intervention should be efficient and simple, combining only effective components. Thus, we investigated optimal iCBT components and combinations, conducting fully factorial trial. We recruited 1093 university students. We randomly assigned the presence or the absence of five iCBT components (self-monitoring, behavioral activation, cognitive restructuring, assertiveness training, and problem-solving) to each participant. As a result, all groups improved depression severity during the 8-week intervention duration, and we couldn't find any significant difference between the presence and absence of each component. However, we learned several implications from this trial for future iCBT optimization trials.

Lastly, I introduce our current population-based factorial trial for the general adult population in Japan (Resilience Enhancement with Smartphone in Living ENvironments: RESILIENT trial; Furukawa et al., 2023). The RESILIENT trial is the master protocol of the four 2-by-2 factorial trials for investigating optimal iCBT components for subthreshold depression among general adult population. Considering the feedback from the HCT, we are assigning iCBT components so that participants can adequately engage with each skill and control the intensity of control conditions for detecting effective components. Now we are ongoing the RESILIENT trial, and we believe the results will prove optimal iCBT for improving the population burden of subthreshold depression and general mental health.

## **Real-World Cases of an AI Chatbot Based Self-Help App with CBT Skills for Mental Health: Collaboration of a Startup Company with Universities and Local Governments**

Saori Chikami\*

*Emol Inc., Japan*

There are many people in Japan who feel resistant to consulting or seeing a specialist for mental health issues. Furthermore, cognitive-behavioral therapy is only recognized as being implemented by physicians in insurance-covered medical care, and its implementation by certified public psychologist is not covered.

To enable many people to easily receive cognitive-behavioral therapy, Emol Inc. has developed a cognitive-behavioral therapy self-help application based on an AI chatbot.

Emol inc. operates in two areas: the medical field and the healthcare field. In the medical field, the company is developing an application for the treatment of obsessive-compulsive disorder and anxiety disorders, and is currently conducting clinical research in Japan. In the healthcare field, we provide cognitive-behavioral therapy self-help apps to those who need them in collaboration with companies, local governments, and educational institutions as a form of prevention and support for the unwell.

In this presentation, we will introduce case studies for companies and local governments.

For companies, we provide a cognitive-behavioral therapy self-help program aimed at maintaining and improving the mental health of employees, and its implementation is advancing in large corporations and organizations such as local governments.

In a effectiveness verification conducted in 2022 for local government employees, there was a tendency for improvements in presenteeism in healthy individuals, and a tendency for anxiety reduction in those with mental health issues.

For the development aimed at pregnant and postpartum women, cognitive-behavioral therapy self-help applications are provided to pregnant and postpartum women in the region through the maternal and child health window of local governments.

From 2021 to 2022, an RCT was conducted targeting pregnant and postpartum women. We examined whether the use of an acceptance and commitment therapy self-help program during pregnancy could prevent mental health issues after childbirth. As a result, there was a tendency for improvement in EPDS after childbirth in the intervention group.

The app provided by emol Inc. has a user interface that users will become attached to. Past studies have shown that the completion rate of cognitive-behavioral therapy programs for the Emol app exceeds 90%, providing a user-friendly experience.

Based on case studies of the social implementation of a cognitive-behavioral therapy self-help application based on an AI chatbot in Japan, we will introduce current issues and our future plans.

## **Expanding Access to Mental Health Care: Overcoming Barriers of Technology-Delivered CBT for People with Sleep Difficulties**

Hitomi Oj\*

*National Center for Cognitive-Behavior Therapy and Research, National Center of Neurology and Psychiatry, Japan*

The supply of cognitive behavioral therapy (CBT) has not increased, even though the demand for CBT has been increasing since 2010 when CBT for depression became covered by insurance under Japan's universal health insurance system. This is partly because even when patients visit a medical facility, they have limited access to therapists who can provide CBT. Digital technology is attracting attention as a tool to solve this problem caused by this shortage of CBT therapists. The implementation of technology-delivered CBT is expected to reduce the service gap. Technology-delivered CBT could also be a means of promoting the equal availability of CBT, as it would increase the possibility of implementing CBT in areas where therapists are not available. However, technology-delivered CBT is not yet sufficiently implemented in Japan. It is necessary to devise ways to facilitate the use of CBT tools that use digital technology for support providers and patients.

Our team has been conducting several clinical trials that use digital technology to provide CBT for people with sleep difficulties, and we are building a system that is accessible to both providers and their patients (jRCT1030210575; jRCT1030210518). These are the systems that connects (1) sleep clinics that patients visit and facilities where CBT therapists are located and (2) patients at home with facilities where CBT therapists are located in collaboration with primary care hospital. Sleep problems can occur in various age groups: insomnia being more common among the elderly and circadian rhythm problems being more common among adolescents.

The presenter outlines a system to make CBT available to patients of various ages, from adolescents to the elderly, using digital technology. First research employed a system that connects sleep clinics and facilities where CBT therapists are located via a videoconference system. This delivering format enables elderly persons with low digital affinity to receive CBT using digital technology. In other words, this format allows patients to receive CBT regardless of digital affinity or device ownership, as the medical facility staff configures the necessary device. Second research employed a system that connects patients' homes, facilities with CBT therapists, and doctors at primary care hospitals. Given the current situation in Japan in which many people with sleep difficulties first see their primary care hospitals, we provided videoconference-delivered CBT in collaboration with primary care hospitals. In general, primary care hospitals in Japan do not have CBT therapists, and it is difficult for doctors and nurses at primary care to find enough time to provide CBT. In addition, it has been difficult for primary care providers to offer CBT at the hospital due to difficulties in securing hospital space. Therefore, we developed a system of referrals from primary care physicians to facilities with therapists to provide CBT to insomniacs seen at primary care hospitals. This system has solved the problem of lack of time and place availability at primary care facilities. However, patients must be able to use digital devices from their homes. Therefore, this study offered patients the choice of format of delivering CBT, videoconference system or by telephone, depending on the ease of use for the patient. The telephone is in daily use by elderly persons, which has helped to lower their resistance to using it for assistance.

The development of technology-delivered CBT has been remarkable, but more systems are needed that can be used by providers and patients who are experiencing digital divides. Otherwise, a situation could arise in which development of new tools are prioritized, and no services is received by patients. In the future, it will be necessary to disseminate and implement the practice of actually designing formats for patients across Japan and around the world.

## Cross-Cultural Differences, Similarities, and Adaptations in the Context of CBT for Anxiety Disorders

Many countries, including those in Asia, are facing significant challenges to provide care for mental health problems, such as the highly prevalent anxiety disorders. Worldwide, Cognitive Behavioral Therapy (CBT) is considered the treatment of choice for anxiety disorders. However, most assessment instruments and cognitive behavioural therapies for anxiety disorders have been developed in Europe, north America, and Australia, all from a western perspective. It is unclear whether we can assume that the way anxiety presents, the content and format of CBT, the acceptability of CBT, and the process during CBT are comparable between western countries and countries in other parts of the world such as in Asia. In our symposium, we will present different studies about cultural differences and similarities in the presentation and treatment of anxiety disorders as well as on the acceptability of the CBT framework.

The first speaker Rachel de Jong focuses on the differences and similarities of how school-aged children in India and the Netherlands conceptualize anxiety and depression. They conducted an interview with open ended questions on anxiety and depression, and administered a commonly-used questionnaire assessing anxiety in youth in both countries. She will discuss implications for CBT treatment. Next, Ardian Praptomojati will present a systematic review on cultural adaptations in CBT for anxiety disorders in South-East Asia, that have been reported on in a total of 12 trials. He will provide examples of how mostly the peripheral details of the treatments were adjusted (like adding appropriate examples), while a minority also adapted core components. Next, Theo Bouman and Miriam Lommen will address the acceptability of the CBT framework for mental health professionals in Indonesia. They provided short video fragments of CBT ingredients, and asked professionals to rate the degree to which the interventions were in accordance with their personal, family, religious and cultural values. The fourth presentation by Shin-ichi Ishikawa focuses on cultural differences of interactions within a therapy room during parent and child joint CBT. The author shows the results of a cross-cultural comparison study in Australia and Japan regarding three-way interactions including children, parents, and therapists based on the video data which recorded therapy sessions in each country's RCT. Finally, the findings of the different studies will be reflected upon by our Discussant Cecilia Essau, placing the current studies into a broader perspective of cross-cultural aspects of developing and implementing CBT in non-western countries.

## Cultural Formulation of Anxiety and Worry in Indian and Dutch School-Aged Children and Implications for CBT

Rachel de Jong<sup>1\*</sup>, Santha Kumari<sup>2</sup>, Miriam Lommen<sup>3</sup>, Theo Bouman<sup>3</sup>

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In children and young people (CYP) in developing countries, anxiety and depression often go undiagnosed and untreated, due to limited access to (cognitive-behavioral) treatment (CBT) and substantial social stigma attached to mental health issues (WHO, 2017). To reduce the treatment gap for anxiety and depression among CYP in the developing world, we first need to understand cultural formulation of mental illnesses and specific syndromes or individual symptoms. This implies not only assessing youth's problems, but also exploring their perception of the problems and their way of dealing with the problems right now. By this means, we gain essential knowledge that is needed for successful assessment, prevention and treatment of common mental disorders in CYP around the globe. With this goal in mind, data were collected from 75 school-aged children in Punjab, India and 75 school-aged children in North and South Holland, the Netherlands. Data collection consisted of an interview about the child's feelings of age appropriateness, age-related expectations, stressors, and support as well as the child's anxieties and worries (Cultural Formulation Interview, APA 2013), and a self-report questionnaire to assess the child's symptoms of anxiety and depression (RCADS, Chorpita, Moffitt & Gray, 2005). Preliminary results of the cross-cultural comparisons and implications for culturally sensitive CBT will be presented.

## **A Systematic Review of Culturally Adapted Cognitive Behavioral Therapy (CA-CBT) For Anxiety Disorders in Southeast Asia**

Ardian Praptomojati\*, Ajeng Viska Icanervilia, Maaïke H. Nauta, Theo K. Bouman

*University of Groningen, Netherlands*

Many countries, including Southeast Asia, face significant mental health challenges to overcome the rise of mental health disorders. According to previous findings, anxiety disorders are highly prevalent in Southeast Asian populations (Dessauvagie et al., 2021; World Health Organization, 2017) and are categorized as chronic conditions with the highest lifetime prevalence (Kessler et al., 2005). Anxiety disorders are also a strong predictor of the onset of other mental disorders (Kessler & Greenberg, 2002). Cognitive Behavioral Therapy (CBT) is considered an effective treatment for various mental disorders, including anxiety, and has been perceived as the gold standard of psychotherapy (David et al., 2018). However, CBT still dominantly uses the concepts and constructs rooted in Western cultures, and most research on CBT focused on Western Europe or North American populations (Rathod et al., 2019). Some adaptation frameworks were developed; however, they focused on immigrant populations in North America and Western Europe, which may differ for local communities due to the different contexts (Rathod et al., 2018). We, therefore, set out to review culturally adapted CBT (CA-CBT) for treating anxiety disorders in Southeast Asia countries, conducting a systematic review of empirical studies. This exclusive scope might help focus on revealing the face of cultural adaptation in Southeast Asia, which generally have socio-cultural similarities in each country (King, 2008). We investigated whether cultural adaptations were made with regard to peripheral components (such as semantics and examples) or core components of treatment. In this study, we used the guidelines outlined by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and search strategy conducted in the following databases: PubMed, PsycINFO, Embase, Cochrane Central Register of Controlled Trials (CENTRAL), GARUDA, and Google Scholar. The review focused on local communities in Southeast Asia countries with anxiety disorders. Data were synthesized using a narrative synthesis to answer the research questions. Thirteen studies (2 randomized controlled trials, 8 quasi-experimental, and 3 case reports) met the inclusion criteria. Most studies considered multiple components in making the cultural adaptation, with the majority focused on peripheral treatment components; only three studies modified the core treatment components. The most frequent types of cultural adaptation were adaptation on (1) materials and semantics, (2) cultural examples and themes, and (3) therapeutic framework related to the person/place. Only three studies modified the core component of treatment, for instance, they incorporated religious values and practices in the treatment. Five studies did not provide complete information about the adaptation process and components. In addition, two RCT studies reported that CA-CBT gave improvement for the participants. The findings indicate that the researcher must consider aspects and components when considering making cultural adaptations. We could not establish the degree of superiority of CA-CBT over non-CA-CBT, nor identify the components with the most influence, due to the limited number of studies found. During the presentation, various examples will be given, as well as avenues for further research.

## **The Acceptability of Cognitive Behavior Therapy (CBT) For Indonesian Mental Outpatients**

Miriam J.J. Lommen<sup>1\*</sup>, Diana Setiyawati<sup>2</sup>, Theo K. Bouman<sup>2</sup>

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<sup>2</sup> *Gadjah Mada University, Indonesia*

### **BACKGROUND**

Cognitive Behavioral Therapy (CBT) is currently considered to be the most evidence-based form of psychological therapy. Therefore, CBT is one of the most important psychotherapy methods to be mastered by psychologists to treat patients' a wide variety of psychological problems. Since CBT has been developed in Western countries, its background and procedures are deeply rooted in Western culture. In the context of the Indonesian health clinic centers (Puskesmas), there are concerns whether CBT is in accord with the local culture and



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context in Indonesia. Before implementing CBT in the health centers, it is therefore important to know if the background and delivery of mainstream CBT is acceptable for patients.

Aim: This research aimed to develop a framework of reference adaptation of CBT which is more appropriate to the patient's and psychologists' conditions in Indonesia within the context of the health clinic centers.

## METHOD

Nine brief video demonstrations of the most frequently used CBT interventions for emotional disorders were developed, featuring a local Indonesian psychologist and a local patient. Research participants were 32 health clinic center psychologists' outpatients from Sleman and Yogyakarta. Using Likert scales and open questions, participants were asked to indicate to what degree the interventions were in accordance with their personal, family, religious and cultural values.

## RESULTS

We found that the participants were highly appreciative of the CBT background and of the way in which the interventions were to be delivered. Overall, they considered CBT be in accordance with their personal, family, religious and cultural values.

## DISCUSSION

It can be concluded that CBT is considered to be acceptable to Indonesian patients who attend a health care clinic. In the discussion we will go into the potential reasons why this might be the case. The implications for implementing these interventions in clinical practice will also be addressed.

## **A Comparison Study of Therapeutic Interactions Across CBT Treatment Delivered With Two Different Cultural Groups**

Shin-ichi Ishikawa\*

*Doshisha University, Japan*

## BACKGROUND

Despite growing attention towards culturally adaption of evidence-based psychosocial interventions, there are still little studies regarding cross-cultural comparison of cognitive behavioral therapy (CBT) programs in different countries. Especially, comprehensive frameworks of cultural adaptations have been proposed in previous studies; however, this type of research does not identify how the cultural adaptations are expressed during treatment and as such practical implications relevant to diverse clients may be missed (Ishikawa et al., 2022).

## OBJECTIVE

The current study aimed to compare therapeutic interactions among children, parents, and therapists between Australia and Japan.

## METHODS

Participants: Children and adolescents who received CBT for the treatment of anxiety, 30 of whom were drawn from an RCT conducted in Australia, and 30 of whom were drawn from an RCT conducted in Japan.

Treatment: Children and parents received Cool Kids in Australia (Rapee et al., 2006) and those in Japan attended the Japanese Anxiety Children/Adolescents Cognitive Behavior Therapy program (JACA-CBT; Ishikawa et al., 2019).

Behavioral observation: Cross-cultural Behavioural Observation System (C-BOS; Ishikawa & Hudson, 2019) was developed for cross-cultural comparisons of therapeutic interactions in CBT programs delivered to children and adolescents of different cultures. Coding of therapy sessions by the C-BOS were conducted at both the first and last sessions.

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## OUTCOME MEASURES

Measures: The remission of all anxiety disorder diagnoses at post-treatment by an independent diagnostician using Anxiety Disorders Interview Schedule for DSM-IV (ADIS; Silverman & Albano, 1996) was used.

## RESULTS

First, 24 Australian children declared what made them anxious in comparison to 10 Japanese children at the first session,  $\chi^2(1, N=60) = 13.30, p < .01$ . The variable significantly predicted anxiety diagnosis at post-treatment,  $p < .05$ . Second, for proportion of talking, Australian children talked more than Japanese children,  $F(1, 46) = 4.37, p < .05$ . For parent-talking, Australian parents talked more than Japanese, though the proportion increased over time in both countries,  $F(1, 46) = 4.93, p < .05$ . For therapist-talking, Japanese therapists talked more at the last session compared to Australian therapists,  $F(1, 46) = 11.43, p < .01$ . Third, Australian parents tended to interrupt the conversation significantly more than Japanese parents at the last session,  $F(1, 56) = 6.20, p < .05$ . Moreover, greater parent-talking and more instances of interruption were associated with greater remission of any anxiety diagnosis at post-treatment.,  $ps < .05$ .

## DISCUSSION

This study demonstrated significant differences of therapeutic interactions between the two countries. The results suggest clinical implication with regard to expressive cultural adaptation including how step-by-step interactions with one's client are expressed in the two countries and how the interaction affects treatment outcomes.

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### **CBT in Chinese Culture: Strengths and Challenges**

The universality and profoundness of Confucianism, Buddhism and Taoism in Chinese culture provide a rich cultural background for the formation of beliefs in Chinese society. This cultural background is distinctly different from Western culture and profoundly influences Chinese cognition, emotion and behavior. However, it remains unclear how these ideologies affect the application, promotion, and therapeutic effects of cognitive behavioral therapy (CBT) in China, as well as the cultural differences; further, how can we respond to the various challenges and how can we use the relevant resources of Chinese culture to promote the application and development of CBT in China. This symposium will focus on this theme, with five speakers presenting and discussing different perspectives.

The first speaker (Chenye Shu) will discuss the relationship between Zen Wisdom and CBT Thought. It is pointed out that both of them emphasize the importance of cognition while facing negative feeling, but Zen provides a non-linear method to improve the change of cognition. The presentation will include the discussion about how Zen changes the cognition and the new pathway is beneficial for CBT treatment.

The second presenter (Jiao Man) will discuss the typical cultural beliefs, which are common while applying CBT in China, and reveal out the framework of beliefs in Chinese culture. The report will analyze maladaptive beliefs in Chinese culture and discuss how to dialectically use Chinese philosophical thought to adjust those beliefs.

The third speaker (Baihui Chen) attempts to explore the specificity of core beliefs under the context of Chinese culture, how Chinese culture affects the core beliefs, and how different trends of thought in the current era have impacts on Chinese core beliefs. Also, she will further discuss how to use or break through the influence of culture on core beliefs, and expand the ideas and methods of working on core beliefs in the process of CBT treatment.

The fourth presentation by Yuting Ouyang will review cultural differences in emotion regulation strategies, presenting the unique Chinese people's tendency to use cognitive reappraisal and expressive expression, as well as explaining the role of these emotion regulation strategies for CBT. The presentation will focus on the differences in emotion regulation strategies brought about by these cultural factors and present the challenges and implications of these differences for CBT in China.

The last presentation, by Kaidi Yang, deals with a topic about the generation and intervention of cognitive distortion related to stigma of mental diseases, which is largely influenced by typical cultural construct of China. It is pointed out the common problem in application of CBT in China.

Through the discussion about the cultural factor, the symposium wants to enhance the adaptation of CBT to Chinese culture, provide suggestions to mental health professionals, and promote the propagation and further development of CBT in China.

### **Different Routes to the Same Destination: A Study of the Relationship Between Zen and Cognitive Behavioral Therapy**

Chenye Shu\*

*Hohai University, China*

In previous studies, some scholars think Zen was a special form of psychotherapy, which was popularized in the Western world and attracted people's strong interest. As an important philosophical heritage in Chinese culture, Zen thought has a close relationship with CBT treatment. Firstly, their philosophical backgrounds both emphasize that the reason why humans suffered is that they see the world in the wrong way. Secondly, Zen and CBT both pay attention to the importance of cognition in dealing with negative emotions and emphasize the intervention of irrational beliefs. Many cases recorded in Zen Koan show techniques in cognitive behavioral therapy. Among these cases, some describe using specific technologies to change specific behaviors and some others reveal specific technology which reduces the individual pain by changing the cognition. Unlike CBT techniques, intervention techniques in Zen thought follow a nonlinear cognitive

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reconstruction behavior-changing path. The speaker will present this model, which will help the CBT treatment in Chinese culture. Meanwhile, it also promotes the integration of beneficial resources of Zen in CBT and boosts the diversified development of CBT.

## **Attacking Ones' Shields With Their Spears: The Maladaptive Beliefs and Intervention in Chinese Culture**

Jiao Man\*

*Changzhi Medical College, China*

Society and culture profoundly influence individual beliefs, and their maladaptive beliefs carry distinct cultural overtones. The Chinese culture has been passed down for 5,000 years, and the beliefs under its influence are engraved with deeper cultural imprints. These maladaptive beliefs about the self, the world, and the future are related to rigid understanding and stereotypical adherence to social values, traditional culture, philosophical ideas, religious concepts, folklore, and so on. Chinese culture contains thoughts of dialectical unification in the concepts of "yin and yang" "five elements" and "the unity of knowledge and practice". Applying CBT theory and technology in the context of Chinese culture can actively make use of the dialectical unity thoughts in the culture, to deeply integrate cultural concepts with CBT techniques, or extract intervention methods more suitable for Chinese people from Chinese philosophical thoughts. The speaker will sort out maladaptive beliefs in Chinese culture at three levels: the self, the world, and the future, discuss the challenges of intervening maladaptive beliefs in the cultural context, and try to explore corresponding measures from the culture.

## **The Influence of Chinese Culture on the Core Beliefs in Cognitive Behavioral Therapy**

Baihui Chen\*

*Zhejiang Business Technology Institute, China*

Culture is a spiritual value and lifestyle that becomes a habit. Its final result is collective personality. The core belief in cognitive behavioral therapy is the individual's core concept of self, so the core belief is bound to be influenced by culture. This speaker explores the specificity of Chinese core beliefs under the background of Chinese culture and the formation mechanism of China people's core beliefs in the context of Chinese culture. It is further thinking about how to absorb nutrients from Chinese culture and expand the ideas and methods of working on core beliefs in cognitive behavioral therapy.

## **Implications and Challenges of Cultural Differences in Emotion Regulation Strategies for CBT Treatment in China**

Yuting Ouyang\*

*Beijing Normal University, China*

The Chinese cultural ideologies have shaped the emotional experiences of Chinese culture differently than those of Western cultural contexts. These different emotional experiences influence individuals' use of emotion regulation strategies and their effectiveness. It has shown that expressive suppression is likely to function differently across cultures, whereas cognitive reappraisal does not show such differences. Emotional regulation strategies can partly explain how cognitive behavioral therapy works. Clinical studies have also shown that CBT treatment targeting emotion regulation strategies has better efficacy. When using CBT for treatment, it is necessary to consider

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cultural differences in emotion regulation strategies, set treatment goals, monitor the treatment process, and evaluate the treatment effects based on the emotional characteristics of Chinese people.

## **Cognitive Behavioral Therapy Intervention for Self-Stigma: Application and Challenges in Chinese Culture**

Kaidi Yang\*

*Beijing Normal University, China*

In Chinese culture, there is a high regard for interpersonal relationships and collectivism, which can lead to a tendency to conform and contribute to the development of self-stigma in individuals with mental illness and their families. However, cognitive-behavioral therapy that includes family support and education has proven effective in reducing the negative effects of self-stigma. This presentation will examine how Chinese culture fosters self-stigma and discuss the advantages and challenges of implementing cognitive-behavioral therapy to address self-stigma while providing recommendations to minimize resistance and increase motivation for participation in treatment.

### **The Prevention and Identification of Mental Health Problems in Schools**

Universal mental health approaches delivered through schools show promise in improving the identification of at-risk young people and broadening access to evidence-based prevention and early intervention programs. School-based programs are attractive for the reach and access to large numbers of young people they provide. However, there is not yet consensus about the value and effectiveness of universal school-based approaches, nor the best way to implement these approaches.

In this symposium, new findings from universal school-based research trials from around the world will be presented. The first three presentations focus on the delivery of universal programs to prevent mental illness in secondary school students. The final two presentations focus on work investigating universal screening of mental health problems at school for primary-school aged children. In the first presentation, Aliza Werner-Seidler will share the outcomes from the Future Proofing Study, an Australian school-based trial involving the delivery of CBT to prevent depression in a large adolescent sample (N=6433; aged 12-15 years). The intervention, SPARX, is a gamified digital CBT program. Effects on depression and anxiety at post-intervention and 12-month follow-up time points will be presented.

In the second presentation, Liesbeth Bogaert provides results from a school-based trial conducted in Belgium investigating the effects of a clinician-delivered mindfulness-based intervention on emotional distress and anhedonia, and possible underlying mechanisms in secondary school students (N=231; aged 15-18 years). Effects at post-intervention and 3 month follow-up will be presented, and directions for further research in this field will be discussed.

The third presentation, delivered by Tracey Wade, focuses on the effects of a teacher-delivered CBT-informed intervention designed to prevent perfectionism in young Australian adolescents (N=636; mean age 13.68 years). The effects of the intervention on perfectionism, well-being, depression, anxiety, self-compassion, and intrinsic motivation at post and 3-month follow-up will be presented.

In the fourth presentation, Jennie Hudson will share results of a trial examining the impact of mental health checks in primary-school aged children (aged 5-12 years) on mental health stigma. Stigma is a common barrier to the implementation of school-based mental health assessment and is therefore a necessary factor for investigation if school-based screening is to be safely and effectively implemented.

The final presentation, delivered by Cathy Creswell outlines the findings from a comprehensive codesign process employed in the development of an integrated school-based screening and intervention process for children with anxiety problems in the UK. This talk brings together the perspectives of children (aged 8-9 years), parents, school staff and mental health professionals on school-based screening and the pathway to intervention, and identifies key factors required for screening and intervention processes to be successfully implemented in schools.

The symposium will conclude with a consideration and discussion about the benefits and limitations of taking a universal school-based approach to improve population-level child and adolescent mental health.

### **The Future Proofing Study: Evaluating School-Based Prevention at Scale**

Aliza Werner-Seidler<sup>1\*</sup>, Kate Maston<sup>1</sup>, Philip Batterham<sup>3</sup>, Alison Calear<sup>3</sup>, Andrew Mackinnon<sup>1</sup>, Helen Christensen<sup>2</sup>

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<sup>3</sup> Centre for Mental Health Research, Australian National University, Australia

Psychological prevention programs for depression and anxiety are frequently delivered in school settings. However, the literature has been limited to mostly small-scale trials and barriers to implementation at scale remain, including the requirement of clinical experts to deliver some programs and high associated costs. Delivering standardised, evidence-based programs via digital technologies direct to

students may overcome some of these barriers.

We developed the Future Proofing Study to investigate whether cognitive behaviour therapy (CBT) delivered by smartphone application can prevent depression at scale in school students. We conducted a cluster-randomised controlled trial and assessed depression (primary outcome), anxiety, distress, and suicidal ideation at baseline, post-intervention, 6- and 12-month follow-up. There were 6388 participants in the trial (Mage=13.90 years) and schools (N=134) were randomised to the SPARX prevention program or school as usual. SPARX is a 7-session digital CBT program delivered in a gamified format, and in this trial was accessed by students on their own smartphones, with delivery support provided by teachers.

The sample was broadly representative of the Australian population. At baseline, 15.1% of the sample met the clinical threshold for depression, 18.6% for anxiety, 36.6% for psychological distress and 4.9% for suicidal ideation. An intent-to-treat analysis has been conducted on the trial data, and the outcomes will be presented in this talk. The implications of the findings will be discussed and contextualised in terms of the wider literature into the school-based psychological prevention programs.

Australian New Zealand Clinical Trials Registry (ANZCTR) Trial Number: ACTRN12619000855123 (31st May 2019).

## **Universal School-Based Mindfulness Training To Increase Mental Health via Healthier Ways of Responding To Negative and Positive Emotions: A Cluster-Randomised Controlled Trial in Secondary Schools**

Liesbeth Bogaert<sup>1\*</sup>, Katleen Van der Gucht<sup>1</sup>, Peter Kuppens<sup>1</sup>, Merle Kock<sup>1</sup>, Marieke Schreuder<sup>1</sup>, Willem Kuyken<sup>2</sup>, Filip Raes<sup>1</sup>

<sup>1</sup> KU Leuven, Belgium

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### **INTRODUCTION**

Many adolescents suffer from emotional distress, which has multiple problematic consequences including putting them at risk for developing long-term psychiatric problems. Vulnerable youngsters are often characterised by an unfavourable way of responding towards negative and positive emotions. In particular, our study examines whether Mindfulness Training (MT) can serve the double purpose of attenuating vulnerable youngsters' tendency towards non-acceptance of negative emotions (underlying symptoms of emotional distress) and dampening of positive emotions (underlying symptoms of anhedonia). Related to the individual tendency of non-acceptance of negative emotions, this study also investigates whether MT can foster a healthier social climate among peers with less toxic social pressure not to experience/express negative emotions.

### **METHOD**

By means of a cluster-randomized controlled trial, the impact of an 8-week in-class MT, delivered at secondary schools, was examined (intervention vs. control group; n<sub>control</sub> = 136 and n<sub>intervention</sub> = 95). Adolescents (15-18 years) of both groups participated in three assessment points (before, immediately after and three months after intervention), consisting of self-report questionnaires and Experience Sampling assessments. Analyses will be based on general linear modelling and multilevel mixed effects modelling.

### **RESULTS**

No significant evidence was found for the beneficial impact of the MT on emotional distress or anhedonia (main outcomes), at post-training or follow-up (intervention vs. control group). Also, no significant changes were observed in adolescents' tendency towards suppression/non-acceptance of negative emotions, dampening of positive emotions, and perceived social pressure not to experience/express negative emotions (putative mediators). Only at post-training and based on the self-report questionnaire data, a trend towards lower levels of depressive symptoms was observed. However, this trend appeared not to be long-lasting as it was no longer significant at follow-up.

Discussion and Conclusion: Based on the results of this trial, we cannot conclude that offering universal school-based MT to adolescents

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has a substantial (and long-lasting) beneficial impact on mental health (or particular response styles towards emotions that have been linked with higher levels of symptomatology). Future research should take into account both individual (e.g., intrinsic motivation) and group factors (e.g., class dynamics, school climate) to learn more about who benefits most, from what, and under which circumstances.

## Effects of a Teacher-Delivered CBT-Informed Universal Prevention Approach for Perfectionism in Young Adolescents

Ivana Osenk, Catherine Johnson, [Tracey Wade\\*](#)

*Flinders University Institute for Mental Health and Wellbeing, Australia*

Perfectionism has adverse impacts on mental health and academic outcomes. We evaluated a 5-lesson classroom intervention for young adolescents delivered by teachers for impact on perfectionism, well-being, self-compassion, academic motivation and negative affect, at post-intervention and 3-month follow-up. Classes ( $N = 636$  students,  $M_{age} = 13.68$ ,  $SD = 0.60$ ) were randomized to intervention ( $n = 343$ ) or classes as usual ( $n = 293$ ). Data were analyzed using linear mixed models adjusted for baseline observation and clustering. At post-intervention no differences were found between the groups. At 3-month follow-up, anxiety showed a significant increase in the control group with no increase in the intervention group ( $d = 0.23$ ; 95% CI: 0.05, 0.40); females in the control group had a significant decrease in well-being from post-intervention to 3-month follow-up compared to the intervention group ( $d = 0.33$ ; 95% CI: 0.08, 0.58); students with high levels of perfectionistic concerns in the intervention had significantly lower perfectionistic strivings at 3-month follow-up than the control group ( $d = 0.34$ , 95% CI: 0.19, 0.49). This intervention shows promising results when delivered by teachers. Australian New Zealand Clinical Trials Registry (ANZCTR) Trial Number: ACTRN12621000457842 (19th April 2021).

## Impact of Primary School Voluntary Mental Health Checks on Stigma

[Jennie Hudson\\*](#), Deanna Francis, Chloe Lim, Abigail Allsop, Emma McDermott, Gemma Sicouri, Andrew MacKinnon, Annabel Songco

*Black Dog Institute, University of New South Wales, Sydney, Australia*

Stigma is a common barrier to identification of child mental health problems in the school setting. We conducted a cluster randomised controlled trial (RCT) in primary schools to examine the impact of voluntary mental health checks on stigma and mental health outcomes. Participating schools were randomly allocated to either an intervention or control condition and 798 children completed assessments at three time-points: baseline ( $n = 798$ ), 6-week follow-up ( $n = 753$ ), and 12-week follow-up ( $n = 502$ ). A total of 798 aged children (aged 8-13 years;  $M_{age} = 10.29$ ;  $SD = 1.23$ ) received the mental health check or monitoring only. Parents of children receiving the mental health check were provided the results of the assessment in a report that provided resources about mental health and referral pathways.

## School-Based Screening and Intervention Delivery for Childhood Anxiety Problems: A Codesign Approach

[Cathy Creswell\\*](#)

*University of Oxford, UK*

Only a small proportion of children with anxiety problems receive evidence-based treatment. Barriers to access include difficulties with problem identification, concerns about stigma and a lack of clarity about how to access specialist services and their limited availability. A



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school-based programme that integrates screening to identify those children who are most likely to be experiencing anxiety problems with the offer of intervention has the potential to overcome many of these barriers.

In this talk I will describe the process of working together with year 4 children in England (aged 8–9 years), parents, school staff, and mental health practitioners to develop a primary school-based screening and (online, therapist supported parent-led CBT) intervention programme for child anxiety problems. In a subsequent evaluation 84% of parents of children who ‘screened positive’ for anxiety problems took up the offer of the intervention. Routine outcome monitoring (built in to the online intervention) indicated session on session improvements throughout the course of treatment, with substantial changes across measures by the final module (e.g. Goal Based Outcomes  $d = 1.52$ ). Parent engagement and satisfaction was high as indicated by quantitative and qualitative assessments, and intervention usage.

The talk will end with some reflections on the lessons learnt from the codesign process and some recommendations that may inform the development and implementation of future school-based screening and intervention programmes.

### **Cognitive Bias Modification of Interpretations: Novel Digital Applications Across Disorders**

Maladaptive, negative interpretations play a crucial role in a large range of disorders, including anxiety, depression, and obsessive-compulsive disorder (OCD). As such, negative interpretations are considered a transdiagnostic process. Importantly, reducing those interpretations is associated with reductions in symptoms, and they are a central target of CBT. Cognitive Bias Modification training for Interpretations (CBM-I) is a technological innovation designed to reduce negative interpretations directly. Recently, a network meta-analysis concluded that CBM-I is a promising treatment. And given its digital nature, it offers great potential with respect to dissemination and accessibility of care.

The current symposium advances the insights on CBM-I training in various ways. First of all, CBM-I training is applied to a novel domain of symptoms (i.e., fear of cancer recurrence) and thus tests the breath of its transdiagnostic utility. Also, the presentations in this symposium cover a range of different symptoms and problems (anxiety, depression, OCD) and thus collectively also provide insight into the broad domain of applicability of CBM-I. Secondly, most disorders are characterized by an interplay between various cognitive biases and an understudied question is whether CBM-I training affects other biases. And thirdly, the symposium provides insight into change; when is change occurring and who are the individuals benefitting the most? This is relevant, as it allows for better matching of individuals to CBM-I training.

The symposium consists of an international group of experts from Australia, Germany and the Netherlands. In the first presentation, Louise Sharpe (University of Sydney, Australia) will present findings from a series of studies examining first the role of interpretation bias in fear of cancer recurrence. Subsequently, automated, digital CBM-I training as a clinical intervention is examined in 177 patients with either breast or ovarian cancer (trial registration ACTRN12621000634875, see below). There were promising, significant effects on fear of cancer recurrence, and pain. Secondly, Zhen Zhang (Radboud University, the Netherlands) will present a study that examined whether depression-related CBM-I training and attention training impact upon memory biases. Results indicated that training influenced memory biases in a training-congruent way, suggesting that biases should be studied and intervened interactively. Thirdly, Simon Blackwell (Bochum University, Germany) will present a pre-registered single case series (trial registration NCT04779437, see below) applying imagery-based CBM-I as an internet-delivered intervention for depressed adults on the waiting list for outpatient CBT. The study investigated the potential to apply Bayesian sequential analyses to single case data to quickly detect whether participants were responding to each intervention or not, providing a simple method for matching patients to low-intensity cognitive training interventions. And finally, Elske Salemink (Utrecht University, the Netherlands) presents the main results and secondary moderator analyses of a pre-registered, published multi-center, RCT testing the effectiveness of CBM-I training in youth with OCD (Wolters et al., 2021). Not everybody benefits from CBM-I and the current study tested whether individual differences in baseline symptoms, interpretation bias, and degree of autism symptoms are associated with training outcome.

Overall, the symposium highlights some of the latest advances in CBM-I and its potential to improve treatment outcomes by targeting one of the core processes underlying CBT-based interventions.

## The Role of Interpretation Biases in the Maintenance and Management of Fear of Cancer Recurrence Amongst Women With Breast and Ovarian Cancer

Louise Sharpe<sup>1\*</sup>, Poorva Pradhan<sup>1</sup>, Jemma Todd<sup>1</sup>, Wendy Lichtenthal<sup>2</sup>, Courtney Beard<sup>3</sup>, Phyllis Butow<sup>1</sup>, Hayley Russell<sup>4</sup>

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The tendency to interpret ambiguous information as threat-related has been shown to be greater in people with heightened anxiety compared to those without. However, whether these biases are also present in people with physical illness who have fears about their illness is largely unknown. When people are living with and beyond cancer, the most common concern they express is fear of cancer recurrence. We conducted three studies to examine the role of interpretation biases in fear of cancer recurrence. In study 1 we found that women with ovarian cancer ( $n = 62$ ) had interpretation biases compared to women who had never had cancer ( $n = 96$ ) (Cohen's  $d = 1.28$ ). Further, interpretation biases were correlated with FCR ( $r = 0.41$ ,  $p = 0.001$ ). In study 2, we examined 147 women with breast cancer. We found that FCR was associated with interpretation biases ( $r = 0.45$ ) and pain severity ( $r = 0.40$ ). Further, we found that interpretation biases moderated the relationship between pain and FCR, such that when women had high levels of pain, interpretation biases were strongly associated with FCR. However, women with low levels of pain showed no such relationship. Study 3 was a large randomized controlled trial of cognitive bias modification for interpretation in women with breast and ovarian cancer. We randomised 177 women with either breast or ovarian cancer to receive one of two versions of CBM-I or placebo. One version specifically trained people not to interpret ambiguous physical symptoms as pain-related, and the other trained people not to interpret ambiguous scenarios as cancer-related. There were four training sessions completed over two weeks, and FCR and pain outcomes were measured before and after training and two weeks later. Training effects were found, demonstrating that both CBM-I programs had induced interpretation biases away from cancer-related interpretations. Large and significant improvements were observed in FCR (and fear of progression) in both CBM-I groups compared to placebo (all Cohen's  $d > 1$ ). Similarly, both pain severity and pain interference improved significantly in the CBM-I groups compared to placebo. The two CBM groups did not differ in efficacy. These results, taken together, suggest that interpretation biases are important in FCR and can be modified to produce large clinical improvements using a fully automated training program.

## Can Memory Bias Be Modified Through Attention and Interpretation Bias Training? A Proof-of-Concept Study

Zhen zhang<sup>1\*</sup>, Janna Vrijssen<sup>2</sup>, Alvaro Sanchez<sup>3</sup>, Ernst Koster<sup>4</sup>, Eni Becker<sup>1</sup>

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### BACKGROUND

The biased information processing in different cognitive domains at stages of attention, interpretation, and memory play an important role in developing and maintaining depression symptoms. Cognitive frameworks of depression propose that these cognitive biases are interrelated and work on depression together like a concert. This assumption implies that targeting one or several of these biases (e.g., attention and interpretation) in treatment could transfer to the other cognitive (e.g., memory) domains. However, the causal relationship

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between biases in different cognitive domains received little attention in research. Therefore, we tested whether manipulating attention and interpretation bias transfers to memory bias and how far-reaching the transfer is.

## METHOD

Ninety-nine Dutch-speaking undergraduates were randomly assigned to receive either a positive or a negative four-day attention and interpretation bias training. Participants' mood was assessed before and after training. A set of memory bias assessments was performed after the training to assess the transfer effects of the training to different forms of memory biases: a). a free recall task assessing the transfer effect on recalling the same emotional stimuli trained to process during attention and interpretation training; b). a recognition task assessing the transfer effect on retrieving related information (synonyms and looks similar words); c). a self-reference encoding task assessing the encoding and retrieval of new emotional information; d). an autobiographical memory task assessing the recall of real-life events.

## RESULT

Participants in the negative training condition recalled more negative stimuli used in the attention and interpretation bias training task, and recognized more synonyms of negative training stimuli as seen before, than those in the positive training condition. Besides, a more negative autobiographic recall was evident in the negative training condition compared to the positive training condition. However, no group difference was found in recognizing looking similar words of training stimuli, either in encoding and recalling new emotional stimuli.

## DISCUSSION

The results support a possible causal relation of attention and interpretation in memory bias. This transfer effect was strong and far-reaching, being found not only in retrieving emotional experimental material but also in the memory of personal life events. Furthermore, a preference for semantic processing but not perceptual processing during the attention and interpretation process was evident, and the semantic information was better encoded into retrieved from the memory process. The results lead to a better understanding of cognitive mechanisms underlying depression and are helpful in refining current cognitive models and interventions.

Keywords: attention bias, interpretation bias, memory bias, cognitive bias, experimental research, depression

## Using Bayesian Single Case Analyses To Guide Treatment Selection and Tailoring: A Pilot Single Case Series

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## INTRODUCTION

While there are many possible low-intensity psychological interventions available, these are likely to vary in how helpful they may be for any one individual. The sooner we can identify treatment non-response, the sooner we can make changes to the treatment to increase the chance of a successful outcome. Application of sequential Bayesian analyses to individual-level data may allow rapid detection of treatment non-response, and hence switching to another, potentially more beneficial, treatment. The current study investigated this idea via a single case series contrasting two simple computerized cognitive training interventions that both target symptoms of depression, but via different mechanisms: positive imagery cognitive bias modification, and cognitive control training.

## METHOD

Patients waiting for outpatient psychological therapy and experiencing at least mild levels of depression took part in a single case series using an ABC design (clinicaltrials.gov: NCT04779437). Participants completed a two-week baseline phase of daily depression measurement, followed by two weeks of each intervention in turn. Depression symptoms were compared between baseline and intervention phases via sequential Bayes factors, updated on a daily basis.

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## RESULTS

Results demonstrate the potential of sequential Bayesian analyses to detect treatment non-response before the end of the fixed intervention phases, indicating that such analyses could be used to guide switching between treatments in future work.

## DISCUSSION

Application of sequential Bayesian analyses to single-case data could provide a means to guide treatment selection and tailoring over time. While the current study used simple computerized interventions for demonstration purposes, the approach could be expanded to a broader range of interventions such as CBT.

## **Cognitive Bias Modification of Interpretation Training for Youth With OCD: An RCT To Examine Effectiveness and Moderating Variables**

**Elske Salemink<sup>1\*</sup>, Lidewij Wolters<sup>2</sup>, Annelieke Hagen<sup>3</sup>, Else de Haan<sup>4</sup>**

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<sup>4</sup> *Amsterdam UMC, Netherlands*

## BACKGROUND

Cognitive behavioral therapy (CBT) is the treatment of choice for pediatric obsessive-compulsive disorder (OCD). While it is associated with significant reductions on symptoms, not all patients profit sufficiently. Long waitlists and wide variations in improvement rates ask for new interventions. Cognitive Bias Modification–Interpretation (CBM-I) training has been put forward as a promising new intervention for youth with psychopathology. The aim of the current study was to examine the effectiveness of a CBM-I training that was offered during the waiting period before CBT. We tested 1) whether the CBM-I training is an effective intervention during a waitlist period for CBT, 2) whether augmenting CBT with CBM-I improves treatment effect, and 3) who benefits from this training (whether baseline OCD severity, interpretation bias, and degree of autism symptoms moderate training effectiveness).

## METHODS

Participants (74 children with OCD, 8–18 years) were randomly assigned to either a 12-session CBM-I training or a waitlist, both followed by CBT.

## RESULTS

Results indicated that compared to the waitlist, the CBM-I training was effective in reducing OCD severity, with a medium effect size. Patients in the CBM-I training condition started subsequent CBT with less severe OCD, and this advantage was maintained during CBT. However, the CBM-I training did not result in a faster decline of symptoms during subsequent CBT. Bayesian analyses showed no evidence for any of the three predictors being associated with CBM-I effects on OCD symptoms.

## CONCLUSION

These findings indicate that CBM-I training had therapeutic benefits on OCD symptoms and could be a helpful intervention during a waitlist period. The online and automated nature of the training allows for 24/7 accessibility, is cheap and an easy to implement intervention. However, the results offer no answer to the question for whom CBM-I training works best. However, there is also no evidence that CBM-I might work less well for these subgroups. Replications in larger samples and comparisons to active control conditions are needed in future studies.

## Treatments for Rumination: Global Perspectives, Dissemination, Accessibility and New Technology

Depressive rumination has been identified as a transdiagnostic process, contributing to the onset, maintenance, and recurrence of depression, anxiety, and other mental disorders. This mechanism is recognized as a universal contributor to mental disorders across cultures. Targeting rumination in treatment offers numerous benefits, including the reduction of both depression and anxiety symptoms, addressing comorbidity, and mitigating the common residual symptom that increases the likelihood of future relapse and recurrence. Efficacious interventions for rumination have been developed, including Rumination-Focused Cognitive-Behavioural Therapy (RFCBT; Watkins, 2016). The RFCBT adopts a functional-analytic approach aimed at systematically reducing depressive rumination. Within RFCBT, maladaptive rumination is reduced through modifying environmental stimuli that contribute to rumination, as well as increasing awareness of early warning signs of stress and facilitating the utilisation of alternative coping strategies, e.g., concreteness, compassion, and absorption. The effectiveness of RFCBT has been tested in multiple randomised controlled trials and has been adapted for different cultural contexts and formats, including face-to-face, online, and group-based approaches. Given the growing evidence for the direct intervention of rumination, the latest National Institute for Health and Care Excellence (NICE) guideline for depression in the United Kingdom recommends Cognitive Behavioural Therapy (CBT) that specifically addresses rumination in preventing relapse and enhancing treatments for chronic depressive symptoms (NICE, 2022).

This international symposium, a collaborative effort, delves into the latest developments in RFCBT practice and research, and tackles matters related to the dissemination and accessibility of this practice. Yusuke Umegaki (Nara Women's University, Japan) will present on the RFCBT-NARA project, encompassing case series that incorporate a self-help material (Umegaki et al., 2022 <https://doi.org/10.1016/j.cbpra.2021.01.003>) as well as face-to-face practices. Topics of discussion include the translation/adaptation, development and evaluation, training, and dissemination of RFCBT. Takenori Kato (Sakuragaoka Memorial Hospital / Keio University, Japan) will address the implementation of RFCBT in psychiatric practices in Japan and examine the potential benefits and challenges of this approach. His talk will also examine the impact of these challenges on the development of a Japanese therapists' guide. Atsuo Nakagawa (St. Marianna University, Japan) explores the clinical manifestations of depression, adjustment disorders, and rumination in Japan, and subsequently elucidates the cultural characteristics of Japanese patients. He also touches upon the definition of treatment-refractory depression within Japanese treatment guidelines and its significance in psychotherapy. The Japanese speakers will also delve into the adaptation of RFCBT, including the translation of the treatment manual. Finally, Edward Watkins (University of Exeter, United Kingdom) will give a presentation synthesizing the evidence for RFCBT in the United Kingdom, Europe, and the United States and advancements in terms of dissemination, accessibility, and new technology, including the development and evaluation of internet and app versions. The symposium concludes with a discussion of future research directions in rumination and its treatments.

## Delivering Rumination-Focused Cognitive-Behavioral Therapy in Japan: An Overview of the RFCBT-NARA Project, Its Implications, and Strategies for Overcoming Obstacles

Yusuke Umegaki\*

*Nara Women's University, Japan*

Depressive rumination can be defined as a transdiagnostic psychopathological process that plays a significant role in the onset, maintenance, and recurrence of diverse mental health problems, such as depression and anxiety. The prevalence of rumination is not limited to Western populations, as it is also commonly observed among the Japanese population, especially among those who suffer from depression. Furthermore, rumination is positively associated with concurrent depression severity and is also a predictor of

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future depression severity. Therefore, targeting rumination is a reasonable and promising strategy for the treatment and prevention of depression, not only in Western societies but also in Japan.

Rumination-focused Cognitive-Behavioral Therapy (RFCBT) is a novel CBT approach that directly addresses depressive rumination. RFCBT employs a functional-analytic perspective, which identifies and modifies external contingencies that trigger rumination, while aiming at identifying and changing response styles for internal triggers (i.e., warning signs of rumination) using contingency If-Then plans. While RFCBT shares a theoretical basis with Behavioral Activation, it more focuses on treating depressive rumination, and it features unique intervention techniques such as concreteness, absorption, and compassion, all aimed at specifically targeting rumination.

The presenter, a senior assistant professor and a public psychologist/clinical psychologist, will discuss the potential of RFCBT in Japan. While multiple randomized controlled trials conducted in Western countries support the effectiveness of RFCBT in the treatment and prevention of depression, no trials to date have examined its effectiveness in Eastern countries. This presentation will provide an overview of the RFCBT-NARA project, which aims to implement RFCBT in Japan. The project involves the development, adaptation, evaluation, and dissemination of RFCBT, including a preliminary test of effectiveness/feasibility based on face-to-face cases (E-BIRCS study), development and evaluation of an RFCBT self-help prevention program, and translation of the treatment manual. Preliminary evidence suggests that RFCBT is effective and helpful for the Japanese population, and the presentation will cover topics related to lessons learned from providing RFCBT in Japan, including the relationship between rumination and culture and the feasibility and effectiveness of RFCBT among the Japanese population. Additionally, the presentation will discuss how techniques such as concreteness, absorption, and compassion can be helpful for Japanese individuals.

## **Efforts and Challenges of Implementing RFCBT in the Real World: A Case of Tertiary Psychiatry Hospital in Japan**

Takenori Kato\*

*Sakuragaoka Memorial Hospital / Keio University, Tokyo, Japan*

Beck's standard CBT is effective for treating depression, but the remission rate is limited to 40% (Nakagawa et al., 2017). In a routine psychiatric hospital, patients with difficult-to-treat depression are referred by general practitioners (GPs) and primary psychiatry clinics. One of the reasons for referral is that these patients present a high level of rumination and avoidance. Depressed rumination often reduces the effectiveness of standard CBT and makes it challenging to conduct CBT itself.

From the standpoint of a clinical psychiatrist working at a tertiary psychiatric hospital in Japan, the following points regarding efforts and the challenges of implementing RFCBT in the real world will be presented.

- 1) The need for RFCBT for depressed patients and efforts and challenges for implementing RFCBT in Japanese clinical settings.
- 2) Implementing strategies for RFCBT in routine psychiatry care settings in Japan: developing training program.

## **The Current Status of Rumination-Focused Cognitive Behavioral Therapy (RFCBT) In Japan: Clinical Research, Practice, and Target Population**

Atsuo Nakagawa\*

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Rumination-focused Cognitive Behavioral Therapy (RFCBT) is a promising new form of therapy that addresses repetitive negative thinking patterns, namely rumination. While RFCBT has been gaining popularity in the United States and Europe, its status in Japan remains unclear.

This presentation will provide an overview of the current status of RFCBT in Japan, including clinical research, practice, and target

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population. Studies conducted in Japan have found that RFCBT can effectively reduce rumination, depressive symptoms, and anxiety in Japanese university students and patients with major depressive disorder. However, further research is needed to understand the effectiveness of RFCBT and to promote uptake and implementation strategies in Japanese clinical settings.

Despite some familiarity among therapists, RFCBT is not yet widely recognized as a form of therapy in Japan. Moreover, cultural factors may influence the uptake and implementation of RFCBT in Japanese populations. RFCBT may benefit individuals who struggle with repetitive negative thinking patterns commonly seen in depression and anxiety disorders, including adjustment disorders. Nonetheless, therapy should be tailored to meet the specific needs of each individual.

In conclusion, this presentation aims to shed light on the current status of RFCBT in Japan and its potential benefits to the Japanese population. The information presented will be of interest to mental health professionals and researchers seeking to broaden their understanding of evidence-based treatments for rumination.

## **Global Evidence for the Efficacy of Rumination-Focused CBT and Steps Towards Dissemination of Rumination-Focused CBT**

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Depressive rumination has been identified as a transdiagnostic process, contributing to the onset, maintenance, and recurrence of depression, anxiety, and other mental disorders. This mechanism is recognized as a universal contributor to mental disorders across cultures. Targeting rumination in treatment offers numerous benefits, including the reduction of both depression and anxiety symptoms, addressing comorbidity, and mitigating the common residual symptom that increases the likelihood of future relapse and recurrence. Efficacious interventions for rumination have been developed, including Rumination-Focused Cognitive-Behavioural Therapy (RF-CBT; Watkins, 2016), which has been proven to be effective in randomised controlled trials of face-to-face individual and group treatments for residual and acute depression in adults (Watkins et al., 2011; Hvenegaard et al., 2020), for adolescents with a history of depression (Jacobs et al., 2016) and in randomised controlled trials of young people at elevated risk for depression and anxiety (Topper et al., 2017; Cook et al., 2019). As well as the evidence from Japan presented in the parallel talks in this symposium, this talk will briefly review evidence for variants of RF-CBT being efficacious in different trials across multiple countries including the UK, Netherlands, Denmark, Sweden, Romania, Australia, and the USA, consistent with rumination being a universal difficulty common across nations and cultures. Given this growing evidence for the benefits of directly targeting rumination, the most recent National Institute for Health and Care Excellence (NICE) guideline for adult depression in the United Kingdom recommended Cognitive Behavioural Therapy (CBT) that specifically addresses rumination to prevent relapse and to enhance treatments for chronic depression (NICE, 2022). To further support the dissemination of RF-CBT, online delivered training programmes have been developed and are being piloted in the UK and USA, and digital interventions including internet RF-CBT and RNT-targeting apps have been developed and evaluated. These processes and next steps will be reviewed.



## Determining the Cognitive Processes Underlying Heightened Negative Expectancies in Elevated Vulnerability to Anxiety and Depression

Expectations about future events play a crucial role in human well-being. A heightened tendency to hold positive expectancies about future events can enhance well-being, but a heightened tendency to hold negative expectancies about such events can contribute to the development and maintenance of mental disorders. Specifically, it is well-established that a heightened tendency to expect that future events will be negative contributes to elevated vulnerability to anxiety and depression, and many influential theorists have suggested that change in negative expectancies represents a key transdiagnostic mechanism underlying cognitive behavioural treatments of anxiety and depression. Consequently, there has been increasing interest in advancing understanding of the factors that underpin the development of elevated negative expectancies, as such knowledge can form the basis of novel prevention and treatment programs. The present symposium includes five presentations that focus on the formation of negative expectancies in elevated anxiety and depression, the cognitive processes that contribute to the development of such expectancies, and potential pathways through which elevated negative expectancies might lead to elevated anxiety and depression.

Three presentations focus on negative expectancies in elevated anxiety vulnerability. Basanovic employed an experimental framework that exposed participants to an upcoming socially stressful situation to provide a controlled and more ecologically valid assessment of the formation of negative expectancies. In addition, he addressed the question of how negative expectancies lead to post-event rumination and associated negative emotional experiences in social anxiety. Using an innovative assessment approach, Reynolds examined if dispositionally anxious individuals volitionally choose to expose themselves disproportionately to negative, relative to positive information about a future event, and how such bias in information choice may drive negative expectations, and heightened anxiety responding to that event. Focusing on prenatal anxiety, Mazidi employed a variant of the assessment approach developed by Reynolds to examine whether pregnant women who selectively choose more negative than positive information about various aspects of upcoming childbirth event are more vulnerable to form negative expectations about childbirth, and whether these expectations mediate the relationship between choice bias and prenatal anxiety.

The other two presentations focus on the role of negative expectancies in elevated depression vulnerability. Using a novel laboratory paradigm, Ji focused on depression-related behavioural inactivity and examined the distinctive role of two types of expectancies about the likelihood of an objective negative rather than positive outcome, and the expected emotional impact associated with either outcome. Finally, Sim further unpacked the cognitive roots of attenuated reward-seeking activities in depression, investigating whether individuals with elevated depression vulnerability expect less enjoyment (reduced enjoyment expectancy) and/or expect more effort (elevated effort expectancy) from engaging in an upcoming reward activity. In sum, the studies presented in this symposium advance understanding of the cognitive processes which may underpin variation in vulnerability to anxiety and depression. The findings from these studies have important implications for the development of interventions aimed at reducing the impact of negative expectancies and improving emotional and behavioural outcomes in individuals who suffer from anxiety and depression.

## The Association Between Pre-Event Expectancies, Peri-Event Experience, and Post-Event Processing in Social Anxiety

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A maintaining factor of heightened social anxiety vulnerability is the experience of negative thoughts about past social events (post-event negative thinking). Heightened social anxiety vulnerability is also characterised by a biased tendency to hold negative expectancies

about future social events, and negative emotion experienced during social events. Critically, research has not determined the relationship between pre-event negative expectancies, peri-event negative emotional experience, and post-event negative thinking, with regards to social anxiety vulnerability. Fifty-one participants who varied in social anxiety vulnerability were exposed to a social evaluation event via a simulated interview. Participants reported on their negative expectancies about their interview performance prior to its commencement, their level of negative emotion experienced during the interview, and the severity of their negative post-event thinking across the week following the interview session. Analyses reveal direct associations between social anxiety, pre-interview negative expectancies, negative emotion experienced during the interview, and negative post-event thinking. Further analyses found pre-interview expectancies predicted post-event thinking outcomes via a mediated pathway involving negative emotional experience. The results of this study reveal pre-event negative expectancies predict post-event thinking and illuminate the pathways through which this relationship exists in individuals who vary in social anxiety. These findings suggest the modification of pre-event expectancies may impact post-event processing in social anxiety.

## **The Role of Volitional Choice in the Impact of Exposure to Information About Future Events on Anxiety-Linked Expectancies and Emotion**

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### INTRODUCTION

Individuals with elevated anxiety vulnerability experience greater negative expectancies and emotions in the lead up to events. These negative expectancies play a critical role in maintaining elevated anxiety vulnerability. Research examining mechanisms underlying anxiety-linked expectancies and emotions suggests how information about future events is processed plays a central role. Though, this neglects the mechanisms determining what information is available to be processed. Volitional choices, such as asking a friend “what did you dislike about the film?” rather than, “what did you like about the film?”, can disproportionately expose us to negative or positive information about future events. Importantly, this information guides how we expect to feel during the event and the emotions we feel in the lead up to the event. Hence, the current study examined the role of choice bias, a volitional choice to disproportionately access negative, relative to positive information, in the impact of exposure to information about future events on anxiety-linked expectancies and emotion.

### METHOD

US participants varying in anxiety vulnerability were recruited via Amazon's Mechanical Turk ( $N = 286$ ). Participants were informed the testing session may involve viewing a short video, which could evoke a strong emotional response, and then provided the opportunity to access negative and positive information about the video. Participants were only permitted to choose half the accessible information. The proportion of negative information chosen provided an index of choice bias. To measure the impact of exposure to information on expectancies and emotions, participants reported how they expected to feel while viewing the video and the emotions they felt prior, during, and post exposure.

### RESULTS

A serial mediation analysis indicated choice bias mediated the association between anxiety vulnerability and emotion, via expectancies (indirect effect  $\beta = .03$ ,  $SE = .01$ ,  $z = 3.07$ ,  $p = .002$ ). As observed, (1) anxiety vulnerability was positively associated with choice bias, (2) choice bias was positively associated with elevations of negative, relative to positive, expectancies, and (3) elevations of negative expectancies were positively associated with elevations of negative, relative to positive, emotion.

## CONCLUSIONS

Elevated anxiety vulnerability is associated with disruptions to behavioural and cognitive functioning which are of detriment to psychological, social, and physical wellbeing. To reduce these impacts, it is important to understand the cognitive mechanisms underlying anxiety vulnerability. To the best of our knowledge, the current study is the first to investigate the role of volitional choice in information processing in the lead up to events and illustrates how biased choices may maintain elevated anxiety vulnerability through driving expectancies and emotion in the lead up to events. The findings of the current study have important theoretical and clinical implications for reducing elevated anxiety vulnerability.

## **Examining the Role of Choice Bias in First-Time Pregnant Women's Expectancies About Parenting and Prenatal Worry**

**Mahdi Mazidi<sup>1\*</sup>, Ben Grafton<sup>1</sup>, Michelle Moulds<sup>2</sup>, Colin MacLeod<sup>1</sup>**

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The transition to parenthood is a life-changing event that elicits varied emotional responses in expectant mothers. During this period, some women may be optimistic about what the future holds whereas others may be more worried about this impending change. Such individual differences in prenatal worry have been identified as a critical predictor of both prenatal and postnatal mental health problems. Despite this, very little research has sought to identify the mechanisms that underpin individual differences in the tendency to engage in prenatal worry. One factor that may contribute to prenatal worry is the extent to which expectant mothers selectively access negative, relative to positive, information about parenthood. This bias in information access may lead to negative expectancies about parenthood, exacerbating prenatal worry. This study tests the hypothesis that the degree to which pregnant women volitionally access negative information about parenthood drives prenatal worry in a manner that is mediated by heightened negative expectancies about parenthood. Method: Fifty primigravida women will be recruited using online testing platforms including Prolific, and social media websites including Facebook. The participants will complete a biased access assessment task, wherein they will be presented with 4x4 grids containing labels about different aspects of parenthood. The grid will comprise equal numbers of positive and negative labels, and the participants can access additional information about each label by selecting it. Participants will be asked to choose half the accessible labels. The proportion of labels for negative information chosen will provide an index of choice bias. Participants' expectancies about parenthood and their prenatal worry will be assessed using self-report measures. The study will be the first that examine the role of choice bias in prenatal worry and expectancies about parenthood. The results of the project provide critical information about the potential underlying mechanisms of prenatal worry and will have important theoretical and clinical implications for addressing prenatal worry and negative expectancies among pregnant women.

## **Investigating How Action-Contingent Expectancy Biases and Attribution Style Relate To Dysphoria-Linked Behavioural Withdrawal**

**Julie Ji<sup>1\*</sup>, Colin MacLeod<sup>2</sup>**

<sup>1</sup> *University of Plymouth, UK*

<sup>2</sup> *University of Western Australia, Australia*

Behavioural inactivity is a hallmark of depression. This talk presents two studies investigating the role future expectancy biases may play in depression-linked behavioural inactivity, in participants varying in self-reported depression symptoms (dysphoria). A novel laboratory paradigm was developed to assess the presence of indirect associations between dysphoria and behavioural inactivity via negative

expectancy biases. Specifically, two types of expectancy biases were distinguished: a) the expected likelihood of a negative rather than positive outcome, and b) the expected emotional impact of either outcome. Across two studies, undergraduate students with higher vs. lower levels of dysphoria were presented with descriptions of activities that could result in a positive or negative outcome (in Study 1 the activity was a chance-based coin-flip game that could result in increased or decreased donations to a chosen charity; in Study 2 the activities were real life activities within the social domain). Importantly, with respect to each activity, participants rated their expectations concerning the likelihood of a negative vs. positive outcome, and expectation concerning the emotional impact of such outcomes. Results indicated that higher dysphoria was associated with more negative expectations concerning objective outcome likelihood and the emotional impact of outcomes, and such negative expectancy biases mediated indirect associations between dysphoria and behavioural inactivity. Additionally, preliminary findings show that dysphoria-linked elevations in negative emotional impact expectancy was mediated by dysphoria-linked elevations in negative internal attribution style. Theoretical and applied implications of investigating action-contingent expectancies in relation to depression-linked behavioural deficits will be discussed.

## **Negative Reward-Related Expectancies and Elevated Depressive Vulnerability: Potential Depression-Linked Biases in Expectancies of Future Benefit and Cost, and Their Possible Origins**

Kenneth Sim<sup>1\*</sup>, Julie Ji<sup>2</sup>, Lies Notebaert<sup>1</sup>, Colin MacLeod<sup>1</sup>

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Individuals who have a tendency to more readily experience negative mood (elevated depressive vulnerability) tend to exhibit a loss of interest in engaging in rewarding activities, though it is not known why this occurs. It is thought that the diminishment of reward-seeking in such individuals is plausibly driven by biased expectations concerning the benefits and costs of engagement in upcoming rewarding activities (reward-related expectancies). A key research question thus aims to identify if individuals with elevated depressive vulnerability expect less enjoyable benefits (dampened enjoyment expectancy) and/or expect more effortful costs required (elevated effort expectancy) from engaging in an upcoming reward activity. Given that one's appraisal of how previous experiences were could potentially influence their expectations concerning the same or similar future events, a second key research question aims to determine if these bias(es) arise purely as a result of distortions in how expectancies are formed (due to expectancy formation), or purely as a result of how individuals previously appraised prior reward activity experiences to be (due to previous enjoyment and/or effort experience appraisal). In the present study, an elevated level of depressive vulnerability was found to be associated with dampened enjoyment expectancy, but not elevated effort expectancy. Moreover, elevated depressive vulnerability was both directly associated with dampened enjoyment expectancy, indicating that expectancy formation was one source of biased expectancy, AND indirectly associated through its relationship with dampened enjoyment experience appraisal, indicating that previous experience appraisal was also a source of biased expectancy. These findings provided preliminary evidence for a type of expectancy bias present in those with elevated depressive vulnerability, as well as highlighted two potential independent sources of this bias. Importantly, identifying more specific cognitive mechanisms involved in depression-related diminished reward-seeking can have relevance for common therapeutic interventions seeking to improve the uptake of reward-seeking behaviours.

## New Developments in Avoidance Research in Anxiety Disorders and Chronic Physical Illness

Identifying stimuli in the environment that signal threat (e.g., pain) enables us to initiate appropriate defensive/protective responses that protect us from further harm (e.g., avoidance). Thus, avoidance of genuine threat is very adaptive. Yet, unnecessary, and persistent avoidance is a key diagnostic criterion across mental disorders. Despite avoidance being a clinical hallmark symptom of anxiety disorders and chronic pain, and extinction with response prevention (RPE) protocols being the gold standard in clinical treatment, experimental research on this topic is scant.

This symposium investigates the transdiagnostic importance of avoidance by combining cutting-edge experimental research and the most recent theoretical advances in anxiety disorders and chronic physical illness. Four speakers from different labs and countries will present the newest developments in avoidance learning and critically evaluate the role of avoidance and more subtle safety behaviors in exposure-based protocols. Avoidance behavior hampers fear extinction (protection from extinction), therefore RPE, i.e. prohibiting avoidance behavior, is standard practice in clinical treatment. Dr. Meulders will present new data showing that the unavailability of avoidance may constitute a context-switch (from therapy context to the patient's daily life) impeding the transfer of corrective learning and leading to return of avoidance, and present two potential ways to tackle such relapse (by introducing competing valued goals and increasing positive affect). Dr. Engelhard, will present a study investigating whether future-oriented imagery rescripting can reduce avoidance and safety behaviors during exposure. Dr. Koizumi will present experimental data comparing the effect of passive safety behaviors and more active avoidance behaviors on return of fear in a VR set-up. Results suggest that there may be a critical role of body movements/active agency in both acquisition and reduction of conditioned fear among humans. Finally, Dr. Sharpe, will evaluate whether reducing safety behaviors is always necessary, proposing a framework introducing safety precautions in a way to maximize the reduction of pain-related fear, in populations where safety behavior is deemed necessary. Clinical implications and future directions and challenges will be discussed.

## Exploring Strategies To Prevent Return of Pain-Related Avoidance Behavior After Successful Extinction With Response Prevention

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Avoidance behavior is adaptive in the acute pain stage, but when it persists beyond healing time, it may become disabling. Previous research has focused on passive fear correlates (arousal and verbal reports) largely ignoring active behavioral avoidance. However, fear and avoidance affect each other. For example, avoidance behavior during exposure may hamper corrective learning because the non-occurrence of the feared event is misattributed to the avoidance response. Therefore, exposure protocols usually imply response prevention with extinction (RPE), i.e. avoidance is prohibited. This technique however may shift the problem because the unavailability of the avoidance response may constitute a context-switch (from therapy context to the patient's daily life) impeding the transfer of corrective learning and leading to return of avoidance or renewal (return of fear due to context-switch). I will present new data testing two potential interventions to prevent relapse. In Study 1, we tested the effect of increasing positive affect (using an experimental affect induction) which is thought to strengthen inhibitory learning, and in Study 2, we tested the effect of increasing approach/reward-motivation (operationalized by lottery tickets increasing the chance of winning a valued price) to compete with avoidance behavior. In Study 2, we also tested the effect of cognitive load on extinction retrieval. Extinction and inhibiting the first-learned excitatory memory after extinction are resource-demanding processes that may be impaired by low availability of cognitive resources, leading

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to more return of pain-related avoidance and fear. Using a robotic arm avoidance paradigm, healthy participants learned to avoid pain by performing more effortful arm movements (in terms of distance and exerted force). During RPE, they could only perform the pain-associated movement, but pain was omitted. In Study 1, the Positive Affect group did a writing-imagery exercise to increase positive affect (Best Possible Self), whereas the control group wrote and imagined a Typical Day. To test for return of fear/avoidance, participants received two unsignaled pain stimuli (reinstatement) and all trajectories were made available again. Pain-related avoidance returned in both groups, but the two groups did not differ herein. The Positive Affect group reported increased positive affect, though not more than the Control group. Nevertheless, they generalized the learned safety of the extinguished movement to the other movements during RPE, whereas they also retrospectively rated the pain as less intense and less unpleasant. In Study 2, we used an identical acquisition, RPE and reinstatement procedure. During the test one group performed a low cognitive load task, another a high cognitive load task, and a third group received lottery tickets (reward) during the high cognitive load task. All groups showed return of fear. As predicted, however, the presence of a competing reward-goal reduced the return of pain-related avoidance compared to the low load group and the high load group. The high load group did not show increased return of pain-related avoidance behavior. Implications for the treatment of chronic pain will be discussed.

## Does Modulating Threat Memory Reduce Avoidance Behavior?

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### INTRODUCTION

Maladaptive avoidance is a core characteristic of anxiety disorders. Its reduction is often promoted using exposure-based treatment, but many individuals suffering from anxiety disorders do not benefit sufficiently from it. Negative mental imagery involving future and past events is commonly reported by patients and can reduce a person's willingness to use exposure. Laboratory research has shown that such imagery can be modulated by psychological interventions. In two laboratory studies, we examined whether mental imagery based interventions can reduce avoidance and safety behaviors during exposure to fear-related stimuli and situations.

### METHOD

In Study 1, we examined whether positive imagery during exposure (i.e., imagery-based counterconditioning), relative to standard exposure, reduces avoidance behavior in the lab (Hendrikx et al., 2021, JBTEP). In Study 2, we replicated and extended earlier work (Landkroon et al., 2022) in individuals with social fears and examined whether future-oriented imagery rescripting, relative to a wait-list condition, on Day 1 reduces avoidance and safety behaviors during exposure on Day 2. This was an extended replication of Landkroon et al. (2022, BRAT).

### RESULTS

In Study 1, we found that Counterconditioning intervention resulted in a short-lived reduction of distress associated with a threat cue. However, groups did not differ in avoidance or distress during test phases. In Study 2, data collection is ongoing and results will be presented at the conference.

### CONCLUSION

Mental imagery of threat is common in anxiety disorders and can promote avoidance behavior, thus rendering symptoms self-perpetuating. Interventions are available that modulate threat imagery. This research will further elucidate whether mental imagery-based intervention reduce avoidance behavior.

## **Fear Memory Acquisition and Alleviation Through Body Movements**

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Traumatic memories enhance the chance of survival particularly when the memories shape defensive movements to minimize direct harm. In animals, traumatic memories and body movements show bidirectional interplays: Traumatic memory acquisition results in adapting defensive actions whereas training active defensive moves can alleviate traumatic memories. However, body movements' roles in acquiring and alleviating human traumatic memories remain unclear because body movements are typically marginalized in human experiments. In this study, we tracked participants' whole-body motions while they underwent a simulated traumatic experience in a 3D virtual space. First, with representational similarity analysis of body motions, we revealed that participants obtained embodied traces of traumatic memories in their spatiotemporal patterns of body movements. Second, we demonstrated that subsequent embodied training to execute intrinsic defensive actions to actively avoid threats led to a long-term (24 hrs) alleviation of physiological and bodily defensive responses, while control training with extinction or vicarious procedures only led to transient alleviation effects. This advantage of the embodied procedure was more pronounced in male participants than in females. Together, these results reveal that body movements are intrinsic to human fear memory functions, highlighting the potential improvement of traumatic memory interventions through the embodiment of procedures.

## **Safety Behaviours or Safety Precautions? The Role of Subtle Avoidance in Anxiety Disorders in the Context of Chronic Physical Illness**

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Theories of anxiety disorders have focused not only on overt avoidance, but also on more subtle avoidance known as 'safety behaviours'. Safety behaviours involve behaviours which aim to reduce anxiety or prevent a feared outcome from occurring. In the long-term, however, these behaviours prevent the disconfirmation of threat because safety is incorrectly attributed to the safety behaviour, thus perpetuating anxiety. As a result, reducing or eliminating safety behaviours is an important target for many cognitive behaviourally oriented treatments. Notably, despite the relevance of anxiety to people with chronic health problems, the role of safety behaviours is rarely discussed in these contexts. Further, safety behaviours among those with chronic health problems pose a particularly complex problem. Distinguishing adaptive safety precautions from maladaptive safety behaviours can be a difficult task. In this paper, we discuss the role of safety behaviours in maintaining and treating anxiety problems in healthy adults, and whether these same principles apply to those with chronic illness. We propose a functional and contextual model of differentiating between safety behaviours and safety precautions amongst those with chronic physical illness. Lastly, we propose methods for adapting the treatment of anxiety disorders in the context of chronic physical illness.

### **Reaching Out Early to Children and Young People With Mental Health Problems Through Professionals Delivering in Schools, Community-Based Interventions Delivered by Young People and Community-Based Parenting Programmes**

There are enormous mental health needs of children and young people but equally, problems with capacity in providing accessible and effective interventions. The symposium describes a range of innovative evidence-based approaches in reaching out to diverse young people across different countries. We recognise the importance of digital interventions in being able to reach a large number of young people but also are aware of significant problems of uptake and drop-out. This symposium uses largely face to face interventions which may be supported by digital interventions.

The first 2 talks will describe 2 aspects of a large clinical trial for adolescents which was run in order to offer accessible CBT in secondary schools. The trial aimed to recruit 900 16-18 year olds in schools in the UK called the BESST (Brief Educational workshops in secondary schools trial) and which will be reporting in autumn 2023. The rationale for the day-long face-to-face Stress workshop intervention in schools will first be described. The intervention was designed to be accessible to students to self-refer for Stress problems after which they had telephone and digital support. The first talk will describe the processes by which students were recruited, their diverse backgrounds and clinical characteristics (June Brown). The second talk will describe the findings from a qualitative process evaluation which investigated how students experienced the intervention. This will include an exploration of the student's feelings about the day-long workshops and the post workshop support they received, identifying both the positive and negative aspects and the perceived utility of these intervention components (Steve Lisk).

The third talk will describe a task sharing method in Zimbabwe where young people are trained to offer the well-evaluated 'Friendship Bench' intervention to young people. This talk will describe the 'Youth Friendship Bench' intervention and experiences of young people and those who delivered the intervention. The talk will also give an overview of a new project called Youth in Mind that is focusing on adapting an intervention for young people (15-24 years) with depression and anxiety in Ghana and Zimbabwe. This project will have involvement of young people and stakeholders working with young people who will provide input at every stage of the project.

Parenting programmes are one of the most well established interventions for child mental health difficulties, particularly behavioural difficulties. The final talks describe the development, evidence and dissemination of a parent-led task sharing parenting programme, Empowering Parents Empowering Communities (EPEC). Paper 4 (Crispin Day) will describe the rationale and running of the EPEC programme – its concepts, logic model, content and methods and parent group leader recruitment, training impact and quality assurance. Paper 5 (Crispin Day) will describe the evidence demonstrating EPEC's success in reaching socially disadvantaged, Black and Minoritised parents living in excluded communities and neighbourhoods in the UK, the high level of programme acceptability and completion as well as evidence of significant impact on child, parenting and parent outcomes achieved in research trials and in widescale replication and dissemination.

The symposium concludes with a general discussion about future research directions in developing accessible and effective interventions that children and young people will actually take up and find helpful.



## **Baseline Characteristics and Recruitment Approaches for Brief Educational Workshops in Secondary Schools Trial (BESST) - A School-Based Cluster Randomised Controlled Trial of Open-Access Psychological Workshop Programme for 16–18-Year-Olds**

Stephen Lisk\*

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### **INTRODUCTION**

Anxiety and depression are increasingly prevalent in adolescents (Merikangas, Nakamura, & Kessler, 2009). Despite the significant and growing burden, significant barriers to help-seeking exist in this population (Michelson & Day, 2014), resulting in less than a quarter of affected young people being known to specialist child and adolescent mental health services (CAMHS) (Ford et al, 2007). The Brief Educational Workshops in Secondary Schools Trial (BESST) is an England-wide school-based cluster randomised controlled trial assessing the clinical- and cost-effectiveness of an exciting new open-access psychological workshop programme (DISCOVER) for 16–18-year-olds. It is a day-long workshop comprising psychoeducation, teaching and practice of CBT methods, with goal-setting and follow-up telephone calls. This interactive programme was developed in collaboration with a Teenage Advisory group. Here we will present the cohort profile of BESST, describing the recruitment process and the baseline characteristics of the enrolled participants and schools.

### **METHOD**

With a target of 60 schools and 900 students, a total of 15 areas (across four regions of England) were searched to enrol schools and recruit student participants. The trial was presented to all 6th form students in each school, using co-produced presentations. Presentations were structured to engage underserved groups including boys, using results from focus groups with adolescent boys. Students were encouraged to self-refer into the study if they wanted help for stress. The primary and secondary outcome measures were assessed at 3- and 6-months post randomisation.

### **RESULTS**

15 Mental Health Support Team (MHST) services were trained to deliver the workshops and 57 secondary schools were recruited from a geographically diverse sample across England. The majority of schools (39%) were recruited from London, with average school size being 244 students. We enrolled a total of 900 participants. Students self-enrolled into the study if they self-identified as seeking help for stress; with a mean age of 17.2 (SD=0.6), 641 (71%) participants were female and 432 (48%) were non-white. The general wellbeing of our sample measured using the Mood and Feelings Questionnaire (MFQ) found 314 (35%) students exhibited symptoms of depression at baseline. Wellbeing on the Warwick and Edinburgh Mental Wellbeing Scale (WEMWBS) found a participant mean of 41.2; compared to a population norm of 49.2; suggesting our sample were of high distress.

### **DISCUSSION**

These baseline characteristics and recruitment approaches will be discussed and compared with the wider literature.

## **The Experience of 16-18 Years Old Students Receiving a School Based Mental Health Workshop. Findings From a Process Evaluation Embedded in the Brief Educational Workshops in Secondary Schools Trial (BESST Trial)**

June Brown\*

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In the UK it has been estimated that around a quarter of 16-18 years olds experience mental health problems. This population is poorly served by mental health services and often reluctant to seek help. Providing support in schools may contribute to meeting the needs of this age group. The UK government is encouraging this approach by appointing Educational Mental Health Practitioners (EMHPs) to work in schools.

The Brief Educational workshops in Secondary Schools Trial (BESST) is currently evaluating the effectiveness of The DISCOVER programme – which is delivered in schools by EMHPs as a day-long student workshop. If shown to be effective DISCOVER could help address the gap in provision for the 16-18-year-old population. The BESST design includes a qualitative process evaluation which investigated (through interviews and focus groups) delivery of the DISCOVER workshop from Student, School and EMHP perspectives. This process evaluation aims to achieve a clear understanding about the operation of the intervention, the mechanisms that contribute to the outcomes observed by the BESST trial and the contextual and process factors that support the attainment of desired outcomes.

This paper will describe the findings from a thematic analysis of semi-structured interviews conducted with a sample of students who participated in the workshops. The study sample was drawn from eight schools which hosted the DISCOVER workshop in the first of two academic year cohorts. In total interviews with a purposive sample of 22 students (representing site and gender) were completed after the 6-month assessment of trial outcomes. This was also the end of the academic year and provided an opportunity for reflection on the extent to which participants benefited from the workshop, what aspects of the workshop contributed most to their reported experience, and the extent to which benefit was felt during the high stress period around exams. As such the interviews were designed to explore the mechanisms that contribute to the outcomes assessed by the trial.

Interviewers used a semi-structured topic guides developed on the basis of literature, and consultation with project investigators and the BESST PPI group. The topic guides were applied flexibly to ensure coverage of key issues and responsiveness to emergent themes. Interviews were completed in person - where possible – but most were completed online. Interviews were audio-recorded and transcribed verbatim prior to a thematic analysis.

Our analysis (which is ongoing) indicates that the DISCOVER group format was well accepted, that the teams delivering the workshops were viewed positively, and that most students found the workshop to be a worthwhile and beneficial experience. The workshop materials were generally well received, but some student's reported fatigue with the intense 1-day workshop programme. Some – though not all - students were able to provide clear reports of how the acquisition of knowledge about the nature of stress and anxiety and/or techniques to alleviate these brought perceived benefit. In a number of instances these benefits were associated with improved exam performance. Our initial analysis suggests that perceived benefit amongst students may be linked to having clear goals. Engagement with, and the perceived benefit of, 1-2-1 follow-up phone calls from EMHPs after the workshop was variable. Similarly, there appeared to be limited utilisation of an associated app and written materials which students took away from the workshops.

Implications for the development of the intervention and its wider dissemination will be discussed.

## **Successfully Reaching Socially Disadvantaged Families and Communities: The Rationale, Methods and Implementation of a Peer-Led Parenting Program**

Crispin Day\*

*King's College London, South London & Maudsley NHS Foundation Trust, UK*

### INTRODUCTION

Parenting interventions, particularly those delivered in a group format, are an effective approach for many social, emotional and behavioural difficulties of early childhood. An impressive range of well-evidenced profession-led parenting programmes have been developed. However, research and practice evidence indicate significant barriers to their likely success including: (i) families experiencing social disadvantage, exclusion and higher levels of need are less likely to use and benefit, (ii) the scale of need in socially disadvantaged areas far outweighs service capacity, and (iii) profession-led parenting services can be complex to access, stigmatising for families and costly to deliver. Innovative methods are required that increase access to low cost, effective and acceptable parenting programme at scale.

### METHOD

Empowering Parents Empowering Communities (EPEC) is a manualised parent-led parenting programme developed in the UK and now available globally. It combines manualised delivery by parent group leaders (PGLs) with training, organisational support and supervision provided by specialists in child mental health and parenting. This paper will describe the rationale, logic model and clinical methods of this task-transfer parenting intervention.

### RESULTS

Evidence of the successful recruitment and effective training of EPEC parent group leaders will be presented alongside evidence of the successful engagement of socially disadvantaged and ethnically diverse parents in the intervention.

### CONCLUSION

Evidence demonstrates that EPEC's innovative approach can successfully provide parenting support at scale to families and communities at highest risk of adverse outcomes. As a consequence of its success and effectiveness, EPEC has developed a range of early intervention programmes from birth to adolescence, and specialist interventions for parents with child with autism, ADHD, parental mental health difficulties and co-parent conflict. EPEC approach is delivered in the UK, Europe, Asia, Australia and South America.

## **Empowering Parents Empowering Communities: Peer-Led Parenting Program Engagement Acceptability, Outcomes and Implementation at Scale**

Crispin Day\*, Jo Nicoll

*South London and Maudsley NHS Foundation Trust, UK*

### INTRODUCTION

Childhood behavioural difficulties are the most common mental health disorder worldwide and represent a major public health concern, particularly in socially disadvantaged communities. Treatment barriers mean that up to 70% of children do not receive recommended parenting interventions. Innovative approaches are required if the the scale of need is to be addressed and significant improvements in child and adolescent development achieved. These innovative approached include the use of evidence-based task transfer, peer-led

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parenting interventions, such as Empowering Parents Empowering Communities' (EPEC) Being a Parent (BAP) programme, that have the potential to reduce childhood difficulties and improve parenting if replicable and successfully delivered at scale.

## METHOD

This real-world quasi-experimental study, with embedded RCT benchmarking, examined the population reach, attendance, acceptability and outcomes of 128 BAP groups (n=930 parents) delivered across 15 newly established sites participating in a UK EPEC scaling programme.

## RESULTS

Scaling programme sites successfully reached parents living in areas of greater social deprivation (n=476, 75.3%), experiencing significant disadvantage (45.0% left school by 16; 39.9% lived in rental accommodation; 36.9% lone parents). The only benchmarked demographic difference was ethnicity, reflecting the greater proportion of White British parents living in scaling site areas (SP 67.9%; RCT 22.4%). Benchmark comparisons showed scaling sites' parent group leaders achieved similar levels of satisfaction. Scaling site parent participants reported substantial levels of improvement in child concerns (ES 0.6), parenting (ES 0.9), parenting goals (ES 1.2) and parent wellbeing (ES 0.6) that were of similar magnitude to RCT benchmarked results. Though large, parents reported lower levels of parenting knowledge and confidence acquisition compared with the RCT benchmark.

## CONCLUSION

Despite common methodological limitations associated with real-world scaling evaluations, findings suggest that this peer-led, community-based, parenting approach may be capable of successful replication at scale and may have considerable potential to improve child and parenting difficulties, particularly for socially disadvantaged populations.

Day, C., Harwood, J., Kendall, N & Nicoll, J (2022). Impact of a peer-led, community-based parenting programme delivered at a national scale: an uncontrolled cohort design with benchmarking. *BMC Public Health* (2022) 22:1377. <https://doi.org/10.1186/s12889-022-13691-y>

### **Cognitive and Behavioural Therapies for People With Neurological Disorders**

People with neurological disorders are consistently observed to be at greater risk of emotional difficulties, reduced well-being and quality of life. Cognitive and behavioural therapies are increasingly being trialled to improve these outcomes. This includes therapies that, consistent with the conference themes of accessibility and new technology, are modified to support usability for individuals with cognitive/ communication disorder and are available online. This symposium highlights current work in this area.

Ian Kneebone will look at the findings of an NVivo supported thematic analysis of interviews that consider the perspectives of people with aphasia on modifying online behavioural activation to be suitable for them. Rebecca El-Helou will report the early outcomes of an international (UK/ Australia), co-designed, modified online relaxation program for persons with the communication disorder aphasia after stroke, and Rene Stolwyk will discuss the use of online and in person modified CBT with this population. Rebecca's work utilises Jacobson and Truax reliable change methodology; Rene's a randomised baseline, ABA withdrawal/reversal, single case design. Dana Wong will consider the outcomes of the ValiANT (Valued Living After Neurological Trauma) program. This is a pilot randomised controlled trial of Acceptance and Commitment Therapy integrated with cognitive rehabilitation to improve meaningful participation following acquired brain injury. Finally, Milena Gandy will report on a randomised controlled trial of the 10-week Well-being Neuro course (WBNC). The course is based on cognitive behavioural therapy but also incorporates compensatory cognitive rehabilitation. The WBNC has been evaluated with a diverse sample including those with acquired brain injury, epilepsy, Parkinson's disease and multiple sclerosis. It is available online and includes the provision of weekly support from a mental health professional via email and telephone. The program will conclude with a panel discussion on future research directions in this emergent area of research and practice.

### **Online Behavioural Activation Intervention for People With Aphasia: Accessibility and Acceptability**

Sayampurna Ray<sup>1</sup>, Brooke Ryan<sup>1</sup>, Peter Baldwin<sup>2</sup>, Shirley Thomas<sup>3</sup>, [Ian Kneebone](#)<sup>1\*</sup>

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#### **INTRODUCTION**

Behavioural Activation (BA) is an established intervention for depression in the general population. It has also demonstrated the potential to prevent and treat depression in those with neurological conditions, notably stroke. This includes support for treatment in the up to 30% of those post stroke with the communication disorder, aphasia. A BA intervention, available online, may be able to support dissemination of BA for this group. An initial step in developing such an opportunity is to work with a consumers to consider accessibility and acceptability.

#### **METHOD**

The Black Dog Institute Healthy Minds program was modified then presented to 11 people with post –stroke aphasia on squarespace.com, a website building service. Semi-structured interviews were used to seek the views of the participants on the program. Finally, Thematic Analysis was used to analyse the interview data.

#### **RESULTS**

Two themes were identified; "Communicative accessibility" and "Relatability and useability". Communicative accessibility encompassed issues relating to website layout and content including text readability, vocabulary level, sentence length, and image use, in addition

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to memory (cognitive load) and the use of support from others. Relatability and useability concerned the appeal of examples, wording choices and interactive components.

## CONCLUSIONS

Based on the views of potential consumers with aphasia, an online BA intervention can be improved to be more communicatively accessible and acceptable. Once revised, a proof of concept trial might be conducted to progress development.

## **Aphasia, Depression, and Psychological Therapy (ADaPT): Modified Cognitive Behavioural Therapy To Treat Depressive Symptoms in Stroke Survivors With Aphasia**

**Rene Stolwyk<sup>1\*</sup>, Priscilla Tjokrowijoto<sup>1</sup>, Sonia Thomas<sup>2</sup>, Ian Kneebone<sup>3</sup>, Brooke Ryan<sup>4</sup>, Caroline Baker<sup>5</sup>**

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### Background and OBJECTIVES

Cognitive behavioural therapy (CBT) can effectively treat depression in the general population. However, to date, no study has evaluated the use of CBT tailored to specific communication needs of stroke survivors with aphasia. Our aim was to explore the feasibility and preliminary efficacy of a modified CBT intervention in treating depressive symptoms.

### METHODS

We repeated an ABA withdrawal/reversal single case design across ten participants. Participants were assigned a randomised baseline (2.5, 4.5, or 6.5 weeks), then completed 10 intervention sessions and a 4-week follow-up. Data were analysed visually and statistically controlling for baseline trend.

### RESULTS

Five participants self-reported decreased depression ratings during the intervention phase. Improvement was sustained for most participants in the withdrawal phase, with some additional participants improved during this phase. Close others reported improvement in depressive symptoms among 8 participants. Improvement was sustained for most participants. Close others reported improvement in anxiety symptoms among 8 participants, which was sustained for most participants.

### CONCLUSION

Our results provide preliminary support for the feasibility and efficacy of a modified CBT intervention to reduce depressive symptoms in people with aphasia; however, further work is required to understand variable response to intervention across participants. Additional treatment sessions might be necessary to sustain improvement in mood. We also note discrepancies between self-report and close other report of mood. Suggestions for future outcome measures are discussed.

## **VaLiANT (Valued Living After Neurological Trauma): Clinical Trial of a Group Program Combining Acceptance and Commitment Therapy And Cognitive Rehabilitation for People With Acquired Brain Injury**

**Dana Wong<sup>1\*</sup>**, Nick Sathananthan<sup>1</sup>, Brad Wright<sup>1</sup>, David Gillanders<sup>2</sup>, Roshan das Nair<sup>3</sup>, Eric Morris<sup>1</sup>

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<sup>3</sup> Institute of Mental Health, University of Nottingham, UK

### **INTRODUCTION**

Cognitive and psychological changes affect many individuals with acquired brain injury (ABI) and are associated with poor long-term outcomes. Intervention approaches typically target cognition and mood separately, with mixed results. VaLiANT (Valued Living After Neurological Trauma) is a novel 8-week group intervention that uniquely combines cognitive rehabilitation with modified ACT to enhance wellbeing following ABI by concurrently addressing both cognitive and emotional barriers to meaningful participation. ACT was modified in numerous ways to make it more suitable and accessible for people with cognitive difficulties. We aimed to evaluate VaLiANT's potential efficacy, trial feasibility, and intervention acceptability.

### **METHOD**

We conducted a pilot feasibility two-arm randomised waitlist-controlled trial with blinded outcome assessments across three time points (baseline, 8-week follow-up, 16-week follow-up). The primary trial outcome was wellbeing, measured by the Warwick-Edinburgh Mental Wellbeing Scale. Secondary outcomes included measures of valued living, mood, cognitive complaints, and self-efficacy. Trial feasibility was evaluated against recruitment rates, drop-out rates and treatment fidelity (manual adherence and therapist competence). Intervention acceptability was measured quantitatively with simple Likert ratings, and qualitatively using semi-structured interviews exploring participants' experiences of the intervention.

### **RESULTS**

Trial participants were 54 adults (median age = 51.4 years, range 19-79) with ABI (54% stroke, 22% TBI, 24% other) at least 3 months prior to study entry (median time since injury = 2.7 years). Semi-structured interviews were conducted with 39 participants. Primary and secondary outcomes will be presented at the conference. The trial was found to be feasible, with steady recruitment, low drop-out rates, high treatment fidelity and high intervention acceptability ratings. In reflexive thematic analysis of qualitative interviews, three themes were generated reflecting the impact of VaLiANT on adjustment to life with ABI: 1. A fuller toolkit for life with brain injury, 2. The value of connection and belonging, and 3. Finding the 'me' I can be. Participants described a broad range of positive outcomes including changes in self-identity, reorganisation of values, engagement in different valued behaviours, and learning new skills which were useful in coping with life with ABI.

### **CONCLUSIONS**

These findings support the acceptability and feasibility of VaLiANT, and the value of integrating cognitive and psychological intervention elements to optimise valued living and post-ABI identity reconstruction.

### **The Future of CBT Education Based on Global and Cultural Context**

The presentation of many mental disorders is culturally bound and cannot be understood in isolation from the original cultural, historical, and idiomatic stressors that are unique in their manifestations and wouldn't be understood unless they were put in their proper contexts. In other words, the perception and expression of symptoms, the explanations as well as treatment expectations are linked to the specific culture. The Western theoretical framework on Cognitive Behavioral Therapy (CBT) and depression by Beck's theories are well-known. So, most CBT education for students and residents in the mental health care field, medicine and psychiatry are taught these Western models. Another challenge for Western models of mental disorders and psychological treatments is to adapt interventions to the specific needs of ethnic minorities, refugees, displaced people, migrant workers and populations in different cultures. There are several kinds of research on the development of frameworks to standardize the process of cultural adaptation and a few reports on the enhanced efficacy of psychotherapy when treatment is adapted to the culture of origin. However, our education curriculum or system has not been ready to include cultural issues and diversity. Thus, the following speakers will present their experiences teaching medical students and psychiatric residents CBT with global and cultural perspectives in different teaching and cultural environments. It will include culturally adopted CBT programs and teaching strategies for trainees from multiple cultural backgrounds. Then, they will discuss the current limitations and suggest the future directions of CBT education in terms of global and cultural perspectives. This symposium aims to shed light on this aspect by introducing evidence-based knowledge and sharing experiences of international professionals of different backgrounds and to gain superior knowledge in teaching students and trainees in different medical schools, universities and training hospitals from different backgrounds.

### **The Limitation of the Generalizability of CBT's to Culturally Diverse Populations**

Seungyoung Moon\*

*Swansea University Health Board, UK*

Cognitive Behaviour Therapy has been widely recommended for various mental health conditions worldwide. However, it has been generalised in the context of Western cultural concepts, which needs more attention to be diversely incorporated into a therapeutic framework.

Despite we are currently living in a rapidly globalising era as well as the world has become borderless, the unique cultural aspects are still existing, and it has been becoming even increasingly and highly valued. The meaning of diverse culture could be delivered as not only including ethnicity or race but could widely include diverse heritage, religion, and social norms that have been highly associated with their value, lifestyle and social belief, which could be interpreted as an individual identity.

Globalism refers to various patterns of meaning; attempts to understand all the interconnections of the modern world and to highlight patterns that underlie them. Multiculturalism refers to the belief that different cultures within a society should all be given importance. Therefore, acknowledging and integrating the proportional pattern of the rapidly becoming diverse worldwide and careful modification of the CBT model according to the trends would be crucial, which would potentially attribute positive therapeutic outcomes. The framework that helps clinicians attend to the diverse worldviews and experiences of their clients whilst being mindful of their own cultural backgrounds and identities would be essential.

This clinical symposium provides the following points in regard to the limitation of the generalizability of CBT to diverse cultural populations with broad therapeutic scope: the trends of diversity worldwide, essential understanding around terms used for diverse populations, and differences in core socio-environmental value dimensions or personal identities, etc. Also, a case study would be discussed with the key factors of limitation of generalizability as well as further consideration of disparities or contraindications in therapeutic perspectives.



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## Key Learning Objectives

By the end of the workshop, participants would be able to:

- Identify the limitation of the generalisability of CBT
- Understand different approaches and develop wide therapeutic perspectives for culturally diverse population
- Address different therapeutic approaches with various cultural concepts

## **The Efficacy of Culturally Adapted CBT Programs and Training Outcomes**

Jae-Hon Lee\*

*Schulich School of Medicine & Dentistry, Western University, Canada*

CBTs are generally known to be effective even for ethnic minorities or non-White populations with diverse mental health problems. A few previous studies supported this by showing positive cultural tailoring effects on cognitive biases and dysfunctional behaviors. Currently, culturally adapted CBT to ensure relevancy and accessibility to these population groups is also being implemented, such as using appropriate language terms and developing an understanding of psychopathology from a cultural viewpoint. In this session, the presenter will first introduce a culturally adapted CBT program for Korean people by the presenter to the audience. Then, the presenter will also briefly synthesize positive and negative results from reviews of the previous studies and discuss limitations regarding the efficacy of culturally adapted CBT from the perspective of isolating cultural tailoring effects. Lastly, a few studies about the impact of the therapist's cultural competency on the treatment outcome will be reviewed. At the end of the session, the presenter will discuss the need for further research with the audience.

## **Suggestions for the Future Directions of CBT Education From the Global and Cultural Perspectives**

Hwa Young Lee\*

*Soonchunhyang University College of Medicine, Korea*

Cognitive behavioral therapy (CBT) is considered a "gold standard" treatment for many mental disorders. However, there are some questions that CBT can be generalized to various cultures, because CBT was targeted at Western population groups in the early stages of development. The importance of integrating culture and psychotherapy is increasing, and clinicians must have cultural sensitivity to provide CBT in consideration of cultural context. However, there is still a lack of empirical evidence on which educational model should be applied to provide CBT with cultural sensitivity. In the absence of evidence-based guidelines, clinicians may ignore cultural context and treatment may be hindered. Therefore, the aim of this presentation is to address the following topics: First, we examine why education on cultural sensitivity is important for clinicians. Second, the direction of Future CBT education for clinicians is suggested through three training models: Adopt a Skills-Oriented Training Model, Train Clinicians in Evidence-Based Cultural Adaptation Strategies, and Adopt a Personalized Model of Psychotherapy That Incorporates Culture. These models help us to pave the way for solving cultural issues when providing CBT treatment to population of various cultures.

## Insights and Advances in the Assessment of Attention Control in Psychopathology

Attention control occupies a central place in many models of psychopathology. Considerable research suggests reciprocal and often causal relationships between attention control and mental health problems including insomnia, addiction, posttraumatic stress disorder, depression, and in particular, anxiety. Given its proposed importance it is critical that research investigating the role of attention control in various forms of psychopathology utilise methods of assessment that accurately and validly quantify attention control processes. The present symposium brings together research that informs the quality of common attention control measures, offers solutions to recognised problems with assessing attention control, and addresses issues regarding both validity and reliability of current measures. Dr Jemma Todd initially presents findings from a meta-analysis which addresses concerns about the validity of one of the most commonly employed measures of attention control – the Attention Control Scale. While a widely used measure, a number of studies have reported no relationship between subjective reports and performance-based measures. Meta-analytic findings of nine studies (n=1274 participants) that compared self-report (Attention Control Scale) and a variety of performance-based attention control measures showed no significant relationship overall. This holds considerable implications for findings derived from subjective measures of attention control and highlights the importance of researchers incorporating valid performance-based measures. The studies reported by Dr Lies Notebaert follows up on this finding to examine the question: If self-report attention control is unrelated to objective attention control, then what is it assessing, and why is it related to anxiety? Using an adapted version of the Attention Control Scale that queried participants about their attention control performance on a common behavioural assessment of attention control (attention network task), this research revealed that only beliefs about their attention control on the task, but not actual task performance, were related to both self-report attention control and anxiety. Given concerns over the validity of self-report measures of attention control that possess such high utility, Dr Julian Basanovic reports findings from a study seeking to assess the value of a brief, easily administered, objective measure of inhibitory attention control: the masked target antisaccade task. In a large sample (n=342) this research found that the task can be easily administered online, is sensitive to anxiety-linked differences in attention control, and enjoys very high levels of internal consistency. These findings suggest that the task may provide researchers with a psychometrically reliable, highly accessible and scalable assessment of attention control. Finally, Dr Patrick Clarke reports on research that has sought to further refine the masked-target antisaccade task to improve its sensitivity to more extreme (high and low) levels of attention control, and also its ease of administration. This refined variant, the staircase antisaccade, was found to be sensitive to anxiety-linked impairments in attention control, showed validity via shared variance with a theoretically related task (the Sustained Attention Response Task), and also evidenced high test-retest reliability. The symposium therefore highlights both current problems with attention control assessment and offers a number of solutions for researchers interested in examining the role of attention control in various forms of psychopathology.

## The Role of Performance Beliefs in the Relationship Between Attentional Control and Anxiety

Lies Notebaert\*, Bram Van Bockstaele

*Centre for the Advancement of Research on Emotion, University of Western Australia, Australia*

While empirical findings closely link poor attentional control with elevated anxiety, this relationship is more consistently evident and stronger when attentional control is measured through self-report than through behaviour. One possible explanation for these diverging findings is that people lack insight into their attentional control capabilities, and people with elevated anxiety hold more negative beliefs about their level of attentional control, resulting in lower self-reported levels of attentional control. In two studies, participants (N = 78 and N = 207) completed the attentional control scale, the attentional network test (ANT), a questionnaire measuring beliefs about atten-

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tional control in the ANT, and a measure of anxiety. In both studies, no significant associations were present between beliefs about attentional control in the ANT and participants' performance on the ANT, suggesting a lack of insight in attentional control capabilities. Both studies further demonstrated that only beliefs about attentional control but not performance in the ANT was related to self-reported attentional control and anxiety. We thus show that evidence supporting the relationship between self-reported attentional control and anxiety is driven by biased beliefs about ability to control attention in people with heightened anxiety, and not by behavioural indices of attentional control. These findings have important implications for clinical research seeking to establish the role of attentional control in psychopathology.

## **Assessing Anxiety-Linked Impairment in Attentional Control Without Eye-Tracking: The Masked-Target Antisaccade Task**

Julian Basanovic<sup>1\*</sup>, Jemma Todd<sup>2</sup>, Bram van Bockstaele<sup>3</sup>, Lies Notebaert<sup>4</sup>, Frances Meeten<sup>5</sup>, Patrick Clarke<sup>6</sup>

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Contemporary cognitive theories of anxiety and attention processing propose that heightened levels of anxiety vulnerability are associated with a decreasing ability to inhibit the allocation of attention toward task-irrelevant information. Existing performance-based research has most often used eye-movement assessment variants of the antisaccade paradigm to demonstrate such effects. Critically however, eye-movement assessment methods are limited by expense, the need for expert training in administration, and limited mobility and scalability. These barriers have likely led to researchers using suboptimal methods of assessing the relationship between attentional control and anxiety vulnerability. The present study examined the capacity for a non-eye-movement based variant of the antisaccade task, the masked-target antisaccade task (Guitton et al., 1985), to detect anxiety-linked differences in attentional control. Participants (N = 342) completed an assessment of anxiety vulnerability and performed the masked-target antisaccade task in an online assessment session. Greater levels of anxiety vulnerability predicted poorer performance on the task, consistent with findings observed from eye-movement methods and with cognitive theories of anxiety and attention processing. Result also revealed the task to have high internal reliability. Our findings indicate the masked-target antisaccade task provides a psychometrically reliable, low-cost, mobile, and scalable assessment of anxiety-linked differences in attentional control. Contemporary cognitive theories of anxiety and attention processing propose that heightened levels of anxiety vulnerability are associated with a decreasing ability to inhibit the allocation of attention toward task-irrelevant information. Existing performance-based research has most often used eye-movement assessment variants of the antisaccade paradigm to demonstrate such effects. Critically however, eye-movement assessment methods are limited by expense, the need for expert training in administration, and limited mobility and scalability. These barriers have likely led to researchers using suboptimal methods of assessing the relationship between attentional control and anxiety vulnerability. The present study examined the capacity for a non-eye-movement based variant of the antisaccade task, the masked-target antisaccade task (Guitton et al., 1985), to detect anxiety-linked differences in attentional control. Participants (N = 342) completed an assessment of anxiety vulnerability and performed the masked-target antisaccade task in an online assessment session. Greater levels of anxiety vulnerability predicted poorer performance on the task, consistent with findings observed from eye-movement methods and with cognitive theories of anxiety and attention processing. Result also revealed the task to have high internal reliability. Our findings indicate the masked-target antisaccade task provides a psychometrically reliable, low-cost, mobile, and scalable assessment of anxiety-linked differences in attentional control.

## The Staircase Antisaccade Task: Validation and Sensitivity To Anxiety-Linked Impairment in Attention Control

Patrick Clarke<sup>1\*</sup>, Annelise Pring<sup>1</sup>, Alannah Horton<sup>1</sup>, Daniel Rudaizky<sup>1</sup>, Julian Basanovic<sup>2</sup>

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Attention control is implicated in many forms of psychopathology, including mood disorders, trauma, addiction, and pain. Given concerns about the validity of self-report measures of attention control, it is important that researchers have access to reliable, valid, and accessible measures that are sensitive to variation in ability. One promising measure of inhibitory attention control is the masked-target antisaccade task which has been shown to have robust internal reliability and shows anticipated relationships with emotional constructs. This measure has a number of significant limitations however, and in particular, the requirement to arbitrarily employ a single target exposure duration for all participants that may vary widely in terms of attention control ability. The current study sought to validate a novel staircase variant of the masked-target antisaccade task. An unselected undergraduate sample comprising 216 participants ( $M_{age} = 20.7$ ,  $SD = 5.23$ ) initially completed the masked-target antisaccade task, staircase antisaccade task, Sustained Attention Response Task and dispositional anxiety. A subset of this sample ( $n=90$ ,  $M_{age} = 22.2$ ,  $SD = 6.82$ ) completed the same three behavioural measures one-week later to assess test-retest reliability. The staircase antisaccade demonstrated good validity, correlating significantly with both the masked-target antisaccade,  $r(190) = -.75$ ,  $p < .001$ , and SART,  $r(179) = .24$ ,  $p = .001$ . The new measure also showed the anticipated association with anxiety,  $r(214) = .21$ ,  $p = .002$ . The test-retest reliability of the staircase antisaccade was also observed to be high,  $F(89) = .733$ ,  $p < .001$ . Results therefore provide initial encouragement for the staircase antisaccade as a reliable, valid, and easy to administer measure of inhibitory attention control that is sensitive to anxiety-linked deficits in attention control ability.

## Development and Testing of Psychological Interventions in N-Small-Number Studies

Mental disorders and mental suffering are world-wide challenges with huge costs for the individual as well as for society (World Health Organization [WHO], 2022). While psychological interventions have shown evidence to alleviate suffering and improve clinical recovery, there is a large subset of patients for whom they are not effective enough. Influential researchers such as Hofmann and Hayes declare that the most important question for the further development of modern psychotherapy and intervention science is “what core psychosocial processes should be targeted with this client given this goal in this situation, and how can they most efficiently and effectively be changed” (Hofmann & Hayes, 2019). Since mechanisms of change in psychotherapy to a large extent remain unresolved (Cuijpers, 2022), they are an important investigation target for maximizing psychotherapy’s effects.

As such, we need to look to idiographic rather than nomothetic approaches, and towards investigating processes rather than average treatment effects of treatment packages. This means moving beyond conducting randomized controlled trials to focus on other types of studies. Smaller scale and real-life settings (e.g., observational research) and designs that permit causal relations (e.g., single-case experiments) may have promise in furthering the understanding and effectiveness of interventions (Kazdin, 2022).

In this symposium, different small scale approaches to developing or investigating psychological interventions are presented. In the first paper, Nancy Peeters presents data

from a non-concurrent multiple baseline study investigating a treatment program combining schema therapy and cognitive behavioural therapy for patients with an anxiety disorder and comorbid personality disorder. Within this study they aim to investigate both the effectivity and working mechanisms of the treatment. The second paper by Stine Bjerrum Moeller is a clinical case report synthesizing information on the application of schema therapy interventions with quantitative data. The final presentation by Lisa Groenberg Riisager uses a participatory action research design to co-create a personalized psychotherapy concept which integrates the use of a wearable ecological momentary assessment device with refugees diagnosed with complex PTSD.

The symposium concludes with a general discussion of the usefulness, strengths and limitations of different small scale approaches. These include what types of questions different study designs can answer, and suggestions for future advancement of the research field in the development and testing of psychological interventions.

## Schema Therapy with Exposure and Response Prevention (SCHerp) for Chronic Anxiety and OCD: A Multiple Baseline Study

Nancy Peeters<sup>1\*</sup>, Boris van Passel<sup>1</sup>, Gert-Jan Hendriks<sup>1</sup>, Eni Becker<sup>2</sup>, Julie Krans<sup>2</sup>

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### INTRODUCTION

Cognitive Behavioral Therapy (CBT) is an evidence-based guideline treatment for anxiety and obsessive-compulsive disorders, but about 50% of patients show insufficient improvement (Loerinc et al., 2015). In some cases, this may be due to comorbid cluster C personality traits, which can impede treatment for various reasons. Schema therapy is an evidence-based guideline treatment for personality disorders. Therefore, a combined treatment of CBT and schema therapy could provide a solution for chronic anxiety/obsessive-compulsive disorder with cluster C comorbidity. In this study, we evaluated the effectiveness of the combined treatment called ‘SCHerp’ (SCHema therapy with exposure and response prevention) and explored possible working mechanisms and effective moments in the treatment.

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## METHODS

Six patients with chronic anxiety/obsessive-compulsive disorder and comorbid cluster C personality traits were observed during the SCHerp treatment (3 days per week for 6 months) within a non-concurrent multiple-baseline study. Psychological functioning, anxiety/obsessive-compulsive symptoms, and schema modes were measured weekly using the Outcome Questionnaire-45, the short Schema Mode Inventory, and relevant disorder-specific questionnaires (Y-BOCS, PDSS, LSAS).

## RESULTS

Medium to large reliable improvements were observed in psychological functioning, disorder-specific symptoms, and maladaptive schema modes in two patients, whilst two other patients did not show any improvement. The remaining two participants showed inconsistent results. No evidence was found for the hypothesis that changes in adaptive and maladaptive schema modes precede changes in anxiety/obsessive-compulsive symptoms and psychological functioning. A comparison of the first half of the treatment ("junior phase") with the second half ("senior phase") showed that the senior phase had an additional effect.

## DISCUSSION AND CONCLUSION

The findings regarding the effectiveness of the SCHerp treatment show, consistent with previous studies, that about one-third of patients improved with treatment (Thiel et al., 2016; Peeters et al., 2021; Remmerswaal et al., 2023). Further research into the optimal duration and intensity of the treatment will provide more insight into ways to optimize the treatment. Finally, further research could focus on a phased therapy structure (rather than an integrated structure) to gain more insight into possible working mechanisms.

Clinical implications: This study contributes to the empirical support for the effectiveness of a combined treatment of schema therapy and CBT for chronic anxiety/obsessive-compulsive symptoms and its optimization.

## Case Report: Schema Therapy for a Case of Treatment Resistant Schizotypal and Paranoid Personality Disorder

Stine bjerrum Moeller<sup>1\*</sup>, Ida-Marie Terese Pereira Arendt<sup>1</sup>, Jacob Stig Jarnot Meline<sup>1</sup>, Randi Oibakken<sup>2</sup>

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There is currently a lack of evidence for any psychotherapeutic treatment for schizotypal or paranoid personality disorders (SPD and PPD). However, schema therapy (ST) seems to be a promising candidate, with its focus on ameliorating the consequences of childhood trauma through building a healing personal relationship and working on the integration and regulation of the total range of emotions with experiential exercises, e.g., imagery work.

The current case report presents a 38-year-old male with SPD, PPD and comorbid substance abuse who received 63 sessions of individual ST. His trauma history was extensive, including numerous adverse experiences in childhood with cold and critical parents and excessive bullying in school. Further, several acutely traumatic events had occurred in his youth and adulthood. At the time of enrolment, he presented with extensive social isolation, emotional inhibition and avoidance, and a persistent sense of being different than other people. The therapy consisted primarily of 'limited reparenting' interventions, as the patient found it difficult to engage in experiential exercises. When engaging with challenging emotions, the patient would often exhibit a swift sequence of schema modes, or even slip into micro-psychotic experiences. This meant that it became difficult to work with the patient on a deeper emotional level.

The effect of therapy was therefore only partly successful, as seen in the small changes in schemas and modes during therapy, and some changes in the expression of anger, but no effect on personality disorder or symptom levels at the end of treatment and follow-up. At the end of treatment, the patient still endorsed the criteria for SPD, PPD, and alcohol dependence.

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On the YSQ, the largest reductions were on the schemas Abandonment, Mistrust/Abuse, Defectiveness/Shame, and Insufficient Self-control/Self-discipline. On the SMI, all child modes, including the VC, improved except Happy Child Mode. Of the CMs, only the Bully & Attack Mode score decreased, while for parent modes, the patient had a large reduction in the Demanding Parent Mode and a small reduction in the Punitive Parent Mode, but no improvement in the Healthy Adult Mode.

Based on the course and effect of ST for this particular patient, we conclude that ST might have some effect for SPD and PPD. The lack of successful experiential interventions was problematic, since particularly imagery work is one of the most well-researched and effective methods for targeting unmet emotional needs, emotional inhibition, and experiential avoidance. Since – to our knowledge - ST has not been adapted to SPD, PPD, or schizophrenia spectrum disorders, it remains to be investigated to what extent experiential techniques could be utilized or whether they should be adapted with the above mentioned obstacles in mind. Given the patient's difficulties with the development of his own HA, we also recommend special attention on ways to develop and strengthen HA in further studies on the adaption and effect of ST for the treatment of these disorders.

## **Push the Button: A Co-Created Personalized Psychotherapy Concept for Using a Wearable Self-Tracking Instrument With Refugees Diagnosed With Complex PTSD**

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Due to exposure to multiple trauma and post-migration stressors, refugees are at high risk of developing complex PTSD (CPTSD). Manualized psychotherapeutic approaches with refugees with CPTSD can be challenging due to different expectations to treatment, language barriers and culturally specific interpretations of symptoms. To overcome these barriers, this project aims to co-create a data-driven personalized psychotherapy concept with the integration of a wearable self-tracking instrument called the One Button Tracker (OBT) for refugees with CPTSD. The treatment consists of two main elements: 1) The OBT, a single-purpose device, designed to collect data on a subjectively experienced phenomenon. Data is used in a collaborative process to enhance the shared understanding of the patient's condition and to personalize clinical decisions in treatment. Observations are made by pressing a button and the OBT stores the time and each observation in its local storage. 2) A logbook created by the therapists to document how the OBT was used and to support the therapist in creating a shared focus with the patient.

The project includes two studies: A pilot and a main study. A mixed method design was used in the pilot study, where the primary research question was to explore how the OBT mediates patients' engagement to treatment as well as how the OBT is used and experienced in the patient's daily life. Two patients and two therapists participated in the study, where logbooks from sessions, data from the OBT were collected and semi-structured interviews were held at treatment end (session 12 and 14). Quantitative data results showed high engagement in the use of the OBT, with 98 and 106 days of consistent data collection and averages of 7.3 and 4.2 observations a day throughout the treatment period. Qualitative data revealed that the OBT was able to create a therapeutic bridge to the patient's daily life, creating a platform for engaging in treatment outside sessions. The use of the OBT also had social consequences, as it facilitated communication about treatment to family members in one patient, but enhanced mental health stigma surrounding treatment within the family for the other patient. Moreover, incorporating OBT in the treatment sessions provided a more precise focus on specific phenomena, thereby reducing vagueness.

Building on these findings, the main study seeks to co-create and evaluate the personalized psychotherapy concept with the integration of the OBT. The study uses a participatory action research design to engage researchers, therapists and patients in the process. Four

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therapists are participating and the aim is to include fifteen patients in the study. Semi-structured interviews are conducted with each patient prior to, during, and at treatment end (20 sessions). As a part of the data collection, the study starts with a workshop for researchers and therapists to create the specific research questions, and throughout the study period peer supervision sessions are held every second week. Recruitment for the main study is ongoing and will end in April 2024. Preliminary findings indicate a high engagement in the use of the OBT and the participants reported a strong relationship between the therapy sessions and the incorporation of OBT in their daily lives. Output from the study will be a self-tracking-assisted, personalized psychotherapeutic concept for refugees with CPTSD.



## Targeting Transdiagnostic Processes With Third Wave Cognitive Behavioral Therapies

In the mental health field, comorbidity (i.e the presence of 1 or more disorders in relation to an index disorder) is commonly present and contributes to a poorer prognosis. Developing effective transdiagnostic treatments for patients presenting comorbid anxiety and mood disorders, with or without concomitant physical illness and personality disorder traits, means that therapy can be efficiently provided to a broad range of clients in a variety of treatment settings and may be particularly suitable for application in the varied population seen in primary and secondary care settings.

Cognitive Behavior Therapy (CBT) is one of the most widely used approaches and is regarded as treatment of choice for depression (DeRubeis et al, 2005) and anxiety (Olatunji, 2010). Data from meta-analyses also support the use of CBT for a range of disorders (Butler et al, 2006; Hofmann et al, 2010).

The past three decades has witnessed the emergence of a “third wave” of cognitive and behavioral therapies, integrating acceptance and mindfulness concepts and interventions (Hayes, 2011). These interventions place less importance on the reframing of thought content and behavior modification, and more emphasis on changing the relationship with thoughts in order to prevent their proliferation (Segal et al, 2002). A shift towards disengaging or decentering from thought content is proposed to reduce the tendency to amplify depressive and anxiety symptoms by engaging in uncontrolled worry and rumination. More generally, they encourage mindful acceptance of difficult psychological experience, the cultivation of psychological health by developing metacognitive awareness together with an accepting and compassionate attitude (Kahl et al, 2012, Churchill et al, 2010)

There is increasing evidence to support the clinical use of these interventions for both physical and psychological conditions, including chronic pain (Whetherell et al. 2013), cancer (Foley et al., 2010), diabetes (van Son et al, 2014), depression (Segal et al, 2018), substance abuse (Bowen, 2009), anxiety (Roemer, 2009), borderline personality (Panos et al, 2014), psychosis (Bach et al, 2012), eating disorders (Kristeller et al, 1999).

This session will present an overview of how three “third wave CBT” approaches, dialectical behavior therapy, acceptance and commitment therapy and mindfulness based cognitive therapy target transdiagnostic maintenance mechanisms in individual and group therapy when offered to a broad range of patients presenting comorbid anxiety, depression or borderline personality traits. All three presentations will describe the main mindfulness and acceptance based cognitive therapies and their hypothesized mechanism of actions, in particular how dialectical behavior therapy enhances emotion regulation (Trottier Duclos and Lussier Valade), how mindfulness based cognitive therapy fosters mindfulness, decreases rumination, worry, cognitive and emotional reactivity (Ngô) and how acceptance and commitment increases psychological flexibility (Poitras). All the speakers will also share free pedagogical videos, audios, worksheets and infographics created for the therapy groups they co-lead (available on [www.tccmontreal.com](http://www.tccmontreal.com), [www.psychopap.com](http://www.psychopap.com) and [www.tcdmontreal.com](http://www.tcdmontreal.com)).

## Targeting Transdiagnostic Processes with Third Wave Cognitive Behavioral Therapies

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In the mental health field, comorbidity (i.e the presence of 1 or more disorders in relation to an index disorder) is commonly present and contributes to a poorer prognosis. Developing effective transdiagnostic treatments for patients presenting comorbid anxiety and mood

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disorders, with or without concomitant physical illness and personality disorder traits, means that therapy can be efficiently provided to a broad range of clients in a variety of treatment settings and may be particularly suitable for application in the varied population seen in primary and secondary care settings.

MBCT is a multimodal intervention that integrates training in mindfulness meditation and the cognitive theory of affective disorders. It is a therapeutic approach that has been shown to be effective in treating the residual symptoms of depression as well as preventing depressive relapse. It is thus recommended as a first line intervention for maintenance treatment of depression as well as a second line intervention for acute depression (Parikh et al., 2016).

It can also be used in the treatment of anxiety disorders such as generalized anxiety which is maintained by an iterative cognitive process, worry. The latter can be parcimoniously targeted by teaching mindfulness meditation, as in the case of ruminations which is associated with a risk of relapse and maintenance of depression. MBCT has, in the past two decades, been studied for the treatment of dysthymia (Hamidian et al., 2013), bipolar disorder (Perich et al., 2013; Deckersbach et al., 2012; Weber et al., 2017; Cotton et al., 2020; Lovas et al., 2018; Miklowitz et al., 2009), obsessive compulsive disorder (Külz et al., 2019; Zhang et al., 2021, Mathur et al., 2021), post-traumatic disorder (King et al., 2013, Jasbi et al., 2018), generalized anxiety disorder (Wong et al., 2016, Ghahari et al., 2020, Evans et al., 2008, Kim et al., 2009), social anxiety disorder (Piet et al., 2010, Ebrahiminejad et al. 2016), borderline personality (Sachse, 2011), hypochondriasis (Mc Manus et al., 2012), mental retardation (Idusohan-Moizer et al., 2013), psychosis (Collip et al., 2013, Langer et al., 2012), chronic pain (Veehof et al., 2016, Day et al., 2019, Pei et al., 2021), binge eating (Sala et al., 2021).

Among the hypothesized mechanisms of change, increased mindfulness, metacognitive awareness, deceneration and self-compassion, decreased rumination, worry and cognitive reactivity, have been the most studied (van der Velden, 2015, Gu, 2015, Alsubaie, 2017).

This presentation will provide an overview of the MBCT model, a brief review of the literature on its application to several psychiatric and medical conditions. An MBCT group for individuals presenting a mood disorder comorbid with other psychiatric conditions will be described (Geurts et al. 2021). Francophone online resources will also be shared with participants (<https://www.psychopap.com/mbct-therapie-cognitive-basee-sur-la-pleine-conscience/>).

## Transdiagnostic Dialectical Behavior Therapy

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Dialectical behavioral therapy (DBT) has been shown to be effective in the treatment of borderline personality disorder. Other indications are eating disorders, substance use, post-traumatic stress disorder, depression and bipolar disorder (Tan et al., 2022). Transdiagnostic DBT groups that target emotional dysregulation in patients with mood and anxiety disorders have been studied in recent years (Neacsiu et al., 2014). They promote emotion management and improve the quality of interpersonal relationships. Emotional dysregulation refers to the lack of skills needed or using maladaptive strategies to regulate emotional responses. It is relevant to a majority of mental health disorders as most diagnoses involve excesses or deficits of emotions or a lack of coherence among emotional components. Maladaptive emotion regulation strategies, such as experiential avoidance, suppression, rumination and problematic goal setting, limited emotional clarity, fear of experiencing emotions, inappropriate emotional intensity, inability to modulate emotions based on contextual demands, and intense reactions to nonthreatening cues are targeted (Neacsiu et al., 2014). This presentation will start with an overview of the DBT model, a brief review of the literature on its application to several psychiatric and medical disorders. It will describe the protocol for a transdiagnostic group for individuals who present comorbid pathologies including refractory anxiety and mood disorders. It will also present the use of francophone online tools created to enhance participant learning ([https://tcdmontreal.com/?page\\_id=1048](https://tcdmontreal.com/?page_id=1048))

## **Paving a Way, From Many Places: The Transdiagnostic Manner of Acceptance and Commitment Therapy**

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Transdiagnostic conceptualisation in psychiatry bases its relevance in the modern understanding of common psychopathologies, which frequently manifest in co-occurring conditions. Indeed, as the burden associated with chronic diseases grows in different types of medical settings, the pertinence of practical, broad-spectrum psychological interventions to promote overall health appears to be quite clear. Contextual Cognitive-Behavioral Therapy (C-CBT) represents a recent group of treatments that preferably address the function rather than the content of inner experiences. Acceptance and commitment therapy (ACT) stands as a prototype of C-CBT by its focus on functional processes of openness, awareness and activeness. Derived from Relational Frame Theory (RFT), therapeutic interventions in ACT focus on the virtually universal human ability to elaborate relations through symbols, mainly through language. As the core processes explored by ACT are of a fundamental nature, this therapy represents a transdiagnostic approach.

ACT offers an alternative way to interact with emotions and thoughts, transitioning from a problem-solving perspective to an experiencing one. The three main processes – each of them dividing into two sub-processes – can be explored with individuals in different ways. Metaphors, behavioral experiments, in-session occurrences, and specific tools can all help the clinician share a new way of interacting with private experiences, which are, in the medical paradigm, described as symptoms resulting in disorders. ACT posits that pathological outcomes are the manifestation of a rigid relationship between a person and his/her private experiences rather than the presence of these private experiences per se. Thereby, clinical diagnoses are no longer of a paramount importance when considering ACT, as patterns of experiential avoidance are present in many psychiatric diagnoses.

Yet, adopting a transdiagnostic approach does not mean that a given therapy is indicated in all clinical contexts or for every patient. Rather, this kind of conceptualisation represent a movement toward a more flexible, and possibly more useful, way to evaluate and treat disorders, through the lens of psychological flexibility. As the definition of these processes and the concept of a transdiagnostic approach keep being refined, ACT offers a promising way to offer a versatile and wieldy psychotherapy to heterogenous clinical populations.

### **Supporting Parenting in the Context of Parental Mental Illness**

Mental health difficulties run in families: Children of parents with a mental illness (COPMI) have an increased likelihood of developing a psychological disorder themselves, with a life-time risk estimated at between 41-77 %, depending on the parental disorder. The evidence suggests that this transmission is accounted for largely by environmental rather than genetic factors, with parenting behaviours and parent-child-interactions as core mechanisms of transmission. However, a growing evidence-base suggests that interventions which support the parenting of those with mental health difficulties can ameliorate this risk. This symposium will focus on interventions which engage with parenting and parent-child interaction, to mitigate the impact of parental mental health. Two presentations will focus on interventions delivered transdiagnostically: Dr Dunn will present findings from a pilot face-to-face intervention developed for parents in receipt of psychiatric inpatient care in the UK National Health Service. Delivered on acute inpatient wards to adults with children aged 2-11, this novel intervention was adapted from a manualised CBT-based parenting intervention using participatory evaluative methods. Professor Christiansen will present data from the multi-centre study "Children of Parents At Risk Evaluation" (COMPARE) comparing effects of parental gold standard cognitive behavioural therapy (CBT) on children's outcomes, compared to effects of CBT plus the Positive Parenting Program (CBT+PPP). Preliminary findings from 345 families (460 children) will be presented. Three presentations will be focused on interventions targeting the transmission of anxiety, one of the most common mental illnesses amongst children and young people. Professor Cartwright-Hatton will present findings of a RCT of a CBT-focused one-day, group workshop for parents with anxiety disorders, recruited from adult mental health services in England (and their children aged 3-9 years). Children whose parents were in the intervention condition were 16% less likely to have an anxiety disorder at 12-month follow-up than those in the control group and the intervention was reported as highly acceptable to parents who received it. Professor Cobham will present data on an RCT comparing two different modalities of the same parent program (Fear-Less Triple P) for parents of children aged 6-14 years who met criteria for at least one diagnosable anxiety disorder in Australia. Both conditions were associated with significant improvements in child anxiety symptoms. Dr Tu will present work focused on anxiety disorders in bipolar-at-risk offspring including results of a meta-analysis which indicated offspring of parents with mood disorders are at increased risk for anxiety disorders, and a qualitative study of parents with bipolar and stakeholders, exploring experiences of parenting children with anxiety in the context of parental bipolar disorder. An adapted intervention of parent-led CBT for child anxiety to meet the needs of families with bipolar disorder will also be presented.

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### **Parenting From Hospital: A Novel Intervention for Psychiatric Inpatients With Dependent Children**

**Abigail Dunn\***

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#### **INTRODUCTION**

As many as a quarter of the 16,500 adults receiving psychiatric inpatient care in the UK are parents. This form of treatment typically requires the parent to be separated from their children, with the potential to disrupt the parent-child relationship. Children whose

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parents are hospitalised are at risk of impaired educational outcomes, behavioural and psychological difficulties, and increased housing instability. A systemic review indicated that parents want their parenting identity to be engaged with while they receive inpatient treatment, and they want to learn skills which can minimise the impact of their mental health on their children. No such interventions were found to exist within the UK National Health Service (NHS). In response, a brief targeted intervention was developed and delivered within acute inpatient services.

## METHOD

A pilot face-to-face intervention for parents in receipt of psychiatric inpatient care in the NHS was developed using a pragmatic co-production approach. Interviews with parents, carers and clinicians informed the adaption of an existing CBT-focused parenting course, designed for anxious parents receiving NHS treatment. The course was then delivered to hospitalised parents ( $n = 6$ ) who took part in a participatory evaluation process. Following iterative refinement, a five-session intervention was developed. This flexible intervention involves an initial exploratory first session followed by four modules which explore play, emotional regulation, communication, and transition from hospital. The delivery order is agreed between the parents and facilitators. This intervention is subject to an ongoing pilot within one large NHS mental health trust.

## RESULTS

During initial scoping interviews, clinicians and parents receiving inpatient psychiatric responded positively to the focus of the intervention and the method of delivery. Preliminary results indicate that the intervention is acceptable to parents who have provided strong positive feedback. Challenges related to the delivery of the intervention, include the clinical context and identification of eligible parents.

## DISCUSSION

Parents who are hospitalised want their parenting identity to be engaged with. To date there has minimal engagement with the parenthood of mental health inpatients in the UK. Initial evidence suggests that a novel intervention delivered within acute mental health care, which focuses on parenthood and promoting parent-child connection, is well received by parents, and is not associated with heightened distress.

## Running in the Family: Can We Prevent Anxiety in the Children of Anxious Parents?

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### INTRODUCTION

Children of anxious parents are at high risk of anxiety disorders themselves – approximately twice the risk of typical children, according to a recent systematic review. The evidence suggests that this transmission is accounted for largely by environmental rather than genetic factors, which opens up opportunities to intervene to prevent such transmission. In particular, there is evidence that supporting parenting in those with mental health difficulties can ameliorate the risk of their children developing mental health difficulties. Therefore, the objective of this study was to test the feasibility of a new one-session, group-based, preventive parenting intervention for parents with anxiety disorders.

### METHODS

One hundred parents with anxiety disorders, recruited from adult mental health services in England (and their children aged 3-9 years) were randomised to receive the new intervention (a one-day, group workshop), or to receive treatment as usual. Children's anxiety

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disorders and anxiety symptoms were followed up to 12-months by outcome assessors who were blind to group allocation. Analyses were conducted on an intention to treat basis, as far as possible.

## RESULTS

51 participants were randomized to the intervention condition and 49 to the control condition and 82% and 80% of these were followed to 12-months, respectively. The intervention was reported as highly acceptable to parents who received it. The results show that the intervention and RCT were feasible and 12-month follow-up attrition rates were low. Children whose parents were in the intervention condition were 16% less likely to have an anxiety disorder at 12-month follow-up than those in the control group. No adverse events were reported.

## CONCLUSIONS

An inexpensive, light-touch, psycho-educational intervention may be useful in breaking the intergenerational cycle of transmission of anxiety disorders. A substantive trial is warranted.

## Evaluating Different Versions of a Parent-Focused Intervention Designed To Support Families of Children Experiencing Anxiety Disorders

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## BACKGROUND AND OBJECTIVES

Anxiety disorders are the most common mental health problem experienced by children – with a worldwide prevalence rate of 6.5%. Parent-only cognitive-behavioral therapy (CBT) interventions represent a promising method of treatment for youth experiencing anxiety disorders. Fear-Less Triple P (FLTP) is one such intervention. This study compares two different formats of the same intervention: a 6-week program and a 1-day workshop.

## METHOD

Seventy-three youth (mean age, 8.4 years; 74% male) were randomized to the 6-week group or the 1-day workshop condition. Primary outcomes include: anxiety diagnostic status, and self- and parent-reported anxiety symptoms scores. Secondary outcomes include: parental confidence, sibling anxiety, and self-reported emotional awareness and emotional expressiveness. Data were collected prior to treatment, and one-week, six-months, and twelve-months following treatment.

## RESULTS

Both conditions resulted in: significant improvement in child anxiety symptom scores per parent report; significant improvement in sibling anxiety symptoms scores per parent report; increases in parents' confidence in their ability to manage their children's anxiety; and reduced expressive reluctance per child report. There were no significant differences between treatment conditions in the number of children who no longer met criteria for any anxiety disorder at the post-treatment, 6-mth or 12-mth follow-up assessment; with 87.2% and 70.6% of children in the workshop and group conditions respectively being free of any anxiety diagnosis at the 12-mth follow-up assessment.

## DISCUSSION

Results of this study indicate that brief, low-intensity, parent-only interventions can effectively target childhood anxiety symptoms. Such interventions have the potential to increase accessibility of treatment for families of children with anxiety disorders.

## **Adapting Child Anxiety Treatment for Offspring of Parents With Bipolar Disorder: A Qualitative Investigation and Intervention Development**

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### OBJECTIVE

Offspring of parents with bipolar disorder (OPBD) have a doubled risk of developing anxiety disorders, which can predict major mood disorders later in life. This highlights the importance of targeted interventions for childhood anxiety in this population. However, no studies have explored the parenting experiences of helping OPBD with anxiety disorders or how psychological treatment should be tailored to the needs of such families.

### METHOD

We conducted a systematic review and qualitative synthesis, searching five electronic databases to identify studies investigating general parenting experiences in the context of parental bipolar disorder. Findings were pooled using thematic synthesis. Furthermore, we purposively sampled and interviewed parents of OPBD with anxiety issues, along with professionals or charity workers experienced in supporting such families. Reflexive thematic analysis was applied to generate themes.

### RESULTS

Our qualitative synthesis of 12 studies revealed themes related to parent-child interaction and relationship, including impacts of bipolar disorder on parenting practices, parental burdens and strengths, children's challenges and coping strategies, and service needs. Furthermore, we interviewed 10 parents and 12 professionals or charity workers. Challenges to helping OPBD with anxiety included parental anxiety and guilt, emotional availability, balancing parental mental health needs, understanding children's anxiety, and accessing mental health services. Strategies for addressing OPBD's anxiety encompassed anxiety-relieving techniques, open communication, support networks, cognitive behavioural strategies and professional support.

### CONCLUSIONS

Our findings enhance the understanding of families with parents who have bipolar disorder and contribute to the development of suitable psychological treatment for OPBD with anxiety, ultimately improving mental health outcomes for this vulnerable population.

## Understanding the Individual Effects of Mindfulness Meditation

In recent years, mindfulness meditation is increasingly incorporated into psychological treatments and prevention programs and is more and more offered in various secular settings including public education and businesses. There is growing evidence that mindfulness-based interventions (MBIs) have a range of beneficial effects across diverse clinical and non-clinical populations, including reduced stress, anxiety, depression, and pain, and improved quality of life. However, in the mindfulness literature there are large differences in efficacy of MBIs across individuals and populations. Until today, there is only a limited understanding of the underlying mechanisms and moderating factors that may explain the interindividual differences in efficacy of MBIs. Therefore, and given the increasing popularity of mindfulness, a better understanding of the individual effects of mindfulness meditation should not only be a crucial subject for research but also a general concern for public health.

In this symposium, four studies provide new insights into potential mechanisms and moderating factors of MBIs in diverse populations. The first three presentations report on randomised controlled trials (RCTs) while the last presentation deals with an experimental study. In the first presentation, Vera Scheepbouwer investigates experiential avoidance and fear of self-compassion as potential mediators and moderators of Mindfulness-Based Compassionate Living for patients with recurrent depression compared to treatment as usual (<https://clinicaltrials.gov/ct2/show/NCT02059200>; Schuling et al., 2016). She found that experiential avoidance mediates the decrease in depressive symptoms and increase in quality of life following the MBI. The second presentation by Ausias Cebolla discusses the efficacy of a mindfulness and compassion-based intervention for psychotherapists and its indirect effect on their patients compared to an active control condition, an empathy diary (<https://clinicaltrials.gov/ct2/show/NCT04680559>; Garrote-Caparrós et al., 2022). He shows that the increase in therapists' mindfulness skills after the MBI was associated with increased patient-reported empathy in therapists, which produced an improvement in therapeutic bond and in patients' symptomatology. In the third presentation, Maris Vainre presents preliminary findings of her RCT (<https://clinicaltrials.gov/ct2/show/NCT04631302>; Vainre et al., 2022), comparing an online mindfulness training to light physical exercise in employees. She explores two potential mechanisms of mindfulness training for workplace performance: the mental health pathway and the cognitive control pathway. In the final presentation, Merle Kock presents a replication of an experimental study comparing the effects of a short mindfulness practice with a distraction condition on pain perception (<https://doi.org/10.17605/OSF.IO/CZDMG>). She investigates how pain catastrophising and repetitive negative thinking influence the effect of mindfulness meditation on pain perception in the lab.

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## **Mechanisms of Change in a Randomized Controlled Trial of Mindfulness-Based Compassionate Living for Recurrent Depression: Examining Fear of Self-Compassion, Experiential Avoidance and Positive Emotions as Potential Mediators of Response**

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### INTRODUCTION

Despite multiple evidence based treatment options, recurrent depression is still one the leading causes of global burden of diseases. It is important to further develop interventions that are not only focused on decreasing symptoms, but also increasing quality of life. Mindfulness-Based Compassionate Living (MBCL) has been shown promising in the treatment of recurrent depression, indicating positive effects on depressive symptoms and quality of life. In order to improve efficacy, it is important to further investigate mechanisms of change. The current study aimed to investigate whether fear of self-compassion, experiential avoidance, and positive emotions mediate the effect of MBCL for recurrent depression.

### METHODS

The current study was divided in two parts. Part one is a randomized controlled trial comparing MBCL in addition to treatment as usual (TAU) with TAU alone at end of treatment/end of follow-up. Part two is an uncontrolled study on the consolidation of treatment effect over the 6-month follow-up period. Measurements were conducted at baseline, end of treatment, and at 6-month follow-up. The outcome measures were self-report questionnaires on depressive symptoms (BDI-II), quality of life (WHOQOL-BREF), fear of self-compassion, experiential avoidance (AAQ-II), and positive affect (types of positive affect).

### RESULTS

Patients were randomized in MBCL + TAU (n=61) or TAU only (n=61). Fear of self-compassion and experiential avoidance decreased in the intervention group with a moderate effect size, but positive affect remained stable. Only experiential avoidance mediated the effect of MBCL on depressive symptoms and quality of life. No differences were found between end of treatment and 6-months follow-up for all the outcome measures. The change of experiential avoidance from before to directly after MBCL predicted the 6-month follow-up depressive symptoms and quality of life, but the change of fear of self-compassion and positive affect did not.

### DISCUSSION

A decrease of experiential avoidance seems to be a clinical relevant mechanism of change in MBCL for recurrent depression. Further research is necessary, especially mediation analyses with midtreatment measurements, but also on how the decrease of experiential avoidance can be optimized.

## **The Work Engagement and Well-Being Study (SWELL): A Randomised Controlled Feasibility Trial Evaluating the Effects of Mindfulness Versus Light Physical Exercise at Work**

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## BACKGROUND AND AIMS

Mindfulness-based programmes are increasingly used in occupational settings yet there is inconsistent evidence regarding the effects and mechanisms of mindfulness training for workplace performance. Here we evaluate two potential pathways: first via improvement in mental health, and/or second, via improvement of cognitive control.

## METHODS

In this randomised controlled feasibility trial, 242 employees from 8 employers were randomised to four weeks of either light physical exercise or mindfulness training online (1:1 allocation). The primary outcome was work performance at post-intervention, measured using the Work Role Functioning Questionnaire. Multiple measures evaluated potential mediators of intervention effects. The mental health pathway was indexed via measures of well-being, depression, anxiety, stress, and decentering, and cognitive control via computerised cognitive tasks. Outcomes were collected at baseline, post-intervention and 12-week follow-up. The trial was pre-registered (NCT04631302) and its protocol published (Vainre et al., 2022).

## RESULTS

122 employees were randomised to mindfulness ( $M = 44.22$ ,  $SD = 11.13$  years, 86% female) and 120 to light exercise (age  $M = 45.15$ ,  $SD = 10.24$ , 83% female). Analysis of outcome data is ongoing. We will present preliminary findings.

## Pain Catastrophizing as a Potential Moderator of Mindfulness Meditation for Pain

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Mindfulness-based interventions (MBIs) have a range of beneficial effects across diverse clinical and non-clinical populations, including reduced pain. However, there are large differences in efficacy of MBIs across individuals and it is unknown for whom mindfulness meditation is beneficial and for whom it may have undesirable effects. Given the increasing popularity of mindfulness, a better understanding of the individual effects of mindfulness meditation is not only a crucial subject for research but also a general concern for public health. Replicating and extending previous studies reporting undesirable effects of mindfulness meditation in specific subpopulations is a first step to identify moderating factors that may explain the interindividual differences in efficacy of MBIs. Post-hoc analyses of an experimental study (Prins et al., 2014) showed that students low on pain catastrophizing experienced more pain during mindfulness meditation compared to distraction, suggesting that mindfulness meditation may have undesirable effects for individuals low on pain catastrophizing. Given the low power and post-hoc nature of the finding, the present (pre-registered) study sought to replicate and extend this prior study to examine the effect of mindfulness compared to distraction on experimental pain perception and affect in healthy students with varying levels of pain catastrophizing. 110 participants were randomised to the mindfulness or distraction condition. While receiving seven mildly painful heat stimuli, participants listened to the corresponding experimental induction (pre-recorded mindfulness exercise or children's stories) via headphones. Pain perception and state affect was assessed at baseline, after the experimental induction, and at 2-weeks follow-up. To address limitations of the study by Prins et al. (2014), our sample size was based on a priori power calculations, a manipulation check was added, and the baseline pain assessment items were repeated at post-assessment and follow-up to assess the effect on pain experience across time. Moreover, state affect was included as outcome and repetitive negative thinking as additional moderator due to its close relation to pain catastrophizing. Multivariate linear models were applied to test whether pain catastrophizing and repetitive negative thinking moderate the effect of mindfulness on pain experience. As a sensitivity analysis, we replaced missing data on outcomes using multiple imputation with chained equations. Analyses showed no difference in pain perception between the mindfulness and the control group. Neither pain catastrophizing nor

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repetitive negative thinking moderated the effect of mindfulness on pain perception. Pain catastrophizing was positively associated with pain perception at post-assessment. This effect was most pronounced for affective components of pain perception (affective pain, general anxiety, and fear of pain) and attention to the perceived pain. The findings do not support the notion that mindfulness may lead to pain reduction, nor that this effect is moderated by pain catastrophizing or repetitive negative thinking. Sufficient mindfulness practice, and not only a single mindfulness exercise, may be necessary for mindfulness to exert its effect on pain perception, which has often been shown in MBIs. Future studies should test pain catastrophizing as potential moderator of efficacy following full MBIs. This study highlights the importance of replicating findings, especially post-hoc findings in underpowered studies.

### **Recent Developments in Disgust-Related Cognitive Processes Across Disorders**

Disgust was initially conceptualized as a negative emotion that evolved to serve a disease-avoidance function by motivating the avoidance and rejection of physical contaminants. More recently, researchers have proposed that disgust also serves a social cohesion function by promoting the avoidance of moral and social “contaminants” as well. As such, disgust is now thought to be a multidimensional emotional state consisting of three dimensions – core, animal reminder, and moral. A growing body of research has demonstrated the importance of disgust and disgust proneness to a wide range of psychopathology including, but not limited to, obsessive-compulsive disorder, eating disorders, phobias, borderline personality disorder, and sexual dysfunction. Because disgust has been historically understudied compared to other negative emotions (e.g., anxiety, sadness, anger) in the context of mental disorders, there is a smaller, but burgeoning, body of literature on the cognitive processes associated with the experience of disgust. Expanding our understanding of these disgust-related cognitions can help make case conceptualization more accurate and complete across disorders. Having a fuller picture of disorder-relevant cognitive processes can ultimately improve the effectiveness of our interventions. Thus, the focus of the symposium will be on research across mental disorders that examines cognitive processes associated with disgust. In the first paper, Sandra Krause will explain results from a qualitative study examining differences and similarities in cognitions and behavioural urges associated with disgust and anger in individuals with obsessive-compulsive disorder and those with trauma histories. In the second paper presentation, Peter de Jong will present work on disgust-based reasoning in anorexia nervosa and disgust towards one’s own body within the context of body dissatisfaction/eating disorders. The third presentation, by Catherine Ouellet-Courtois, will explore results from a study that induced moral disgust through manipulations of moral self-perceptions. In this presentation, she will explore how this process may influence cognitive avoidance and thought suppression in response to thoughts related to immorality. Finally, Josie Millar will present research on the experience of mental contamination (i.e., feelings of disgust and contamination that arise in the absence of contact with a physical contaminant) in obsessive-compulsive disorder. The symposium will conclude with a general discussion of future research directions on disgust transdiagnostically and on clinical applications of this work.

### **Mental Contamination in Borderline Personality Disorder (BPD)**

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#### **BACKGROUND**

Mental contamination (MC) encompasses feelings of disgust and dirtiness that arise in the absence of direct physical contact with a contaminant. MC can be evoked by memories of a traumatic event, particularly a trauma that involves a violation or betrayal. Given the hypothesised relationship between MC and trauma, we aimed to investigate whether experiences of betrayal trauma and MC were greater in a clinical population of people with Borderline Personality Disorder (BPD) compared to a) those with anxiety and/or depression and b) non-clinical controls.

#### **METHOD**

Using a cross-sectional design, N = 122 adults were recruited to one of three groups: a) BPD, b) anxiety/depression, c) non-clinical controls.

#### **RESULTS**

The BPD group reported experiencing a greater number of high and medium betrayal traumas, as well a higher levels of MC and more childhood betrayal traumas than controls.

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## CONCLUSIONS

Findings are consistent with previous studies that have linked MC to childhood abuse and PTSD. This suggests that MC may be relevant to BPD because of the overlap in experiences of betrayal trauma in childhood rather than the diagnosis. This may be due to appraisals of shame, disgust or alienation, as a way to make sense of and survive the threat to their relationship with a caregiver. Our findings support MC as a transdiagnostic construct and highlights the importance of clinicians assessing for MC, in understanding behavior in the context of betrayal trauma.

## Violation and Self-Disgust in Individuals With OCD And/or Histories of Sexual Trauma

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## INTRODUCTION

Since the publication of the DSM-5, OCD and PTSD are no longer categorized as anxiety disorders, in part due to the constellation of negative emotions beyond anxiety associated with both disorders (Bartz & Hollander, 2006; Resick, Monson, & Chard, 2016). Accordingly, the last two decades has seen a dramatic increase in the volume of research examining the role of disgust in both disorders (Olatunji & McKay, 2007). This has included research on the phenomenon of mental contamination, which refers to internal feelings of dirtiness, self-disgust, and/or washing behaviour that arises in the absence of direct contact with a contaminant (Fairbrother, Newth, & Rachman, 2005). Cognitive models suggest that these feelings of self-disgust and internal dirtiness result from cognitive processes wherein mental events (i.e., intrusive thoughts, images, memories) are appraised as a violation (Rachman, Coughtrey, Shafran, & Radomsky, 2015). However, little research has been done to identify the cognitive processes behind these feelings and the behavioural impulses that follow from them. Therefore, the aim of the present study was to use qualitative interviews to further explore the experience of mental contamination and self-disgust in individuals with OCD and/or histories of sexual trauma.

## METHOD

Semi-structured qualitative interviews were conducted with 20 individuals with a diagnosis of OCD and/or a history of a DSM-5 PTSD Criterion A trauma. Interviews were transcribed and coded using grounded theory methods (Corbin & Strauss, 1990).

## RESULTS

Three themes of cognitive appraisals associated with feelings of self-disgust were identified: responsibility & self-blame; contradiction of identity; dehumanization. In response to these feelings, participants reported engaging in either avoidance or washing behaviour. While washing was closely linked to feelings of disgust, not all washing behaviour served a physical cleansing function.

## DISCUSSION

Findings from the study highlight themes of cognitive appraisals that may be important for understanding the experience of self-disgust and mental contamination in individuals with OCD and/or histories of trauma. A clearer picture of these cognitive mechanisms can point to important cognitive intervention targets for individuals with these symptoms. Future research should aim to develop a way to measure these appraisals quantitatively to examine their differential impact on disgust-related symptom domains in OCD and PTSD.

## Beliefs About the Moral Self: Implications for Obsessive-Compulsive Disorder

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### BACKGROUND AND AIMS

According to recent cognitive-behavioural models of obsessive-compulsive disorder (OCD), beliefs about the moral self are central to the phenomenology of OCD. For instance, beliefs that one is immoral may induce feelings of self-disgust and result in the cognitive avoidance and thought suppression that are typically seen in OCD. The goal of this experiment was to examine how manipulating beliefs about one's morality may trigger OCD-relevant responses.

### METHODS

388 undergraduate participants have so far enrolled in this study, and data collection is still ongoing. Participants first completed a moral dilemma task and were provided with false feedback on their performance, by being told that they were either highly moral or immoral. Subsequently, participants completed state measures of moral emotions and moral self-perception. Next, participants completed a moral approach task (to measure the degree of cognitive avoidance in the face of thoughts related to immorality), as well as a thought suppression task. A battery of measures of OCD symptoms and cognitive processes was finally completed.

### RESULTS

Preliminary results indicated that participants in the immoral-self condition reported a more negative self-image, as well as more negative moral emotions and self-disgust subsequent to receiving the false feedback. On the other hand, the feedback resulted in an enhanced moral self-perception in participants in the moral-self condition. Further, while no main effect of experimental condition was found on cognitive avoidance, an interaction between OCD symptoms and experimental condition was found. Namely, participants with greater OCD symptoms, who were assigned to the moral-self condition, completed significantly less steps in the moral approach task (i.e., more cognitive avoidance). No significant differences were found between groups in terms of thought suppression.

### CONCLUSIONS

These results suggest that individuals with a greater propensity to OCD and who hold positive beliefs about their own morality may wish to preserve this heightened sense of morality, for instance by not engaging with thoughts about immorality. These findings highlight the association between moral emotions, self-beliefs, and OCD symptoms, and pave the way for future research examining morality-related constructs in OCD.

## Disgust Responses Towards Own-Body Pictures in Women With Eating Disorder Symptomatology

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Individuals with an eating disorder (ED) often report to be disgusted by their body. Body-related self-disgust could play an important role in the development and maintenance of EDs. We tested if women with high ED symptom scores indeed respond with disgust upon exposure to their body as indexed by facial electromyography (fEMG) of the m. levator labii superioris and self-report. Since one's self-disgust may increase/decrease depending on the relative distance of the own body to the thin ideal, we also assessed women's disgust for overweight- and thin-morphs of their body. Female undergraduate students (N = 104) were photographed and presented with their (morphed) body pictures, next to disgust-relevant and overweight body control pictures. Higher levels of ED symptoms were

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associated with stronger self-reported disgust to unedited body-pictures and overweight-morphs. Disgust to thin-morphs was unrelated to ED symptoms. Participants generally showed heightened facial disgust as indexed by EMG activity of the m. levator labii superioris towards overweight morphs, yet the strength of facial disgust was unrelated to ED symptoms. Thus, the findings provide evidence for the involvement of heightened body-related self-disgust in ED symptomatology. This relationship was, however, restricted to subjective self disgust and not reflected in a stronger facial expression of disgust in response to unedited or overweight pictures of their body.

### **An Effective Mechanism of Dialectical Behavior Therapy for Non-suicidal Self-Injury Behavior**

Non-suicidal self-injury (NSSI) is defined as the direct and deliberate destruction of one's body tissue without suicidal intent. Dialectical behavior therapy (DBT) has been proven to be effective in improving NSSI. However, it remains unclear how it works. To further explore the effect in China and the effective mechanism of DBT, we conducted a multicenter study with 14 hospitals in China. In this symposium, five researchers will jointly introduce their research achievements from clinical practice and scientific research perspectives in the past three years. In the first presentation, Congwei Liu will report on the effectiveness of DBT for NSSI. The study focused on the mediating role of DBT in the improvement of patients' emotion regulation skills in the treatment of NSSI, to find the effective mechanism of DBT in the treatment of NSSI. Then, the second presenter, Sichu Wu will report on neuroimaging change for NSSI patients after 13 weeks of DBT and discuss the brain network mechanism of DBT. After this, Lichen Ouyang will discuss the changes in gut microbes composition of NSSI after the 13 weeks of DBT. And the curative effect of DBT is related to the change of gut microbes in the third presentation. The final presentation, by Zhangwei Lv, will involve a topic of genetics: the epigenetic mechanism of NSSI. According to previous studies, the effect of psychotherapy may be related to the change in patients' epigenetics. The authors conducted a randomized controlled study using Infinium 850k chip and DNA methylation sequencing was conducted before and after treatment. It was pointed out that the reason for the effectiveness of DBT in treating NSSI was related to the changes in patients' DNA methylation. The symposium will conclude with a general discussion of future research directions in DBT for NSSI.

### **Mechanism of Dialectical Behavior Therapy on Non-suicidal Self-Injury**

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Non-suicidal self-injury (NSSI) is defined as a behavior which is not recognized by culture, intentionally and directly causes repeated injuries to body tissues, but has no obvious suicide intention and will not cause death. At present, the treatment of NSSI in the world is mainly psychotherapy, and the dialectical behavioral therapy (DBT) developed from cognitive behavioral therapy (CBT) has accumulated more evidence of effective improvement of NSSI. However, the change mechanism of DBT also need further exploration. Therefore, this study analyzed the changes of clinical symptoms and psychological functions of NSSI patients after 13 weeks of DBT treatment, and established a SEM model of DBT effect, so as to better understand the mechanism of DBT. The results showed that there were two chain mediating effects of DBT in improving NSSI behavior. First, DBT can improve patients' borderline personality symptoms by reducing their alexithymia, improving their level of perceptual support, and finally achieving the goal of improving NSSI symptoms; Second, DBT alleviates the depressive symptoms of patients by improving their emotional regulation skills, and finally achieves the goal of improving the symptoms of NSSI.



## Neural Mechanisms of Dialectical Behavior Therapy in the Treatment of Non-suicidal Self-Injury: A Resting-State Fmri Study

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### INTRODUCTION

Non-suicidal self-injury (NSSI) refers to the direct, intentional self-inflicted lesion of body tissue without suicidal intention or socially sanctioned reasons. This behavior is particularly prevalent among adolescents and young adults and is a known risk factor for suicidality. Dialectical behavior therapy (DBT) has been internationally recommended as an effective intervention for NSSI. However, the neural mechanisms underlying its efficacy remain largely unexplored. This study aimed to investigate the neural mechanisms of DBT in treating NSSI using resting-state functional magnetic resonance imaging (rs-fMRI) data collected before and after DBT intervention.

### METHODS

A total of 84 NSSI patients were recruited and randomly assigned to either DBT or social supportive group therapy (SSGT) intervention groups. The Ottawa Self-Injury Inventory and rs-fMRI data were collected using a Siemens 3.0T MRI scanner before and after a 13-week group psychotherapy intervention. Forty participants (20 in each group) completed the data collection. Rs-fMRI data were preprocessed using DPABI\_v6.0, and intrinsic regional brain activity and seed-based functional connectivity (FC) were calculated and analyzed using mixed-ANOVA to identify main group and interaction effects. Spearman correlations were employed to examine the association between altered intrinsic brain activity and NSSI frequency to verify the efficacy of DBT in NSSI patients.

### RESULTS

A significant group  $\times$  time interaction effect of brain intrinsic activity was observed in the left calcarine in the DBT group. Specifically, the DBT group exhibited a significant decrease in regional homogeneity (ReHo) in the left calcarine after treatment ( $p < 0.05$ ). For main effect in DBT group between pre- and post-treatment, the right anterior cingulate demonstrated a significant decrease in amplitude of low-frequency fluctuations (ALFF), while bilateral middle cingulate showed a significant increase in ALFF and ReHo after treatment ( $p < 0.05$ ). A significant increase in FC between the right anterior cingulate and bilateral postcentral was then observed after DBT treatment ( $p < 0.05$ ). The SSGT group exhibited a significant increase in FC between the middle cingulate and bilateral calcarine after treatment ( $p < 0.05$ ). Spearman correlation revealed a significant negative correlation between ReHo in the middle cingulate and NSSI frequency in the six months preceding DBT treatment ( $p < 0.01$ ), and a positive correlation between NSSI frequency change in the month before and after DBT treatment and FC between the right anterior cingulate and bilateral postcentral ( $p < 0.05$ ).

### CONCLUSION

Our findings suggest that DBT may induce significant changes in spontaneous brain activity in limbic and parieto-occipital regions among NSSI patients, with these changes significantly correlating with NSSI frequency. This study provides supporting evidence for the neural mechanisms underlying the efficacy of DBT in treating NSSI patients.

## The Characteristics of Gut Microbiota in Non-suicidal Self-Injury Patients and the Role of Dialectical Behavior Therapy

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### INTRODUCTION

Non-suicidal self-injury (NSSI) is common in psychiatric disorders for which Dialectical Behavior Therapy (DBT) is an effective treatment, however, its pathogenesis and mechanism of action are still not fully understood. Growing evidence supports that the gut microbiota influences central nervous system function and behavior through the microbiota-gut-brain axis.

### METHODS

Microbial 16S rRNA analysis was performed on stool samples of 84 NSSI patients, 75 psychiatric patients, 81 healthy controls, and 25 NSSI patients after three months of DBT treatment from 4 hospitals in China. Microbial analysis including examining  $\alpha$  and  $\beta$  diversity, correlation analysis of bacterial abundance.

### RESULTS

NSSI and DBT led to significant changes in the gut microbiota, and there were significant differences in the composition of gut microbiota between the NSSI group, the disease group, and the healthy group ( $P=0.003$ ). Compared with the HC group, the NSSI group had a significant decrease in firmicutes at the phylum level, a significant increase in bacteroides, a significant decrease in romboutsia, clotridium\_sensu\_stricto\_1 and fusicatenibacter at the genus level, Compared with NSSI patients before 13 weeks of DBT treatment, there is no significant difference in the composition of flora between groups at the phylum level, the composition of gut microbiota after DBT was significantly reduced at the genus level of faecalibacterium and significantly increased of romboutsia.

### CONCLUSION

These findings suggest that gut microbes influence function and behavior, and can be further applied to assess the pathogenesis of NSSI and the biological mechanisms underlying the onset of DBT.

## The Study on the Effect of Dialectical Behavior Therapy on Non-suicidal Self-Injury Behavior and the Change of DNA Methylation of Whole Gene

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### OBJECTIVE

The purpose of this study is to explore the effect of dialectical behavior therapy skills training (DBT-ST) on patients with Non-Suicidal Self-Injury (NSSI) behaviors and the change of DNA methylation of the whole gene.

### METHODS

The mental patients with NSSI behavior (NSSI group) were recruited from 9 hospitals in China, and 10 healthy subjects were recruited from the society as the control group (HC group) The NSSI group were randomized to the DBT-ST group or the social support group therapy group. The demographic data and clinical data before and after treatment were collected. At the same time, 5ml of peripheral venous blood was collected and DNA was extracted.

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## RESULTS

(1) There is no significant difference between HC group and NSSI group in demographic data such as sex, registered residence and education; (2) After DBT-ST treatment, the scores of self-injury thoughts, self-injury behaviors, suicidal thoughts and suicidal behaviors in DBT-ST group were significantly lower than those in baseline; (3) After filtering, the probes were used for subsequent differential methylation analysis.

## CONCLUSION

(1) The level of DNA methylation is related to the behavior of NSSI, and the overall methylation level of patients with NSSI decreases; (2) The effect of DBT-ST on NSSI behavior is significantly better than that of the control group. After DBT-ST treatment, the DNA methylation level changed significantly.

Keywords: non-suicidal self-injury; Dialectical behavior therapy; DNA methylation

## How Do Accessible Interventions Help People: The Behavioural and Cognitive Mechanisms

Poor mental health has been a global challenge, and implementing accessible interventions may be one of the solutions. In this symposium, we used rigorous experimental designs to understand the mechanism of accessible interventions for improving people's mental health.

This symposium presents four studies, using either lab-based experiments or randomised control trials, that investigate the cognitive and behavioural mechanisms of four low-cost, accessible interventions for reducing mood disturbance, depression, and anxiety among diverse participants from China and the UK. The interventions include mindful walking, mindfulness meditation, mindfulness-based cognitive therapy, and self-compassion writing therapy.

Jingni Ma explored the mechanism of outdoor mindful walking interventions (in nature or urban walking environments) for mood improvement during the lockdown of the COVID-19 pandemic in the UK. Results from university students with sleep difficulties highlighted that all participants benefited from mindful walking intervention indicated by increased trait mindfulness, sleep quality and decreased mood disturbance. Besides, sleep quality is the mechanism of mindful walking for mood improvement.

Dongfang Zhao and her colleagues explore if a 21-day mindfulness meditation training can reduce anxiety in Chinese undergraduates. Their findings suggested that mindfulness meditation reduced participants' trait anxiety and mind wandering. Further analysis demonstrated that in the control group (no meditation), baseline trait anxiety predicted mind wandering after 21 days. However, this relationship was not observed in the mindfulness meditation group, which suggested mindfulness meditation could buffer the negative effect of trait anxiety on mind wandering.

Bin Jiang and Wenjing Zhou tailored 8-week mindfulness-based cognitive therapy (MCBT) to a 4-week MCBT course and tested the effectiveness of this short MCBT course in depressed Chinese university students. They delivered this MCBT course via face-to-face or self-guided format and followed participants for up to four months. The findings supported improved mindfulness and decreased depressive mood and ruminative thoughts in both formats. However, compared to self-guided MCBT, the benefits of face-to-face MCBT lasted longer.

Mengya Zhao and her colleagues compared the efficacy of two online writing interventions (i.e., expressive writing and self-compassion writing) among adults suffering from depression and anxiety in the UK. They conducted an RCT study with follow-up for 3 months and aimed to explore the effect of writing interventions on rumination, sleep, emotion regulation, self-compassion, depression and anxiety. They also provided participants' feedback on online writing interventions.

The symposium unpacks several cognitive and behavioural mechanisms of mindfulness-based and compassion-focused interventions. The symposium provides evidence for the effectiveness of accessible interventions (e.g., mindful walking, meditation, self-guided MCBT, and online writing) on mood improvements. Also, the symposium will encourage discussion and reflection on how to increase the accessibility of third-wave therapies.

## Effectiveness of Mindful Walking Intervention in Nature on Sleep Quality and Mood Disturbance Among University Student During Covid-19: A Randomised Control Study

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### OBJECTIVE

The aim of this project was to conduct a randomised control study to examine whether outdoor mindful walking in nature could effectively improve university students' sleep quality, mood disturbance, and mindfulness level during the lockdown of the COVID-19

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pandemic in the U.K.

## METHODS

Participants were measured at T0 (pre-study baseline), T1 (pre-intervention), T2 (post-intervention), and T3 (follow-up). A total of 104 participants (female = 94) who were experiencing sleep difficulties were randomly allocated to either an experimental (i.e. nature) or control (i.e. urban) walking environment. Participants in each walking condition independently undertook a daily 35-minute walk for a week (7 days). Subjective sleep quality, total mood disturbance, mindfulness, and degree of nature, and participants' perspectives and suggestions about the intervention, were collected.

## RESULTS

Findings suggest that both groups exhibited significant improvements on participant's trait mindfulness, sleep quality and mood after the intervention. However, mindful walking in nature did not bring additional mental health benefits to participants than to those who walked in urban environment. Participants reflected their perspectives about the intervention, which will assist with further intervention development.

## CONCLUSIONS

Findings contribute to the evidence base for the effectiveness of outdoor mindful walking interventions on mental health. Especially these findings add new knowledge of how mindful walking outdoors reduces university students' mood disturbances and improves their sleep quality and mindfulness level during the pandemic.

Keywords: Mindful Walking Intervention, Nature, Sleep Quality, RCT, COVID-19, University Students

## Effects of Different Forms of Mindfulness Cognitive Training on Depression in College Students: A Trial in China

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Mindfulness-based cognitive therapy (MBCT) has been shown to have a good regulating effect on depression. In order to improve the easy-availability of MBCT and extensively cover the population suffering from depression, it is necessary to explore more convenient and accessible forms of mindfulness training from multiple perspectives such as length of time and form of development. The study aimed to explore the effects of two different four-week mindfulness courses (fwMC) which refers to MBCT on depressed college students in China were discussed and compared with depressed college students without intervention, so as to provide new ideas or methods for developing new easy-to-operate mindfulness-based cognitive therapy intervention methods. A 3(group: face-to-face group(FFG), self-help group(SHG) and non-training group(NRG)) by 5 (time: pre-, middle-, post-, 60-day follow-up, and 120-day follow-up) mixed design was used in this study. 90 participants were randomly assigned equally to the FFG (which take a 2.5-hour weekly offline course for 4 weeks and completed about 40 minutes of mindfulness exercises and other assignments each day) and the SHG (they were the same as the face-to-face group except that they received the same text and audio content as the offline course online for self-training) as well as the NRG (continued their daily lives as usual). All groups were followed up at 60 days and 120 days after the training via online questionnaires. Repeated-measures analyses of variance were conducted using pre-, middle-, post-training (all participants, N=90), and follow-up (N= 70) data. The result found that Compared to the NRG, the FFG and SHG showed improvements in depressive mood and ruminative thoughts, as well as the mindfulness across the subsequent four assessments, and it has good stability. Moreover, FFG was also significantly different from SHG, which means that face-to-face training is more consistent than self-guided training. So preliminarily believe that both face-to-face and self-help fwMC can effectively improve the level of mindfulness, depressive mood and ruminative thoughts of college students with depressive symptoms. The effects of face-to-face fwMC lasted for at least 3 months, while the effects of self-

help fwMC were less sustained. However, the results of self-help fwMC revealed that this training method has certain economic benefits, which provides a new idea for the development of mindful practice, indicating that this type of training is worth further exploration in China.

Keywords: Depression; Face-to-face; Mindfulness-based cognitive therapy (MBCT); Ruminantion; Self-help

## The Role of Mindfulness in the Relationship Between Trait Anxiety and Mind Wandering: A Cross-Lagged Study

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### INTRODUCTION

Mindfulness, one form of meditation intervention, has been shown to play an indispensable role in improving attention and regulate emotion. Attentional control theory (ACT) proposed a new explanation for the relationship between anxiety and attention. ACT put forward that anxiety will interfere with top-down information processing, transforming the processing from goal-oriented to stimulus-oriented. In other words, anxiety will make individuals more susceptible to internal and external stimuli and thus generate distractions. Mindfulness can improve anxiety and mind wandering, however, the influence mode of mindfulness on the relationship between anxiety and mind wandering is not clear yet. In this paper, we examine whether short-term mindfulness meditation can change the patten relationship between mind wandering and anxiety.

### METHODS

Forty one Chinese undergraduates were randomly assigned to short-term mindfulness meditation group (n=20) or a control group (n=21). Mind wandering and anxiety were assessed by the Mind Wandering Frequency Questionnaire (MWFQ) and State-Trait Anxiety Inventory (STAI) respectively. Repeated measures ANOVA and cross-lagged regression analysis were used to investigate the changes of mind wandering and anxiety during 21-day meditation, as well as the causal relationship between the two variables after mindfulness meditation training.

### RESULTS

As predicted, repeated measures ANOVA showed that compared with the control group, mind wandering and trait anxiety decreased after 21-day mindfulness meditation training. Contrary to predictions the score of state anxiety creeps up instead of reducing, which showed a reverse trend in MMI group. The level of state anxiety was not significantly different between the two groups after application of the program; (2) Cross-lagged regression analysis based on mind wandering and trait anxiety showed that in the control group, trait anxiety at Time 1 can predict mind wandering at Time 2,  $\beta=0.274$ . On the contrary, mind wandering can not predict trait anxiety. However, there was not cross-lagged effect in mindfulness meditation group.

### CONCLUSIONS

Our results suggested that emotion-based attention-protecting mechanism may be attributed to short-term mindfulness meditation. This discovery supports the Attention Control Theory (ACT) and complements the Mindfulness Coping Model.

## The Effectiveness of Online Writing Interventions Among Adults: A Randomised Control Study

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Writing, i.e., writing about a negative event, has been revealed as an effective way to improve mental health by focusing on emotional expression and the narrative of the stressful event. Expressive writing (Pennebaker & Beall, 1986) is one of the techniques for writing participants' thoughts and feelings about a stressful event, which has been shown psychological benefits (Pennebaker, 2004). With the pitfalls of writing techniques highlighted, such as rumination on negative events when exploring their feelings and thoughts, other writing techniques were developed, such as guided narrative writing, processing the events or emotion with specific instructions to construct participants' narrative around the cause of the events and positive growth, and self-compassion writing, processing the event from different perspectives related to self-compassion, such as being kind towards oneself and using a balanced way to process the emotion. Both writing techniques have been proven their effects on improving mental health (Urken & LeCroy, 2021; Zang et al., 2011). However, limited research compared the effectiveness of different writing techniques and explored their cognitive and behavioural mechanisms. This randomised control study aims to explore the effectiveness of three online writing interventions, i.e., expressive writing, guided narrative writing and self-compassion writing, compared to a control group, writing their daily activities. Depression, anxiety, sleep quality (i.e., insomnia symptoms), rumination and reflection, and emotion regulation (i.e., difficulty in emotion clarification and difficulty in awareness) were assessed, and 200 participants (50 participants per group) were invited to answer the surveys before and after writing, at 1 month and 3 months. More than 70% of participants finished the whole three-day writing sessions (36 for expressive writing, 39 for guided narrative writing, 36 for self-compassion writing and 44 for daily activity writing). We ran 4\*4 mixed ANOVA to explore the main effect of different writing techniques and time (pre-, post-intervention, 1 month and three months) on mental health (i.e., depression, anxiety). Unfortunately, we did not find any group effects, and only time effect of anxiety was significant. This preliminary result suggested that writing techniques may be more beneficial for individuals suffering from anxiety but not depressive symptoms. Also, different writing techniques did not show different effects in this analysis. We would further run other regression analyses and modelling to unpack the potential moderation effects and understand the effect of writing techniques among adults with certain traits. We will provide a discussion about the effectiveness of different writing techniques.

Keywords. Expressive Writing; Guided Narrative Writing; Self-Compassion Writing; RCT; Online Intervention

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ISRCTN Registry link: <https://www.isrctn.com/ISRCTN12914732>

## Recent Developments in the Psychopathology of Disgust

Considerable research suggests that the emotion of disgust may play a distinct role in the etiology and maintenance of various forms of psychopathology, especially anxiety and related disorders. Evolutionary accounts suggest a disease avoidance mechanism where experiencing disgust functions to protect against disease. However, this view has only been useful for explaining the role of disgust in some disorders. In recent years, significant progress has been made in better understanding the nature and function of disgust in the etiology, maintenance, and treatment of various disorders. In this symposium, new approaches to better understanding the function of disgust in the context of psychopathology are presented. In the first paper, Sarah Jessup and Bunmi Olatunji investigate disgust-relevant processes as an endophenotype for obsessive compulsive disorder (OCD). The findings show that while disgust proneness and disgust conditioning abnormalities may uniquely characterize OCD, they may not necessarily function as endophenotypes for OCD. The second presentation by Peter J. de Jong and Paula von Spreckelsen presents new data on the potential impact of disgust on memory retrieval as a transdiagnostic mechanism that might help understand the role of disgust in the persistence of psychopathology. Among other findings, they show that a disgust-based urge to avert from body-related autobiographical memories may counteract the correction of negative body related self-schemata, thereby contributing to the persistence of body image concerns and associated psychopathology (i.e., eating disorders). The third presentation, by Lara Lakhsassi, Charmaine Borg, and Peter J. de Jong broadens the scope in examining the extent to which feelings of disgust inhibits sexual arousal, in turn exacerbating pain. This is a neglected, but important area of research given that genito-pelvic pain/penetration disorder (GPPPD) affects 14-34% of women. This presentation will address how induced subjective sexual arousal might reduce pain in the absence of disgust. The experience of disgust is also commonly observed among those experiencing post-traumatic stress disorder (PTSD) due to sexual assault. Accordingly, the final paper of this symposium presented by Iris Engelhard reports the results of an experiment examining the effects of a dual-task intervention (e.g., making horizontal eye-movements) on the experience of disgust while recollecting a trauma memory as this may have important implications for the treatment of PTSD. The symposium concludes with a general discussion of future research directions on the psychopathology of disgust.

## Preliminary Examination of Disgust Proneness and Disgust Learning as an OCD Endophenotype

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A growing body of research has implicated disgust proneness in the etiology of obsessive-compulsive disorder (OCD). Recent research also suggests that OCD may be uniquely characterized by disgust conditioning abnormalities that may reflect heightened disgust responding to the CS+ and/or a failure to extinguished learned disgust. However, a framework for understanding the nature of disgust-relevant processes in OCD remains unclear. One hypothesis is that disgust-relevant processes may function as endophenotypes (intermediate phenotypes) or objective, heritable, quantitative traits that confer genetic risk for OCD. Accordingly, an endophenotype model may inform etiological understanding of OCD. In the present study, 30 participants with OCD, 27 first-degree relatives, and 25 healthy controls completed measures of disgust proneness. They also completed a Pavlovian conditioning procedure in which one neutral food item (conditioned stimulus; CS+) was followed by disgusting videos of individuals vomiting (unconditioned stimulus; US) and another neutral food item (CS-) was not reinforced with the disgusting video. Following two blocks of this acquisition phase, there was an extinction phase in which both CSs were presented unreinforced.

The findings showed that although those with OCD reported higher levels of disgust proneness than their first-degree relatives and healthy controls ( $p$ 's < .05), first degree relatives and controls did not significantly differ from each other ( $p$  > .05). A 2 (CS: CS+, CS-) x 4 (Phase: Habituation, Acquisition 1, Acquisition 2, Extinction) x 3 (Group: OCD, Relative, Control) mixed-effects ANOVA was then conducted



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to examine group differences in disgust ratings during the conditioning paradigm. A significant quadratic CS X phase interaction [ $p < .01$ ] and a marginally significant quadratic group X phase interaction [ $p = .06$ ] was observed. However, the predicted quadratic CS x phase X group interaction was not significant [ $p = .56$ ]. Examination of the quadratic CS X phase interaction showed that although there were no significant differences in disgust ratings of the CS+ and CS- at habituation and extinction ( $ps > .10$ ), participants rated the CS+ as significant more disgusting than the CS- at the first ( $p = .013$ ) and second ( $p = .008$ ) blocks of acquisition. Examination of the quadratic group X phase interaction revealed no significant group differences in disgust ratings of the CS at habituation ( $p = .38$ ) or extinction ( $p = .105$ ). However, significant group differences were observed at the first ( $p = .004$ ) and second ( $p = .024$ ) blocks of acquisition such that the OCD group reported significantly higher disgust ratings of the CS than relatives ( $p = .002$ ) and controls ( $p = .015$ ) at acquisition block 1. However, relatives and controls not significantly differ in disgust ratings of the CS at acquisition block 1 ( $p = .48$ ). The OCD group also reported significantly higher disgust ratings of the CS than relatives ( $p = .008$ ) and marginally higher disgust ratings of the CS than controls ( $p = .08$ ) at acquisition block 2. However, relatives and controls not significantly differ in disgust ratings of the CS at acquisition block 2 ( $p = .35$ ). These findings suggest that while disgust proneness and disgust conditioning abnormalities may characterize OCD, they may not necessarily function as affective endophenotypes for OCD.

## **Disgust-Induced Avoidant Processing of Autobiographical Memories as a Transdiagnostic Mechanism in the Persistence of Psychopathology**

Peter de Jong\*, Paula von Spreckelsen

*University of Groningen, Netherlands*

There is accumulating evidence that (self)disgust is somehow involved in various types of mental disorders including depression, PTSD, and eating disorders. In this presentation we focus on the potential impact of disgust on memory retrieval as a transdiagnostic mechanism that might help understand the role of disgust in the persistence of psychopathology. As a first step, we examined the role of disgust in memory retrieval within the context of eating disorder symptoms. In two subsequent experimental studies we asked women with high and low levels of habitual body-directed self-disgust to recall autobiographical memories in response to abstract (study 1) and concrete (study 2) body-related cue words in an Autobiographical Memory Test (AMT) to test if (i) autobiographical memory retrieval is biased towards disgust-related experiences, and (ii) disgust promotes the avoidance of specific autobiographical memories by (a) strategically preventing access to them, and/or by (b) reactively aborting the processing of those memories (disgust-induced escape). Both studies provided consistent evidence for a bias towards disgust-related memories of the own body in women with a negative body image. Study 1 provided no evidence for disgust-induced strategic avoidant retrieval of body-related memories. Yet, study 2 showed evidence for disgust-induced escape from body-related memories (reactive avoidance). The disgust-based urge to avert from body-related autobiographical memories might counteract the correction of negative body related self-schemata, thereby contributing to the persistence of body image concerns and associated psychopathology. The current findings are consistent with the view that disgust-induced avoidant memory processing may help understand the refractoriness of disgust-relevant psychopathologies and point to the necessity of therapeutic strategies to address disgust-induced avoidance.

## **Disgust: A Sneaky Culprit in Pain-Related Sexual Dysfunction in Women?**

Lara Lakhsassi\*, Charmaine Borg, Peter de Jong

*University of Groningen, Netherlands*

Genito-pelvic pain/penetration disorder (GPPPD), affecting 14-34% of women, not only undermines sexual functioning, but also influences relationship satisfaction and general quality of life. Current models propose that inhibited sexual arousal is a key component

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in the maintenance of sexual pain. In the last decade, however, more research has been pointing to disgust as another key culprit relating to sexual dysfunction. Specifically, feelings of disgust may inhibit sexual arousal, in turn exacerbating pain. The opposite is also true, provided that feelings of sexual arousal are more prominent than those of disgust. Conversely, the evidence suggests that enhancing sexual arousal can reduce pain.

To test these proposed relationships, Study 1 (N = 151) aimed to assess whether inducing subjective sexual arousal might reduce pain in women. Participants were randomly allocated to one of four conditions (sex, general arousal, distraction, and neutral) and were asked to view a given film (porn, parkour, train ride with counting task, train ride with no counting task, respectively) while participating in a cold pressor test. The design aimed to establish whether sexual arousal may have a stronger analgesic effect than mere distraction or non-sexual arousal, as measured by ratings of pain intensity on a visual analog scale. The results showed no differences between conditions; one testable explanation for the failure of the sex condition in reducing pain is that our sex stimulus may have inadvertently elicited disgust (as commonly occurs), thereby potentially counteracting the pain-killing effects of sexual arousal on pain.

Study 2 (N = 174) followed up on this hypothesis by replicating the conditions with three conditions (sex and neutral with the same films, and disgust with a vomiting film) and confirmed that the sex film in Study 1 had indeed elicited levels of disgust comparable to those of sexual arousal, thereby hindering our manipulation. A moderate negative correlation between sexual arousal and disgust further affirmed the theory that these two emotions inhibit one another. No analgesic effects were found in this study either.

Study 3 (N = 174) will replicate and expand on the two aforementioned studies by testing three conditions (original sex movie, original neutral movie, and a newly-piloted low-disgust, female-friendly sex film). We aim to assess whether induced subjective sexual arousal might reduce pain in the absence of disgust. If our predictions are correct, this would imply that reducing feelings of disgust during sex is a critical target for treatment of GPPPD.

## **Self-Disgust and Sexual Functioning: A Scenario-Based Study Testing the Ability of Sex-Related Experiences To Elicit Self-Directed Disgust**

Berber Brouwer, [Charmaine Borg\\*](#), Peter de Jong

*University of Groningen, Netherlands*

Increasing evidence indicates that disgust might compromise sexual functioning and can contribute to sexual problems. Although the stimuli and conditions that elicit disgust vary greatly across individuals, they cluster in three categories of disgust elicitors: Stimuli that are associated with an increased risk of the transmission of infectious diseases (pathogen disgust), stimuli that signal poor mating quality and may jeopardize reproductive success (sexual disgust), and behaviors that violate social norms (moral disgust). It has been argued that each of these categories of disgust may interfere with sexual responses. Thus far, research on the role of disgust in sexual contexts focused on external stimuli (e.g., ejaculate or vaginal fluids). Yet, recently it has been proposed that disgust can also become directed to features of the self. Such self-directed disgust may also apply to sexual contexts and contribute to sexual problems. As a first step, to explore the relevance of self-disgust in sexual functioning, we tested if indeed particular sexual experiences have the ability to elicit self-disgust. Using a within subject design, participants (N=124; all women) imagined themselves as well as others experiencing a series of sex-related scenarios, each relevant for one of the three categories of disgust, and subsequently rated their self-disgust. For all types of disgust, the scenarios evoked self-disgust, and the “self-perspective” elicited significantly more self-disgust than the “other perspective”. These findings support theoretical models pointing to the relevance of taking self-disgust into consideration as a factor that may compromise sexual functioning and sexual psychopathologies. Data from an indirect replication of this study including men too as participants will be also discussed.

## **Reducing Disgust Related to an Unwanted Kiss**

Iris Engelhard\*

*Utrecht University, Netherlands*

Feelings of disgust and dirtiness are common after sexual assault. Such feelings may contribute to the persistence of post-traumatic stress and are typically not reduced by exposure-based treatments. In EMDR therapy, patients recall a traumatic memory while making voluntary lateral eye movements. Lab studies have shown that this dual-task approach reduces vividness and the emotional intensity of emotional memories, presumably because eye movements (or other distracting tasks) limit working memory resources needed for memory retrieval. The aim of this laboratory experiment was to examine whether this intervention decreases feelings of dirtiness and disgust aroused by an imagined forced kiss. In a within-subjects design, participants (N = 60 female students) listened to two audiotapes describing a non-consensual kiss and imagined this happening to them. Then they recalled the memory of each situation with or without simultaneously making voluntary lateral eye movements (the order was counterbalanced). Before and after each intervention, they rated their feelings of dirtiness, disgust, vividness, and emotionality associated with the memory. Recalling the memory while making eye movements, compared to only recalling the memory, reduced feelings of dirtiness, vividness, and emotionality associated with the memory. It only reduced feelings of disgust among participants who had no previous non-consensual sexual experience. The findings will be discussed with respect to theoretical and potential clinical implications.

## Advances in the Treatment of Trauma: From Mobile Apps to Integrated Interventions

Trauma-related disorders are severe and debilitating disorders that affect many individuals who have experienced traumatic events. Despite the availability of effective evidence-based treatments, between 30-60% of individuals with Post-Traumatic Stress Disorder (PTSD) fail to experience reduction in symptoms, suggesting the need for further research on novel approaches that will optimise treatment outcomes. In particular, there is limited evidence on the optimal treatment approaches for individuals with comorbidities or those experiencing PTSD following prolonged and multiple traumas, often referred to as complex PTSD, who may present with additional symptom features of emotional dysregulation, disturbances in self-concept and in interpersonal functioning, as well as unique challenges in accessing effective treatments. This symposium will present new and innovative approaches to treating trauma, including the use of mobile apps, compassion-focused therapy, and phase-based interventions.

In the first talk, Doron and colleagues will present findings from a study examining the real-world data of the OCD.app - Anxiety, Mood & Sleep app. The study will explore whether cognitive training through this app can significantly reduce symptoms of PTSD in individuals with anxiety disorders. The second talk (Blackie et al.), will provide insights into the challenges faced by survivors of complex trauma in accessing appropriate treatment. The presentation will discuss the results of a qualitative study examining the experiences of individuals seeking treatment for complex trauma and the barriers they face in obtaining care. The third talk (Gnatt et al.) will present findings from a feasibility study exploring the integration of compassion-focused therapy into the treatment of individuals with co-morbid trauma and disordered eating. The initial results will demonstrate that this approach is effective in reducing symptoms and improving overall quality of life. Finally, in the fourth talk (DeBoer et al.), the findings of a naturalistic treatment outcome study of a phase-based intervention for women experiencing complex trauma will be presented. The intervention integrates internal family systems approaches and aims to address the unique needs of women who have experienced trauma. The findings support the potential utility of integrating internal family system approaches within phase-based treatments to increase engagement in treatment and reduce symptoms and associated distress. This symposium will provide a comprehensive overview of the latest advances in the treatment of trauma, from mobile apps to integrated interventions, and will be of interest to professionals and researchers in the fields of psychology, psychiatry, and trauma-focused care.

### Can Brief Daily Cognitive Training Using a Mobile App Be Associated With Significant Clinical Improvement in PTSD Symptoms? Examining Real World Data From “OCD.app - Anxiety, Mood & Sleep”

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#### BACKGROUND

Cognitive behavioral therapy (CBT) interventions such as cognitive processing therapy (CPT) and prolonged exposure (PE) have been shown to be effective in reducing PTSD symptoms. However, high cost, limited accessibility to trained professionals, stigma and the significant time commitment involved in such therapies may hinder individuals from seeking CBT treatments. Previous randomized controlled trials (RCTs) have supported the efficacy of brief, daily, mobile delivered game-like training exercises provided by the GGtude platform in reducing a wide variety of psychiatric symptoms. However, no studies have examined the associations between such training and PTSD symptoms. Further, interventions shown to be effective in RCTs may be less effective in real world settings.

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## METHODS

Real world data of “OCD.app - Anxiety, Mood & Sleep” users was collected from October 2020 to June 2022. Users’ PTSD symptoms (PCL), trait and state mood scores were evaluated at baseline (T0; n=1800), payment barrier (T1; n=302), and at the final level (T-final; n=156).

## RESULTS

A paired t-test analysis suggested medium-large effect-size reductions ( $t(301) = 10.489$ ,  $p < .001$ , Cohen’s  $d = 0.605$ , Cohen’s  $d$  95% CI: [0.481, 0.727]) in PCL scores between T0 ( $M = 43.98$ ,  $SD = 16.47$ ) and T1 ( $M = 35.69$ ,  $SD = 18.03$ ). Similarly, a paired t-test analysis indicated medium-large effect-size for reductions in PCL scores ( $t(155) = 9.211$ ,  $p < .001$ , Cohen’s  $d = 0.74$ , Cohen’s  $d$  95% CI: [0.561, 0.917]) between T0 ( $M = 42.83$ ,  $SD = 16.62$ ) and T-Final ( $M = 31.49$ ,  $SD = 19.35$ ). A total of 89 of these users (29.5 %) reached clinically significant improvement (PCL change  $>20$ ) with 55 users reaching such improvement by T1 and an additional 34 users by T-Final. The average number of days to reach a clinically significant change was 40.2 days ( $SD = 65.77$ ).

## CONCLUSIONS

Real world data supports the effectiveness of OCD.app for reducing PTSD symptoms.

## Investigating Complex Trauma Survivors’ Experience With Accessing Treatment

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Resulting from prolonged/repeated trauma usually involving an interpersonal component, Complex Post-Traumatic Stress Disorder (cPTSD) is a trauma response which goes beyond that of PTSD; which usually results from impersonal, single event traumas. In addition to the symptoms characteristic of PTSD (re-experiencing of the trauma, avoidance of reminders, and hypervigilance), those experiencing cPTSD may also experience deficits in interpersonal relatedness, emotional regulation, and their concept of self. Research investigating treatment approaches for cPTSD continues to develop following the first inclusion of the disorder as a clinical diagnosis separate to PTSD, within the latest revision of the International Classification of Disease (ICD-11). The current research presents the findings from a series of semi-structured interviews with 14 survivors of complex trauma, aiming to understand their experience with accessing psychological treatment. Results will provide suggestions on how to increase initial accessibility, in terms of both awareness of available interventions and comfort with engagement. The effectiveness of different therapeutic approaches, from the perspective of those with lived experience, will also be discussed. As will a summary of survivors’ comments on what aspects of psychological interventions they found most helpful, and how this differed throughout their therapeutic journey. Safety concerns and ethical considerations will also be discussed, from the perspective of those accessing treatment.

## A Pilot Intervention Integrating Compassion-Focused Therapy in the Treatment for Co-Morbid Trauma and Disordered Eating: A Feasibility Study

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Posttraumatic stress disorder has been reported to commonly co-occur alongside eating disorders, however they are seldom addressed together during treatment where recovery rates are low and relapse is high. Compassion-focused therapy was developed to address

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psychological vulnerabilities and potential maintaining factors such as shame, self-criticism, and emotion dysregulation, all common features of both eating disorders and posttraumatic stress disorder. The aim of this study was to evaluate the feasibility and acceptability and assess relevant psychological symptoms, of a compassion-focused intervention to treat comorbid eating disorders (EDs) and posttraumatic stress disorder (PTSD). Five women with comorbid EDs and PTSD participated in a 10-week group-based compassion-focused intervention targeting common difficulties experienced by this population (e.g., shame, self-criticism, emotion dysregulation). Outcomes were assessed using symptoms measures at baseline, six weeks and end of intervention, and participants provided qualitative feedback by structured interview. Participants had an average age of 33.4 years ( $SD = 15.61$ , range 22 – 60). All five participants completed the program, and qualitative data suggested that participants found the intervention to be helpful in building greater compassion, emotion regulation and reducing problematic shame and self-criticism. Symptom measures demonstrated that overall PTSD symptoms were reduced, and ED symptoms improved for three out of the five participants. Other measures indicated that individuals reported increased compassion, and decreased shame. The study provides evidence that group-based CFT is an acceptable and useful transdiagnostic treatment for people with comorbid EDs and PTSD. Further studies should focus on assessing long term symptom change, and investigate aspects of delivery that may enhance the experience and outcomes, such as increasing the duration.

## **Outcomes From a Pilot Study To Evaluate a Phase-Based Approach To Treat Women With Complex Trauma Histories**

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Despite few studies assessing the effectiveness of phase-based interventions for treating complex trauma symptoms, such approaches have been endorsed by experts as a first-line intervention. The aim of this study was to evaluate a phase-based intervention for women who have experienced complex trauma. The Women's Trauma Program comprised of 10 weeks of group psychoeducation, safety and stabilization, followed by 10 weeks of individual trauma memory processing informed by an Internal Family Systems therapy framework. In terms of assessing Phase 1 of the intervention, quantitative assessments of posttraumatic stress, depression, anxiety and stress (baseline and Week 10) are reported for 11 participants and six women also participated in qualitative interviews. Four women participated in qualitative interviews after completing Phase 2 of the program. Due to extenuating circumstances related to COVID-19 and administrative issues, quantitative outcomes were not available for Phase 2. Descriptive statistics and interpretive phenomenological analysis were used to analyze quantitative and qualitative data, respectively. Four of nine participants with probable PTSD at baseline were asymptomatic at the end of Phase 1. Regarding qualitative analysis, three superordinate themes were generated from the interview data post Phase 1 participation: (1) Empowerment: the experience in Phase 1, (2) Recovery: an ongoing process, and (3) "Hey, I'm human": connection through shared experience. After Phase 2, the following themes were generated from the data: (1) Complex trauma and recovery: "I've opened up a whole can of worms", (2) Treatment in partnership, (3) Phase 2: complementary and flexible and (4) Leading with the Self. Phase 1 of the program demonstrated promising findings in terms of symptom improvement. Furthermore, participants perceived it as an empowering experience with positive responses to the phase-based model as well as the use of Internal Family Systems therapy. The group modality enabled women to create connections that validated and normalized their experiences. Future studies of phase-based interventions with larger, well-powered samples are needed.

## Modifying Negative Mental Imagery of the Past and the Future: Processes and Outcomes Relevant to Anxiety Treatment

Negative mental imagery commonly occurs in a variety of anxiety disorders and can elicit strong emotional responses. The content of intrusive mental imagery can encompass past autobiographical experiences, but also anticipated future threats. Given that such intrusive negative imagery is thought to contribute to the maintenance of anxiety, several interventions have been implemented that explicitly target negative imagery (either as a stand-alone intervention or as an add-on to standard CBT exposure treatment). Examples include imagery rescripting and eye-movement interventions. Yet, less is known about how these interventions actually affect the content and phenomenology of aversive memories and future projections. It would be relevant to know more on imagery outcomes beyond traditional measures as imagery vividness and unpleasantness and to assess potential changes in memory content. Moreover, we could learn more on the working mechanisms by assessing the process of change during treatment. Finally, it would be important to evaluate the relevance of modifying negative imagery in terms of the willingness to approach fear-relevant situations and actual behavior. Therefore, in the current symposium, we will present new findings related to modifying negative mental imagery of the past and the future with imagery rescripting and eye-movement interventions to further enhance our understanding of the working mechanisms and the effects of these interventions. We will shed more light on the process of change and cover a variety of outcome measures with relevance for both theory and clinical practice. We will discuss implications for treating anxiety and suggest future directions for research. Lastly, we will also consider accessibility and feasibility for CBT (add-ons), for example, by evaluating internet-based imagery interventions. In the first presentation, Jonathan Huppert will present data from a randomized controlled trial in people with heightened trait anxiety in which they conducted an internet-based imagery rescripting intervention with aversive memories. They evaluated state emotion after each phase of rescripting and examined the effects in terms of a variety of memory outcomes. Second, Hannah Meckling will present on the effect of eye-movements on the phenomenological characteristics and the content of idiosyncratic aversive memories in an extended replication study. Specifically, it will be discussed if the content (i.e., the central and peripheral details included in the aversive memory) changes following eye-movement interventions. In the third presentation, Bart Endhoven will present preliminary baseline data from a randomized controlled trial in patients with social anxiety disorder and panic disorder. He will present on the phenomenological characteristics and the content of disorder specific memories and flashforwards of feared outcomes. Fourth, Marjolein Thunnissen will present an experimental study in which they targeted negative flashforward imagery of feared outcomes of speech situations with an online eye-movement intervention in people with heightened speech anxiety. The impact of attenuating such negative future imagery on anxiety and avoidance related to an actual speech via videoconferencing will be discussed. Finally, Elze Landkroon will present an experimental study in which they used future-oriented imagery rescripting of the feared outcomes of behavioral experiments in social anxiety and evaluated the willingness to conduct the behavioral experiment.

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## Online Imagery Rescripting for Trait Anxiety: Changes in Emotions and Memories

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Imagery rescripting (IR) is a therapeutic technique that has been found effective across psychopathologies. IR attempts to modify and

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update negative schema-based representations by recalling autobiographical memories of aversive past events. During IR, the patient is requested first to relive a negative past event and then to reimagine the event with an agent (self or other) intervening. The classic procedure involves an invitation of the current self into the imagery of the negative event. However, difficulties with the implementation of using the self (for instance, because of limited resources of the self) led to a suggestion to implement other as an agent. This study is a secondary evaluation of emotions during a transdiagnostic, internet-based intervention (IBI) of IR, and to compare two conditions of agent type. We examine both changes in the positive and negative details of the autobiographical memory, predicting that more positive and neutral details will be updated in the memory after IR. In addition, we predict that positive emotions will increase following rescripting, whereas negative emotions will decrease. We will examine the relation between increases in positive details of the memory with increases in positive emotion, and decreases in negative details with decrease in negative details. Exploratory analyses will examine whether these changes are different for self vs other conditions. 300 clinical analogs of high trait anxious individuals were randomly assigned to one of the two experimental conditions of agent type. In the 'self' condition, 141 participants rescripted their memory with the help of their current selves. In the 'other' condition 159 participants were asked to elicit an image of a close and trusted other who intervened in their painful memory. Clinical symptoms were measured in three time-points: pre-intervention, post-intervention, and one week follow-up. Autobiographic memories were collected only at pre and at follow-up. Emotional responses to memories were collected during IR. Positive state emotion increased during the IR, whereas negative state emotion decreased. Memories are currently being coded.

## **The Effects of Eye-Movements on the Characteristics and Content of Aversive Memories: An Extended Replication and Expansion**

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*University of Groningen, Netherlands*

In consensus with treatment guidelines, eye-movement desensitization and reprocessing (EMDR) is a recommended first or second step intervention for post-traumatic stress disorder (PTSD; Martin et al., 2021). A prominent explanation for the mechanisms underlying the efficacy of EMDR is the working memory account (WM; van den Hout & Engelhard, 2012). During EMDR, participants typically perform eye-movements while recalling an aversive memory. The WM-account holds that performing both tasks simultaneously requires limited working memory resources and that this affects the vividness and emotionality of the aversive memory (van den Hout & Engelhard, 2012). Indeed, experimental studies show decreased vividness and emotionality ratings after eye-movements compared to looking at a black screen (e.g., Houben et al., 2020). Yet, until now, few studies examined whether eye-movements may also affect the content of the aversive memory (i.e., the number of central and peripheral details included in the memory). It is known that memory is reconstructive (Conway & Pleydell-Pearce, 2000). It may thus be hypothesized that reduced emotionality leads to an increased rehearsal of the aversive memory, as there is less need to avoid it. Each time the memory is retrieved may provide the opportunity for change in the content of the memory (e.g., filling in the gaps based on knowledge, introducing new memory details).

We conducted two experiments, aiming to a) contribute to the extant literature by replicating the effect of eye movements on the perceived vividness and emotionality of the aversive memory in a between-participants design and b) exploring change in the number of central and peripheral details as well as characteristics of the memory (e.g., the visual perspective, valence, narrative coherence) after recall and eye-movements.

In experiment 1, 97 female undergraduate psychology students were randomly allocated to either the experimental condition (recall + eye-movement,  $n = 49$ ) or the control condition (recall + looking at a black screen,  $n = 48$ ). In both conditions, participants retrieved an unpleasant idiosyncratic memory while performing eye-movements (i.e., experimental condition) or looking at a black screen (i.e., control condition). Before and after the experimental task, each participant answered several questions about the memory's characteristics (including the vividness and emotionality) and provided detailed descriptions of the content of their memory. Two independent raters coded the content of these memories using a standardized coding manual developed for this study (based on Burke



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et al., 1992; Wessel et al., 2015, Larkina & Bauer, 2012).

The results suggested an eye-movement specific reduction for the vividness but not for the emotionality of the unpleasant memory. In both groups, the average number of central and peripheral details was slightly decreased. Yet, power issues may have precluded the extent to which were able to find small effect sizes. Therefore, in experiment 2, we conducted a preregistered, direct replication of experiment 1 in a larger sample (N = 251). The results and implications of both experiments will be presented and discussed.

## **Past and Future Oriented Threat Imagery, Two Sides of the Same Coin?**

**Bart Endhoven\***, Iris Engelhard

*Utrecht University, Netherlands*

### INTRODUCTION

Negative mental imagery is common across a range of psychological disorders including anxiety disorders. It can involve memories for past experiences (e.g. witnessing assault), and manifest as “flashbacks”, as in post-traumatic stress disorder. It can, however, also be related to anticipations of future threat, coined as “flashforwards”, for example as in panic disorder (e.g. seeing yourself having a heart attack). Previous research has shown that similar neural mechanisms are involved in past and future oriented imagery. The aim of this study is to examine whether future-oriented threat imagery shows distinct phenomenological characteristics in social anxiety disorder and panic disorder compared to threat imagery involving past events. A variety of phenomenological characteristics was assessed (e.g. imagery complexity, sensory modalities, imagery complexity, emotionality and controllability).

### METHODS

Patients with panic disorder or social anxiety disorder completed a video-taped interview about mental threat imagery and rated phenomenological characteristics related to past and future oriented mental imagery of threat.

### RESULTS

So far, forty patients have been tested and data collection is still ongoing. Results will be presented and discussed at the conference.

### CONCLUSION

Findings and potential implications for further research into working mechanism research as well as potential clinical implications will be discussed at the conference.

## **Targeting Negative Flashforward Imagery in Speech Anxiety With a Visuospatial Dual-Task: Impact on Anxiety and Avoidance**

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### INTRODUCTION

Speech anxiety is an intense, persistent social fear related to speaking or performing in public. It has been proposed that negative mental imagery plays an important role in the persistence of social fears. Experiencing vivid and distressing ‘flashforward’ images of a

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potential social catastrophe appears to be of relevance in speech anxiety. To clarify the role of these images in speech anxiety, the current experimental study tested if reducing the vividness and distressing properties of recurring negative flashforward images subsequently reduces anxiety and avoidance tendencies regarding a speech. Thereby, we used a visuospatial dual-task or eye-movement intervention to target negative imagery.

## METHOD

Participants were female undergraduates high in speech anxiety ( $N = 134$ ) who joined our study online. They were interviewed on their typical speech-related flashforward image of feared outcome and were then randomly assigned to a control condition or to the online eye-movement intervention to reduce image vividness and distress. In the control condition, participants received no imagery manipulation. All participants then performed an actual speech via videoconferencing. Primary outcomes were participants' self-reported anxiety and avoidance ratings in anticipation of and during the speech. As a secondary outcome, we used observer ratings of participants' anxiety during the speech.

## RESULTS

Participants reported moderate to high frequency and interference of their vivid and distressing flashforward images in daily life. The manipulation check showed that the eye-movement intervention had indeed resulted in reductions in vividness and distress, with a moderate to small imagery manipulation effect. However, when evaluating the effects of attenuated flashforwards on speech anxiety, we found no differences between conditions in anxiety and avoidance ratings before and during the speech. Similarly, observer-rated anxiety did not differ between conditions.

## DISCUSSION

Reducing negative flashforward imagery vividness and distress with an eye-movement intervention did not directly lead to less anxiety and avoidance tendencies related to a later speech. Thus, findings provided no support for a causal impact of experiencing highly vivid and distressing flashforward images on speech anxiety, and for using a short eye-movement intervention with these images to aid individuals in facing their fears. Future studies using more intensive or different imagery manipulations and replications in clinical samples are necessary to arrive at firmer conclusions on the relevance of these images in the maintenance and treatment of social fears.

## **Future-oriented Imagery Rescripting Facilitates Conducting Behavioral Experiments in Social Anxiety**

Elze Landkroon\*, Katharina Meyerbröker, Elske Salemink, Iris Engelhard

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## INTRODUCTION

Cognitive behavioral therapy is recommended as treatment for anxiety disorders, but some patients do not start with or benefit sufficiently from it. One explanation is that patients may experience image-based representations of feared future outcomes that can make it difficult for them to confront feared situations. Modifying these image-based representations could potentially increase patients' willingness to confront feared situations. Imagery rescripting is a psychological intervention that aims to modify image-based representations. This study investigated whether future-oriented imagery rescripting focused on feared social events increases the willingness to conduct a behavioral experiment.

## METHOD

Sixty healthy individuals were asked to formulate a behavioral experiment to test their negative beliefs about a social situation they feared. Participants were asked to complete rating scales regarding the behavioral experiment and were then randomly assigned to a

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control condition or to future-oriented imagery rescripting. Participants in the control condition had a break, while participants in the imagery rescripting condition were asked to imagine the feared outcome of the behavioral experiment and to change the scenario into a more desired direction. All participants were then asked to complete the ratings scales again, to conduct the behavioral experiment, and finally to complete the rating scales again.

## RESULTS

Before the behavioral experiment, the imagery rescripting condition, compared to the control condition, showed reduced anticipated probability and severity of the feared outcome, lower anxiety and helplessness levels, and increased willingness to conduct the behavioral experiment. Exploratory analyses revealed that from before the intervention phase to after the behavioral experiment, the expected probability of the negative outcome and helplessness decreased more in the imagery rescripting group than in the control group. This suggests that imagery rescripting had an additional effect on reducing the anticipated probability of the negative outcome and helplessness levels, above and beyond the efficacy of the behavioral experiment.

## DISCUSSION

Future-oriented imagery rescripting reduced the fearful anticipation of a behavioral experiment compared a control task. These findings suggest that imagery rescripting is not only effective to modulate distressing memories as earlier research demonstrated, but also to modulate future-oriented mental imagery. An important next step is to investigate in (sub)clinical samples whether future-oriented imagery rescripting enhances patients' willingness to expose themselves to fear-provoking situations in cognitive behavioral therapy.

## Reference

Landkroon, E., Meyerbröker, K., Salemink, E., & Engelhard, I. M. (2022). Future-oriented imagery rescripting facilitates conducting behavioral experiments in social anxiety. *Behaviour Research and Therapy*, 155, 104130. <https://doi.org/10.1016/j.brat.2022.104130>

## Adaptations of Cognitive Behavioural Therapy for Children With Anxiety Disorders

Anxiety disorders are the most prevalent mental disorder for children, which causes impairment in their daily life and increase the risk of developing other disorders. Cognitive behavioural therapy (CBT) is an effective treatment for children with anxiety disorders. Over the years, many programs have been developed for children and gained evidence for effectiveness in improving anxiety disorder symptoms. The CBT programs are adapted and modified to fit children and their families in different contexts and to increase accessibility. Each speaker in this symposium presents adaptations to CBT programs to effectively deliver the intervention to diverse children with anxiety disorder. The first presentation by Sho Okawa presents the cultural adaptation of Parent-led CBT to the Japanese population. The parent-led CBT is a brief CBT program that teaches parents CBT techniques to support their children with anxiety problems. The author reports a feasibility study of Parent-led CBT for Japanese parents and children with anxiety disorders. The second presentation by Fuzhen Xu presents the application of Parent-led CBT to Chinese parents with anxious children. The author and her research team made minor adaptations to make it suitable for Chinese populations and conducted a feasibility study with 27 Chinese children aged 8-12 and their parents. The third presentation by Gemma Halliday presents case examples of supporting parents in challenging circumstances to use digital parent-led CBT for children with anxiety problems identified through UK primary schools in a randomised-controlled trial. The presenter shares reflections on treatment success, what worked well and less well, and what we might consider when using this approach with parents navigating social care involvement, having their own mental health needs, or living with other challenges. The fourth presentation by Shin-ichi Ishikawa deals with a cultural adaptation for Japanese children based on reiterative approaches and reports a randomized controlled trial to examine the adapted CBT. The final paper of the symposium is presented by Deanna A Francis and Jennie L Hudson, who report on an adaptation of CBT for children and their parents who may struggle with reading-related skills. This presentation will provide an overview of the adapted therapist-delivered CBT program, the co-design process, and the modifications made to tailor the program.

## Parent-Led CBT for Japanese Children and Parents: A Feasibility Study and Cultural Adaptation

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### INTRODUCTION

Child anxiety disorder is a commonly reported disorder worldwide that causes daily life impairment. Cognitive behavioural therapy (CBT) is a first-line treatment for childhood anxiety. Growing evidence suggests that parent-led CBT is an effective treatment with a low burden on children with anxiety disorders (Thirlwall et al., 2013). The parent-led CBT is a brief CBT program that teaches parents CBT techniques to support their children with anxiety problems. Although parent-led CBT is an evident treatment for children in Western countries, whether the program can apply to Japanese children and parents are unknown. In this presentation, the presenter reports a feasibility study of parent-led CBT for Japanese parents and children with anxiety disorders and discusses possible cultural adaptation to the program.

### METHOD

In the feasibility study (Okawa et al., 2023), twelve children with anxiety disorders and their parents participated, and ten children (mean age = 10.1 years, SD = 1.6) and parents (mean age = 44.8 years, SD = 3.58) completed the program. Participants were assessed at pre-, post- and one-month follow-up for symptom changes. Acceptability of the program was assessed post-treatment. For children's symptom change, we utilised the following outcomes: the Clinical Severity Rating (CSR) of the Anxiety Disorders Interview Schedule

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for DSM-IV: Child and Parent versions, the Spence Children's Anxiety Scale – Child (SCAS-C), the Spence Children's Anxiety Scale – Parent (SCAS-P), and the Child Depression Inventory (CDI). We assessed parents' treatment satisfaction using the Client Satisfaction Questionnaire (CSQ-8). We also asked parents to answer the following five questions with scores ranging from 1 to 5 for acceptability of the program: (1) explanation comprehension; (2) required time; (3) degree of burden; (4) convenience; (5) possibility of continuation after the program. This trial was approved by the Institutional Review Board of Chiba University Hospital (reference number: G2019012).

## RESULT

40% of children were free from their primary diagnoses immediately post-treatment and 70% at the one-month follow-up. The effect size for change in disorder severity (CSR: pre to post hedge's  $g = -1.37$ , pre to follow-up hedge's  $g = -1.36$ ), a child reported anxiety symptoms (SCAS-C: pre to post hedge's  $g = -0.34$ , pre to follow-up hedge's  $g = -0.77$ ), and a child reported depression symptoms (CDI: pre to post hedge's  $g = -0.41$ , pre to follow-up hedge's  $g = -0.36$ ) were consistent with those found in Western trials (Thirlwall et al., 2013). However, parent-reported child anxiety symptoms (SCAS-P: pre to post hedge's  $g = -0.43$ , pre to follow-up hedge's  $g = -0.46$ ) were lower than those found in Western trials of parent-led CBT and a Japanese CBT program directly delivered to children with anxiety disorders (Ishikawa et al., 2019; Thirlwall et al., 2013). The participating parents showed high satisfaction with the program, with a mean total score of 25.4 (SD = 4.7) for the CSQ-8J. The mean scores for each acceptability measure were as follows: explanation comprehension (mean = 4.8, SD = .42), required time (mean = 4.6, SD = .7), degree of burden (mean = 4, SD = .94), convenience (mean = 3.7, SD = .95), and the possibility of continuation after the program (mean = 4.4, SD = .7).

## DISCUSSION

Despite the limitation of the small sample size, this study suggests that parent-led CBT is a satisfactory low-intensity program for Japanese children with anxiety disorder. Although the further examination is needed for the effectiveness of parent-led CBT, our results suggest that parent-led CBT may reduce child anxiety problems with lower costs and burdens compared to other CBT programs. However, there is room for improvement to make parent-led CBT more applicable to Japanese children and parents. Considering the two dropouts from the program and the small effect size on the parent-reported scale, the presenter proposes possible cultural adaptations to parent-led CBT for Japanese children and parents.

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Thirlwall, K. et al. (2013). Treatment of child anxiety disorders via guided parent-delivered cognitive-behavioural therapy: randomised controlled trial. *The British Journal of Psychiatry*, 203, 436-444.

## Application of Parent-Led CBT To Chinese Family With Anxious Children

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## INTRODUCTION

Anxiety disorders are the most common psychiatric disorder in children, with a prevalence in China (6.9%) (Leung et al. 2008) similar to the global average (6.5%) (Polanczyk et al. 2015). Only a minority of affected children receive appropriate professional help. A recent innovation to increase access to evidence-based psychological treatment for childhood anxiety disorders is a brief CBT approaches in

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which parents are instructed in putting CBT principles in their daily lives. This approach has been evaluated and found effective in the UK (Thirlwall et al., 2013), Australia (Lyneham et al., 2006) and the United States (Chavira et al., 2014). Its feasibility and availability among Chinese family remains unknown. Therefore, the adaptation of 'Overcoming your child's fears and worries' brief parent-led CBT (Creswell & Willets, 2007) was conducted on Chinese parents.

## METHOD

A sample of 651 father–mother dyads and their children completed the Spence Children Scale (SCAS-c/p) at T1 and T2 with a one-year interval. Sixty-two children whose anxiety score above established cut-offs on either child or parent report were invited to attend a diagnostic interview (ADIS-c/p). Of these 51 children met diagnostic criteria, and their parents were invited to take part in a qualitative interview. Six months after diagnostic interview, both children and parents were reassessed and 49 children continued to meet diagnostic criteria for an anxiety disorder. However, only 26 father–mother dyads (mean age of  $38.88 \pm 2.28$  for fathers and  $37.27 \pm 2.85$  for mothers) and their children (13 boys and 13 girls, mean age =  $9.06 \pm 1.06$ ) completed the entire intervention programme which involved three phases. Phase A involved four 30-minute WeChat classes once a week for parents to explain the basic knowledge of CBT for anxiety. Phase B involved four 1-hour face-to-face intervention interviews once a week to instruct parents in helping their children overcome anxiety in daily life. Phase C involved four 20-minute follow-up by phone once a week mainly to answer parents' questions and support them psychologically and technically. Post-evaluations were conducted three month and one year later after intervention completion.

## RESULTS

46% (12/26) and 77% (20/26) of children were free of their diagnoses three months and one year later after the intervention ended, respectively. Total scores of parent-report children's anxiety ( $d=0.35$ ,  $p=0.031$ ;  $d=0.43$ ,  $p=0.001$ ), and scores of separation anxiety ( $d=0.53$ ,  $p=0.007$ ;  $d=0.44$ ,  $p=0.006$ ), social phobia ( $d=0.58$ ,  $p=0.003$ ;  $d=0.62$ ,  $p=0.003$ ), panic/agoraphobia ( $d=0.54$ ,  $p=0.009$ ;  $d=0.57$ ,  $p=0.007$ ) in the two post-tests were significantly lower than those in the pre-test. Mothers themselves reported anxiety were significantly lower ( $d=0.37$ ,  $p=0.054$ ;  $d=0.56$ ,  $p=0.009$ ). Similarly, levels of parental psychological control also significantly decreased ( $d=0.38$ ,  $p=0.03$ ;  $d=0.36$ ,  $p=0.002$ ). Overall, the longer the interval, the better the intervention effect. In addition to the quantitative evaluation, children and parents also provided some feedback (e.g. mother: 'I have learned to understand my kid's emotion and to manage my own anxiety, not allowing it to pass on to my kid'; Child: 'I do not worry about my fears anymore because my parents can help me'). It could be found that with the guidance of CBT professionals, parents gradually internalize CBT knowledge and skills and could help anxious children scientifically and skillfully.

## DISCUSSION

Due to limitations of small sample size and lack of a control group, we should make cautious conclusions. This appears to be a promising approach to increase access to evidence based treatments for children in China, further work is needed to both systematically evaluate the approach and also to identify and address potential barriers to engagement among some families.

## **Empowering Parents in Challenging Circumstances to Access Digital Therapist-Supported Parent-Led CBT for Child Anxiety Problems**

Gemma Halliday\*

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### BACKGROUND

Anxiety problems have a particularly early age of onset and are common globally among children. CBT remains the only psychological intervention for child anxiety problems with a robust evidence base, but despite this, very few children with anxiety problems access CBT. Creative solutions are urgently needed to ensure that effective treatments can be delivered at scale to meet the needs of diverse

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populations. Brief parent-led CBT for child anxiety problems shows consistent evidence of effectiveness (Creswell, Chessell & Halliday 2022). Digital therapist-supported parent-led CBT interventions such as 'Online Support and Intervention for child anxiety' (OSI) are a promising technological development to increase engagement and widen access (HILL; GREEN). However, clinicians and parents/carers have understandable reservations about the usefulness and appropriateness of a brief digital intervention for families living with very challenging life circumstances. Sadly, these families are often the most disempowered and least likely to access and receive support for an anxious child.

## METHOD

I will draw on our clinical experience of working with families experiencing significant contextual challenges in UK early intervention research trials to share what we have learned works well and less well to empower parents and their system to benefit from digital therapist-supported parent-led CBT. I will discuss treatment outcomes, feedback from parents, and reflections from case examples including foster carers, families with social care support, separated parents, and parents living with anxiety or severe and enduring mental health difficulties.

## CONCLUSIONS

I will conclude by highlighting that with some flexibility and adaptation, it is possible to support clinicians and families to navigate significant challenges in ways that adhere to the treatment model's key principle of empowering parents. Wider benefits for some families are seen in increased help seeking and relationship building with school and services. Our work highlights that, whilst there should be careful consideration with each family about individual circumstances, there is no reason to withhold offering a brief digital intervention for child anxiety due to "complexity". Future research should formally evaluate what characterises families in these situations who do and don't benefit and what predicts treatment response.

## **A Culturally Adapted Cognitive Behavioral Therapy for Children With Anxiety in Japan: Application of a Bidirectional Cultural Adaptation**

Shin-ichi Ishikawa\*

*Doshisha University, Japan*

## BACKGROUND

Anxiety disorders are among the most prevalent psychological disorders in children and adolescents. Although prevalence surveys using diagnostic interviews have been scarce in Japan, the number of school-nonattendance recorded the highest in 2021. Moreover, half of those children showed high anxiety and related symptoms as their major maintenance factors. Therefore, it is an impeding issue to develop cognitive behavioral therapy (CBT) to treat a culturally specific expression of anxiety symptoms in Japan.

## OBJECTIVE

This study aimed to develop a CBT program through a bidirectional approach of cultural adaptation including both top-down and bottom-up ways and conduct a randomized controlled trial to examine its efficacy.

## METHODS

Development of CBT Program: The Japanese Anxiety Children/Adolescents Cognitive Behavior Therapy program (JACA-CBT; Ishikawa et al., 2019) has been developed through four phases: 1) Collecting components and developing a provisional version, 2) Refining and creating culturally adapted materials, 3) Developing the two versions for children and adolescents and arrangement of components, 4) Finalizing of the program component and materials (Ishikawa, 2022).

Participants: The participants comprised 51 children and adolescents aged 8–15 years who were diagnosed with anxiety disorders based

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on the diagnostic interview: 31 (60.78%) showed social anxiety disorder as their primary diagnoses, followed by specific phobia (n = 9; 17.64%) and generalized anxiety disorder (n = 7; 13.73%). Participants were randomly allocated to either the JACA-CBT (n = 26) or a wait-list control condition (WLC: n = 25).

## MEASURES

A blinded independent evaluation by the Anxiety Disorders Interview Schedule for DSM-IV (ADIS; Silverman & Albano, 1996) was administered as a primary outcome measure. For secondary outcomes, questionnaires for self-reported anxiety, depression, and cognitive errors as well as parent-reported anxiety were used.

## RESULTS

A significant difference was found between the treatment and WLC conditions at post-treatment assessment,  $\chi^2(1, N = 51) = 8.55, p < .01$ . Specifically, 50% in treatment condition were free from their primary diagnoses compared to 12% in WLC. Moreover, 66.67% of the participants no longer met their primary diagnoses after 6 months. While significant time effects were only found for self-reported anxiety and cognitive errors, significant interactions were obtained for self-reported depression and parent-reported anxiety,  $F(1, 47.60) = 5.95, p < .05$  and  $F(1, 47.53) = 8.24, p < .01$ . No major adverse events were observed.

## DISCUSSION

The JACA-CBT ameliorated primary anxiety diagnoses in children and adolescents in Japan. The remission ratio is comparable with that in the Cochrane review (49.4%; James et al., 2020). Therefore, the results provide support the efficacy of a bidirectional, culturally adapted CBT protocol. Because the therapeutic gains of the trial were observed in children with school-nonattendance, future research is warranted to examine its efficacy on school-nonattendance with anxiety symptoms.

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## Adapting Cognitive Behavioural Therapy for Children With Reading Difficulties

Deanna Francis, Jennie Hudson\*, [Melissa Aji](#)

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One in three children with reading difficulties experience co-occurring anxiety. While several literacy interventions exist to support students reading skills, there are no clinically available evidence-based anxiety interventions to support children struggling with reading-related skills and anxiety. This is an alarming clinical gap in the field that our research team is addressing. Available anxiety interventions also place high demands on reading and related skills for children and their parents. As a result, children with anxiety and reading-related difficulties miss out on effective treatment. To address this gap, we have adapted cognitive behavioural therapy (CBT) to be suitable for children and their parents who may struggle with reading-related skills. This presentation will provide an overview of the adapted



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therapist-delivered CBT program, the co-design process, and the modifications made to tailor the program. We will also present current plans for evaluation.

## Obsessive-Compulsive Disorder: Treatment Challenges, Technological Solutions: An Indian Experience

Obsessive Compulsive Disorder (OCD) is debilitating, and impacts quality of life and functioning, with nearly 40-60% of patients not responding optimally to pharmacological interventions. It is critical to focus on factors impacting outcomes, such as treatment adherence, cognitive inflexibility, intolerance to anxiety, family accommodation, and neurocognitive deficits.

Here we present four studies, from an Indian tertiary center with a specialist OCD clinic, focusing on variables impacting treatment outcomes, and varied and novel treatment approaches to address them.

Inhibitory learning-(IL)based exposure shows demonstrated effects on extinction in anxiety disorders, but not yet been examined in OCD. In the first presentation, Thampy et al present preliminary findings from the development and open-label trial of an IL-based exposure module for OCD, examining cognitive flexibility and intolerance to uncertainty as predictors of outcomes. In the second presentation, Poornima et al highlight the nature of family accommodation in late adolescents with OCD in the Indian setting, challenges in the assessment of family accommodation, and parental psychopathology and illness severity.

Neurocognitive deficits in OCD are well-documented, persistent, and impact treatment outcomes. Bhattacharya et al examine a novel integrated approach to cognitive training using smartphone-based techniques to improve illness-linked neurocognitive deficits in OCD, and functional and clinical outcomes. Preliminary findings show improvements in executive functions, socio-occupational functions, and a reduction in symptom severity. With a dearth of mental health professionals and an increasing need for psychological interventions for clinical conditions, the need for technology-based apps has increased. In the last presentation Sudhir and colleagues, describe the development and user trial of a mobile-based application for OCD based on CBT, designed to be a self-guided intervention. The study examined user experiences with respect to the app's content, ease of access, navigation, challenges in engagement, and features pertaining to therapeutic applications. The presentation describes challenges in testing the mobile application, with respect to user engagement, and utility in OCD.

## Inhibitory Learning-Based Exposure Response Prevention Therapy in Obsessive-Compulsive Disorder: A Preliminary Study

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*NIMHANS, Bangalore, India*

Exposure response prevention therapy (ERP) and pharmacology have been the treatment of choice for OCD. However, many patients fail to achieve clinically significant symptom relief from traditional exposure and response prevention (ERP) therapies for obsessive-compulsive disorder (OCD). This has led to re-examining interventions and augmentation strategies in providing interventions for OCD. Inhibitory learning-based exposure is well-documented in anxiety disorders, with demonstrated effects on extinction as a treatment goal. However, there is a need to examine its application in OCD. Optimizing inhibitory learning (IL) as the core mechanism of extinction can help achieve long-term outcomes in OCD. In this presentation, the preliminary findings of an open-label study that tested the efficacy of an inhibitory learning-based exposure module developed for OCD will be discussed. The study also examined cognitive flexibility and intolerance to uncertainty as psychological variables impacting learning treatment response.

### METHODS

A quasi-experimental study design with baseline, post-treatment, and follow-up assessments will be adopted. The sample consisted of (n=4) patients with a mean age of 28 years, with a diagnosis of OCD as per DMS 5, recruited from the outpatient department of a tertiary care hospital and assessed on YBOCS, Hamilton Depression Rating Scale(HAMD), Hamilton Anxiety Rating Scale(HAM-A), Clinical Global

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Impression Scale (CGI), Intolerance to Uncertainty Scale (IUS-12), Object Alternation Test (OAT), Stop Signal Task, Spatial Span Test and Acceptance and Action Questionnaire – II at baseline and post-intervention.

## RESULTS

The results indicate a change in YBOCS and CGI scores from baseline to post-intervention. The score on HAM-D and HAM-A has also changed from baseline to post-intervention. Further, detailed results and discussion will be presented, highlighting the role of cognitive flexibility and intolerance to uncertainty as psychological variables impacting learning treatment response. This study will add to the growing body of evidence indicating the application of IL in exposures and specifically in designing ERP in OCD, thereby reducing relapse and promoting extended benefits for ERP.

## Family Accommodation and Parental Psychopathology Is Pediatric OCD

**Dr. Poornima Chandrashekar\***, Dr Paulomi M. Sudhir, Dr. Preeti Jacob

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Obsessive-compulsive disorder (OCD) is one of the more common mental illnesses of children and adolescents, with prevalence of 1% to 3%. Its manifestations often lead to severe impairment and to conflict in the family. It is associated with significant impairments in the quality of life of the affected young people, with considerable conflicts within the family (Coluccia, Ferretti, Fagiolini, & Pozza, 2017; Walitza et al., 2011).

In the context of paediatric or juvenile onset OCD, family factors that have been frequently researched include family accommodation, family functioning, parenting variables, particularly parenting styles and practices. In addition to these variables, parental psychopathology is also likely to contribute to the process of parenting and family environment and dynamics.

Family accommodation is believed to reinforce OCD-related rituals and avoidance and conflicts with the primary goals of cognitive-behavioural therapy because it prevents the child from habituating to the anxiety that is experienced when he/she refrains from engaging in rituals and limits the child's opportunities to learn that feared consequences are not likely to occur (Francazio et al., 2016). Further accommodating to a child's symptoms diminish the aversive consequences of obsessive-compulsive behaviour (e.g., interference with preferred activities), reducing motivation for change (Storch et al., 2007).

Family accommodation has been examined extensively in the context of OCD, both paediatric and adult populations, in relation to factors such as parental stress, family functioning and burden and symptom severity (Baruah et al., 2018; A. V. Cherian, Pandian, Bada Math, Kandavel, & Janardhan Reddy, 2014; Shrinivasa et al., 2020). Studies indicate that family accommodation is higher in paediatric populations, than adults (Storch et al., 2007). However, it is not limited to OCD in paediatric population. Family accommodation is also related to anxiety severity (Lebowitz et al., 2013; Shimshoni, Shrinivasa, Cherian, & Lebowitz, 2019). Lebowitz, Scharfstein, & Jones, (2014), also report that mothers of children and anxiety disorders engage in significant family accommodation. Findings from these studies indicate that family accommodation in addition to being related to symptom severity, is influenced by other factors as well. Not all family members engage in family accommodation to the same extent, or in the same manner, and this may vary with respect to the relationship with the patient, as well as individual factors such as personality, beliefs, and other factors such as psychopathology.

Like family accommodation, parental psychopathology is also impacted by several other variables, including parent's pre morbid personality, coping, life events and stressors such as providing care to a child with OCD. Parental psychopathology refers to the presence or absence of psychiatric illnesses in the parents, along with sub-syndromal psychiatric disorders such as trait anxiety and depression. Mothers of children and adolescents with OCD had significantly more psychiatric diagnoses than matched controls with no psychiatric diagnoses. Only parents of children and adolescents with OCD had a diagnosis of OCD and psychiatric diagnoses (Adjustment Disorders, Major Depression, Anxiety Disorders) with an onset during the 6 months and the duration of disease in the children and adolescents appeared to be related to the development of morbidity in the parents. Parents of patients also showed a higher incidence of personality disorders, in particular, Anxious Avoidant and Obsessive-compulsive personality disorder (Calvo, Lázaro, Castro, Morer, & Toro, 2007).

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This presentation is aimed at providing a profile of family accommodating behaviours of parents of adolescents with OCD and examining the impact of adolescent variables such as (age of onset, duration of illness, anxiety severity, ocd severity, comorbid disorders, levels of avoidance and insight on levels of family accommodation. This presentation also aims at understanding the impact of OCD symptom severity, need to engage in accommodating behaviours on parental psychopathology.

Several challenges are faced when gathering information on family accommodation, and assessing parental psychopathology and the solutions to overcome these, which will also be highlighted during the presentation.

## **Mobile-Based Application for the Management of Obsessive-Compulsive Disorder: Preliminary Findings From a User Experience Trial**

**Paulomi Sudhir<sup>1\*</sup>, Kaajal Gupta<sup>2</sup>, Srikanth TK<sup>3</sup>, Mahedra Sharma<sup>1</sup>, Manjula M<sup>1</sup>, Nitin Anand<sup>1</sup>, Ajay Kumar<sup>1</sup>, Janardhan Reddy<sup>1</sup>**

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### **BACKGROUND**

With a dearth of mental health professionals and an increasing need for psychological interventions for clinical conditions, the need for technology-based apps has increased. There has been a surge in the number of digital interventions for mental health. However, some clinical conditions, such as Obsessive Compulsive Disorder (OCD) are challenging in terms of treatment and OCD is one such condition. In this paper, we describe the development and results of a clinical trial of a mobile-based application for OCD, called My Liberate. The app, based on the principles of CBT, was designed to be a largely self-guided intervention.

### **METHODS**

The mobile app, built on the android operating system was developed through a process of extensive reviews of the disorders, treatment components, and inputs from domain experts. The program contains 7 modules, including information about OCD, steps in tracking obsessions and compulsions, building a hierarchy, setting goals for exposure, tasks for self-directed exposure, and restructuring dysfunctional beliefs. Self-assessment for symptoms, regular notifications, and reminders for exposure tasks are built into the system. Additionally, an option for the therapist to assign tasks is included. Following the development of the app, we examined the user experiences of adult patients with mild-moderate OCD, on a client feedback measure and system usability scale, after a two-week engagement with the app.

### **RESULTS**

A total of 25 adult patients with OCD, were recruited for the overall trial, of which two patients reported difficulties in either downloading or logging in after downloading, 6 dropped out after giving consent citing difficulty in using the app regularly, and 2 patients had difficulties in the English language, 1 had significant scores on depression and hence could not be recruited. User experience with respect to the app's content, ease of access, navigation, and features pertaining to therapeutic applications was sought. One of the significant observations by the researchers was the challenge of continued engagement in the app by clients. Other challenges faced by clients were in the technological aspects of app usage, and a felt need for structuring the usage of the app in terms of the components by a therapist. Positive feedback was noted in the ease of navigation and the potential the app had with respect to setting exposure goals. Overall clients reported being more comfortable when the therapist was involved in the process.

### **CONCLUSIONS**

We tested the application of a mobile app called My Liberate for OCD, in a small group of patients with mild-moderate OCD. While digital interventions are seen as a promising means of engaging clients in therapy, the challenges posed by them include being limited to clients who have access to smartphones and are comfortable with digital formats and have an understanding of therapy. The results of the user

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experience study underscore the need for careful planning of digital interventions, particularly unguided or minimally guided, and their use across clinical populations and the importance of involving stakeholders in this process.

## Fear of Disease Progression: A Transdiagnostic Construct

Fear of cancer recurrence is now established as the most common psychosocial concern for people living beyond a cancer diagnosis. However, it has recently been proposed that fear of disease progression is a transdiagnostic construct associated with increased psychopathology and poorer quality of life. In this symposium, we present new evidence regarding the factors related to fears of progression across a range of different illnesses. In the first presentation, Professor Louise Sharpe presents the outcome of a systematic review and meta-analysis that laid the groundwork for the development of a new transdiagnostic measure: the Worry About Recurrence or Progression Scale (WARPS). The WARPS was then validated in a large sample (N = 800) of people with some of the most common chronic illnesses, including diabetes, cardiac, respiratory, and rheumatic disease, and showed good reliability and validity. The remaining papers use the WARPS to investigate the relationships of fear of disease progression with key constructs, such as illness-specific fears, pain, interpretation bias and death anxiety, that carry implications for the psychosocial care of people living with chronic illnesses. Firstly, Bethany Richmond will present data on people with a rheumatic or autoimmune disease (N = 198) which demonstrated that when controlling for pain status and psychopathology, pain-related distress and death anxiety uniquely predict fear of progression. Secondly, Stefan Michalski will present data that shows how death anxiety and pain is also uniquely associated with fear of progression in people with Type-1 or Type-2 diabetes (N = 208). Thirdly, Dr Rachel Menzies will present data that demonstrates how pain symptoms and death anxiety predict worse fear of progression, and that death anxiety continues to predict these fears even when controlling for cardiac-specific anxiety in people with cardiac disease (N = 200). In our final talk, by Daelin Coutts-Bain, we pose the question of whether fears of recurrence and progression may also be applicable to mental health conditions. We present the results of a systematic review and meta-synthesis on fear of recurrence and progression in mental health. These demonstrate how a largely under-researched construct may contribute to distress and the high rates of relapse observed amongst people with different mental health conditions including depression, bipolar, and schizophrenia-spectrum conditions. The symposium will conclude with an opportunity for the audience to ask questions regarding the presented research.

## The Development and Validation of the Worries About Recurrence or Progression Scale (WARPS)

[Louise Sharpe\\*](#), Rachel Menzies, Bethany Richmond, Jemma Todd, Joanne Shaw

*The University of Sydney, Australia*

Worry about recurrence or progression is a common concern amongst people with a range of chronic physical illnesses. Although there are a multitude of options to measure fear of cancer recurrence and other illness-specific measures, there is only one transdiagnostic measure of fear of progression, which does not assess fear of recurrence or relapse. A multi-phase study outlining the development and validation of a novel transdiagnostic measure of fear of recurrence or progression, the Worries About Recurrence and Progression Scale (WARPS). From a prior systematic review, we used quotes from people with lived experience to generate 55 items. Next, we piloted the items with 10 people with a range of chronic conditions, leading to a final total of 57 items. We then recruited four groups of people with cardiac disease, rheumatic disease, diabetes and respiratory disease (n = 804). An exploratory factor analysis in a randomly split sample resulted in an 18 item, single factor scale. We then performed confirmatory factor analysis on these 18 items in the remaining sample. The 18-item WARPS demonstrated good construct validity, internal consistency and test-retest reliability. Specifically, the WARPS was strongly correlated with the Fear of Progression Questionnaire, and with illness-specific fears. Significant, moderate correlations were observed with depression, anxiety, stress, and death anxiety. The WARPS demonstrated validity and reliability amongst people with four of the most common chronic conditions. The WARPS is a valid and reliable tool to measure transdiagnostic worries about recurrence and progression.

## **The Relationship Between Death Anxiety and Fear of Disease Progression in People With Rheumatic and Autoimmune Disease**

Bethany Richmond\*, Louise Sharpe, Rachel E Menzies, Joanne Shaw

*Faculty of Science, The University of Sydney, Australia*

Fear of disease progression is common in rheumatic disease and previous research has shown that levels of FoP are higher in people with rheumatoid arthritis than people living with or beyond cancer. In this study, we attempted to examine the role of death anxiety in FoP, based on previous findings that existential concerns are associated with FoP in people with cancer and RA. We recruited 198 people with at least one rheumatic or autoimmune disease and administered questionnaires assessing fear of disease progression, pain severity, pain distress and pain interference, death anxiety beliefs, affect and behaviour, and depression, anxiety and stress. We analysed data using a series of linear multiple regression equations. On its own, death anxiety affect, beliefs and behaviour accounted for 15% of the variance in fear of disease progression, with both death anxiety affect and beliefs accounting for unique variance in FoP. We then constructed a regression equation controlling for age and gender, pain variables and depression, anxiety and stress, before entering death anxiety variables. The results demonstrated that pain-related distress, but not pain severity or interference was a significant predictor of unique variance in FoP. When psychopathology was entered, stress and pain-related distress predicted unique variance in FoP. However, death anxiety still made a unique contribution to the variance in FoP, with death anxiety affect the strongest predictor along with pain-related distress. These results suggest that pain distress and death anxiety are uniquely associated with the experience of FoP in a group of people with mixed rheumatic and autoimmune diseases.

## **Investigating Fear of Disease Progression in Diabetes: The Role of Pain And Interpretation Bias**

Stefan Carlo Michalski\*, Louise Sharpe, Jack Boyse, Joanne Shaw, Rachel Menzies

*The University of Sydney, Australia*

Recent research suggests that fear of progression (FoP) may be a transdiagnostic construct that accounts for heightened anxiety in people with health problems. Theories suggest that it is the interpretation of illness-related symptoms (such as pain) that might be a central putative mechanism in the development of FoP. However, FoP has rarely been studied in diabetes. We recruited 198 participants with Type 1 or Type 2 diabetes and a control group matched for age and gender. We assessed FoP, pain, illness-related interpretation bias, emotional states, and treatment adherence perception. People with diabetes were more likely to interpret ambiguous information as health related than people without diabetes, with a large effect. Moreover, people with diabetes who reported persistent pain were more likely to interpret ambiguous stimuli as health related. Amongst people with diabetes, pain severity and interpretation bias were significantly associated with FoP. Contrary to our expectations, we did not find evidence that interpretation bias moderated the relationship between pain and FoP in people with diabetes. Overall, our results suggest that targeting pain could reduce FoP in people with diabetes.

## **Death Anxiety and Fear of Progression in People With Cardiac Disease**

Rachel Menzies\*, Louise Sharpe, Bethany Richmond, Jemma Todd, Joanne Shaw, Stefan Michalski

*The University of Sydney, Australia*

Cardiac disease, like cancer, is a potentially life-limiting illness. While some people survive heart attacks and live long and productive lives, the experience of a previous heart attack or underlying heart disease greatly increases the risk of another cardiac event. For that

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reason, people with cardiac disease report significant cardiac-related anxiety and fear of disease progression. Our aim was to determine what factors were associated with fear of progression. We recruited 200 people with cardiac disease who completed a range of measures including fear of progression, cardiac anxiety, anxiety, depression and stress, death anxiety, interpretation bias, and pain-related outcomes. People who experienced pain as a symptom of their cardiac disease had poorer mental health outcomes, and were more fearful of progression. Fear of progression was associated with poorer psychopathology overall. In multiple regression equations, female gender, increased depression, and death anxiety were unique predictors of fear of disease progression. Indeed, death anxiety remained a significant predictor of fear of progression, even once cardiac-specific anxiety was controlled for. As in fear of cancer recurrence, fear of disease progression in cardiac disease appears to be associated with death anxiety, which might be an important focus of intervention for people living with cardiac disease.

## **Fear of Recurrence and Progression in People With a History of Mental Health Conditions**

Daelin Coutts-Bain\*, Louise Sharpe, Pirathat Techakesari, Madeline Forrester, Caroline Hunt

*University of Sydney, Australia*

A fear that one's physical illness will recur or worsen has received substantial research attention over the past decade. Such fear is understandable, but is nevertheless associated with poorer quality of life, disturbances in adaptive health behaviours, and increased mental health condition comorbidity. However, fears of recurrence and progression (FORP) in people living with mental health conditions has received comparatively little study. Moreover, within this emerging field, most research on FORP has focused on conditions within the schizophrenia-spectrum. Hence, even less is known about FORP as it relates to more common mental health conditions, such as depression. This presentation summarises the results of a recent mixed-method systematic review and meta-synthesis of FORP in people with different mental health conditions. A qualitative meta-synthesis of 19 studies identified four subthemes underlying FORP (fear of symptoms, loss of progress, fear of death, and traumatic experiences). The three themes related to FORP were: inability to trust oneself, hypervigilance, and a low-risk/low-reward lifestyle which was comprised of three subthemes (limiting relationships, limiting life goals, and fear of changing treatment). These themes and subthemes were able to be identified in both psychotic and non-psychotic mental health conditions. A quantitative systematic review of 15 studies found FORP to be strongly associated with worse quality of life, as well as greater depression, anxiety, psychotic symptoms, and medication adherence. Based on these findings, there is evidence that FORP can be understood transdiagnostically across different mental health conditions, is generally associated with relevant poorer mental health outcomes, and may also predict adaptive health behaviour, such as medication adherence.



## Treating Insomnia: Mechanisms and Effects on Depression and Anxiety

Insomnia is a chronic, debilitating condition that can be experienced at any stage across the lifespan. It has been established as a robust causal risk factor for depression and anxiety, contributing to their maintenance and severity. While cognitive behavioural therapy for insomnia (CBT-I) is considered the gold-standard treatment, response to CBT-I varies widely. A better understanding of the mechanisms underlying responsiveness to CBT-I, its ability to reduce depression and anxiety, and how these differ between age groups, will improve the potency of CBT-I. In this symposium we will present new insights into the mechanisms underlying response to CBT-I in children, adolescents and adults and its capacity to indirectly target depression and anxiety. The first talk by Dr Cele Richardson, investigates sleep restriction therapy, a critical component of CBT-I, in children with Chronic Insomnia Disorder (N=61; <https://doi.org/10.1111/jsr.13658>). The role of evening sleepiness (a proxy for increased homeostatic sleep drive) in mediating reductions in childhood insomnia, and the effect of sleep restriction therapy on worry and anxiety symptoms will then be discussed. In the second talk, Dr Sophie Li will present new data describing how Sleep Ninja®, a CBT-I smartphone app for adolescents (N=264; ACTRN12619001462178), reduced depression via improvements in insomnia. This talk examines rumination as a mechanism underlying improvements in depression following CBT-I. In the third talk, Michelle Tadros will describe how CBT-I was adapted into a Telehealth format for university students through a co-design process, noting how insomnia and depression factors specific to this population were targeted. Pilot data (N=44; ACTRN12622000067774) on acceptability and preliminary indications on mechanisms responsible for reductions in both insomnia and depression will be presented. The fourth talk, by Prof Allison Harvey, will examine worry, unhelpful beliefs and other cognitive and behavioural mechanisms underlying the effects of cognitive therapy, behavioural therapy, and CBT-I on insomnia. Presenting data from 188 adults with Chronic Insomnia Disorder (DOI: 10.1037/ccp0000244), this talk will describe how matching treatment to an individual's underlying symptom profile can improve treatment outcomes by addressing the most relevant processes. To conclude the symposium, the outcomes of the presented research will be drawn together to facilitate a discussion on future directions in insomnia and CBT-I research and the potential for CBT-I to indirectly target depression and anxiety.

## A Randomised Controlled Dismantling Trial of Sleep Restriction Therapies for Chronic Insomnia Disorder in Middle Childhood: Effects on Sleep and Anxiety

Cele Richardson<sup>1\*</sup>, Neralie Cain<sup>2</sup>, Kate Bartel<sup>2</sup>, Hannah Whittall<sup>2</sup>, Joseph Reeks<sup>2</sup>, Michael Gradisar<sup>3</sup>

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Sleep restriction therapies likely drive improvement in insomnia in middle childhood via increases in homeostatic sleep pressure (e.g., evening sleepiness). Increased evening sleepiness may also dampen comorbid anxiety symptoms; and reduced wakefulness in bed may reduce worry. However, sleep restriction therapies have never been evaluated as a standalone intervention in this population. The mechanism of action needs testing, as do effects on anxiety and worry. This randomised controlled trial evaluated the efficacy of two “doses” of sleep restriction therapy (sleep restriction therapy, bedtime restriction therapy), compared to a control condition (time in bed regularisation). A total of 61 children (mean [SD, range] age 9.1 [2.1, 6–14] years; 54% female) with chronic insomnia disorder received two weekly 60-min treatment sessions with a psychologist. Sleep, sleepiness, anxiety and worry were measured pre-treatment, across treatment, and at 4-weeks post-treatment. Both the sleep and bedtime restriction groups experienced reductions in total sleep time ( $d = 1.38-2.27$ ) and increases in evening sleepiness ( $d = 1.01-1.47$ ) during the 2-week treatment, and improvements in insomnia (i.e., sleep onset latency;  $d = 1.10-1.21$ ), relative to the control group. All groups reported improved anxiety and worry, yet there were no differences

between the control and restriction groups (all  $p > 0.658$ ). Time in bed increased at the 1-month follow-up, and benefits to sleep and insomnia were maintained. These results suggest that sleep restriction therapies are brief, yet effective, standalone interventions for insomnia in middle childhood, and improvements are likely due to increased sleepiness, not sleep regularisation.

## The Role of Rumination in the Relationship Between Symptoms of Insomnia and Depression in Adolescents

Sophie Li<sup>1\*</sup>, Brittany Corkish<sup>1</sup>, Cele Richardson<sup>2</sup>, Helen Christensen<sup>1</sup>, Aliza Werner-Seidler<sup>1</sup>

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There is a strong relationship between symptoms of insomnia and depression, however, little is understood about the factors that mediate this relationship. This study examined rumination and unhelpful beliefs about sleep as mediators between symptoms of insomnia and depression, and as mechanisms responsible for reductions in depression symptoms following cognitive behavioural therapy for insomnia (CBT-I). The effect of CBT-I on rumination and unhelpful beliefs about sleep was also examined. A series of mediation analyses and linear mixed modelling were conducted on data from 264 adolescents (12-16 years) who participated in a two-arm (Intervention v Control) randomised controlled trial of Sleep Ninja<sup>®</sup>, a CBT-I smartphone app for adolescents. Results showed rumination, but not unhelpful beliefs about sleep, was a significant mediator between symptoms of insomnia and depression. Neither rumination, nor unhelpful beliefs about sleep emerged as mechanisms underlying improvement in depression symptoms relative to the control group following CBT-I, however, rumination mediated within-subject improvements in depression. CBT-I led to reductions in unhelpful beliefs about sleep, but not rumination. These findings suggest rumination links symptoms of insomnia and depression and provide preliminary evidence that reductions in depression following CBT-I occurs via improvements in rumination. Targeting rumination may improve current therapeutic approaches.

## A Pilot Study Investigating the Effects of Cognitive Behavioural Therapy for Insomnia in University Students

Michelle Tadros<sup>1\*</sup>, Sophie Li<sup>2</sup>, Britt Corkish<sup>2</sup>, Emily Upton<sup>2</sup>, Jill Newby<sup>1</sup>, Aliza Werner-Seidler<sup>2</sup>

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### INTRODUCTION

Sleep difficulties are common amongst university students (Siversten et al, 2019) and are associated with mental illness and reduced wellbeing (Baglioni et al., 2011; Kuhlman et al., 2020; Szentkiralyi et al, 2009). There is emerging evidence that treating insomnia and sleep difficulties using cognitive behavioural approaches can improve sleep and reduce the severity of comorbid mental illness (Cunningham & Shapiro, 2018; Freeman et al, 2017; Scott et al, 2022). Treatment research has largely focused on middle aged and older adults. To address this gap in the literature we conducted a pilot trial of a sleep intervention tailored specifically for university students. It was hypothesized that the intervention would be feasible to deliver, acceptable to students and associated with improvements in sleep quality, anxiety and depression.

### METHOD

A single arm pre-post pilot study of a Cognitive Behaviour Therapy for Insomnia (CBT-I) program was conducted with students aged 18-25. Students participated via video conferencing in four weekly small group sessions of CBT-I facilitated by a psychologist. The intervention content was adapted for university students and included: psychoeducation, sleep hygiene, sleep scheduling, challenging

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unhelpful beliefs about sleep and suggestions for managing anxiety and worry at night. Feasibility and acceptability were assessed using attrition, adherence and intervention satisfaction. Outcome measures included sleep quality, insomnia, suicidal ideation, depression, anxiety, wellbeing and were assessed at baseline and immediately after the intervention (4 weeks following baseline).

## RESULTS

Participants were 44 students (mean age: 21.8 years). Program feasibility was confirmed by sufficient sign up and consent into the study (80% of the students who expressed interest agreed to participate); overall study attrition was 48%, with 27% not commencing treatment. Acceptability was high, indicated through adherence: 82% of participants attended 2 or more sessions and 63% attended all four sessions; and participant satisfaction: 92% were either very satisfied or mostly satisfied with the program. Sleep quality, insomnia, depression and anxiety all significantly improved from pre to post intervention, with medium to large effect sizes.

## DISCUSSION

There was evidence that the CBT-I intervention tailored for university students was feasible to deliver and acceptable to participants. Analysis of outcomes revealed significant improvements in sleep quality, depression, anxiety and wellbeing. These findings suggest the intervention is suitable for evaluation in a fully powered randomised controlled trial.

## Using Bedtime Procrastination as an Emotional Regulation Strategy in Insomnia Patients

Sooyeon (Aly) Suh\*

*Sungshin Women's University, Korea*

Bedtime procrastination is defined as the behavior of going to bed later than intended, in the absence of any external factors. Previous studies have reported the associations between bedtime procrastination and a variety of clinical variables, including depression, anxiety, and insomnia. This talk focuses on taking a functional approach to bedtime procrastination in insomnia patients. A functional approach aims to identify the function of a target behavior (bedtime procrastination), and is known to be useful in understanding why individuals engage in certain deleterious health behaviors, despite being aware of its negative consequences.

The current study enrolled 80 participants who reported being above the clinical cut-off score (14) on the Insomnia Severity Index, and also reported engaging in high levels of bedtime procrastination. All participants completed the Bedtime Procrastination Scale, Insomnia Severity Index, Pre-sleep Arousal Scale, Difficulties in Emotion Regulation Scale, Emotion Regulation Strategy Questionnaire, and weekly sleep diaries. Actigraphy was used to monitor objective sleep throughout the study. A structured interview was used with each participant to investigate the function of bedtime procrastination, and a functional analysis was conducted with an interviewer to identify antecedents and consequences of bedtime procrastination. Every interview session was recorded, and two independent researchers then coded the function(s) of bedtime procrastination into 7 categories: emotion regulation, compensation, social interaction and feelings of belonging, searching for information, trying to fall asleep, feelings of accomplishment, and pleasure. Results indicated that the most common functions of bedtime procrastination were emotional regulation (49.3%), compensation and rewards for their day (14.3%), and trying to induce sleep (10.7%). Further discussion on the implications of using bedtime procrastination as an emotional regulation strategy will be presented.

### **Mechanisms of Action in Mindfulness Related Intervention**

Recently, there has been an increased interest in studying the effects of mindfulness related interventions for people with psychological problems. However, the mechanisms of action in these interventions that lead to beneficial psychological outcomes have yet to be clearly identified. In this symposium, we reported our investigations on the mechanisms of action in mindfulness related interventions. In the first paper, Chun Wang intends to find out the role of mindfulness in DBT. Mindfulness focuses on teaching patients the skill of “acceptance”, which is considered to be the core skill of DBT. The authors studied the relationship between NSSI related symptoms and mindfulness of NSSI patients receiving 13-week DBT, founding that DBT alleviates the symptoms related to NSSI by improving their awareness of mindfulness. In the second paper, Yanjuan Li investigated distress tolerance as a mechanism of mindfulness for anxiety and depression using a large-sample cross-sectional study and a daily dairy study. Results demonstrated that mindfulness was associated with anxiety/depression via distress tolerance at both the within- and between-person level. This indicated that Individuals with high or fluctuating depression and anxiety may benefit from short-term or long-term mindfulness training to increase distress tolerance. The third presentation, by Mengyao He, deals with the mechanism of mindfulness intervention for emotional distress (MIED) in the early stage. Results showed that compared to the waiting-list group, experiential, emotional distress, anxiety and depression significantly were improved in the MBI group in the first three weeks. Changes in experiential avoidance mediated the effects of MBI on emotional distress in both contemporary and lagged mediation models. The results revealed the mechanism role of experiential avoidance in the effects of the early-stage MBI in alleviating emotional distress. The final papers are dealing with the effect of Online Self-Help Mindfulness Intervention for Emotional Distress (MIED): Zhenzhen Wang present a randomized waitlist-controlled design to investigate whether mindfulness and attentional control were the mediators of MIED program on emotional distress, and the results found that the change of mindfulness and the change of attentional control sequentially mediated the effects of the MIED program on the change of emotional distress. The symposium concludes with a general discussion of future research directions in Mechanisms of action in mindfulness related intervention.

### **Mechanism of Dialectical Behavior Therapy on Non-suicidal Self-Injury**

Chun Wang, DanHui Fan\*

*Nanjing Brain Hospital affiliated to Nanjing Medical University, China*

Non-suicidal self-injury (NSSI) is defined as a behavior which is not recognized by culture, intentionally and directly causes repeated injuries to body tissues, but has no obvious suicide intention and will not cause death. At present, the treatment of NSSI in the world is mainly psychotherapy, and the dialectical behavioral therapy (DBT) developed from cognitive behavioral therapy (CBT) has accumulated more evidence of effective improvement of NSSI. Mindfulness focuses on teaching patients the skill of “acceptance”, which is considered to be the core skill of DBT. This study intends to find out the role of mindfulness in DBT. We studied the relationship between NSSI related symptoms and mindfulness of NSSI patients receiving 13-week DBT, founding that DBT alleviates the symptoms related to NSSI by improving their awareness of mindfulness.

## **Distress Tolerance as a Mechanism of Mindfulness for Depression and Anxiety: Cross-Sectional and Diary Evidence**

Yanjuan Li<sup>1\*</sup>, Ruilin Ju<sup>1</sup>, Stefan Hofmann<sup>2</sup>, Wingsze Chiu<sup>1</sup>, Ye Guan<sup>1</sup>, Yu Leng<sup>1</sup>, Xinghua Liu<sup>1</sup>

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### BACKGROUND

Both trait and state mindfulness are beneficial for alleviating depression and anxiety, but little is known about the mechanisms from the perspective of the transdiagnostic factors underlying emotional disorders (i.e., depression, anxiety). Distress tolerance plays an important role in the onset, maintenance, and extinction of depression and anxiety. It is highly related to exposure, one of the important mechanisms of mindfulness. However, no study has directly examined whether mindfulness is associated with depression and anxiety via distress tolerance, which is the main aim of the current study.

### METHOD

In Study 1, a large sample (N = 905) was tested in a cross-sectional design to examine the mediation model at the between-person level. In Study 2, a daily diary study (N = 110) was conducted to examine within-person changes. Participants were invited to complete daily diaries measuring daily mindfulness, distress tolerance, depression and anxiety for 14 consecutive days.

### RESULTS

Study 1 found that distress tolerance mediated the relationship between mindfulness and depression/anxiety at the between-person level. Study 2, using multilevel mediation analyses, found that, in both the concurrent model and time-lagged model, daily distress tolerance mediated the effects of daily mindfulness on daily depression/anxiety at both the within- and between-person level.

### CONCLUSIONS

Distress tolerance is a mechanism underlying the relationship between mindfulness and depression/anxiety. Individuals with high or fluctuating depression and anxiety may benefit from short-term or long-term mindfulness training to increase distress tolerance.

Keywords: Mindfulness, distress tolerance, depression, anxiety, mechanism, daily diary

## **The Role of Experiential Avoidance in the Early Stage of Mindfulness-Based Interventions: Two Mediation Studies**

Mengyao He<sup>1\*</sup>, Yanjuan Li<sup>1</sup>, Ruilin Ju<sup>1</sup>, Shu Liu<sup>1</sup>, Stefan Hofmann<sup>2</sup>, Xinghua Liu<sup>1</sup>

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Nowadays, there is an increasing number of studies examining the mechanisms underlying traditional 8-week mindfulness-based interventions (MBIs) in alleviating emotional distress. Although 2 to 4 weeks MBIs could already produce significant improvements in emotional stress, few studies paid attention to the early-stage mechanisms of the 8-week MBIs. The current studies sought to examine whether experiential avoidance mediated the effects of MBIs on emotional distress in the early stage. Participants with high emotional distress were recruited online. In study 1, 324 participants were randomly allocated to the MBI group (N = 171) or the waiting-list group (N = 153). Experiential avoidance and emotional distress were measured at the baseline and after the 3rd week intervention. In study 2, 158 participants were randomly allocated to the MBI group (N = 79) or the waiting-list group (N = 79). Experiential avoidance and emotional distress were measured at the baseline and weekly in the first three weeks. Linear mixed models showed that compared to

the waiting-list group, experiential, emotional distress, anxiety and depression significantly improved in the MBI group in the early stage (Cohen's  $d = 0.22-0.63$ ). Moreover, results consistently showed that in the early stage of intervention, changes in experiential avoidance mediated the effects of MBI on emotional distress in both contemporary and lagged mediation models. The results of this work revealed the mechanism role of experiential avoidance in the effects of the early-stage MBI in alleviating emotional distress.

## **The Mediating Effects of Attentional Control and Mindfulness in the Effect of Online Mindfulness Intervention for Emotional Distress: A Randomized Controlled Trial**

Zhenzhen Wang\*, Xinghua Liu

*Peking University, China*

### INTRODUCTION

Many studies suggested that mindfulness-based interventions (MBIs) have a significant easing effect on emotional distress, but the underlying mechanism is unclear. Attentional control is the ability to actively direct, focus and divert attention, which is one of the core operations of mindfulness practice. It has been proved that the higher the level of attentional control, the lower the level of emotional distress (e.g. depression, anxiety). In order to explore the potential mechanism for the impact of MBIs on emotional distress, this study aimed to investigate whether attentional control and mindfulness were the mediators of MBIs on emotional distress using a randomized waitlist-controlled design.

### METHOD

498 participants with high emotional distress were recruited online and randomly assigned to a 49 days Online Mindfulness Intervention for Emotional Distress (MIED) group ( $N = 249$ ) or a wait-list control (WL) group ( $N = 249$ ). Levels of mindfulness, attentional control and emotional distress were assessed at baseline ( $T_0$ ), week 3 ( $T_3$ ), week 5 ( $T_5$ ) and week 7 (post intervention,  $T_7$ ).

### RESULTS

Mixed model repeated-measure ANOVA revealed significant Group (MIED group, WL group) by Time ( $T_0$ ,  $T_3$ ,  $T_5$ ,  $T_7$ ) interaction effects for mindfulness ( $p < 0.001$ ), attentional control ( $p < 0.001$ ), Emotional Distress ( $p < 0.05$ ). From  $T_3$  onwards, the levels of mindfulness, attentional control and emotional distress in MIED group were significantly better than WL group. Latent growth curve analyses showed that MIED group increased faster than the WL group on mindfulness and attentional control. Serial mediation analyses found that attentional control at  $T_3$  and mindfulness at  $T_5$  sequentially mediated the effects of the MIED program on emotional distress. In addition, the change of attentional control ( $\Delta T_3-T_0$ ) and the change of mindfulness ( $\Delta T_5-T_0$ ) sequentially mediated the effects of the MIED program on the change of emotional distress ( $\Delta T_7-T_0$ ).

### DISCUSSION

The findings suggest that the significant effect of MIED program on mindfulness, attentional control and emotional distress appeared in the week 3 ( $T_3$ ). Furthermore, MIED program might decrease emotional distress by improving the levels of attentional control and mindfulness. It suggests that attentional control and mindfulness might be the potential mechanisms underlying the effect of MIED, but it need further exploration.

## Perseverative (Repetitive) Thought: Current Developments in Theory and Treatment

Perseverative thought, also called repetitive thought or negative repetitive thought, is a major transdiagnostic mechanism of internalizing-related psychopathology. Quantitative, technological, and methodological advances offer new opportunities for improving our ability to conceptualize and treat perseverative thought at scale – a goal with far-reaching implications for dissemination and accessibility. The present symposium draws together an international group of experts spanning a range of career stages who use diverse methodologies to obtain cutting-edge insights into the mechanisms and cognitive-behavioral treatment of perseverative thought. Beginning with mechanisms, Irene Seung Yeon Baik will describe findings from a recent study that used ecological momentary assessment (EMA) to examine the extent to which the contrast avoidance model extends to rumination in participants with and without major depressive disorder (MDD) or generalized anxiety disorder (GAD). Higher worry and rumination were associated with reduced negative emotional contrast following negative events. Those with (vs. without) MDD/GAD were more likely to report use of repetitive negative thinking as a coping mechanism. Next, Dr. Lauren Hallion will provide a data-driven characterization of the latent structure of perseverative thought, drawing on recently-published and ongoing preregistered research (<https://osf.io/psk65/>). Findings offer unique insights into the within-person latent structure of perseverative thought, including comparison of dimensional and categorical models. Moving toward intervention, Dr. Hani Zainal will explain how precision medicine methods such as machine learning can be harnessed to identify prescriptive predictors of intervention outcomes. Using data from a randomized controlled trial of a mindfulness ecological momentary intervention vs. self-monitoring placebo for GAD, the project tested eight machine learning models and utilized the best-performing models to predict clinically reliable improvement in global perseverative cognitions, trait mindfulness, and executive function from pretreatment to one-month follow-up. Findings suggest that predictive models show promise for intervention selection based on pre-treatment characteristics. Next, Dr. Stefan Hofmann will describe a process-based approach to cognitive-behavioral therapy, which offers a new framework for organizing evidence-based therapeutic techniques for perseverative thought and related problems. Finally, Dr. Edward Watkins will present on ways to increase the coverage and availability of evidence-based interventions for repetitive negative thought (RNT) via digital technology. Evidence-based approaches for RNT, developed in face-to-face contexts such as rumination-focused CBT, have been adapted for delivery via internet therapy and mobile apps. Recent developments and trial evidence for apps to target RNT will be presented.

## The Transdiagnostic Use of Worry and Rumination To Avoid Negative Emotional Contrasts Following Negative Events: A Momentary Assessment Study

Seung Yeon Baik\*, Michelle Newman

*The Pennsylvania State University, USA*

The contrast avoidance model (CAM) suggests that worry enhances and sustains negative affect, enabling avoidance of a sharp increase in negative affect and/or decrease in positive affect (negative emotional contrasts; NECs). This mechanism may apply to rumination. Although the effects of worry are the same for all individuals, only those with generalized anxiety disorder (GAD) and/or major depressive disorder (MDD) have reported sensitivity to NECs in laboratory studies. However, it is unclear whether previous laboratory findings on reported sensitivity to NECs would be generalized to intentional use of worry to avoid NECs in real life. This study examined the effects of worry and rumination on NECs in daily life using ecological momentary assessment.

Participants were individuals diagnosed with MDD and/or GAD (N = 36) or who had no present psychopathology (N = 27). They received 8 prompts/day for 8 days, where they rated the occurrence of negative events, level of emotion right after the event (i.e., anxiety,

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sadness, and happiness), and current levels of emotion and repetitive thoughts. Data were analyzed with three-level multilevel models, accounting for nesting of repeated emotion ratings within events and repeated events within participants.

Higher levels of worry and rumination were associated with higher concurrent anxiety and sadness, and lower happiness, suggesting that repetitive thinking generated negative mood. Higher (vs. lower) levels of worry and rumination before a negative event were associated with less increased anxiety and sadness, and less decreased happiness after the event regardless of group status. Participants with (vs. without) MDD/GAD reported higher ratings on intentionally focusing on the negative to avoid negative emotional shift following potential future threat.

The results provide evidence for the ecological validity of CAM being a transdiagnostic phenomenon that extends to rumination and the intentional engagement in repetitive thinking as a coping mechanism among individuals with MDD/GAD.

## **Within-Person Latent Structure of Perseverative Thought in Daily Life**

**Lauren Hallion\*, Jennifer Silk, Peter Gianaros, M. Kathleen Caulfield**

*University of Pittsburgh, USA*

Despite a growing push toward transdiagnostic conceptualizations, clinically-relevant thought is overwhelmingly conceptualized in terms of discrete categories (e.g., “worries;” “obsessions”) in clinical practice and most research settings. These categories are typically defined on the basis of the underlying features of thoughts (e.g., temporal orientation; valence; form; content). These categorical conceptualizations play a major role in clinical conceptualization and treatment planning. However, previous work interrogating the existence and nature of these categories has been overwhelmingly conducted within the constraints of established theories and models, which limits the extent to which that work has the ability to falsify or confirm those categories. In our previous work, we directly challenged the existence of discrete categories or subtypes. Applying multilevel exploratory factor analysis and multilevel latent class analysis to naturally-occurring (i.e., theoretically unconstrained) patterns of covariation in the underlying features of idiographic thoughts, we demonstrated and replicated a dimensional (five-factor) latent structure that outperformed a latent categorical (subtype) structure in two samples (cross-sectional data; three thoughts per participant). The present study will first establish whether the five factor latent structure observed in our previous work replicates when thoughts are sampled repeatedly in ecologically valid contexts. Next, we will replicate the direct comparison between a dimensional versus categorical (subtype) latent structure.

Adult community-dwelling participants completed a 14-day ecological momentary assessment (EMA) protocol, during which they reported on the characteristics of their thoughts (e.g., uncontrollability; self-reference; interpersonal content; valence; anxious apprehension) 8 times per day. Participants represented the full range of perseverative thought severity, oversampled for severe perseverative thought. I will present results from an interim analysis of approximately 100 participants (final anticipated N = 200). All analyses were preregistered on the Open Science Framework (<https://osf.io/psk65/>) at the outset of data collection. Preregistered hypotheses describe a robust five-factor latent structure of perseverative thought at the within-person level. A preliminary multilevel exploratory factor analysis suggested good model fit for the hypothesized five-factor within-person structure. Multilevel latent class analysis will also be used to examine model fit for a latent class (“thought type”) structure. This dimensional model is expected to provide a strong fit to the data and to outperform a latent class-based model.

Support for a dimensional, rather than class-based, model at the within-person level would be consistent with a growing shift toward transdiagnostic conceptualizations of perseverative thought. Such findings would also support a shift away from reliance on traditional clinically-derived categories (e.g., worry versus rumination versus obsessions). Instead, such findings would underscore the importance of understanding thoughts in terms of their underlying features or dimensions. Future directions to be discussed include consideration of which features account for the robust associations of these thoughts with psychopathology, as well as which features may be most amenable to direct intervention.



## Process-Based Therapy: A Case Example

Stefan Hofmann\*, Clarissa Ong, Steven Hayes

*Philipps University Marburg, Germany*

Despite the significant contribution of cognitive-behavioral therapy to effective treatment options for specific syndromes, treatment progress has been stagnating, with response rates plateauing over the past several years. This stagnation has led clinical researchers to call for an approach that instead focuses on processes of change and the individual in their particular context. Process-based therapy (PBT) is a general approach representing a model of models, grounded in evolution science, with an emphasis on idiographic methods, network models of case conceptualization, and enhancing wellbeing. In this paper, we describe the theory underlying PBT and present a case study for how to apply PBT tools and principles to deliver process-informed and person-centered evidence-based treatment. In addition, we discuss lessons learned from our case and provide suggestions for future considerations when implementing PBT in clinical settings. Despite the significant contribution of cognitive-behavioral therapy to effective treatment options for specific syndromes, treatment progress has been stagnating, with response rates plateauing over the past several years. This stagnation has led clinical researchers to call for an approach that instead focuses on processes of change and the individual in their particular context. Process-based therapy (PBT) is a general approach representing a model of models, grounded in evolution science, with an emphasis on idiographic methods, network models of case conceptualization, and enhancing wellbeing. In this paper, we describe the theory underlying PBT and present a case study for how to apply PBT tools and principles to deliver process-informed and person-centered evidence-based treatment. In addition, we discuss lessons learned from our case and provide suggestions for future considerations when implementing PBT in clinical settings.

## Digital Interventions for Repetitive Negative Thought

Edward Watkins\*

*Mood Disorders Centre, University of Exeter, UK*

Effective evidence-based interventions for repetitive negative thought (RNT) / perseverative thought have been developed over the last two years including cognitive-behavioural therapy (CBT) specifically adapted to target RNT (e.g., Watkins, 2016; Watkins et al., 2011). To increase the scalability and accessibility of this intervention, particularly to support prevention of anxiety and depression, RNT-focused CBT has been adapted for a variety of digital formats including internet-delivered CBT and mobile apps. This presentation will outline and summarise the evidence for digitally delivered RNT-focused CBT including two randomized controlled trials of internet-delivered RNT-focused CBT that demonstrate that it can significantly reduce the onset of depression and anxiety in high risk young people (Topper et al., 2017; Cook et al., 2019) and a prevention mechanism trial of a RNT-focused mobile app, conducted within the ECoWeB project (Edge et al., 2022). Ongoing work to further test and refine digital interventions for RNT will be further discussed including within a large-scale definitive trial of a RNT-focused mobile app for UK university students within the Nurture-U project and innovative designs to further enhance digital interventions for RNT. Lessons learnt will be summarized.

## **Which Client with Generalized Anxiety Disorder Benefits from a Brief Mindfulness App Versus a Self-Monitoring App? A Machine Learning Analysis**

Nur Hani Zainal<sup>1\*</sup>, Michelle Newman<sup>3</sup>

<sup>1</sup> *Harvard Medical School, USA*

<sup>2</sup> *National University of Singapore, Singapore*

<sup>3</sup> *The Pennsylvania State University, USA*

Harnessing precision medicine methods such as machine learning (ML) can identify which clients with generalized anxiety disorder (GAD) benefit from mindfulness ecological momentary intervention (MEMIs) versus self-monitoring placebos (SMPs). This project used data from a randomized controlled trial of a MEMI versus SMP for GAD, tested eight ML models, and utilized the best-performing ML models to predict one-month follow-up (1MFU) reliable improvement in perseverative cognitions (PC), trait mindfulness (TM), and executive function (EF). Baseline predictors included specific factors within global PC, TM, EF, and sociodemographic domains. Bee swarm plots based on the SHapley Additive exPlanation (SHAP) approach facilitated interpretation of the relative importance of each potential prescriptive predictor and direction of association between the predictor and outcome. Following recursive feature elimination, the final models for determining prescriptive predictors of the three primary clinical outcomes showed excellent performance (area under the receiver operating characteristic curve (AUC) = 0.809 to 0.997). Higher inhibitory dyscontrol, dwelling on the past, older age, lower discordant thoughts, and verbal fluency predicted better likelihood of pre-1MFU reliable improvement in global PC with MEMI (versus SMP). Higher expecting the worst, working memory, verbal fluency, dwelling on the past, and lower nonjudgment predicted increased probability of pre-1MFU reliable improvement in trait mindfulness with MEMI (versus SMP). Lower nonjudgment, EF errors, inhibitory dyscontrol, and higher thoughts discordant with ideal self and non-reactivity predicted greater probability of pre-1MFU reliable improvement in EF with MEMI (versus SMP). Predictive models may optimize MEMI for clients with GAD by prioritizing this digital intervention to those who benefit most from it based on their pretreatment PC, TM, and EF profiles and prime treatment targets.

## Implementing Behavioural Activation in Ranging Contexts

Behavioral activation (BA) is an evidence-based intervention extensively and consistently shown to be effective for depression (e.g. Dimidjian et al., 2011). BA has been used as a stand-alone approach and is also emphasized as a key component of cognitive behavioral therapy (CBT). BA has demonstrated its effectiveness in the treatment for not only depression, but other common mental health disorders (Martell et al., 2022). In addition to basic theoretical and experimental evidence supporting its use, the efficacy of BA has been examined in a variety of contexts, specifically, in diverse populations, different protocols, and various forms of delivery. This is in line with recent emphasis in psychotherapy research to test the implementation and dissemination of existing interventions to provide them to wider populations and contexts. Therefore, the symposium will focus on the following topics: In the first presentation, Hikari Takashina will give an overview of the implementation of behavioral activation in a wide range of contexts. The second presentation by Kotone Hata presents results from an observational study investigating the mechanisms of BA in cancer survivors and a clinical trial on BA for cancer survivors. The third presentation by Ji Hye Oh will show results from a study on applying BA to improve negative symptoms among schizophrenia patients in the community. For the fourth presentation, Maria Santos will present on delivering BA in a manner that attends to clients' culture. Drawing from her work on developing BA for Latinos with recent-onset psychosis, Santos will exemplify the use of BA in conjunction with the Shifting Cultural Lenses model, a process of model of cultural competence. Finally, the discussant Kee-Hong Choi will lead general discussions about the implementation and dissemination of BA in ranging contexts. The present symposium will be chaired by So Sugita. As researchers and as practitioners who are taking on the challenge of dissemination and implementation in their respective settings, the present symposium aims to discuss current topics and future strategies to move the field forward and facilitate the use of BA in ranging contexts.

## Adaptation and Implementation of Behavioral Activation in a Wide Range of Contexts

**Hikari N. Takashina\***

*Research Center for Child Mental Development, Chiba University, Japan*

Behavioral activation (BA) is an evidence-based psychological intervention aimed at reducing depressive symptoms by increasing an individual's engagement in valued life activities through guided goal setting. Recent meta-analyses have demonstrated that BA is effective for treating depression in adults (Uphoff, 2021), depression in adults with non-communicable diseases (Uphoff et al., 2020), and anxiety disorders in adults (Afaq, 2021). Empirical findings have also shown that BA successfully reduces not only depression but also other desirable outcomes across a variety of populations and contexts (Santos et al., 2021).

One context currently in urgent need for research is the ongoing COVID-19 global pandemic. The spread of COVID-19 is associated with psychological distress and symptoms such as anxiety, depression, and self-reported stress (Rajkumar, 2020). Also, people's lives have been affected by restrictions of activities, such as lockdowns, to limit contact between individuals in an effort to slow the spread of COVID-19. Our study examined the behavioral activation model - relationships among activation, positive reinforcement frequency, and depressive symptoms- amid the environment of the COVID-19 outbreak (Takashina et al., 2021). The result suggested that the validity of the behavioral activation model was verified, although it was possibly affected by the frequency of going out. Additionally, studies have shown that BA can be effective when provided through digital tools, including telephone and online, under the environment of the COVID-19 outbreak (such as Boorbo et al., 2022; Pellas et al., 2021).

One strength of BA comparing other evidence-based psychological interventions is its simplicity. It can be delivered with less intensive and costly training, making it more suitable for adaptation and implementation in a wide range of contexts (Ciharova et al., 2021). It could be a key intervention to adapt and implement for people who are currently do not reached effective psychological care.

However, implementation of BA is currently not being carried out in an evidence-based approach. It is important to start thinking about implementation of BA based on implementation science in order to improve individual outcomes and benefit population health.

This presentation provides an opportunity to consider the wider application of BA beyond its traditional use in treating depression. By examining the potential of BA in addressing mental health problems in different contexts, the symposium's discussions can contribute to the adaptation and implementation of this evidence-based psychological intervention to reach more people who need it, particularly in underserved communities. Further research is needed to explore the potential of BA and its implementation based on implementation science.

## **Behavioral Activation for Cancer Survivors**

**Kotone H. Hata\***

*Waseda University, Japan*

Advances in cancer treatments have led to improvements in cancer survival rates and an increase in the number of cancer survivors (Hayat et al., 2007). While this is favourable progress, a high prevalence of depression has been reported among cancer survivors, which is known to result in reduced quality of life and increased mortality (e.g., Brintzenhofe-Szoc et al., 2009). Considerable research has explored the use of different psychotherapies to alleviate this issue, with cognitive-behavioral therapy (CBT) as the most frequently studied approach. CBT protocols for cancer survivors aim to reduce negative thoughts and feelings induced by the diagnosis and have been shown to be effective in treating depressive symptoms. However, experiencing negative thoughts and feelings associated with cancer is considered a normal reaction to a cancer diagnosis (Hopko & Lejuez, 2008). Therefore, instead of attempting to remove the negative thoughts and feelings, it may be more helpful to increase the patient's ability to appreciate the positive experiences even when such thoughts and feelings are present. In this view, psychotherapies that focus on positive feelings, experiences, and values have gained more attention in recent years.

One such approach is behavioral activation (BA). BA is a type of CBT that aims to enhance the individual's access to positive affect or sense of mastery. In a recent literature review, five clinical trials including two randomized clinical trials have been identified to have studied the effectiveness of BA for depression among cancer patients (Hata et al., 2018). Some of these BA programs for cancer patients/survivors were based on the behavioral activation treatment for depression (BATD) protocol, while some were collaborative programs that also included problem-solving components, and other treatment programs included BA as one of the components. Overall, the review showed the steady growth in the literature on the use of BA for this population.

BA is particularly well-suited to the problems cancer survivors face, specifically, as they are characterized by their unique vicious cycle of depression. A key predictor in the vicious cycle of depression in cancer survivors is activity restriction, which is defined as the restriction of daily activities after the diagnosis of the physical illness (Williamson et al., 2002). When cancer survivors experience activity restriction, their perception of positive affect decreases, which leads to worsened depression (Hata et al., under review). As such, BA and treatments that includes BA as a component may be particularly effective to improve depression and associated health concerns among cancer patients and survivors.

As these findings in cancer survivors can be translated to other physical illnesses, this presentation aims to go beyond this population and discuss the potential usefulness of BA in the broader context of physical illness throughout the talk.

## Community-Based Multi-Site Randomized Controlled Trial of Behavioral Activation for Patients With Negative Symptoms of Schizophrenia

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### BACKGROUND

Negative symptoms are closely related to the poor prognosis of schizophrenia, for which there is no effective treatment to date. Behavioral activation (BA), which is an effective treatment for depression, is a behavioral approach that targets low levels of response-contingent positive reinforcement. This study aimed to explore BA as an effective intervention for relieving the negative symptoms of schizophrenia.

### METHODS

This was a randomized single-blind controlled trial. Eighty-four patients with schizophrenia were enrolled in community mental health settings. Excluding 14 patients who opted out of the study, 70 were randomly assigned to receive BA in addition to treatment-as-usual (BA+TAU) or treatment-as-usual (TAU) only. Negative symptoms were assessed using the Clinical Assessment Interview for Negative Symptoms (CAINS) and Brief Negative Symptom Scale (BNSS) at baseline, post-treatment, and 6-months follow-up.

### RESULTS

Significant differences between the BA+TAU and TAU only groups were observed in the measures of negative symptoms post-treatment. The total score of CAINS was significantly decreased after BA treatment ( $\eta^2 = 0.13$ ). The tendency of the BA+TAU treatment effect was also observed for the BNSS total score and PANSS negative symptom subscale ( $\eta^2 = 0.10$  and  $\eta^2 = 0.11$ , respectively). However, the difference between the two groups was not sustained at the six-month follow-up.

### CONCLUSIONS

Our findings suggest that BA could be a promising time-limited and structured psychosocial intervention for schizophrenia-associated negative symptoms with the merit of easy dissemination. Further studies are needed to examine the factors involved in sustaining improvement.

## Behavioral Activations for Latinos

Maria Santos\*

California State University San Bernardino, USA

Behavioral Activation, an empirically supported intervention for depression, shows promise for addressing the burden of mental illness among hard-to-reach and culturally diverse populations, such as Latinos in the U.S. Latinos are the country's largest ethnic/racial minority group, which is comprised of a relatively large proportion of immigrants. Leading mental health organizations have called for greater attention to cultural factors in the development and implementation of psychotherapeutic interventions to help meet the needs of underserved groups like Latinos. The application of BA in working with members of this social group can contribute to answering the call to action to an extent.

BA is designed to help a client engage in healthy, adaptive behaviors that enable the client to solve problems, establish routines, experience enjoyment, and live a life of meaning, and thereby experience reductions in psychopathology. BA holds potential for

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widespread dissemination due to its straightforward, concrete, and easy-to-train models, strategies, and techniques, and because it can enable a clinician to provide culturally sensitive care. BA's treatment model leads a clinician and client to identify and schedule activities that are grounded in a client's goals and values, and these processes should be informed by the client's views. By accessing the client's views, the clinician has an opportunity to incorporate into treatment the client's cultural perspectives. However, substantial advice on how to engage in the process of considering and incorporating a client's cultural perspectives into various aspects of treatment are lacking in today's BA manuals.

The Shifting Cultural Lenses model (SCL; Lopez et al., 1997; Lopez et al., 2020) is a process model that can help incorporate a client's culture into care, and which offers a pragmatic conceptualization of culture and specifies clinician behaviors that facilitate cultural competence. The SCL model defines culture as "what's at stake" in a client's local, social world and identifies behavioral indicators – (a) accessing and integrating the client's view, (b) presenting the clinician's view and requesting feedback on the clinician's view, and (c) negotiating a shared narrative – which, when implemented can enable the incorporation into treatment of what is culturally important to the client. In this talk, an integration of the BA and SCL models will be presented. The presenter will draw on BA work conducted as part of a NIMH-funded community-based randomized controlled trial with Latinos with recent onset psychosis and their families in a Southern California region of the U.S. to exemplify this integration.

### **WCCBT Training Guidelines: Goals, Content, and Implications**

CBT is practised around the world, and the World Health Organization has also recognised CBT as a critical option for the treatment of mental disorders. Additionally, as a result of the COVID pandemic, there has been an increase in mental health problems. However, there is a limited number of trained practitioners to address the increasing mental health need (WHO, 2022). As a result, WCCBT has created an expert committee on accreditation and training as part of its global objectives. This symposium, by members of the WCCBT Training and Accreditation (TAC), will report their results of three years of work. We will provide an introduction to the TAC (Luis) and briefly present perspectives in training from different countries (Andrea and Firdaus) to highlight the global diversity in CBT training models. Next, we will present the culmination of the TAC's works, the WCCBT training guidelines, that can be considered by associations that make up the WCCBT, as regulators in their own continents and countries (Mehmet, Firdaus, and Andrea). Included in the guidelines will be an updated and inclusive definition of CBT, a description of a foundational knowledge and competencies related to assessment, case conceptualization and treatment that practitioners should demonstrate at the end of their training. Suggested method of training and evaluation will also be presented. Finally, the social, professional, scientific and ethical implications of a global definition of CBT, and core and advance knowledge and competencies will be discussed. It will be argued that this work will yield a more consistently and better trained set of cognitive behavioral therapists to promote global mental health. The implications of this initiative will be discussed.

### **Introduction and History on Development of WCCBT Training Guidelines**

Luis Oswald Perez Flores, Universidad Ricardo Palma, Lima, Perú

### **WCCBT Training Guidelines: Goals, Preamble, Assumptions & Definition**

Mehmet Sungur, Istanbul Kent University, Türkiye

### **(A) CBT Training: Perspective From North America (B) Training and Evaluation**

Andrea Ashbaugh, University of Ottawa, Canada

### **(A) CBT Training: Perspective From Southeast Asia (B) CBT Fundamental and Competencies**

Firdaus Mukhtar, Universiti Putra Malaysia, Malaysia

## Emotions in Social Anxiety Disorder: Shame, Pride, and Anger, and Their Role in Maintaining the Disorder

Social Anxiety Disorder (SAD) is a prevalent condition with diverse negative consequences. Extant models of SAD have predominantly focused on the role of cognitions and behaviors in the maintenance of the disorder. However, in recent years there has been a growing interest in emotions and the role they play in the maintenance of mental disorders in general and SAD in particular. Whereas previous studies have focused on broad emotional constructs such as positive and negative effects, the present symposium will show that doing so obscures important differences between discrete emotions and that examining specific emotions can offer important insights and can inform maintenance models of SAD.

The first presentation focuses on the experience of pride in the daily lives of individuals with SAD. In that study 44 individuals with SAD and 44 individuals without SAD completed an experience sampling (ESM) procedure in which they reported on interactions in their daily lives and their emotions every day for 21 days. We found that individuals with SAD experienced less pride compared to individuals without SAD. We also found that pride predicted subsequent changes in anxiety among individuals with SAD but not among individuals without SAD. We discuss the role that pride may play in disorder and its maintenance.

The second presentation focuses on anger and used the same ESM design as the one described in the first presentation. We found that individuals with SAD reported significantly higher levels of anger compared to individuals without SAD. In addition, higher levels of anger on a given day were associated with higher levels of anxiety on the following day, above and beyond the effect of anxiety on a given day. This effect remained above and beyond additional emotions such as sadness and guilt and above and beyond depressive symptoms.

The third presentation focuses on gender differences in the experience of shame among individuals with and without SAD. We found that individuals with SAD reported significantly more shame compared to individuals without SAD and that women reported significantly higher levels of shame compared to men. Additionally, we found a significant Diagnosis  $\times$  Gender interaction indicating that the effect of diagnosis was greater for women. Finally, we found that for women, shame significantly predicted subsequent anxiety among individuals with SAD but not among individuals without SAD (whereas this was not found for men).

The fourth and final presentation focuses on safety behaviors and their effects on the experience of positive emotions. We found that social anxiety significantly moderated the relationship between safety behaviors and positive emotions. Specifically, when social anxiety was low, the association between safety behaviors and positive emotions was positive. However, when social anxiety was high, the association between safety behaviors and positive emotions was substantially negative.

Taken together, these findings can contribute to our knowledge of emotions and emotional processes in SAD and can inform models of the disorder.

### Pride in Social Anxiety Disorder

Roni Oren-Ygaoda, Nadav Paz\*, Idan M. Aderka

*University of Haifa, Israel*

The present study examined differences in the experience of pride between individuals with and without social anxiety disorder (SAD), and is the first to examine both the effects of context on pride and the temporal relationship between pride and anxiety in participants' daily lives. Eighty-eight participants took part in the study, half ( $n = 44$ ) met diagnostic criteria for SAD and half ( $n = 44$ ) did not. Both groups completed an experience sampling measurement (ESM) to assess the levels of pride and anxiety and the nature of interpersonal contexts in which these emotions were experienced every day for 21 consecutive days. Using multilevel linear modeling, our findings suggest that pride is diminished among individuals with SAD, that situations perceived as highly negative and positive, or as highly meaningful and positive are associated with the highest levels of pride, and that the experience of pride is associated with subsequent



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reductions in anxiety among individuals with SAD. These findings point to the role of pride in the disorder and can be used to inform and enhance therapeutic interventions for SAD.

## Quiet Rage: Anger in Social Anxiety Disorder

Roni Oren-Yagoda, [Gal Werber\\*](#), Idan M. Aderka

*University of Haifa, Israel*

The present study focused on the emotional experience of anger among individuals with and without social anxiety disorder (SAD). Eighty-eight participants took part in the study, half ( $n = 44$ ) met diagnostic criteria for SAD and half ( $n = 44$ ) did not meet criteria for SAD. Participants completed a 21-day experience sampling methodology (ESM) measurement in which they reported on daily social interactions and emotions. Using multilevel linear modeling we found that individuals with SAD experienced more anger compared to individuals without SAD. In addition, we found an effect for social context such that interactions with distant others were associated with elevated anger compared to interactions with close others. Finally, we found a diagnosis  $\times$  social context interaction such that interactions with distant others were associated with elevated anger compared to interactions with close others for individuals with SAD but not for individuals without SAD. Finally, we found that for individuals with SAD (but not those without SAD) anger on a given day (day  $t$ ) was associated with elevated anxiety on the following day (day  $t+1$ ), above and beyond previous anxiety, sadness and guilt (i.e., anxiety, sadness and guilt reported on day  $t$ ). This suggests that anger may play a unique role in maintaining or exacerbating anxiety among individuals with SAD. Additional implications of our findings for models of psychopathology and for treatment of SAD are discussed.

## What a Shame: Gender Differences in Shame in Social Anxiety Disorder

Roni Oren-Yagoda, [Adi Tene\\*](#), May Rosenblum, Idan M. Aderka

*University of Haifa, Israel*

Social anxiety disorder (SAD) is characterized by diverse gender differences. However, gender differences in shame – one of the core emotions linked to SAD – have not been examined. The present study aimed to address this gap. Forty-four individuals with SAD and 44 individuals without SAD participated in a 21-day experience sampling measurement (ESM). Specifically, participants reported on their emotions once a day at random times. Hierarchical Linear Modeling indicated that individuals with SAD reported significantly more shame compared to individuals without SAD. In addition, women reported significantly more shame compared to men. Importantly, gender differences in shame were more pronounced among individuals with SAD compared to those without SAD. Finally, we found that for individuals without SAD, shame on a given day significantly predicted anxiety on the following day among men but not among women, whereas for individuals with SAD, shame on a given day significantly predicted anxiety on the following day among both men and women. Our findings suggest that shame may play a role in the maintenance of SAD, such that elevated shame may lead to subsequent social anxiety. In addition, our findings suggest that social anxiety disorder may impact women's experience of shame more than men's.

## **The Effect of Safety Behaviors on Positive Emotions in Social Anxiety Disorder**

Roni Oren-Yagoda, [Adi Prihar\\*](#), Bar Oren, Idan M. Aderka

*University of Haifa, Israel*

The present study examined contextual factors that affect safety behavior use as well as the effect of safety behaviors on positive emotions among individuals with SAD. Eighty-eight participants took part in the study, half ( $n = 44$ ) met diagnostic criteria for SAD and half ( $n = 44$ ) did not meet criteria for SAD. Participants completed a 21-day experience sampling methodology (ESM) measurement in which they reported on daily social interactions, safety behavior use, and emotions. Using multilevel linear modeling we found that both individuals with and without SAD used more safety behaviors when interacting with distant others compared to close others, but this effect was greater for individuals with SAD compared to individuals without SAD. We also found that social anxiety significantly moderated the relationship between safety behaviors and positive emotions. Specifically, when social anxiety was low, the association between safety behaviors and positive emotions was positive. However, when social anxiety was high, the association between safety behaviors and positive emotions was substantially negative. Implications of our findings for models of psychopathology and for treatment of SAD are discussed.

### **Psychedelic-Assisted Psychotherapy: A Powerful Way To Induce Change in a Stuck (Cognitive Behavioral) Psychotherapy**

Since the beginning of the new millennium, we have been experiencing a renewed interest in psychedelics with a revival of scientific research into the therapeutic applications of psychedelics. The presented symposium is intended to explore the integration of psychedelics in cognitive and behavioral therapy (CBT) and should especially emphasize the innovative aspect of the therapeutic application. It is based on experiences from the psychedelic-assisted CBT program in Geneva University Hospital which is one of the first of its kind to use psychedelics for compassionate treatment of complex patients in a clinical setting.

The first presenter (Zullino) will talk about the essential effects of psychedelics and their use in CBT. On the one hand, the expansion of consciousness has been shown in recent studies to increase the capacity to change one's worldview. On the other hand, the altered psychic and bodily sensations during psychedelic sessions offer the possibility to expose patients to new internal stimuli as compared to repeated exposure to anxiety-provoking stimuli in classical CBT. The second presentation (Rothen) will illustrate a mode of utilizing Acceptance and Commitment Therapy (ACT) as a therapeutic framework for psychedelic assisted psychotherapy. As current research offers few examples of practical CBT interventions using psychedelic assisted treatment, the last two presentations will illustrate clinical examples of patients receiving CBT therapy and psychedelic assisted treatment. One talk (Thorens) will present a CBT treatment experience in a patient with a generalized anxiety disorder with predominantly agoraphobia and claustrophobia. The patient received classical exposure treatment during and after three psychedelic-assisted therapy sessions (psilocybin 25 mg twice and 35mg). The other presentation (Penzenstadler) will talk about a patient with severe obsessive-compulsive disorder who received three psychedelic assisted sessions (LSD 100 mcg and 200mcg).

### **Essential Effects of Psychedelics and Their Use in CBT**

Daniele Zullino\*

*Geneva University Hospital, Switzerland*

Since the beginning of the new millennium, we have been experiencing a renewed interest in psychedelics with a revival of scientific research into the therapeutic applications of psychedelics. The presented symposium is intended to explore the integration of psychedelics in cognitive and behavioral therapy (CBT) and should especially emphasize the innovative aspect of the therapeutic application. It is based on experiences from the psychedelic-assisted CBT program in Geneva University Hospital which is one of the first of its kind to use psychedelics for compassionate treatment of complex patients in a clinical setting.

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## **Geneva Compassionate Use Program for Psychedelic Assisted Psychotherapy: A Case Report of a Patient With Obsessive-Compulsive Disorder**

Louise Penzenstadler\*

*Geneva University Hospital, Switzerland*

The psychedelic-assisted CBT program in Geneva University Hospital which is one of the first of its kind to use psychedelics for compassionate treatment of complex patients in a clinical setting. According to the Swiss Federal Act on Narcotics and Psychotropic Substances, the Federal Office of Public Health has started again to issue licenses for the restricted medical use of LSD and psilocybin. Physicians can submit applications for limited medical use if a patient suffers from a mostly incurable disease, conventional treatments have failed and the suggested treatment, in this case psychedelic-assisted psychotherapy can potentially improve the patient's quality of life. This presentation will give an overview of the psychedelic-assisted CBT program in Geneva University Hospital and illustrate this using the example of a patient suffering from severe obsessive-compulsive disorder and generalized anxiety disorder. The patient in question received three psychedelic assisted sessions (LSD 100 mcg twice and 200mcg). The treatment protocol included an exposure therapy component, both before and after the psychedelic treatment.

The patient experienced a significant improvement in his score on the YBOCS Questionnaire before and after therapy. The treatment effects are present 4 months after the last session. The patient describes an overall improvement of his symptoms with greater ease to distance himself from obsessive thoughts and feeling overall more relaxed.

Psychedelic-assisted psychotherapy is a promising form of treatment for patients with anxiety disorders such as obsessive-compulsive disorder.

## **A Case Report of Exposure Therapy Under Psilocybin for General Anxiety Disorder and Claustrophobia**

Gabriel Thorens\*

*Geneva University Hospital, Switzerland*

### **INTRODUCTION**

Psychedelic-assisted psychotherapy (psilocybin and LSD) is based on the patient's psychedelic experience. During this experience, psychic and bodily sensations are strongly altered. This psychotherapy offers the opportunity for patients to expose themselves to new internal stimuli different from those usually experienced in chronic anxiety disorders.

### **METHOD**

Case report of a patient with a generalized anxiety disorder with predominantly agoraphobia and claustrophobia. The patient benefited from three sessions of psychedelic-assisted therapy (psilocybin 25 mg twice and 40mg). The treatment protocol included an exposure therapy component, both before and during the psychedelic treatment. The patient exposing himself to the elevator before and after taking the psilocybin.

### **RESULT**

The patient experienced a significant improvement in his score on the Beck Depression Inventory-II (BDI-II), the State-Trait Anxiety Inventory (STAI), and the Fear Questionnaire before and after therapy. He reported a generalization of the treatment effects, feeling more relaxed and having a greater willingness to confront fearful situations

### **CONCLUSION**

Psychedelic-assisted psychotherapy is a promising form of exposure to internal stimuli and, coupled with conventional exposure therapies, could allow for a potentiation of treatments for specific generalized anxiety disorders.

## New Technologies To Assess Working Mechanisms of CBT Interventions for Anxiety Disorders

Anxiety disorders are one of the most prevalent mental health disorders and about 30% of people meet the criteria of clinical diagnosis of anxiety at some point during their life. It is among the leading contributors to the burden of disease in high-income countries and associated with significant personal suffering. The good news is that there are evidence-based treatments such as Cognitive Behavioral Therapy (CBT). Meta-analyses labelled CBT for anxiety problems as efficacious. However, about 50% of patients who start anxiety treatment recovers. Thus, our best treatment for anxiety is effective for only about half of the patients. This signals a need for improvement. To be able to improve treatment, more research is needed into working mechanisms of CBT.

In this symposium, an international group of experts from Belgium and The Netherlands will present research conducted in collaboration with universities from the USA and Germany, regarding new approaches to investigate working mechanisms of CBT interventions for anxiety disorders. This symposium focuses on innovative research questions by presenting research that use new technologies like Experience Sampling Method (ESM), virtual reality, and online platforms for the administration of interventions.

In the first presentation, Ellin Simon (Open University, The Netherlands) will present research on the fully online 'Learn to Dare!' intervention, designed to increase the accessibility of anxiety treatment. Ellin will present data on the outcomes of the intervention and shed light on the working mechanisms of CBT by examining the efficacy of three elements in decreasing anxiety, namely psycho-education, exposure based on inhibitory learning, and cognitive restructuring (study protocol: <https://doi.org/10.1186/s12888-020-2462-3>). The second presentation by Vera Bouwman (Utrecht University, The Netherlands) presents new empirical data (N = 70) on the temporary dynamic response to a single exposure exercise based on inhibitory learning model for fear of public speaking (pre-registration: <https://doi.org/10.17605/OSF.IO/K2P84>). Using Experience Sampling Method (ESM), the likelihood and severity of a threat expectancy is measured multiple times to see how and for how long the effects of exposure carry over to daily life. Thirdly, Sara Scheveneels (KU Leuven, Belgium) will present two papers that examine the underlying working mechanisms that drive the effects of virtually reality exposure therapy (VRET) for anxiety disorders. In the first study (N = 43), the role of expectancy violation is examined by manipulating whether certain outcomes could occur during VRET and see how this affects treatment outcome (<https://doi.org/10.3389/fpsyg.2019.02849>). The second study (N = 122), examined whether self-reported expectancy violation predicts VRET outcome in spider phobia. And finally, Elske Salemink (Utrecht University, The Netherlands) will present two studies that investigate who is more likely to change within anxiety treatment for fear of public speaking (N = 39, Mobach et al., in press, and N = 100, pre-registration: <https://doi.org/10.17605/OSF.IO/GAEBW>). Given the role of interpretations in anxiety, level of interpretation bias may have an influence on effectiveness of therapy. Results showed that differences in responsiveness to a pre-treatment interpretation training (measured using ESM) predicts response to online exposure therapy.

Taken together, this symposium contains novel, state-of-the-art research that increases our understanding of potential working mechanisms of change in CBT for anxiety. These insights could have great potential for clinical practice as it could give directions for ways to optimize treatment.

Mobach, L., Van Loenen, R., Allart-van Dam, E., Borsboom, D., Wiers, R., & Salemink, E. (in press). Return to baseline after an interpretation training as a dynamic predictor for treatment response in social anxiety disorder. *Cognitive Therapy and Research*.

## **'Learn To Dare!': The Efficacy of an Online CBT-Based Intervention for Anxious Children**

Ellin Simon<sup>1\*</sup>, Susan Bögels<sup>2</sup>

<sup>1</sup> Open University Netherlands, Netherlands

<sup>2</sup> University of Amsterdam, Netherlands

'Learn to Dare!' is an intervention for high-anxious 8-13 year old children (n = 92). This intervention contains only three basic CBT-elements: psycho-education, exposure and cognitive restructuring. The intervention consists of eight sessions and is delivered completely online. Assessments took place before and after each of these elements and also included a 3-month follow-up. In addition to examining the development of anxiety levels and diagnoses over time, we also assessed avoidance and negative and positive cognitions. Moreover, this study uniquely examines exposure based on inhibitory learning for children. Original study protocol: <https://doi.org/10.1186/s12888-020-2462-3>.

## **Dynamic Response to One Exposure Exercise for Fear of Public Speaking**

Vera Bouwman\*

Utrecht University, Netherlands

### INTRODUCTION

Exposure therapy is generally effective in reducing anxiety. However, not everyone benefits from exposure. There are individual differences in how much individuals learn from exposure therapy. It is unclear how much individuals learn after one exposure session and how long they retain it. Therefore, the aim of this study is to increase our understanding of the dynamic response to one exposure exercise using the inhibitory retrieval approach (Craske et al., 2022) for individuals who fear giving speeches. We expected a temporary drop in likelihood of the idiosyncratic threat expectancy after the exposure exercise that translates to temporary changes in severity of threat expectancy, anticipatory anxiety, avoidance tendency, and willingness of giving a presentation. Furthermore, we expected individual differences in the recovery slopes of the likelihood of threat expectancy after the exposure exercise (i.e., time it takes to return to pre-exposure exercise state).

### METHOD

Female participants (N = 70, M age = 23.10, SD = 3.45) with subclinical public speaking anxiety took part in this study. On day 1, participants formulated their biggest worry when presenting in front of an audience (idiosyncratic threat expectancy) and rated its likelihood (0 = not at all, 100 = definitely). From day 2 until 9, participants filled in daily questionnaires (30 sec) on their mobile phone (Experience Sampling Method, ESM) to measure different aspects of their threat expectancy for eight days, eight times a day. Halfway, participants took part in an exposure exercise where they had to present in front of a small audience with the aim to decrease the likelihood of their threat expectancy. During the exposure exercise participants gave 2, 3, or 4 presentations of 5 minutes (stopped when likelihood scores was halved based on likelihood score at start of exposure).

### RESULTS

Out of 70 participants, n = 27 gave two presentations, n = 14 gave three presentations, and n = 29 gave four presentations during the exposure exercise. On average, threat expectancy likelihood significantly dropped from M = 68.37 to M = 35.37 during exposure. This translated to daily life as threat expectancy likelihood significantly dropped from M = 60.66 (all ESM measurements before exposure) to M = 46.52 (all ESM measurements after exposure). Furthermore, the exposure exercise led to a decrease in threat expectancy severity, anticipatory anxiety and avoidance tendency, and to an increase in willingness of giving a presentation. Around 38% of participants held

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on to the drop in threat expectancy likelihood four days after exposure and around 40% of participants returned to pre-exposure exercise state within the four days after exposure. Preliminary results using time series analyses showed an autoregression of threat expectancy likelihood across all participants, indicating a lingering effect of threat expectancy likelihood after exposure.

## DISCUSSION

To our knowledge, this is the first study that looked at the dynamic response right after one exposure exercise for fear of public speaking. The Experience Sampling Method can give new insights into how a drop in likelihood of an idiosyncratic threat expectancy during one exposure exercise translates to daily life in the short term (until four days after exposure).

Reference: Craske, M. G., Treanor, M., Zbozinek, T. D., & Vervliet, B. (2022). Optimizing exposure therapy with an inhibitory retrieval approach and the OptEx Nexus. *Behaviour Research and Therapy*, 152, 104069. <https://doi.org/10.1016/j.brat.2022.104069>

## **It Works, but How? Working Mechanisms in Virtual Reality Exposure Therapy: Expectancy Violation and Habituation**

Sara Scheveneels\*

*KU Leuven, Belgium*

Research on the efficacy of virtual reality exposure therapy (VRET) for anxiety disorders shows promising results, suggesting that it can be equally effective as in vivo exposure. At the same time, the underlying working mechanisms that drive these effects remain largely unexplored. In line with two predominant theoretical accounts on exposure, expectancy violation and habituation are candidate-mechanisms. Especially regarding expectancy violation, it seems at first sight puzzling how this can occur in VRET. An expectancy violation account implies that a strong mismatch between expected outcomes (e.g., a plane crash) and actual outcomes of exposure (e.g., a safe flight) is essential. However, because of its “unreal” and simulated nature, certain aversive outcomes (such as a plane crash) can, from an objective point of view, not occur in VR or do not have the same devastating consequences (e.g. serious injury).

Two studies on this topic will be presented. A first study (Scheveneels et al., 2019) examined whether the degree of testable expectancies predicts VRET outcome in a sample with elevated levels of public speaking anxiety. Results showed that expectancies regarding own reactions were deemed to be better testable in VR as compared to other expectancies. We did not find evidence that participants who indicated that they were better able to test their feared expectancies during VRET benefitted more from the VRET. In a second study (Scheveneels et al., in preparation), we examined whether habituation and expectancy violation predicted VRET outcome in a sample with elevated levels of spider fear. Results showed that feared expectancies decreased after VRET and that this expectancy change predicted short-term VRET-outcome.

## **Time for Change: A Dynamic Approach To Predict Anxiety Treatment Outcome**

Elske Salemink<sup>1\*</sup>, Vera Bouwman<sup>1</sup>, Lynn Mobach<sup>2</sup>, Bethany Teachman<sup>3</sup>

<sup>1</sup> *Utrecht University, Netherlands*

<sup>2</sup> *University of Amsterdam, Netherlands*

<sup>3</sup> *University of Virginia, USA*

## INTRODUCTION

Cognitive Behavioral Therapy (CBT) with exposure is the recommended treatment for anxiety disorders. However, not everyone benefits from CBT. Despite considerable research efforts, consistent predictors of CBT outcome are scarce. Most studies only focused on static predictors that are measured on one occasion. Based on dynamic transition models, two experimental studies were conducted with a

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focus on a dynamic predictor: how long someone holds on to a change in interpretation bias following a short training. Interpretations play an important role in the maintenance of anxiety. After a temporary change towards more positive interpretations, repeated measures can show how long someone benefits from this 'push in the right direction'. In both studies, it was expected that individuals who hold on longer to positive interpretations, show more positive change in subsequent anxiety treatment.

## METHOD

In study 1, anxious participants (N=39) completed an interpretation bias assessment before and after training, and once a day for three days after the training, followed by a six-week CBT-program. Social anxiety symptoms were measured pre-treatment, during treatment, and post-treatment. In study 2, participants (N = 100) with subclinical public speaking anxiety filled in daily questionnaires (1 minute) on their mobile phone (Experience Sampling Method, ESM) for three days, ten times a day to measure IB. In the morning of the second day of the ESM period, participants performed an online computer task to train more positive interpretations (n = 50, positive Cognitive Bias Modification for Interpretations training) or a control task that does not change interpretations (n = 50, neutral interpretations training). On the fourth day, participants followed an online one-session exposure treatment for public speaking anxiety. Public speaking anxiety severity was assessed before treatment, one day, one week, and two weeks after treatment.

## RESULTS

In study 1, return to baseline was operationalized as the individualized slope of negative and positive interpretations across interpretation bias assessments. Analyses (intention-to-treat and completers) analyses showed no significant relation between the individualized slopes. An explanation might be that interpretation was already back to baseline the next day, suggesting that more measurements per day are necessary. In study 2, ten measurements per day were implemented. Return to baseline was operationalized as an autoregressive coefficient for lagged-effects and analyses revealed that this coefficient is associated with treatment outcome. That is, individuals who take longer to return to their baseline level of functioning after interpretation bias training (a larger autoregressive coefficient) showed a stronger reduction in public speaking anxiety following treatment.

## CONCLUSION

When using multiple measurements per day (ESM), slower return to baseline as a dynamic reactivity index has predictive value for CBT-outcome in individuals with social anxiety symptoms. As such, these findings suggest that a dynamic approach using a 'push' to the system might be a promising approach to predict who is ready for treatment.



## **Biased Selective Attention and Attentional Control in Anxiety Vulnerability: Multiple Perspectives on Their Relationship**

Cognitive theories and experimental evidence implicate biases that favour the processing of negative information as being characteristic of heightened anxiety and anxiety-linked psychopathology. Critically, there is good evidence to indicate that these attentional biases not only differentiate individuals with elevated anxiety but may also contribute to maintaining elevated anxiety. Thus, cognitive researchers currently seek to determine how other attentional mechanisms influence the manner that attentional biases characterise heightened anxiety.

One candidate mechanism is the ability for individuals to control the allocation of their attention, "attentional control". Though relatively few, studies are increasingly demonstrating relationships between variation in attentional control, attentional biases, and anxiety. The current symposium presents the audience with recent innovative and informative research that further reveals the role of attentional control on the relationship between attentional biases and anxiety in the domains of social anxiety, worry, body image, and contamination fear.

Yachun Feng will present findings concerning the relationships between attention bias, attention control, and worry across different behavioural measures of attention bias and control. The findings show no direct associations between attention bias and worry or attention control and worry but raise the potential explanation that attention control moderates the relationship between attention bias and worry. Findings also indicate that self-perceived attention control ability does not reflect behavioural attention control ability and is related to attention bias.

Mahdi Mazidi Sharafabadi will showcase research that examined whether attentional control moderates the association between attentional bias toward negative socially relevant information and social anxiety. Findings revealed that while participants with low levels of attentional control exhibited an association between social anxiety and selective attention to negative information, this association was eliminated among participants with high levels of attentional control. The study is the first to demonstrate this effect using behavioural measures of attention.

Julian Basanovic will discuss recent work demonstrating evidence of a relationship between attentional control on a novel antisaccade task, followed by findings indicating that performance on the task moderates the degree of association between body-satisfaction concerns and attentional bias towards thin-ideal body stimuli amongst young women. These results provide a clear explanation for mixed evidence of biased attentional processing of thin-ideal and non-thin images amongst women with high body-satisfaction concerns.

Patrick Clarke will describe research examining attentional biases in contamination fear, an area that has produced mixed findings. One reason for this could be that contamination fear is characterised by a phenomenon of attentional bias variability that has been implicated in other forms of psychopathology and is known to be associated with attention control. This research examined attention bias variability for contamination-related and mitigation-related stimuli and indicates a role of attention control in this relationship.

The symposium will conclude with a discussion led by the module convenor, which will integrate the presented research and discuss the implications for future research directions in the space.

## **Investigating the Relationships Between Attention Bias, Attention Control, and Worry Using Different Behavioural Measures**

Ya-Chun Feng<sup>1\*</sup>, Hao-Yun Cheng<sup>1</sup>, Xue-You Guo<sup>1</sup>, Yuan-Ru Chang<sup>1</sup>, Bo-Cheng Kuo<sup>2</sup>, Colette Hirsch<sup>3</sup>

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Constant and uncontrollable worry is a core symptom of generalised anxiety disorder (GAD). According to the cognitive model of worry (Hirsch & Mathews, 2012), cognitive factors that maintain worry include biased attention towards negative information (i.e., negative

attention bias) and the impaired capacity to direct attention orientation and focus on the current task (i.e., attention control). Evidence has supported that individuals with high levels of worry have poor attention control (e.g., Hayes et al., 2008) and negative attention bias (e.g., Williams et al., 2014), but some of the evidence was mixed (e.g., Engels et al., 2007; Goodwin et al., 2017). In addition, it is still unclear whether attention control influences attention bias, given some previous studies (e.g., Derryberry & Reed, 2002; Goodwin et al., 2017; Lonigan & Vasey, 2009) used self-reported questionnaires for assessing attention control rather than objective performance measures, e.g., behavioural measures, when investigating relationships between attention bias and attention control. Given that there is a discrepancy between self-perceived and object attention control capacity (Clarke & Todd, 2021) and only a few studies have investigated whether attention control and attention bias are interactively associated with worry (e.g., Goodwin et al., 2017), the role of attention control capacity in relation to worry and attention bias is still unclear. Therefore, the current study aims to investigate the relationships between attention bias, attention control, and worry with different attention bias and attention control objective behavioural measures. Seventy-three participants with different levels of worry completed assessments of worry and attention control via self-reported questionnaires (PSWQ, ACS, and eACS). Objective attention bias and attention control capacity when processing emotional information were assessed via two attention bias measures (Posner's and the dot-probe task), and three attention control measures (the emotional n-back, antisaccade, and the switching task). The findings show no direct associations between attention bias and worry, and objective attention control and worry. The results could be explained by the fact that objective attention control moderates the relationship between attention bias and worry. Findings also suggest that self-perceived attention control does not reflect the behavioural attention control capacity, but is related to involuntary attention bias and self-reported worry. The current results may explain the inconsistency of research findings in this area.

## **The Role of Impaired Attentional Control in the Relationship Between Heightened Social Anxiety Vulnerability and Attentional Bias To Negative Social Information**

**Mahdi Mazidi<sup>1\*</sup>, Ben Grafton<sup>1</sup>, Julian Basanovic<sup>2</sup>, Colin MacLeod<sup>1</sup>**

<sup>1</sup> *The University of Western Australia, Australia*

<sup>2</sup> *University of Exeter, UK*

Cognitive theories of social anxiety implicate attentional bias to negative social information in the development and maintenance of heightened social anxiety. Empirical evidence for this proposal, however, has been inconsistent. The aim of the current study was to examine the role of attentional control, which is one's ability to deploy attention to goal-relevant information as a potential moderator of the association between attentional bias to negative social information and social anxiety. Eighty-nine adults were recruited through the Mechanical Turk platform and completed the Social Interaction Anxiety Scale as well as a novel paradigm designed to measure attentional bias to negative social information (angry faces) and attentional control. Attentional control was operationalised as the relative speeding to orient attention to goal-relevant stimuli compared to goal-irrelevant stimuli. The results supported the hypothesis that attentional control plays this moderating role. Specifically, while participants with low levels of attentional control exhibited a positive association between social anxiety and attentional bias to negative social information, this association was eliminated among participants with high levels of attentional control. The current study is the first to our knowledge that has tested the hypothesis that attentional control moderates the association between social anxiety and attentional bias to negative social information using a task that employs an objective measure of attentional control, and the well-established probe approach to assess attentional bias to negative social information. This finding may explain the heterogeneity of research findings in this area. Implications, limitations, and directions for future research are discussed.

## Body Dissatisfaction and Selective Attention to Thin-Ideal Bodies: The Moderating Role of Attentional Control

Laura Dondzilo<sup>1</sup>, Julian Basanovic<sup>2\*</sup>

<sup>1</sup> University of Western Australia, Australia

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It has been widely hypothesised that elevated body dissatisfaction is characterised by a biased pattern of attentional selectivity that reflects increased attention to stimuli portraying the thin-ideal. Empirical evidence in support of this notion, however, has been inconsistent. The current study aimed to examine the potential moderating role of attentional control in the association between body dissatisfaction and selective attentional responding to thin-ideal bodies. Female undergraduate students (N = 232) completed a self-report measure of body dissatisfaction followed by performance-based measures of attentional control and selective attention. Results provided support for the moderating role of attentional control. Specifically, a positive association between body dissatisfaction and biased selective attention towards thin-ideal bodies was evident only amongst individuals with relatively low levels of attentional control. A general association between body dissatisfaction and selective attention was not observed. These findings may explain previous inconsistent findings and highlight the importance of considering the potential role of attentional control in the expression of body dissatisfaction-linked attentional responding to thin-ideal bodies.

## Attention Bias Variability and Attention Control in Contamination Fear

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The onset of the COVID-19 pandemic resulted in a dramatic increase in the salience and importance of information relating to both the risk of infection, and information that could mitigate against such risk. This is likely to have contributed to elevated contamination fear concerns in the general population. Biased attention for contamination-related information has been proposed as a potential mechanism underlying contamination fear, though evidence regarding the presence of biased attention has been somewhat inconsistent. A possible reason for this is that contamination fear may be characterised by variability in attention bias that has not yet been examined. The current study examined the potential association between attention bias variability for both contamination-related and mitigation-related stimuli, and contamination fear during the early stages of the COVID-19 pandemic. Given past findings showing that attention control may account for relationships between measures of emotional vulnerability and attention bias variability, we also included a measure of inhibitory attention control. A final sample of 315 participants completed online measures of attention bias and contamination fear. The standard average measure of attention bias for contamination-related stimuli and mitigation-related stimuli did not predict contamination fear ( $r = 0.055$  and  $r = 0.051$ ,  $p > .10$ ), though both attention bias variability measures did show a small, significant relationship with contamination fear ( $r = 0.133$ ,  $p < .05$ ;  $r = 0.147$ ,  $p < .01$ ). While the attention bias variability measures were also observed to account for significant additional variance in contamination fear above the average attention bias measure (and controlling for response time variability), they did not remain significant when controlling for attention control (antisaccade accuracy). Thus while the current findings therefore provide initial evidence for a small association between attention bias variability and contamination fear, they also suggest that this effect may not remain when accounting for variance in attention control.

### **Nonverbal Synchrony in Social Anxiety Disorder**

Social anxiety disorder (SAD) is a common and debilitating psychiatric disorder resulting in significant interpersonal impairment. Both empirical studies and models of SAD have suggested that nonverbal synchrony (the synchrony in movement between individuals with SAD and their interaction partners) may be impaired in the disorder. The present symposium will be comprised of 3 presentations of studies that examined nonverbal synchrony in interactions of individuals with SAD (or individuals high on social anxiety) with others. The first presentation will focus on interactions of individuals with and without SAD with strangers during both small talk conversations and intimate, closeness-generating conversations. Nonverbal synchrony in these interactions was measured using objective machine-based video analysis, providing a new avenue for examinations of social anxiety. The findings demonstrated that individuals with SAD over-synchronize with their partners in small-talk conversations compared to individuals without SAD. However, individuals with SAD under-synchronized with their partners in closeness-generating conversations compared to individuals without SAD. This could be because intimate conversations generate elevated anxiety and individuals with SAD do not have the resources to adequately synchronize with others.

The second presentation will focus on a comparison of objective machine-based video analysis with human observer coding, in the measurement of nonverbal synchrony during dyadic interactions of individuals with SAD. The findings provide validation for both types of coding. However, machine-based coding was found to be superior to human observer coding in assessing social anxiety during the interactions. We discuss clinical and research implications of the findings.

The third presentation will focus on diagnostic interviews of individuals with SAD to examine whether nonverbal synchrony can be a marker of SAD during diagnostic assessments. Findings demonstrate that diagnostic interviews with individuals with SAD had lower nonverbal synchrony compared to interviews with individuals without SAD. The findings indicate that individuals with SAD synchronize less with their interviewers compared to individuals without SAD, and that nonverbal synchrony could inform the diagnostic decisions. We will discuss these findings together and focus on how dyadic synchrony can contribute to studies on psychopathology and treatment more broadly, as well as specifically help us understand interpersonal impairment in SAD, aid and facilitate diagnosis of SAD and can enhance our understanding of psychotherapy.

### **Out of Sync: Nonverbal Synchrony in Social Anxiety Disorder**

Maya Asher, Amitay Kauffmann, Idan M. Aderka\*

*University of Haifa, Israel*

We examined nonverbal synchrony during opposite-sex interactions of individuals with social anxiety disorder (SAD). Participants were 156 individuals: 38 diagnosed with SAD and 118 individuals who were not socially anxious (NSA). Participants formed 78 dyads of either 2 NSA individuals (control dyads;  $n = 40$ ) or 1 individual with SAD and 1 NSA individual (SAD dyads;  $n = 38$ ). Dyads were randomly assigned to either a closeness-generating conversation or a small-talk conversation, and nonverbal synchrony was derived from computer analysis of videos. We found that for control dyads, closeness-generating conversations led to increased nonverbal synchrony compared with small-talk conversations but did not find the same outcome in SAD dyads. We also found a positive association between social anxiety and nonverbal synchrony in small-talk conversations but a negative association in closeness-generating conversations. Thus, we found evidence for impaired nonverbal synchrony in SAD using objective measures. Implications for psychopathology and treatment are discussed.

## **Man vs. Machine: A Comparison of Human and Computer Assessment of Nonverbal Behavior in Social Anxiety Disorder**

Talia Shechter Strulov\*, Maya Asher, Idan M. Aderka

*University of Haifa, Israel*

Social anxiety disorder (SAD) is a common psychological disorder associated with broad interpersonal impairment. Most previous studies have examined nonverbal behavior in SAD using human coders. However, one recent study utilized a machine-based analysis of nonverbal behavior and dyadic synchrony in SAD (Asher, Kauffmann, & Aderka, 2020). In the present study, we compared human and computer assessments of nonverbal behavior in social anxiety to enhance our knowledge about their commonalities and unique differences in capturing nonverbal behavior in the context of SAD. Specifically, the present study included 152 individuals: 38 individuals diagnosed with SAD and 114 individuals without SAD. Participants formed 76 opposite-sex interaction dyads comprising either two individuals without SAD ( $n = 39$  control dyads) or one individual with SAD and one individual without SAD ( $n = 37$  SAD dyads). All participants underwent a getting-acquainted task and were videotaped during the conversation. Half of the interactions were small talk interactions and half were closeness-generating interactions that required significant self-disclosure. We found that both types of coding were associated with self-reported social anxiety but that machine-based coding was superior in capturing social anxiety in closeness-generating contexts. Implications for research on nonverbal behavior in SAD are discussed.

## **Nonverbal Synchrony in Diagnostic Interviews of Individuals With Social Anxiety Disorder**

Hallel Shatz, Roni Oren-Yagoda, Inbar Tsoran Shaul\*, Idan M. Aderka

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The present study examined nonverbal synchrony (i.e., synchrony between individuals' movement) during diagnostic interviews of individuals with and without social anxiety disorder (SAD). Specifically, 42 individuals with SAD and 42 individuals without SAD underwent a structured clinical interview, and videos of clinical interviews were analysed using Motion Energy Analysis (an objective machine-based video analysis) to quantify each individuals' movement as well as dyadic synchrony. Results indicated that interviews of individuals with SAD had significantly lower levels of nonverbal synchrony compared to interviews of individuals without SAD. In addition, interviews of individuals with SAD had lower levels of pacing compared to interviews of individuals without SAD (pacing refers to synchrony in which the interviewer initiates movement to which the participant responds). Analyses with social anxiety represented as a continuum of severity (vs. a diagnostic dichotomy) resulted in similar findings. Thus, individuals with SAD synchronized with interviewers' movement to a lesser extent compared to individuals without SAD, and social anxiety was associated with diminished synchrony. Implications for psychopathology and diagnosis of SAD are discussed.

### **From Trial to Clinic: Using Virtual Reality Technology To Improve Accessibility, Efficacy, and Breadth of CBT in Clinical Practice**

Virtual reality (VR) technology allows the user to experience a simulated virtual environment, as if they were “really there”. For three decades, this salient element of VR technology has been investigated as a means of improving CBT through habituation-based exposure therapy, behavioral experiments, skills training and much more. In short, VR makes it possible to work directly with patients in situations where they experience difficulties, i.e., a pub for patients with alcohol use disorder or a social gathering for patients with social anxiety.

Meta-analysis finds VR-based CBT to be effective for a wide range of disorders. Generally, these studies examine VR that simulates CBT exercises already performed in-vivo. This may explain why the efficacy of VR-based interventions seems to be comparable to standard treatment. In recent years however, rapid technological advancements have made it possible to use VR therapeutically in innovative ways, giving clinicians access to therapeutic options and methods that are not possible or feasible in standard CBT.

This symposium consists of four presenters with experience from studies examining innovative VR-based CBT interventions in clinical settings. This includes group-, milieu-, and automated CBT, applied across different psychiatric diagnoses from outpatients with alcohol use disorder or anxiety, to inpatients with complex dual-diagnosis disorder. The symposium will cover the currently available research of VR-based CBT and discuss how to utilize VR to improve the efficacy and accessibility of CBT. This includes dissemination of VR-based CBT to clinicians and patients, logistics (storage, disinfections, manuals etc.) and the development of virtual therapeutic environments. MD, PhD-student Daniel Thaysen-Petersen will present the ongoing ‘CRAVR’ study, where VR-exposure to high-risk situations are implemented in CBT-based treatment of patients with alcohol use disorder. He will discuss the development of the VR environments (including a restaurant, supermarket, pub, and party) and present data from the pilot study. Initial findings indicate that the intervention is feasible, acceptable, and effective compared to conventional CBT.

MD, Chief psychiatrist Jakob Krarup will report findings from the Danish Cognitive Milieu Therapy Virtual Reality investigation. In this study, VR headsets are used freely by an inpatient dual diagnoses population as a method of distraction, relaxation, and exercise. Outcomes were usage of PN medication and implementation data from staff and patients. Post Project the VR intervention is now implemented in the wards. Implications for future developments and implementation will be discussed.

Next, clinical Psychologist, PhD, Benjamin Arnfred will discuss his experiences of integrating Virtual Reality Exposure Therapy in outpatient group therapy for agoraphobia and social anxiety disorder. He will also discuss perspectives on the future of virtual reality technology in psychotherapy and the importance of the hardware and software in VR-based therapy.

Lastly, psychologist Vivian Heinola-Nielsen will talk about how to conduct behavioral experiments in VR in the treatment of social anxiety in patients with comorbid psychosis and substance use disorder. The presentation is based on four cases and covers in detail the clinical skills needed to integrate VR into clinical practice in an ethical and efficient way.

### **Virtual Reality in Cognitive Milieu Therapy for Integrated Dual Diagnose Treatment**

Jakob Krarup\*

*Mental Health Services Capital Region, Psychiatric Center Sct Hans, Denmark, Denmark*

This presentation will include the result of the Cognitive Milieu Therapy Virtual Reality (KMVR in Danish) Project including presentation of the 7 domains from the Model for Assessment of Telemedicine (MAST) design used to evaluate the project. Also, the duality between the CMT and the KMVR implementation will be addressed, together with Implications for the phase 2 KMVR where the patients among other things receive the headset at referral and keep them after the inpatient stay.

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In Denmark the public funded and political controlled healthcare system, the decision has been made to offer integrated dual diagnosis treatment funded on a behavioural concept of CBT and MI. The implementation starts ultimo 2024 and are set to be completed in 2026 on a nationwide level. To achieve this, Denmark will have to rely on widespread digitalisation of the development of staff competencies as well as further digitalisation of elements of the CBT treatment i.e., Psychoeducation, e-learning, podcasts, and automated and assisted VR CBT processes. This calls for an unprecedented knowledge base of not only the feasibility of, VR technologies in the psychological treatment framework which also encompass diagnostics, other psych-social interventions, as well as psychopharmacology intervention. At the department of psychiatry and dual diagnosis, Department M, Mental Health Center Sct Hans, Roskilde, Denmark, inpatient Integrated Dual Diagnoses Treatment (IDDT) has for 2 decades been delivered through a highly conceptualised Cognitive Milieu Therapy (CMT) organisation, where all clinical staff working in contact with the 76 inpatients is trained and supervised in 2nd wave CBT with an emphasis on the addiction intervention. The CMT reduced the level of coercion with 85% upon implementation. And there has been no coercion since March 2022. This is unique in this population of severe dual diagnose patients with referral diagnosis of psychosis, severe bipolar condition or complex personality disorder combined with a severe Substance Use Disorder.

The Cognitive Milieu Therapy Virtual Reality (KMVR) project is based in the IDDT CMT inpatient treatment in department M. During the part of admission to the 3 months program the patients were offered the opportunity of having their personal VR headset containing different content grouped in distraction and arousal lowering content. The patients were instructed in using the VR headset as one of the many strategies learned in the CMT. The outcome measure was use of VR and p.n. medicine.

Preliminary findings where the none of the 32 VR headsets were lost or damaged through the 8 month period. Contrary to the initial design, some patients were allowed to bring the VR headset with them when trying out new strategies at home weekends during the last period of their inpatient stay. Contrary to post project scepticism this went unproblematic. Post project the VR equipment continued to be on the wards, and 3 months post project all headsets were still in use in one of the wards, indicating interesting post project implementation data. Final feasibility and acceptability conclusions will be presented.

## **VR-CBT for Alcohol Use Disorder: Production of VR Environments, Implementation, Education of Staff, Results From a Randomized Clinical Trial, and Future Perspectives**

Daniel Thaysen-Petersen\*

*Psychiatric Center Sankt Hans, Mental Health Services in the Capital Region of Denmark, Denmark*

In the presentation, the development and feasibility of VR-CBT will be exhibited from review of CET literature to production of VR environments, education of staff, implementation into clinical practice, results from a randomized clinical trial, and future perspectives. Cognitive behavioral therapy (CBT) is considered best practice in the treatment of alcohol use disorder (AUD). Still, more than 60 percent relapse within the first year after treatment. Exposure to high-risk environments in virtual reality (VR) has been suggested to have a potential therapeutic benefit, but available studies have only applied VR to reduce cue reactivity in cue exposure therapy (CET). Therefore, we aimed to develop and investigate a novel intervention, implementing exposure to VR-simulated high-risk situation into manualized CBT of patients diagnosed with AUD.

The literature of non-technology and technology-assisted CET was systematically reviewed to investigate and compare the effectiveness of different CET-regimens. The systematic review identified 39 controlled trials investigating CET for patients with substance use disorders (SUDs). Results showed that CET was most effective when combined with CBT or CBT-related approaches, i.e., urge-specific coping-skills, mindfulness, and when delivered through VR.

Based on the findings, we developed a novel intervention implementing VR-assisted CET into conventional manualized CBT (VR-CBT). The feasibility was tested in two outpatient clinics in Denmark, where 10 patients diagnosed with AUD were randomized to three weekly sessions of either VR-CBT (restaurant environment) or CBT. Endpoints were drop-out rates, VR-induced reaction (cognitive analysis and cravings), cybersickness, and changes in total alcohol consumption, cravings, general functioning, and symptoms of depression



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and anxiety from baseline to one week and one month follow-up (FU). The feasibility study found a high completion rate of 90% and validated that VR exposure can induced high-risk related thoughts, emotions, physiological reactions. Patients receiving VR-CBT had a greater reduction in alcohol consumption than patients receiving conventional CBT at one week- (median 94% vs. 72%) and one month FU (median 98% vs. 55%). Only mild simulator sickness occurred during VR exposure.

Findings have been implemented into an ongoing randomized controlled trial (RCT) where 102 patients are currently being randomized to 14 sessions of VR-CBT or CBT. In the RCT, patients are exposed high-risk environments from a supermarket, party, pub, at-home, and restaurant for habituation, coping-skill training, and cognitive analysis as an intergrated part of manualized CBT. (Status: 50 patients included)

We found VR-CBT to be feasible, tolerable, and able to induce reactions relevant for CBT purposes. VR-CBT performed better than CBT in short-term reduction of alcohol consumption, heavy drinking days, and cravings. If the RCT shows improved efficacy, we aim to implement VR-CBT into clinical practice and investigate VR-CBT in populations with other substance use disorders and dual-diagnosis.

## **Integrating VR Into CBT for Psychosis: Do's and Don'ts When Conducting Behavioral Experiments in VR**

Vivian Heinola-Nielsen\*

*Mental Health Centre Sankt Hans, Mental Health Services in the Capital Region of Denmark, Denmark*

The presentation will initially cover the current state of evidence in relation to the use of VR within psychosis and addiction. Based on the experience of conducting VR-supported CBT with 4 dual diagnosis cases it will then move on to cover in detail the clinical skills needed to preparing, conducting, and evaluating behavioral experiments in VR.

For people with psychosis, both positive and negative symptoms give rise to social isolation, a restricted activity pattern and significant difficulties in functioning in everyday life. Avoidance of social situations is prevalent among people with psychosis. The avoidance is typically maintained by dysfunctional threat perceptions. When people cannot avoid situations they associate with danger, they will often engage in avoidance or safety behaviors including the use of alcohol or drugs before entering a feared situation. Avoidance and safety behaviors are problematic because the person does not realize that their thoughts about the situation are distorted and the state of anxiety is therefore maintained over time.

A well-established method within cognitive behavioral therapy for both social anxiety and anxiety due to paranoid delusions is the use of behavioral experiments. A behavioral experiment involves a planned experimental activity in which the patient is helped to examine the validity of his thoughts about himself, others and the world.

One challenge is that a behavioral experiment requires the patient to put themselves in a situation which is expected to activate anxiety, and this can be particularly difficult for people with psychosis. Also the effect of a behavioral experiment depends on how skilled we are in controlling the various variables that can affect the outcome of an experiment. At the same time, behavioral experiments in real life require that the patient's psychiatric condition allows them to move around on their own, which is not always the case for patients admitted to an inpatient unit.

A promising field of research is the use of virtual reality in the psychiatric care and treatment. It is well established that virtual reality is safe and acceptable to patients with psychosis and addiction. Common to several of the published studies is that the VR intervention is based on CBT or exposure therapy. VR make it possible to create powerful simulations of the scenarios in which psychological difficulties occur, providing a safe space to gain new experiences and try new behavior. Therefore, the ability to conduct a behavioral experiment in a VR environment can compensate for the challenges mentioned above: Regardless of which emotions are activated the patient knows that he/she is safe, the therapist has full control over which stimuli the patient is exposed to, and there is neither a risk of absenteeism nor of relapse into abuse of drugs. At the same time, behavioral experiments in a VR environment can be repeated an infinite number of times, which can promote learning in people with psychosis, who typically have difficulty generalizing knowledge and therefore need overlearning.



## **VR Exposure in Anxiety Treatment and Group Therapy: Examining the Impact of Specific VR Features in Exposure Therapy**

Benjamin Arnfred\*

*Mental Health Services Capital Region, Psychiatric Center Sct Hans, Denmark., Denmark*

The purpose of this presentation is to review the current state of VR based exposure therapy for phobic anxiety and attempt to answer the question of how we as researchers and clinicians might get the most out of VR technology in the future.

The use of virtual reality (VR) technology to deliver exposure therapy in the treatment of phobic anxiety i.e., social anxiety disorder, agoraphobia, and specific phobia, has been proposed to be advantageous compared with in-vivo exposure therapy. These proposed advantages are that VR allows for greater flexibility and control in presenting phobic stimuli. However, meta-analysis of studies comparing VR exposure to in-vivo exposure have not found VR exposure to have a superior treatment effect.

One reason for the lack of superior efficacy may be that the supposed advantages of VR exposure depend on the features of the technology. For example: To what extent do certain hardware and software features allow the clinician to work in a way that aligns with empirically supported models of exposure therapy?

Thus, this presentation will critically examine the use of VR technology in the treatment of phobic anxiety from three perspectives:

First, by presenting the results of a recent systematic review examining the use of VR technology in phobic anxiety treatment in extant research. This includes how it has been employed therapeutically and how that utilization relates to contemporary models of exposure therapy for social anxiety disorder, agoraphobia, and specific phobia.

Second, by presenting initial findings and experiences from the SoREAL trial, a large ongoing RCT examining VR exposure in group CBT for agoraphobia and social anxiety disorder. The SoREAL trial is the first study to examine VR exposure in a group therapy setting and is one of the largest group CBT studies in the world. The trial is also closely integrated in the clinical practice of the Danish mental health system and as such, findings from the trial are likely to mimic clinical effectiveness of the treatment.

Third, by discussing how specific features of modern VR technology could be utilized to increase the accessibility of evidence based mental health care, as well as giving clinicians access to therapeutic exercises informed by empirically based treatment models. For example, peer-based anxiety support groups have organically attracted significant attention in online multi-user virtual reality systems. Can we, as health professionals, draw inspiration from this?

### **Implementation of CBT and the Current Status of Research in Pakistan**

Cognitive Behaviour Therapy (CBT) has a strong evidence base and is recommended by the National Institute of Health and Clinical Excellence (NICE) in the UK and by the American Psychiatric Association (APA) in the US for a variety of emotional and mental health problems. However, most research comes from the western world. It is also difficult to use western models of implementation in low and middle income countries as the health care models are very different. In this symposium we will discuss the strategies we used to implement CBT at the national level in Pakistan. The origin, barriers and Success of PACT, the educational initiatives of PACT which is one year CBT diploma, and the updates of CBT research in Pakistan. As far as we are aware this is the only example of CBT implementation at a national level in a low middle income country.

### **Implementation of Cognitive Therapies in Pakistan**

Mirrat Gul Butt\*

*Pakistan Association of Cognitive Therapies (PACT), Pakistan*

Pakistan Association of Cognitive Therapy (PACT) and the associated Pakistan Institute of Cognitive Therapy (PICT) were founded in 2008 in Pakistan by a group of mental health professionals. The PACT is the umbrella organization that provides accreditation and training guidelines and public education. PICT is the platform to promote research, training, and service development. Today, we run an international CBT diploma, the first in South Asia, have conducted many RCTs of Culturally adapted CBT and have trained hundreds of mental health professionals in using CBT. We conduct regular workshops, courses and seminars as well as an international CBT conference. We currently have more than 2000 members. We regularly run social media campaigns to introduce CBT as many people were not aware of CBT when we started working. We also support four therapy centers. In this presentation I will discuss the barriers (such as lack of awareness of CBT among people) and facilitators (such as high percentage of younger people in Pakistan who are familiar with western mental health treatments) in implementation of CBT in Pakistan. We will also discuss strategies that were helpful such as developing a business model that is not dependent on foreign funding.

### **Setting up a CBT Diploma in a Middle-Income Country: An Example From Pakistan**

Madeeha Latif\*

*Pakistan Association of Cognitive Therapy (PACT), Pakistan*

This presentation will focus on our experience in setting up the first CBT diploma in South Asia. The Pakistan Association of Cognitive Therapy (PACT), and the Pakistan Institute of Cognitive Therapy (PICT) have provided CBT training through workshops and short courses since 2008. We trained hundreds of professionals in Pakistan through these initiatives. However, due to growing public demand and our realization that until and unless a new cadre of therapists is not produced it will be impossible to provide therapy at affordable price. Therapy is mostly provided in private setup in Pakistan. Pakistani universities produce thousands of psychology graduates (MSc or BSc) each year who are unable to get admissions for higher education due to limited resources. We therefore decided to start a CBT diploma for this group who could work as independent practitioners (although some fully trained psychologists and psychiatrists also joined the program) in 2019. We collaborated with universities in UK and Canada and follow the BABCP guidelines for training and accreditation. This course teaches theory, principles, and core skills of cognitive behavioral therapy (CBT) and key CBT skills. Additionally, the students are provided training in culturally sensitive therapy and in setting up a small business.

## Research on CBT in Pakistan: Overcoming Barriers

Sadia Abid\*

*Pakistan Association of Cognitive Therapy (PACT), Pakistan*

CBT has a strong evidence base and is recommended by almost all national organizations in high income countries. However, the situation is very different in low- and middle-income countries where CBT is not provided through the public health systems due to a variety of factors, such as lack of awareness of CBT, low mental health budget (Pakistan spends less than 1% of its health budget on mental health) and lack of research funding. Foreign funding focuses on ideas that might not be relevant to local ground realities. Pakistan Institute of Cognitive Therapy this(PICT) was setup in 2008 to promote research and education in CBT in Pakistan. We have conducted more than 20 trials of culturally adapted CBT in Pakistan. We also support research nationally through providing support and making our therapy manuals available for free for university students. During our foundation years we also provided small funding for research and regularly provide best research awards for the student projects. This presentation will provide a summary of the research trials conducted by PICT as well as those conducted along with the collaborators. We will also discuss our funding strategies. The successful partnership with local universities and involvement of university students and trainees as research volunteers to develop a successful research funding strategy in a low income countries.

### **Cognitive and Behavioral Therapies for Tinnitus: Adaptation, Delivery, and Flexibility**

Tinnitus cannot be treated, but the mental burden it carries can be alleviated. Cognitive behavioral therapy (CBT) remains the most recommended based on the consensus of the scientific community, including researchers and practitioners in the field of psychology, audiology, and tinnitus management. Mindfulness-based stress reduction is also recommended by many. Moreover, acceptance and commitment therapy (ACT) has also been studied for treating tinnitus, and the results are promising. For individuals with tinnitus to benefit from these psychological treatments across the globe, three main things need to happen: 1) more treatments need to be studied and gather enough empirical data proving their effectiveness, 2) already effective treatments need to be adapted for different cultures, 3) internet should be incorporated as an integral part for delivery of these treatments. This symposium is designed specifically to cover all of these points. In the first paper, Goda Gegieckaitė will present findings from a Lithuanian study exploring whether negative cognitions about tinnitus and the frequency of experienced mindfulness state are associated with the level of psychological difficulties among people having tinnitus. The second paper by Steven Hayes discusses the potential of applying the ACT model to tinnitus and how the concept of acceptance seems to work differently with annoyances like tinnitus and other chronic conditions. In a third presentation, Gerhard Andersson will overview the history of applying CBT to tinnitus treatment, including a successful transition to delivering CBT over the internet with minimal therapist support. This talk will also address critical challenges facing this field of study. Finally, Jonas Eimontas will showcase the results of the most recent randomized controlled trial comparing internet-delivered CBT for tinnitus to internet-delivered mindfulness-based tinnitus stress reduction intervention in a Lithuanian sample. The symposium concludes with a general discussion of the role cognitive and behavioral therapies have to play in tinnitus management.

### **Are Cognitions About Tinnitus and Mindfulness Associated With Depressive, Anxiety, and Insomnia Symptoms Among Individuals Experiencing Tinnitus?**

Goda Gegieckaitė\*, Dovile Savickaite, Jonas Eimontas

*Institute of Psychology, Vilnius University, Lithuania*

#### INTRODUCTION

Cognitive behavioral therapy (CBT) for tinnitus is one of the most established available treatments for bothersome tinnitus and in recent years mindfulness-based approaches have been gaining more attention in this area as well. One of the key principles in CBT for tinnitus is working on dysfunctional cognitions about tinnitus, which is believed to interfere with habituation and a more neutral response to tinnitus (Andersson, 2002; Cima, 2018; McKenna et al., 2015). Mindfulness-based approaches focus more on changing the relationship to tinnitus related emotions, thoughts, and sensations by increasing mindfulness and acceptance (Cima, 2018; Gans et al., 2023). While dysfunctional cognitions about tinnitus previously have been found to be related to a range of psychological problems, mindfulness association with tinnitus-related psychological distress has not been so well established in non treatment seeking samples (Cima et al., 2011; Conrad et al., 2015; McKenna et al., 2018; Roland et al., 2015). Also, while theoretically it has been suggested that mindfulness could decrease dysfunctional cognitions of tinnitus by increasing cognitive and metacognitive awareness (Rademaker et al., 2019), the association between the two has not been well studied in the tinnitus research field. The aim of this study was to analyze the association between mindfulness and cognitions about tinnitus and their association with depressive, anxiety, and insomnia symptoms among people experiencing tinnitus.

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## METHODS

The sample of this study consisted of 81 participants experiencing tinnitus, 66 women (81.5%), ages ranging from 23 to 90 ( $M = 62.49$ ,  $SD = 15.57$ ). Generalized Anxiety Disorder-7 questionnaire (Spitzer et al., 2006), Insomnia Severity Index (Bastien et al., 2001), Patient Health Questionnaire 9 (Kroenke et al., 2001), The Mindful Attention Awareness Scale (Brown & Ryan, 2003), Tinnitus Cognitions Questionnaire (Wilson & Henry, 1998) were used in the study.

## RESULTS

We found that mindfulness frequency score and cognitions about tinnitus, either positive or negative, were not significantly associated. Positive cognitions about tinnitus were not significantly associated with depressive, anxiety, or insomnia symptoms. However, negative cognitions about tinnitus had significant associations with depressive symptoms ( $r = .29$ ,  $p = .009$ ), anxiety symptoms ( $r = .43$ ,  $p < .001$ ), and insomnia symptoms ( $r = .23$ ,  $p = .040$ ). Mindfulness scores were associated with participants' depressive ( $r = -.48$ ,  $p < .001$ ), anxiety ( $r = -.40$ ,  $p < .001$ ), and insomnia symptoms ( $r = -.27$ ,  $p = .015$ ).

## DISCUSSION

Our findings indicate that there is a significant relationship between mindfulness and negative cognitions with depressive, anxiety, and insomnia symptoms in individuals with tinnitus. However, the absence of an association between mindfulness and negative cognitions suggests that they might operate through distinct mechanisms in contributing to psychological distress in individuals experiencing tinnitus.

## Applying the ACT Model to Tinnitus

Steven C. Hayes\*

*University of Nevada, Reno, USA*

Tinnitus can have severe psychological consequences, but it did not do so. In this paper I will describe how the psychological flexibility model helps us understand the psychological sequela of tinnitus and how processes of change can be focused on to ameliorate distress. From a psychological flexibility point of view, tinnitus shares a number of features with other health conditions, and the consistency of process and outcome data across these conditions suggest that a common analysis is possible. It is important, however, not to apply this understanding in the top down, normative fashion. Every person needs to be understood in a way that fits with their unique experience. I will show how recent developments in assessment and empirical analysis affords a new process-based approach that can address what is known about psychological interventions for tinnitus, including acceptance and commitment therapy and related methods from the larger family of behavioral and cognitive interventions, in a way that fits the needs of the particular individual.

## Tinnitus and CBT; How CBT Became the Most Evidence-Based Treatment of Tinnitus

Gerhard Andersson\*

*Linköping University, Sweden*

Tinnitus is defined as constant ringing or buzzing sounds in the ear(s) with not external origin. It is common with 15% of the adult population reporting tinnitus. There is rarely a medical cure and therefore psychological treatments can be considered to reduce the distress associated with the condition. In this talk I will provide an overview of how CBT was developed and tested for tinnitus. The first work was done in the 1980s and was followed by several innovations in techniques and delivery formats. Overall, effects of CBT for

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tinnitus tend to be moderate to large. Unfortunately, few CBT clinicians work with tinnitus leaving many persons with severe tinnitus behind. The talk will end with suggestions on how to improve the situation and disseminating CBT to more people.

## **Efficacy of an Internet-Delivered Cognitive Behavioral Therapy Program for Tinnitus Compared to an Internet-Delivered Mindfulness-Based Tinnitus Stress Reduction Program: A Randomized Controlled Trial**

Jonas Eimontas<sup>1\*</sup>, Goda Gegieckaitė<sup>1</sup>, Gerhard Andersson<sup>2</sup>, Livija Arcimavičiūtė<sup>1</sup>, Eugenijus Lesinskas<sup>3</sup>

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### INTRODUCTION

Tinnitus management has been successful when applying cognitive behavioral therapy (CBT). Internet-delivered CBT (iCBT) treatments have been proven to be efficacious in reducing tinnitus distress. Mindfulness-based treatments have also demonstrated promising efficacy results when delivered in a format of internet-based interventions. This is the first study that aimed to test the efficacy of an internet-delivered mindfulness-based stress reduction intervention (iMBTSR) in comparison to a CBT-based internet-delivered treatment.

### METHODS

Individuals experiencing bothersome tinnitus were invited to participate in an 8-week-long internet-based intervention study. Primary outcomes were measured using Tinnitus Handicap Inventory (THI) which is designed to measure distress in individuals experiencing tinnitus. Secondary outcomes included the Patient Health Questionnaire (PHQ-9), which was used to measure depression symptoms, the General Anxiety Disorder scale (GAD-7) was used to measure anxiety symptoms, and the Insomnia Severity Index (ISI), to measure sleep problems. After the screening, 67 individuals aged between 22 and 77 years ( $M = 45.52$ ,  $SD = 13.96$ ), 52 of whom were women (78%), met all inclusion criteria and were randomized to either of three study arms: iCBT, iMBTSR, or waiting-list control. All participants in treatment arms received regular therapist support while participating in the program.

### RESULTS

The mean level of tinnitus distress as measured with THI was  $M = 58.08$  ( $SD = 19.01$ ). Participants randomized into treatment groups did not differ significantly in their perceived tinnitus handicap severity,  $F(2, 64) = 1.43$ ,  $p = .246$ , sleep problems,  $F(2, 64) = 1.69$ ,  $p = .193$ , symptoms of anxiety  $F(2, 64) = 0.20$ ,  $p = .823$ , age  $F(2, 64) = 1.17$ ,  $p = .316$  or gender  $X^2 = 2.28$ ,  $df = 2$ ,  $p = .319$ , but participants did differ in symptoms of depression. The difference was found between iMBTSR and control groups,  $p = .041$ . The participants are expected to complete the treatment program by the end of April, and we will report the initial efficacy findings during this presentation.

### DISCUSSION

Specialized psychological treatments for tinnitus are the most effective tools for managing bothersome tinnitus, with iCBT leading the way. However, because different individuals have different preferences for treatments, it is vital to have effective alternatives for individuals living with tinnitus to choose from. In this presentation, we will discuss the strengths and weaknesses of both treatments in the context of their efficacy.

### **Cultural Adaptations of CBT**

In his early work, Aaron T. Beck emphasized the significance of therapeutic relationships (Beck, Rush, Shaw, and Emery 1979). There is evidence that the relationship affects the outcome of treatment and some evidence that good outcomes affect clients' perspectives about the strength of the relationship (Norcross, 2009; DeRubeis, 2005). It is self-evident that sensitivity to cultural differences is intrinsic to forming an alliance with individuals, and it has been demonstrated that clinicians with higher levels of cultural competence experience more favorable outcomes with their clients (Sue, 2001). This symposium posits that adaptations to CBT applications can and should be made.

Within the Beck Model of CBT, the strength of the therapeutic relationship may be defined and measured by the components of the Cognitive Therapy Rating Scale-Revised (CTRS-R). Elements of the CTRS-R associated with developing strong therapeutic alliances include Feedback, Understanding, Interpersonal Effectiveness, and Collaboration. Other rating scale components that may require adaptation due to cultural differences include Pacing, Guided Discovery, and Action Plan (Homework). The therapeutic process requires that practitioners demonstrate careful listening, acceptance, collaborative decision making, and soliciting feedback in ways aligned with the cultural orientation of clients. The symposium will focus on challenges experienced by therapists while demonstrating required skills with clients who come from non-western cultures.

The first speaker (Miller) will introduce the topic and describe the CTRS-R items related to therapeutic relationships. Each of the panelists will provide brief descriptions of the cultures they represent, identify the challenges for applying the Beck Model and provide direction on how to adapt the model to produce good outcomes. Our second speaker (Karam) will address both, the specifics and transcultural similarities of applying some CTRS-R aspects (Collaboration, Interpersonal Effectiveness, Pacing, and Feedback) with clients in the Middle East. Our third speaker (Chua) will present the difficulty for therapists who come from a South-East Asian culture to provide positive feedback to clients and the challenges of collaborating in a South-East Asian hierarchical society. Our fourth speaker (Shoyinka) will discuss challenges with collaborating in a West-African hierarchical environment. Additionally, he will address a theory of mind in a culture where psychological conditions are thought to have spiritual origins; he will confront a western view that more frequent sessions are better than less frequent ones, and make recommendations for navigating the confounding factor that in West Africa, family members expect to be included in treatment sessions.

### **The Beck Model of CBT**

**Allen Miller\***

*Beck Institute for Cognitive Behavior Therapy, USA*

Three factors Carl Rogers (1957) considered essential for development of a strong therapeutic relationship were unconditional acceptance, empathy, and genuineness. Those factors have since been shown to have significant impact on the outcome of treatment (Norcross, 2009, Lambert, 2001). The significance of the therapeutic relationship was fully recognized by Aaron T. Beck in his earliest work (Beck, 1979) and was documented in the original Cognitive Therapy Rating Scale, (Young and Beck, 1981).

The Cognitive Therapy Rating Scale-Revised (CTRS-R) retains all of the eleven items from the original rating scale and more precisely prescribes behaviors to be exhibited by therapists in the interest of adhering to the model. Four of the items, Understanding, Interpersonal Effectiveness, Collaboration, and Feedback provide direction to therapists in on how to perform each, in the interest of developing therapeutic alliances.

The four CTRS-R items describes desirable actions in the following ways:

Understanding-one level of understanding is hearing the words spoken, noticing expressions, gestures, etc. and responding by rewording or summarizing the content of what clients convey to us. A more intimate way of demonstrating understanding is by

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reflecting what it feels like to be them in the circumstances under which they live.

Interpersonal Effectiveness-through genuine warmth and caring for clients therapists demonstrate unconditional acceptance of clients regardless of where they are from, or what they have done. Examples include providing positive reinforcement for their efforts, mutually sharing emotions, and recognizing clients' positive personal qualities and characteristics.

Collaboration-minimally, therapists solicit input from clients in the development session agendas, selection of evidence-based techniques, and creation of helpful action plans. Ideally, therapists solicit input or agreement on every major decision in therapy sessions. Feedback- is solicited on two different issues. The first is that therapists ask clients about their levels of satisfaction with therapy sessions and the therapist. Inasmuch as every therapist wants to hear that clients are pleased with them and their work, it can make a critical difference in the outcome of treatment when clients feel safe enough and are appreciated for telling a therapist that there is something about them or what they do that interferes with treatment. Secondly, therapists present questions to clients to ascertain their level of understanding and agreement with the treatment process including the techniques being used and their potential benefit to the client. There has been little or no push back on the importance of therapeutic relationships from the wider therapeutic community. What has surfaced is that clinicians with higher levels of cultural competence experience more favorable outcomes with their clients (Sue, 2001) so, our challenge is not in determining whether or not a therapeutic relationship is important, it is in determining how best to establish relationships. The "how" can be particularly perplexing when working with clients who come from different geographic areas, cultures, religions, or races.

The presenters in this symposium will provide their expertise on how to work with individuals from different cultures (West Africa, Middle East, and Southeast Asia) while simultaneously adhering to the Beck Model.

## **Transcultural Aspects and Culturally Informed CBT for Application in the Middle East**

**Aimee Karam\***

*St. George Hospital, University Medical Center, Lebanon*

Cultural differences can influence the application of CBT, in particular the way therapist demonstrate their aptitude to apply the Beck model of CBT. In order to maximize therapeutic effects and outcomes, therapists and supervisors need to practice with an awareness to cultural sensitivity and develop a culturally sensitive-based approach that combines transcultural and specific components.

A description of what characterizes the Lebanese culture will be presented, a combination of Arab, Middle Eastern and European customs.

Some typical traditions, communication style and emotional expression remain deeply ingrained in social norms and expectations, their expressions in the therapeutic context of CBT forge the therapeutic dialogue.

The following question was sent to colleagues from Lebanon, Saudi Arabia, Jordan and Morocco, practicing CBT for more than a decade, asking them: "What do you think are the cultural specificities/sensitivities that when taken into consideration would contribute to maximize therapeutic effects and outcomes when applying the Beck model of CBT which is essentially based on the following:

Agenda, Feed-back, Understanding, Interpersonal effectiveness, Collaboration, Pacing, Guided discovery, Focus on key cognition and behaviors, Strategies for change, Application of CBT techniques and Action plan (homework).

Based on the answers received, particular components defining the therapeutic process will be highlighted, the ones, observed and experienced as being the most culturally sensitive.

We will then, propose culturally informed modifications directing the way CBT could be delivered and applied in the Lebanese community and the therapeutic process that may be applicable as well, to other Arab speaking countries.

This conversation priming the culture sensitivity may contribute to extend CBT implementation and improve its efficacy on a larger and diverse scale. An approach that puts together transcultural and specific aspects of CBT.

A review of the literature related to the cultural adaptation of CBT will also serve to document this presentation.



## **Adaptations to CBT for Application in Southeast Asia**

Sook Ning Chua\*

*Relate Mental Health Malaysia, Malaysia*

It is generally accepted that the common factors model is universal and necessary for good therapeutic outcomes even in hierarchical cultures. However, it may be difficult to discern what actions are both culturally sensitive and therapeutically beneficial. For instance, in hierarchical cultures, clients often expect and value a therapist who is active, assertive, and authoritative. This might lead therapists to behave directively rather than collaboratively, and to be overly task-focused at the expense of the therapeutic relationship.

In this talk, I will discuss the importance of collaboration and interpersonal effectiveness (as defined by the Cognitive Therapy Rating Scale-Revised; CTRS-R) in therapist-client relationships in Southeast Asia. A large body of research has shown that the basic psychological needs for autonomy, relatedness and competence are associated with well-being and organismic growth across egalitarian and hierarchical cultures. I will suggest that a collaborative relationship with an interpersonally effective is most likely to provide a need satisfying environment to the client. The research suggests that it is more important for a therapist to provide opportunities for need satisfaction even if they are counter-cultural, rather than to manifest behaviors that are culturally normative and socially expected.

## **Transcultural Adaptation of CBT for West African Populations**

Sosunmolu Shoyinka MD, MBA\*

*University of Pennsylvania, USA*

This session will provide an overview of West African cultural norms and values and how these values and norms can influence mental health treatment, including CBT.

Introduction to West Africa: West Africa is home to nearly 430 million individuals, or about 5% of the global population. It has a rich history and was home to the Mali, Songhai, Oyo, and Benin empires. There is some evidence of the penetrance of Cognitive Behavioral Therapy (CBT) in West Africa. Examples include

Research: Bella-Awusah et al studied the effectiveness of brief school-based, group cognitive behavioral therapy for depressed adolescents in south west Nigeria. Brief CBT produced significant reduction in depressive symptoms among in – school adolescents[1].

Novel Applications of CBT in West Africa: Blattman et al studied the effect of investing \$500 for CBT + \$200 cash in Liberia. It reduced violence and promoted reintegration into society for some of the most challenging populations in post-war Liberia[2].

Africans in the Diaspora: Nearly 20 million African migrants now live in Europe, Asia and the Americas[3]. Many have experienced significant trauma and will require treatment for depression, anxiety, post-traumatic stress, addiction etc. CBT has been shown to be effective for this population[4].

Adapting CBT for West African Populations: For CBT and other treatments to be maximally beneficial, they will need to be adapted to the cultural context of Africa (whether on the continent or diaspora).

A Brief Introduction to West African Cultural Values/Norms.

Spirituality is woven into the fabric of daily life. This includes both traditional religious beliefs and formal organized religion. This is in sharp contrast to the west, where religion is considered a private matter – one to be kept outside of the public/business environment.

There is a strong cultural value of social hierarchy and respect for authority figures. This is in contrast to the more egalitarian cultural norms prevalent in the West.

In contrast to the western individualistic cultural value, West African cultures are much more collective. In other words, it is “we” rather than “me”.

Recommendations: In adapting CBT for the African cultural context, these cultural values must be respected and thoughtfully incorporated as they will influence treatment. The presenter will share several salient factors to be considered in adapting CBT for West

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African populations.

[1] Bella-Awusah, T., Ani, C., Ajuwon, A. and Omigbodun, O. (2016), Effectiveness of brief school-based, group cognitive behavioural therapy for depressed adolescents in south west Nigeria. *Child Adolesc Ment Health*, 21: 44-50. <https://doi.org/10.1111/camh.12104>

[2] <https://www.upworthy.com/breakthrough-study-found-that-500-worth-of-therapy-and-200-cash-saves-men-from-a-life-of-crime>.

[3] <https://www.pewresearch.org/global/2018/03/22/at-least-a-million-sub-saharan-africans-moved-to-europe-since-2010/>

[4] Orwenyo E. Mental Health Interventions for African Immigrants and Refugees Resettled in the Western Nations: A Systematic Review. <https://sswr.confex.com/sswr/2020/webprogram/Paper38846.html>

## Dating and Romantic Relations in Social Anxiety Disorder

Relationships with close others are critical for maintaining physical and mental health. Social anxiety disorder (SAD) is a common disorder that is associated with substantial impairment in the formation and maintenance of relationships. Thus, improving our understanding of the difficulties that people with SAD face in initiating and maintaining romantic relationships is of utmost importance. In this symposium, we will present 3 studies of dating and romantic relations among individuals with SAD, each with a different methodology: an experimental psychopathology study with video-taped interactions, a lab-based task developed to simulate dating applications such as Tinder, and a daily diary study over 21 days in which participants reported on their dating experiences and application use.

The first presentation will focus on a study of initial, opposite-sex interactions of individuals with SAD and their interaction partners, in a dating-like setting. Specifically, in the study we investigated gender and social context (small talk vs. closeness-generating conversations) and their effects on momentary social anxiety during the interaction as well as on participants' desire for future interaction. Participants in this study (n=160) formed 42 experimental dyads comprised of one individual with SAD and another non-socially-anxious (NSA) individual, and 38 control dyads of two NSA individuals. We found that men with SAD benefitted significantly from closeness-generating interactions such that levels of momentary social anxiety were greatly reduced and both members of the dyad reported increased desire for future interaction. This effect was not found in small talk conversations and not found for women with SAD. Clinical implications of these findings are discussed.

The second presentation will focus on the pre-interaction stages of dating and specifically, use of dating applications. In a lab-based study, individuals with (n = 40) and without SAD (n = 40) viewed 112 profiles of individuals from the opposite sex that included pictures (either happy/smiling or neutral) and descriptive texts, and were requested to choose partners for a future interaction. Participants could swipe right to indicate their willingness to meet an individual, swipe left to indicate their lack of willingness to meet the individual, or press a button to receive more information before making their decision. Participants were also requested to provide a photo of themselves and write a short description of themselves ostensibly for inclusion in the database. Finally, participants believed that the other participants will similarly evaluate their profile and that meetings will take place between individuals who both swiped right in response to each other's profile. We found that individuals with SAD were less likely to swipe right compared to individuals without SAD, and their likelihood to swipe right did not increase in response to happy/smiling pictures. Individuals with SAD also sought less information about others before making their swiping decisions compared to individuals without SAD. Finally, individuals with SAD provided shorter self-descriptions of themselves and more neutral pictures compared to individuals without SAD.

The third presentation will focus on a daily diary study of dating experiences and application use of individuals with and without SAD over a three-week period. This study is currently in progress and results will be available to present at the conference.

The findings will be discussed in the context of the interpersonal model of SAD as well as cognitive behavioral models, and implications for treatment will be delineated.

## Dating With Social Anxiety: An Empirical Examination of Momentary Anxiety and Desire for Future Interaction

Maya Asher, [Idan M. Aderka\\*](#)

*University of Haifa, Israel*

Individuals with social anxiety disorder (SAD) have substantial difficulties in romantic relationships. The aim of the present study was to examine initial, opposite-sex interactions of individuals with SAD and their interaction partners. Specifically, we investigated gender and social context (small talk vs. closeness-generating conversations) and their effects on momentary social anxiety during the interaction as well as on participants' desire for future interaction. Participants in this study (n=160) formed 42 experimental dyads comprised of

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one individual with SAD and another non-socially-anxious (NSA) individual, and 38 control dyads of two NSA individuals. We found that men with SAD benefitted significantly from closeness-generating interactions such that levels of momentary social anxiety were greatly reduced and both members of the dyad reported increased desire for future interaction. This effect was not found in small talk conversations and not found for women with SAD. Implications for psychopathology and treatment are discussed.

## Swipe Right, Swipe Left: Initial Interactions in Social Anxiety Disorder

Naama Rozen<sup>1\*</sup>, Idan M. Aderka<sup>1</sup>

<sup>1</sup> *University of Haifa, Israel*

Individuals with SAD have difficulties in initiating and maintaining relationships. However, little is known about the pre-interaction behavior of individuals with SAD. Individuals with (n = 40) and without SAD (n = 40) who reported being attracted to individuals of the opposite sex participated in a preregistered lab-based experiment using a novel task similar to existing initial interaction/dating applications. Specifically, participants viewed 112 profiles of individuals from the opposite sex that included pictures (either happy/smiling or neutral) and descriptive texts, and were requested to choose partners for a future interaction. Participants could swipe right to indicate their willingness to meet an individual, swipe left to indicate their lack of willingness to meet the individual, or press a button to receive more information before making their decision. Participants were also requested to provide a photo of themselves and write a short description of themselves ostensibly for inclusion in the database. We found that individuals with SAD were less likely to swipe right compared to individuals without SAD, and their likelihood to swipe right did not increase in response to happy/smiling pictures. Individuals with SAD also sought less information about others before making their swiping decisions compared to individuals without SAD. Finally, individuals with SAD provided shorter self-descriptions of themselves and more neutral pictures compared to individuals without SAD. These findings could not be accounted for by depression and remained above and beyond depressive symptoms. Our findings suggest that significant SAD-related biases may exist even in pre-interaction stages of relationship development (i.e., before initial interactions occur) and research and clinical implications are discussed.

## Dating and Dating Application Use in Social Anxiety Disorder

Talia Shechter Strulov<sup>\*</sup>, Idan M. Aderka

*University of Haifa, Israel*

Relationships with others and romantic relations in particular are extremely important for mental and physical health. However, not much is known about the way in which individuals with social anxiety disorder (SAD) initiate and form relationships. Specifically, very little is known about the way individuals with social anxiety disorder (SAD) date and use dating applications in their daily lives. In the present study, individuals with and without SAD completed a daily diary for 21 days about their use of dating applications and their dating experiences, their emotional experiences when using dating applications and when dating and their perceptions of dating and application use. We found that individuals with and without SAD did not differ in their behavioral patterns of dating and application use (e.g., no differences in frequency of dating or use of dating applications, no differences in duration of use of dating applications, and no differences in the number of dates attended). However, significant differences were found in emotional experiences when using dating applications in both negative and positive emotions and significant differences were found in perceptions of dating - especially in positive perceptions. Specifically, individuals with SAD did not rate dates as significantly more negative compared with individuals without SAD but did rate dates as significantly less positive compared with individuals without SAD. Implications for psychopathology and treatment of SAD are discussed.

## Unraveling the Complexities between Trauma, Dissociation, and Psychosis: New Empirical Insights and Treatment Approaches

Trauma, including early life adversity, plays an integral role in the development of many forms of psychopathology. But what are the mechanisms linking trauma experienced at a young age and psychopathology developing later in life? In this symposium, we will showcase novel empirical findings regarding possible mechanisms including autobiographical memory and sense of self, and present new insights into treatment applications. We discuss empirical findings from studies including samples of post-traumatic stress disorder (PTSD), schizophrenia spectrum disorder (SSD), and dissociative disorders. Utilizing modern methodologies such as virtual reality and network analyses, researchers from various backgrounds will come together to highlight the significance of trauma in mental health research and treatment. Emma Černis will open this symposium by explaining the results of two large-scale network analyses exploring the role of dissociative symptoms within the broader landscape of mental health, including in relation to post-traumatic and psychotic experiences. She will also discuss insights derived from these analyses regarding possible psychological processes driving dissociative experiences and the implications of these findings for future treatment approaches. Following this overview, the second speaker, Ante Schlesselmann, will zoom in on feature binding, a central process involved in memory. This was tested in patients with schizophrenia spectrum disorders (SSD) using a novel ecological valid virtual reality paradigm, offering insights into the role of dissociative experiences in autobiographical memory functioning. The third speaker, Wencke Donath, will discuss the role of traumatic experiences in shaping the self-concept structure, meaning how self-relevant information is organized. Her research investigated commonalities and differences in self-concept structure between patients with Dissociative Identity Disorder (DID) and SSD. Focusing on the role of trauma-related symptoms in psychosis, Tineke van der Linden will follow by showcasing her RE.PROCESS study. This is the first RCT to compare the efficacy of cognitive restructuring, prolonged exposure, and EMDR therapy in reducing PTSD symptoms in individuals with psychosis and PTSD. Rafaele Huntjens will end this symposium by presenting the empirical basis of a new model to understand dissociative disorders, the MODE model. Her findings include data on common maladaptive personality traits, modes, and schemas in patients with dissociative disorders. She will also illustrate the clinical application of an adapted form of schema therapy in patients with DID.

## A Tale of Two Networks: Using Network Analysis to Map Dissociation in the Landscape of Mental Health Disorders, and To Understand Its Relationship to Psychosis

Emma Černis\*

*University of Birmingham, UK*

Dissociation has long been overlooked in routine clinical practice - but should it be?

Dissociative experiences, traditionally studied in relation to trauma and PTSD, may be important phenomena across many different psychological conditions, including as a potential contributory causal factor for psychotic experiences.

In this exploration of the findings from two large network analyses, Dr Emma Černis (Assistant Professor of Clinical Psychology, University of Birmingham, UK) demonstrates the important position of dissociation - taking the form of Felt Sense of Anomaly (FSA)-type dissociation - in the broader landscape of common mental health disorders, and highlights the implications of its links to psychotic symptoms for clinical theory and practice.

In the first study (Černis et al., 2021), Gaussian graphical models and Bayesian inference with Directed Acyclic Graphs (DAGs) were used to explore data from 6941 individuals from the general population who completed online assessments of FSA-dissociation, posttraumatic stress symptoms, anxiety, depression, insomnia, worry, distress tolerance, hallucinations, grandiosity, paranoia, and cognitive disorganization.

In the second (Černis et al., 2022), the same analysis methods were used to explore data from 902 patients with non-affective psychosis

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attending UK mental health services who completed measures of FSA-dissociation, paranoia, hallucinations, psychological wellbeing, sleep, and six potential maintenance mechanisms of FSA-dissociation. The mechanisms explored were: affect intolerance, perseverative thinking, general self-efficacy, alexithymia, cognitive appraisals of dissociation, and cognitive-behavioural responses to dissociation ("safety behaviours").

Using these findings, Dr Černis will paint dissociation in a new light, and explain why turning our attention to this phenomenon may offer opportunities for further understanding psychopathology, and unlock exciting new avenues for future treatment development.

## **Dissociative Memory Disturbances in Psychosis: A Virtual Reality Study**

**Ante Schlesselmann\***

*University of Groningen, Netherlands*

Memory impairments are commonly experienced by individuals with a diagnosis of schizophrenia spectrum disorder (SSD). With the acknowledgement of interpersonal trauma as a possible causal factor in the development of SSD, dissociation may be a possible mediator linking interpersonal trauma and memory (dys)function. Yet, little is known about the link of dissociation and memory functioning in SSD and previous studies utilized artificial stimuli thereby lacking the transfer to daily situations individuals may encounter. Accordingly, we investigated the relations between state dissociation and episodic memory through feature binding of avatars characteristics in an ecologically valid virtual reality (VR) paradigm.

Participants navigated through a shopping mall, approached others, and had to select the emotion corresponding to the facial expression of the avatar facing them. Subsequently, the participants were asked to complete three recall tasks covering different dimensions of feature binding.

The results of this investigation support the idea of dissociation being a driving force in impairments of episodic memory (feature binding) assessed in individuals with a psychotic disorder. The growing evidence for the role of dissociation as a response to trauma in eliciting and maintaining secondary as well as primary symptoms in psychosis points toward the potential of providing trauma focused treatment to alleviate symptoms (i.e., cognitive deficits).

## **Fragmented Selves? Comparing Self-Concept Structure in Dissociative Identity Disorder, Psychosis, and Non-clinical Comparisons**

**Wencke Donath<sup>1\*</sup>, Rafaële J.C. Huntjens<sup>1</sup>, Martin J. Dorahy<sup>2</sup>, Rosie J. Marsh<sup>2</sup>, Peter J. de Jong<sup>1</sup>**

<sup>1</sup> *University of Groningen, Netherlands*

<sup>2</sup> *University of Canterbury, New Zealand*

Dissociative Identity Disorder (DID) is a severe dissociative disorder characterized by identity fragmentation. People with DID report having multiple identity states with different thoughts, feelings, behaviors, and memories. DID is considered to be associated with severe interpersonal trauma according to the dominant practice-based model. DID and specifically identity fragmentation has been subject to controversy over the past decades, with some questioning whether the subjective experience of identity fragmentation coincides with empirical findings from more objective assessments. Yet, empirical research on this topic remains scarce. One way to investigate the nature of identity fragmentation in DID is by looking at the self-concept. The self-concept consists of self-relevant knowledge related to one's identity and one's relationship with others, which is structured in multiple, interrelated self-aspects. These self-aspects can represent different roles (student), types of activities (cooking), or relationships (caretaker). Each self-aspect is characterized by a variety of positive and negative attributes (e.g., hard-working, disorganized). The structure of the self-concept can give insights into the fragmentation of the self by considering how the self-aspects are organized given the amount, type of, and similarity between attributes. In the current

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study, a direct measure (Self-Concept Clarity Scale) and an indirect measure of self-concept structure (Self-Descriptive Card Sorting Task) were used to investigate identity fragmentation in DID, compared to non-clinical adults and individuals with psychosis (i.e., a relevant clinical comparison group experiencing identity confusion but not fragmentation). We hypothesized that while both clinical groups would show less clarity about their self-concept than the non-clinical group, only individuals with DID would show a more fragmented self-concept structure than both comparison groups. Contrary to our expectations, compared to non-clinical adults we found less clarity of the self-concept in participants with DID, but not in participants with psychosis. Further, there was no evidence supporting a more fragmented self-concept structure in DID. Interestingly, both the DID and psychosis group did describe their self-aspects using a higher proportion of negative attributes. These results agree with a more integrated view of identity states in DID than previously thought. Future treatment would benefit from interventions aimed at increasing the subjective clarity of the self in DID and reducing the influence of negative self-evaluations in DID and psychosis across different life domains.

## **Trauma Treatment in Psychosis: EMDR Therapy in Auditory Verbal Hallucinations - A Multiple Baseline Design**

Tineke van der Linden\*

*Psytrek PsychoTRauma Expertise Centre, Psytrek, Netherlands*

In this presentation, outcomes of a multiple baseline design of EMDR therapy on auditory verbal hallucinations in individuals without PTSD will be presented. Therapy protocol will be explained. Both statistical analyses of individual participants, visual inspection, and group outcomes will be discussed, with a focus on specific results, diversity of outcomes, heterogeneity. EMDR therapy was well tolerated in this group of participants, with no adverse events. Advice for future research and EMDR therapy in individuals with complex symptoms where CBT for psychosis is not feasible or was not effective is discussed.

## **Theoretical Misunderstandings and New Insights in Treating Dissociative Identity Disorders**

Rafaele Huntjens\*

*University of Groningen, Netherlands*

Dissociative Identity Disorder (DID) is a severe and highly disabling disorder that is associated with reported childhood trauma. Patients suffering from DID report to experience several identity states, and they tend to regularly switch between these states. However, empirical studies have indicated that memory and identity functioning is not characterized by objective compartmentalization (e.g., Marsh et al., 2018), calling into question previous theoretical models and soliciting new ways of understanding this form of psychopathology. Moreover, currently no evidence-based treatment methods exist for complex dissociative disorders. Effectivity studies are scarce, and results indicate that the treatment is suboptimal (e.g., lengthy, high drop-out rates, in many cases stabilization only).

In this presentation common clinical misunderstandings of memory and identity functioning in DID will be discussed in the context of the results of empirical research. This research also functioned as the background for developing a new model for complex dissociative disorders, the DD mode model. In line with the DD mode model, we also developed an adapted form of Schema Therapy for complex dissociative disorders, which is currently tested in two multiple baseline case series design studies (Huntjens, Rijkeboer, & Arntz, 2019).

Given that Schema Therapy has established effectiveness in other trauma-related disorders, and the DD mode model acknowledges the subjective experience of different modes, Schema Therapy seems a feasible option for DID treatment. The main adaptations will be explained that were made to Schema Therapy for patients with complex dissociative disorders.

Huntjens, R. J. C., Rijkeboer, M. M. & Arntz, A. (2019). Schema therapy for Dissociative Identity Disorder (DID): Rationale and study protocol.

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European Journal of Psychotraumatology. 10 (1), 1571377.

Marsh, R. J., Dorahy, M. J., Verschuere, B., Butler, C., Middleton, W. & Huntjens, R. J. C. (2018). Transfer of episodic self-referential memory across amnesic identities in Dissociative Identity Disorder using the autobiographical implicit association test. *Journal of Abnormal Psychology*, 127 (8), 751-757.



## **Cognitive-Emotional Mechanisms Underpinning Variation in Resilience to Adversity**

Most people will experience several negative life events and one or more traumatic events in their lifetime. Experiencing adversity can have a profound effect on emotional wellbeing, health, and productivity. However, we know there are large individual differences in the degree to which people are impacted by adversity. The process through which people demonstrate better outcomes than what would be expected based on the adversity they experienced is known as resilience. There has been an increasing interest in understanding the factors that contribute to elevated resilience, as such knowledge can form the basis of novel prevention and treatment programs. However, understanding of the cognitive processes which underpin variation in resilience is limited, yet this is of particular relevance for health professionals. This symposium includes five presentations which test hypotheses about the cognitive-emotional processes that may explain why some people are more resilient than others. Two of these presentations focus on factors influencing emotional functioning in the wake of negative experiences. Moore examined the information processing styles driving both the acute, and prolonged anxiety responses to negative experiences, to determine why some individuals are better able to manage their emotions in the lead up to a negative event, but also recover more quickly after the event has passed. Rudaizky also examined variation in anxiety in the aftermath of a negative event, investigating whether a mismatch between expectancies of the event and people's experiences of it influences post-event anxiety. The other three presentations focus on the role of cognitive-emotional flexibility in individual differences in resilience. Using an innovative resilience assessment approach, Ranjbar showed that better cognitive flexibility predicted enhanced resilience of older adults facing declining health. Focusing specifically on emotion regulation flexibility, Abdul Razak used the same residual-based resilience assessment approach to examine whether emotion regulation flexibility is associated with enhanced emotional resilience. In a cross-sectional design, this study examined whether more emotionally resilient individuals are more likely to choose an emotion regulation strategy that is better suited to the type of adversity they are exposed to. Finally, Maccallum further unpacked emotional regulation flexibility to examine in a longitudinal design whether three distinctive processes required for emotion regulation flexibility are related to adaptation to lost futures post adversity. These are the ability to recognize contextual demands, the ability to employ regulation strategies, and the ability to use feedback to evaluate regulation success are differentially. Overall, this symposium aims to raise our understanding of the cognitive processes which may underpin variation in resilience. While as a society we can influence the degree of exposure to some of these negative life events, such change can take time, and some negative life events are inevitable. As such, enhanced understanding of these cognitive mechanisms is of critical value for health professionals to support people in their resilience to adversity.

## **Is It the Situation or the Implications? Investigating the Cognitive Mechanisms Underlying Two Dimensions of Trait Anxiety**

Sophia Moore\*, Lies Notebaert, Laura Dondzilo, Colin MacLeod

*University of Western Australia, Australia*

It is well documented that individuals differ in their vulnerability to experience heightened stress and/or anxiety when exposed to negative experiences. These individual differences in what is known as trait anxiety, the general tendency of an individual to experience elevations in anxiety in response to a stressful event, have long been investigated by researchers, with a specific focus on cognitive biases (most prominently attention biases). However, recently, a distinction has been drawn between the acute response, referred to as anxiety reactivity, when individuals are first exposed to the negative experience, and the ongoing response, referred to as anxiety perseveration, which perseveres after the negative experience has concluded. The present research sought to illuminate the cognitive factors driving both the acute, and prolonged anxiety/stress responses associated with negative experiences, to determine why some individuals are

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better able to manage their emotions in the lead up to an event, but also recover more quickly after the event itself. More specifically, we looked at individuals' anxiety in the lead up to a stressful experience, and in the wake of the stressful experience, examining how their experiences were influenced by exposure to information that was situational or implicational in nature. Situational information comprises the concrete details of an event and the thoughts and feelings elicited, while conversely, implicational information comprises the abstract causes, meanings, and consequences of an event. Participants were 141 undergraduate students from the University of Western Australia aged between 17 and 59. They were exposed to information in the form of video clips, which differed in valence as well as the information type presented (situational or implicational), prior to taking part in a simulated interview. Following the interview, participants completed a breath awareness task, which provided a window during which their anxiety could persevere, or alternatively dissipate. While results revealed no significant effect of information type on either the acute or prolonged stress/anxiety response, valence emerged as a factor that influenced individuals' acute response to the negative experience. These novel findings suggest that information processing biases may play a role in influencing individuals' acute and prolonged experiences of negative events, although valence may play a more important role than initially anticipated.

## **Does the Alignment Between Expectancies and Experience of a Stressful Event Predict Post-Event Anxiety?**

Daniel Rudaizky<sup>1\*</sup>, Jemma Smith<sup>1</sup>, James Tough<sup>2</sup>, Patrick Clarke<sup>1</sup>

<sup>1</sup> Curtin University, Australia

<sup>2</sup> University of Western Australia, Australia

Prior research has established that elevated levels of anxiety vulnerability are associated with an increased tendency to both anticipate an upcoming event to be negative as well as to subsequently evaluate the experience of the event as being more negative on reflection. The aim of the current study was to examine how expectancies of an upcoming event align or misalign with the experience of an event and how that impacts how one feels after the event, termed as post-event anxiety.

Participants completed an online study consisting of an expectancy measure before engaging in a stressful anagram task and an experience measure post-task, with measures of state anxiety collected across the experiment. Overall, people with more negative expectancies reported higher levels of state anxiety and reported more negative experiences of the stressor. Importantly, a follow up analysis revealed expectancy and experience misalignment predicts post-event anxiety, indicating that when participants' experiences were worse than their expectancies, they felt more anxious following the stressor. Implications for future research and targets for therapeutic interventions will be discussed.

## **Cognitive Flexibility as a Factor Underpinning Resilience Among Older Adults**

Seyran Ranjbar<sup>1\*</sup>, Lies Notebaert<sup>1</sup>, Julian Basanovic<sup>2</sup>, Colin MacLeod<sup>1</sup>

<sup>1</sup> Centre for the Advancement of Research on Emotion, The University of Western Australia, Australia

<sup>2</sup> The University of Exeter, UK

### **BACKGROUND**

One of the inevitable changes associated with aging is the adversity of declining health, which can negatively impact older adults' mental and physical health. However, there are significant individual differences in the degree to which declining health affects older adults. The process by which individuals demonstrate more positive outcomes than would be expected given the adversity they experience is called resilience. Resilience has been demonstrated as a key factor in successful aging as it predicts greater physical and psychological well-being. However, despite the strong evidence for the critical importance of resilience in older adults' well-being, there is a dearth of

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research on factors that underpin resilience. This project aimed to examine the role of cognitive flexibility as a candidate cognitive factor that may underpin variations in resilience among older adults.

## METHOD

One hundred and eighty older adults who received home care services from an aged care agency participated in the study. They completed a survey that included measures of cognitive flexibility and physical and psychological well-being. Resilience is measured using an innovative method that reflects an individual's capacity to perform better than expected given the adversity they experienced.

## RESULT

Regression analyses were employed to address the study's questions. It was found that the new measure of resilience significantly predicted greater physical and psychological well-being. In relation to the key hypothesis, better cognitive flexibility was found to significantly predict higher levels of resilience.

## CONCLUSION

The current study was the first to measure resilience among older adults using the innovative assessment approach of resilience that is consistent with the International Classification of Diseases. It is also the first to show cognitive flexibility as a critical predictor of greater resilience among older adults. Given that cognitive flexibility is a modifiable factor, these findings hold important implications for improving resilience among older adults.

## The Association Between Emotion Regulation and Emotional Resilience

**Hannah Abdul Razak<sup>1\*</sup>, Lies Notebaert<sup>1</sup>, Daniel Rudaizky<sup>2</sup>, Colin MacLeod<sup>1</sup>**

<sup>1</sup> *University of Western Australia, Australia*

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## INTRODUCTION

Emotional resilience refers to one's ability to demonstrate more positive emotional outcomes than expected in relation to the adversity experienced. Theorists have proposed certain emotional regulation strategies help with recovery from stressful experiences. Historically, reappraisal was seen as more beneficial than distraction. However, it is increasingly recognised that the optimal emotion regulation strategy depends on the nature of the stressor encountered. This study tested the hypothesis that emotionally resilient individuals have higher emotion regulation alignment, in that they implement distraction strategies following exposure to high intensity stressors, and reappraisal strategies following low intensity stressors.

## METHODS

A measure of participants' emotional resilience was first obtained using a residual-based method. All participants then completed an emotional regulation task where they were exposed to high and low intensity images. With each image, they could choose distraction or reappraisal as an emotion regulation strategy to down-regulate their emotions.

## RESULTS

Consistent with previous research, participants were more likely to choose distraction on high intensity trials, and reappraisal on low intensity trials when downregulating negative emotions. Preliminary findings suggested this was not associated with emotional resilience.

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## CONCLUSION

While the ability to implement appropriate emotional regulation strategies based on context may be a significant contributing factor to individual differences in emotional resilience, further research is required to test this hypothesis.

## Emotion Regulation Flexibility and Adaptation To Lost Futures

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## INTRODUCTION/BACKGROUND

Emotion regulation is considered an important process underlying adaption to major life events such as a bereavement. Successful adaption is thought to be facilitated by the interaction between three related abilities: the ability to recognize contextual demands, the ability to employ regulation strategies, and the ability to use feedback to evaluate regulation success. Emerging evidence suggests that deficits in these abilities may be differentially related to mental health outcomes. In the context of COVID-19, in addition to losses associated with bereavements, many lost their expected futures. Understanding whether similar emotion regulation processes contribute to adaption across these temporally different losses has implication for interventions with those struggling with loss.

## METHODS

A community sample of 1012 participants residing in the UK or Australia (60% female and mean age 37) completed online surveys indexing emotion regulation flexibility, recent significant life events, and symptoms of depression, anxiety and grief. Of these, 385 reported a bereavement or loss of a future in the preceding 3 years. Latent class analysis was used to group participants based on shared symptom co-morbidity. The relationship between class membership and the three emotion regulation abilities was explored cross sectionally and at 3 month follow up.

## RESULTS

Four symptom classes were identified (low symptom 28.5%, grief 14.3%, depression/anxiety 35.7% and grief/depression/anxiety 21.5%). Symptom classes were differentially related to relative deficits skills in context sensitivity and feedback. There were few differences across loss types.

## CONCLUSION

Findings from this study highlight the importance of moving beyond a focus on strategy to include a focus on enhancing skills in evaluating contextual demands and using feedback to assist in adaption to challenging life events.

## Advances in Developing Standard CBT Protocol for Better Practice in China: Evidence From RCT and Brain Science Studies

Cognitive behavioral therapy (CBT) has been broadly applied in clinical practice in China, it is thanks to the joint efforts of Chinese and global scholars to continuously improve and develop the standard CBT protocols and service model. Undoubtedly, the standard CBT protocols have enabled more professionals to participate in the practice of CBT, improved the efficiency of clinical services, benefited more patients, and promoted the popularization and application of CBT in China. Therefore, China's CBT practical experience also shows that the development and promotion of standard CBT protocols can help developing countries better practice and apply CBT. However, there are limitations in previous work: (1) the formulation and application of CBT protocols are mainly oriented to common mental problems such as depression and anxiety disorders, and there is a lack of protocols for some problems such as somatoform and it related disorders; (2) Although the formulation of standard protocol was often based on theoretical models, clinical experience, and expert argumentation, the short-term and briefed protocols were still limited by the lack of research about verification of different therapeutic components' efficacy; (3) In previous work, the efficacy of standard CBT protocols has been well studied and verified, while its neural basis evidence was lacked. It was important and necessary to provide neuroimaging evidence to clarify the mechanism of CBT; (4) As more approaches are applying in mental health field, such as Neuromodulation, VR-based treatment, etc., the standard protocol of CBT combined with these new approaches and their effects need further research.

Therefore, this symposium will focus on the above issues and introduce the advances work carried out by Chinese CBT scholars in the past five years. The first presentation (Jia Luo) will be about the development and validated of CBT protocol for somatoform disorder, and a RCT study was implement to evaluate the protocol's effect on clinical patients, in terms of somatic symptoms, illness-related distress, quality of life, social function, and family burden; The second presenter (Fanqiang Meng) will talk about comparative study on the effects of different therapeutic components of CBT for Insomnia. Furthermore, the presentation will give an insight into optimize the traditional CBT-I protocol and provide a basis for a more brief and individual protocol development. The following presentation (Xiangyun Yang) will focus on the theme of establishing and validating the joint protocol of CBT and Neuromodulation: verify whether low-frequency repetitive transcranial magnetic stimulation (l-rTMS) may enhancement the effect of CBT for panic disorder patients in the early stage. The primary aim of the last talk (Pengchong Wang) will systematically introduce the research advances of Professor Li Zhanjiang's team on the use of MRI technology to explore the neural basis of standard CBT protocol in regulating brain function and white matter network in OCD patients.

## Cognitive-Behavioral Therapy for Patients With Somatoform Disorders: A Randomized Controlled Trial

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### BACKGROUND AND OBJECTIVE

Cognitive-behavioral therapy (CBT) for somatoform disorders is understudied in China. Western findings may not be necessarily applicable, and further trials are needed. This study evaluated CBT for Chinese patients, relative to treatment-as-usual (TAU), in terms of somatic symptoms, illness-related distress, quality of life, social function, and family burden.

### METHOD

Seventy patients with somatoform disorders received either combined CBT and TAU (CBT+TAU), or TAU alone. The CBT+TAU group received 12 weekly individual CBT sessions, each lasting 50 minutes. All analyses were intention-to-treat. Participants were blindly

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assessed at 4 timepoints up to 24 weeks using the PHQ-15 (Patient-Health-Questionnaire-15) and the Whiteley Index-7 (WI-7). Secondly, the following were applied: SQSS (Self-screening Questionnaire for Somatic Symptoms); GAD-7 (General Anxiety Disorder-7); HAMD-17 (Hamilton Depression Rating Scale-17); Family Burden Interview Schedule (FBIS); Sheehan Disability Scale (SDS); and the Short Form of Quality-of-Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-SF).

## RESULTS

At 24 weeks, the generalized linear mixed-effects model of the overall WI-7 scores revealed significant effects for group ( $F = 8.872$ ,  $P = 0.003$ ). Group showed a significant main effect based on SQSS total scores ( $F = 6.268$ ,  $P = 0.013$ ), and specifically negative perception ( $F = 6.268$ ,  $P = 0.013$ ) and illness behavior ( $F = 6.062$ ,  $P = 0.015$ ). Time  $\times$  group interaction was significant, based on the HAMD ( $F = 4.100$ ,  $P = 0.007$ ). Only the main effect of group for the financial burden subscales of the FBIS was significant ( $F = 8.567$ ,  $P = 0.004$ ) for functional disability, quality of life, and family burden due to disease. Each of the assessment scales indicated that CBT+TAU had a significantly larger effect than did TAU alone.

## CONCLUSIONS

CBT combined with TAU for somatoform disorders in the context of Chinese culture is effective, particularly to improve dysfunctional cognitions, depression, and illness behaviors.

Keywords: cognitive-behavioral therapy, treatment as usual, somatoform disorders, randomized controlled trial

## Comparative Study on the Effects of Different Therapeutic Components of Cognitive Behavioral Therapy for Insomnia

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## INTRODUCTION

Cognitive behavioral therapy for insomnia (CBT-I) is currently the first-line treatment for insomnia disorders, and its effectiveness has been confirmed by evidence-based medical researches (van der Zwerde, Tanja et al. 2019). The main targets of CBT-I are maladaptive sleep habits, irregular sleep-wake schedule, unhelpful thoughts about sleep, as well as sleep-related anxiety and overexcitation. Although there is a large amount of research evidence that cognitive behavioral therapy is effective for insomnia patients, insomnia and subsequent symptoms such as anxiety are not always completely relieved, still many patients remain residual symptoms after treatment. In order to further optimize the treatment plan, experts are conducting research on the therapeutic components of CBT-I. The component study conducted by Professor Colin A. Espie's team shows that behavioral intervention consisting of stimulation control and sleep restriction is a predictor of improving sleep latency and reducing nocturnal arousal; cognitive intervention can significantly reduce nocturnal arousal; while sleep hygiene and relaxation training cannot predict any improvement (Harvey, Linda et al. 2002; Harvey, Allison G et al. 2014). It is noteworthy to find whether there are differences between cognitive therapeutic components and behavioral therapeutic component in predicting symptom improvement in patients with insomnia. In combination with the psychological characteristics of Chinese patients with insomnia, this study intends to verify the efficacy of CBT-I on Chinese patients with insomnia, and to explore the different therapeutic components of CBT-I and the related factors affecting the efficacy so as to provide a basis for further localization and individualization of CBT-I.

## METHODS

A total of 90 outpatients who met the diagnostic criteria for insomnia disorders in the 5th Edition of the American Handbook for the Diagnosis and Statistics of Mental Disorders (DSM-5) were randomly assigned to one of three groups: (1) cognitive behavioral therapy (CBT;  $n=30$ ), (2) cognitive therapy (CT;  $n=30$ ), or (3) behavioral therapy (BT;  $n=30$ ). All groups received intervention once a week for 8 weeks.

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Insomnia Severity Index (ISI), Beck Anxiety Scale and the Multidimensional Fatigue Inventory (MFI-20) were evaluated at baseline period, week 4, week 8, week 16 and week 24.

## RESULTS

ISI scores showed that CBT group achieved the most significant decrease compared with CT group and revealed a significant effect at week 8(posttreatment) for time×group interaction ( $p<0.05$ ), and the improvement of BT group was between CBT and CT group, which is second best to CBT group but not significantly different from CT group. From the perspective of improving trend, the improvement of BT group was faster than CT group but not as sustained as the latter. BAI scores at week 4 showed that CBT group was better than CT group( $p<0.05$ ). MFI scores decreased within the group, but there was no difference between three groups.

## CONCLUSION

The findings indicate that both CT and BT are effective, as CBT achieves the optimal effect. There were differences in the onset time and maintenance effect among CT and BT, which also shows their different predictive effects on curative effect.

## Early Enhancement Effect of Low-Frequency Repetitive Transcranial Magnetic Stimulation on Cognitive Behavioral Therapy in Patients With Panic Disorder

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Cognitive behavioural therapy (CBT) is the first-line treatment for panic disorder (PD). However, some patients still have poor response to CBT, especially in the early stage of treatment. Thus, to find a new method to enhance the early effect of CBT is necessary. Current research aimed to verify whether low-frequency repetitive transcranial magnetic stimulation (l-rTMS) may enhancement the effect of CBT for PD patients in the early stage. PD patients were recruited and randomly assigned to the experimental group and the control group using a random number table. The patient of experimental group received CBT combined with true l-rTMS, and the control group received CBT combined with pseudo l-rTMS. Both groups received 12 sessions of CBT and 20 times of l-rTMS intervention in the first month of CBT. The target of l-rTMS stimulation was the left dorsolateral prefrontal cortex, the stimulation time was 30 minutes, and the frequency was five times once week. The patients' panic symptoms, anxiety and depression were assessed with the Panic Disorder Severity Scale (PDSS), HAMD, HAMA and other scales at the end of 0,2,4,6,8,10,12 weeks, a total of 7 times. The reduction rate of PDSS total score before and after treatment was the main therapeutic index. A total of 50 patients with panic disorder were recruited and randomly assigned to the experimental group and the control group with 25 cases each. A total of 10 cases fell out of the two groups. The IPP analysis method was used to analyse the general demographic data and clinical characteristics of 40 patients who completed the treatment. It was found that there were no statistically significant differences between the two groups in terms of age, sex, course of disease, education, severity of panic disorder, anxiety, depression, personal and social functions ( $P>0.05$ ). The difference of PDSS scores between the two groups at different time points (0, 2, 4, 6, 8, 10 and 12 weekends) was compared by repeated measurement analysis of variance. It was found that there were statistical differences between groups, time points and interaction effects ( $p<0.05$ ). Further post-mortem analysis: inter-group univariate analysis of variance found that there was a statistically significant difference in the total PDSS score between the two groups at the end of the 2nd, 4th, 6th and 12th weeks, and the PDSS score of the study group was lower than that of the control group; Intra-group paired t-test showed that the scores of PDSS in the two groups at the end of 2, 4, 6, 8 and 12 weeks were lower than the baseline. It is suggested that the overall effect of true l-rTMS combined with CBT is better than that of pseudo-stimulation group, especially in the early stage of treatment. The changes of HAMD, HAMA, PSP and SCL-90 scores in the two groups at different time points were compared by repeated measurement analysis of variance. It was found that the time point effect was significant, while the inter-group and interaction effects were not significant. The paired t-test showed that the scores of anxiety symptom, depressive symptom and SCL-90 of patients in the two groups at the

end of 12 weeks of treatment were significantly lower than that of the baseline ( $p < 0.05$ ), and the scores of personal and social functions were higher than those before treatment ( $p < 0.05$ ). The effect of l-rTMS real stimulation combined with CBT in the treatment of panic disorder is better than that of l-rTMS false stimulation combined with CBT, which can significantly improve panic symptoms, especially has the advantage of early stage. L-rTMS treatment has good safety and compliance, and can be further used in the clinic.

## The Neural Basis of Standard CBT Protocol in Regulating Brain Function and White Matter Network in OCD Patients

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### BACKGROUND AND OBJECTIVE

To verify the effect and neural mechanism of obsessive-compulsive disorder (OCD) intervention based on standard CBT protocol, the imaging data of resting fMRI, DTI and structural of more than 120 OCD patients have been collected, and more than 70 untreated OCD patients has competed cognitive behavior therapy (CBT), and neuroimaging data been collected before and after CBT treatment. Our research group systematically explored the neural circuitry function and white matter network characteristics of CBT treatment in OCD.

### METHODS AND RESULTS

(1) CBT could regulate the ReHo activity of the “cognitive” and “emotional” related brain regions. In the “cognitive” brain regions, CBT reduce the ReHo activity of the right Orbital Frontal Cortex (OFC), left cerebellum and vermis of OCD. In the “emotional” brain regions, CBT enhance the ReHo activity of the left caudate nucleus of OCD. (2) We also using the template of the Power 264 functional brain region as the network node to construct the whole brain functional network, and calculating the functional connection strength outside the cognitive control network, it was found that after CBT treatment, the functional connection of cingulate cortex-operculum control network and salience network, cingulate cortex-operculum control network and the subcortical network, the frontal-parietal control network and the subcortical network were increased, indicating that CBT can effectively improve the obsessive-compulsive symptoms and improve the external functional connection strength of the cognitive control network. (3) Graph-theoretic functional connection density was used to analyze the hubs and connection changes of the whole brain functional network in patients with OCD before and after CBT, revealing the effect of CBT on the changes of the intrinsic whole brain functional network in OCD patients. CBT was found can regulate changes in the intrinsic functional network connectivity of the cortex-striatum-thalamic-cortical circuit, where cognitive control networks and DMNs are found in patients with OCD may be as potential neuroimaging biomarkers to evaluate the CBT therapeutic effect of OCD. (4) The preliminary research of the research group initially revealed the abnormalities of white matter microstructure in patients with untreated OCD, and found that CBT can partially improve the white matter abnormalities of the “cognitive” and “emotional” brain regions of OCD patients, such as finding bilateral OFC in OCD patients. Fraction Anisotropy (FA) values were significantly reduced in the right cerebellum and left superior parietal gyrus (SPG), and FA values in the right putamen were higher than in the healthy control group, and after CBT, the right-sided MFG, left OFC, right cerebellum, and left middle temporal gyrus have higher FA values, and right putamen (“emotional brain”) FA is lower than before CBT treatment. In addition, based on the graph theory analysis of the white matter structure network, the mechanism of action of CBT intervention on OCD was investigated, and it was found that after CBT treatment, the global average cluster coefficient of OCD patients decreased, and the clustering coefficient of partial occipital-temporal lobe decreased, and CBT treatment was found to improve the abnormally enhanced differentiation of the white matter network in patients with OCD.

### CONCLUSIONS

The intervention based on standard CBT protocol could modulates abnormal function in the prefrontal-striatum-thalamic-cortical circuitry of OCD, and CBT can partially improve the white matter abnormalities of the “cognitive” and “emotional” brain regions of OCD patients.

Keywords: cognitive-behavioral therapy, neural circuitry, white matter, obsessive compulsive disorder



### Schema Therapy for Cluster C Personality Disorders: A Case Series

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'Cluster C' Personality Disorders (PDs) or the "anxious-fearful" cluster consists of Avoidant Personality Disorder (AvPD), Dependent Personality Disorder (DPD), and Obsessive–Compulsive Personality Disorder (OCPD). Literature shows that psychological distress in these disorders is related to shared concerns of anxiety; traits of inhibition as well as negative childhood histories of emotional abuse and neglect, contributing to issues of self-definition, self-control, and self-worth. They also share predominant Early Maladaptive Schema (EMS) domains of disconnection, impaired autonomy, and exaggerated standards. Despite the distress related to these personality concerns research on psychotherapy for the same is limited. Schema Therapy (ST) is an intervention designed for treating rigid, long-standing PD concerns (Young et al., 2003). It adopts an integrative therapy framework, emphasizing on the environmental factors resulting from unmet core childhood needs leading to the development of EMS and schema modes that underlie the PDs. The goal of the therapy is for patients to experience safe attachment in the therapeutic relationship (via limited reparenting), to meet their core emotional needs (Young et al., 2006). Presently, only one multi-centered RCT provides strong evidence for the effectiveness of ST for cluster C PDs (Bamelis, et al., 2014), with further research underway. In the last decade, while research on personality disorders is increasing in India, this study may be the first intervention research in the country.

The present study is a case series evaluation of 4 patients diagnosed (using SCID-5 PD) with either of the three cluster C PDs, recruited from the outpatient department of a tertiary care hospital. The study is part of a larger, ongoing Ph.D. work that aims to examine the process and outcome of ST in individuals with cluster C PDs. Each patient was given 45 individual sessions of ST (Arntz, 2012) over 8 months, using a blended psychotherapy approach (online and in person). Detailed results and discussion will be presented during the presentation, highlighting the changes experienced and comparison between EMS, schema modes, emotion dysregulation, and psychological distress for the 4 patients, assessed at different time points (baseline, post-exploration phase, treatment phase, and post-intervention). Clinical implications will be discussed, with the present study providing preliminary evidence of the effectiveness of schema therapy for cluster C personality disorders.

Keywords: Schema Therapy, Cluster C Personality disorders, Early maladaptive schemas, Schema modes, Emotion dysregulation, Psychological distress

### **Dialectical Behavioral Therapy for Outpatients in Lithuania: Initial Results of an Observational Study with Patient-Reported Outcomes**

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#### INTRODUCTION

Dialectical behavioral therapy (DBT) has been an effective treatment for individuals with borderline personality disorder. However, efforts for the dissemination of this effective treatment and cultural adaptation have not been equal across the globe. The aim of this study was to investigate the effectiveness of an ambulatory DBT program in Lithuania.

#### METHOD

This was an observational study. Patients participating in an outpatient 12-week DBT program at a psychiatric hospital were asked to complete questionnaires (PHQ-9, GAD-7, CORE-OM, DBT-WCCL) before starting the treatment. They were then repeatedly asked to complete questionnaires every four weeks until they finished the program. In total, 31 patients (23 women (74%), seven men (23%) and 1 (3%) other gender) completed questionnaires at baseline. The participants were 18-49 years old ( $M = 24.9$ ,  $SD = 6.31$ ). However, only 9 (29%) patients completed the treatment (12 weeks). This study received approval from the research ethics committee at Vilnius University. To estimate the efficacy of the program we used the Reliable Change Index.

#### RESULTS

Of those who finished the program and participated in the study the whole time, a clinically significant change in the symptomatology of depression ( $n = 2$ ) and anxiety ( $n = 2$ ) in a minority of the patients was observed. There was a significant change in the well-being of some of the participants ( $n = 3$ ). Only a few patients used DBT skills more often ( $n = 2$ ) and dysfunctional coping styles less often ( $n = 2$ ) after the program than at the beginning. However, the majority of those who participated in the study the whole time showed no improvement at all ( $n = 5$ ).

#### DISCUSSION

This study demonstrated that the intervention has the potential to effectively improve well-being and reduce symptoms of depression and anxiety in participants of the ambulatory DBT program in Lithuania. However, due to a large number of dropouts, it remains inconclusive if DBT in Lithuania helps individuals in developing core skills taught at DBT.

### **Predictors of Dropout of Dialectical Behavior Therapy (DBT) in Borderline Personality Disorder (BPD) in Outpatients Setting**

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#### INTRODUCTION

Dropout from Dialectical Behavior Therapy (DBT) among Borderline Personality Disorder (BPD) patients is a main barrier to recovery. Previous studies have examined several variables as predictors of dropout with mixed results, such as sociodemographic (age, gender and therapy history), clinician related (patient-clinician gender match and clinician experience) and patient related (anxiety and suicidal ideation). This study aims to examine previously investigated predictors of treatment dropout in DBT outpatient private settings with BPD patients.

#### METHOD

Data were obtained from 124 patients diagnosed with BPD who completed assessment using the 23-item Borderline Symptoms List questionnaire (Mean = 1.99, SD = .94). The sample was 80.6% females, with an average age of 25.33 (SD = 4.59, Range = 15-37). All patients received treatment with the DBT approach. Logistic regression analyses were used to examine the predictors of dropout. Sociodemographic variables (i.e. gender, age, therapy history), clinician related (patient-therapist gender match and therapist clinical experience) and patient related variables (severity of anxiety and suicidal ideation) were analysed individually.

#### RESULTS

Clinician related variables (patient-therapist gender match, therapist clinical experience) and patient related variables (severity of anxiety and suicidal ideation), gender and therapy history were not found to be predictors of dropout of DBT treatment approach in BPD patients in an outpatient psychotherapy private setting. However, the effect of age on the likelihood to drop out was significant (OR= 0.91, p= .022, 95% CI = 0.83-0.99), which means the younger the patient, the more likely they are to drop out.

#### CONCLUSION

The age of BPD patients is a predictor of dropout of DBT treatment approach, younger patients tend to drop out more than older patients. Younger patients tend to have less distress, more social support, and less pressure to function than older patients, so the younger patients may perhaps have less motivation to engage in the therapy. Interestingly, both clinician related variables (patient-therapist gender compatibility, therapist's clinical experience) and patient related variables (severity of anxiety and suicidal ideation) were not found to be predictors of dropout. This could be because none of those variables are indicative of pressure to function in society, a main motivation of recovery of BPD patients.

Keywords: Dropout; Borderline Personality Disorder (BPD); Dialectical Behavioral Therapy (DBT)

### **Is It Worth It To Personalize the Psychological Treatment of Borderline Personality Disorder? – Answers by Meta-Analytic Findings**

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#### INTRODUCTION

Psychotherapy, including cognitive and behavioral therapies (CBT), is the first-line treatment for borderline personality disorder (BPD) in evidence-based care. Although their average treatment effects are in general medium, many patients do not respond to these treatments or discontinue them prematurely, pointing to differential treatment effects. The aim of this study was to determine this heterogeneity of treatment effects, which in turn would allow a personalized treatment selection with the goal of improving treatment outcomes.

#### METHOD

Using an extensive database of 45 RCTs on different psychological treatments for BPD, we determined a reliable estimate of this heterogeneity in treatment effects (HTE) by (a) applying Bayesian variance ratio meta-analysis, and (b) estimating the HTE.

#### RESULTS

HTE was found for all psychological treatments, although with low degrees of certainty. Across all psychological treatment and control group types, the estimate for the intercept was 0.10 [95% CrI: 0.06; 0.15], indicating a 10% higher variance of endpoint values in outcome measures in the intervention groups after controlling for differences in posttreatment means. With respect to CBT, the estimate for the intercept was 0.09 [95% CrI: 0.04; 0.13]. The probability that the treatment outcomes of two randomly drawn patients differed in a clinically meaningful way was estimated to a maximum of 65%.

#### DISCUSSION

This meta-analysis was the first to provide an estimate of this heterogeneity in treatment effects for psychological treatments of BPD. The results indicate that while there may be sufficient HTE, estimates are uncertain, and future research is needed to obtain more accurate boundaries for HTE. Personalizing psychological treatments for BPD using treatment selection approaches could have positive effects, but current evidence does not allow for a precise estimate of potential outcome improvement.

Key reference: Kaiser, T., & Herzog, P. (2023). Is personalized treatment selection a promising avenue in BPD research? A meta-regression estimating treatment effect heterogeneity in RCTs of BPD. *Journal of Consulting and Clinical Psychology*. <https://doi.org/10.1037/ccp0000803>

## Managing the Comorbidity of Mood Disorder and Borderline Personality Disorder: A Case Report

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Mood disorder (i.e., bipolar disorder and depressive disorder) and borderline personality traits/ disorder are both complex and significantly impairing disorders with severe individual and societal impacts. Both disorders are associated with deficits in affective instability, impulsivity, and interpersonal problems. Dialectical Behaviour Therapy (DBT) is a comprehensive treatment for borderline personality disorder, however many of these patients have high comorbidity with mood disorders which require integration from Cognitive Behaviour Therapy (CBT) to manage the complexity of the symptoms. The main objective is to present strategies for the management of clinical severity and therapeutic objectives of two patients with mood disorder (bipolar disorder and depressive disorder) which comorbid borderline personality traits/ disorder. The first case, Miss DY, a 24-year-old Indian lady who met the criteria for both bipolar disorder and borderline personality disorder pointing to comorbidity. She is presented with impulsivity, suicidal behaviour, extreme emotional reactions, interpersonal conflict, anger, and emptiness. She has addictions to alcohol and has a history of suicidal attempts. Her stressors include financial status and hostile relationship with family and her close friend. Miss DY is first diagnosed with borderline personality disorder and later diagnosed with bipolar disorder. DBT is utilized to manage suicidal behaviour, emotional dysregulation, and poor interpersonal skills. CBT is then delivered to manage intensification of affective symptoms, dysfunctional thinking pattern, impulsivity, for which it was necessary to integrate strategies of other evidence-based treatments to manage. Psychoeducation is provided to give information about the symptoms and aetiology. Treatment goals include reduce suicidal attempt, reduced impulsivity, reduce depression level and improve interpersonal skills. Self-reported pre-post therapy of Miss DY revealed significant improvements overall, driven by improved micro skills and an ability to deal with challenging behaviours. Next, the case report is about Miss B, an 18-year-old Chinese girl who is diagnosed with major depressive disorder and borderline personality traits after multiple times of being admitted to the ward. She was first admitted to the psychiatric ward in 2020, when she was 15 years old due to multiple self-harm events, overdosing and active suicidal thought. After her first admission, she was in and out of the ward for the past years until early 2022. Her presenting issues revolve around worsening depressive symptoms associated with recurrent suicidal thought and attempt. Her stressors are parental conflict and divorce in the past, family financial status, and relationship with friends. Miss B, who has Major Depressive Disorder and Borderline Personality traits, undergone intensive treatment and therapy that combined DBT and CBT approach. During her first stage of therapy, DBT is utilized to manage suicidal thoughts and attempts, self-harm behaviours and emotional dysregulation. When she is stabilised, CBT is given to regulate her depressive episodes, anhedonia, self-isolation, and school refusal for which, the aspect and strategies in CBT are relevant to be integrated in her therapy process. Significant progress is shown after intensive 2 years of therapy in which Miss B's depressive symptoms has reduced, along with her in-ward admission history and suicidal behaviours. In conclusion, strategies from different evidence-based therapies need to be incorporated according to the clinical needs of the patients with mood disorders that comorbid with borderline personality disorder/traits.

### **The Relationship between Impulsivity and Internet Gaming Disorder Tendency: The Mediating Effects of Emotional Clarity and Experiential Avoidance in Korean College Students**

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#### INTRODUCTION

Addiction has the highest prevalence among mental disorders in South Korea. However, Koreans tend not to seek help, particularly with this problem. Considering Internet Gaming Disorder (IGD), college students, who are exposed to PCs and mobile devices and use them freely, are in danger of developing a problematic use of games. However, there were few studies about IGD in healthy college students. Negative urgency, one facet of impulsivity, is repeatedly shown to predict various addictions. Also, identifying the emotion and knowing how to deal with it is a critical factor considering the relationship between impulsivity and IGD. In the present study, we examined the relationship between negative urgency and IGD tendency in college students and whether emotional clarity and experiential avoidance mediated this relationship.

#### METHOD

Self-report questionnaires were administered to 400 undergraduate and graduate students, and a total of 363 data was analyzed (188 men and 175 women with mean age $\pm$ SD of 22.71  $\pm$  2.79). Only students with internet games experience within the past 12 months were included. Each variable was measured using the Korean version of the UPPS-P Impulsive Behavior Scale, the Korean version of Trait Meta-Mood Scale (KTMMS), the Korean version of Acceptance and Action Questionnaire-II (K-AAQ-II), and the Korean version of the Internet Gaming Disorder Scale(K-IGDS).

#### RESULTS

The findings of the study were as follows. Negative urgency had a significant negative correlation with emotional clarity. Also, it had a significant positive correlation with experiential avoidance and IGD tendency. Furthermore, emotional clarity and experiential avoidance had a sequential mediating effect on the relationship between negative urgency and IGD tendency. Surprisingly 48% of the students reported being above the cutoff point of IGD Scale(48 points).

#### CONCLUSION

These results suggest that impulsivity (negative urgency), emotional clarity, and experiential avoidance significantly influence IGD tendency. Furthermore, regarding the clinical implications, it is essential to be aware of emotions clearly and accept those emotions, especially when experiencing negative ones, to prevent and treat IGD effectively. Interestingly the results showed a high percentage of students with IGD tendency. This could imply that simply having the experience of using internet games could drastically drive up the tendency for problematic usage of internet games.

### Prospective Interplay Between Binge Drinking and Insomnia Symptom Severity Among Adolescents

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#### INTRODUCTION

The relationship between alcohol use and sleep deficiencies is complex and bidirectional. Broadly defined sleep deficiencies increase the risk for alcohol use and related problems. Conversely, alcohol use leads to sleep deficiencies both in the short and long term. However, this interplay between sleep and alcohol use is less understood earlier in development, with mixed findings. Given the substantial changes in sleep structure and drastic increases in alcohol use behaviors in earlier developmental stages, these periods are optimal for characterizing risk processes involving sleep deficiencies and alcohol use. The present study prospectively examined the interplay between sleep deficiencies (as measured with insomnia symptoms) and risky alcohol use (as measured with binge drinking frequency) among high school students.

#### METHOD

Data were drawn from Project Teen, a 2-wave (Years 1 and 2) prospective health survey study. Participants were 414 high school students (Mean age=15.07 [SD=1.19] at Year 1; 57% female; 41% Black; 22% White; 18% Asian; 17% Multiracial; 2% Pacific Islander; 1% Native American). Binge drinking frequency in the past two weeks was measured in Years 1 and 2 as having had five or more drinks for boys and four or more drinks for girls in a single setting (NIAAA, 2017). Insomnia symptom severity (e.g., difficulty falling asleep, difficulty staying asleep, diurnal functional impairment due to sleep problems) in the past two weeks was assessed using the 7-item Insomnia Severity Index (Bastien et al. 2001). Secondary data analyses were conducted using path analyses in Mplus. Year 2 binge drinking frequency was modeled as zero-inflated negative binomial distribution to account for its over-dispersed frequency distribution with excess zeros (representing non-binge drinkers). Year 1 binge drinking frequency and insomnia symptom severity, age, sex, race/ethnicity, and free school lunch eligibility as a proxy for socioeconomic status were controlled for in all analyses.

#### RESULTS

Results from a cross-lagged path model indicated that Year 1 insomnia symptom severity significantly predicted Year 2 binge drinking frequency,  $\beta = .37$ ,  $p < .01$ ; however, Year 1 binge drinking frequency did not significantly predict Year 2 insomnia symptom severity. Furthermore, an interaction between Year 1 insomnia symptom severity and Year 1 binge drinking frequency significantly predicted Year 2 insomnia symptom severity (but not Year 2 binge drinking frequency),  $\beta = -.24$ ,  $p < .01$ ; adolescents with lower levels of insomnia symptoms at Year 1 showed greater increases in insomnia symptoms over time when engaging in binge drinking more frequently at Year 1.

#### DISCUSSION

Findings indicated that prior insomnia symptoms predict increases in binge drinking, whereas prior binge drinking is not associated with changes in insomnia symptoms over time. Findings also indicated that prior binge drinking might be a risk factor for the exacerbation of subsequent sleep deficiency over time among adolescents. Overall, these findings suggest that intervention efforts to address adolescent sleep deficiency may subsequently help prevent the escalation of risky drinking.

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### **Implementation, Outcomes and Sustainability of Delivering Core Outcome Measures and a Brief Intervention in Outpatient Alcohol and Other Drug Treatment Services**

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The demand for alcohol and other drug (AOD) treatment in Australia greatly outweighs the resources available. Consequently, funders prioritize the volume of service delivery over quality, requiring AOD services to focus limited resources on assessing large numbers of potential clients, rather than treatment delivery. Even when clients are able to access AOD treatment, on average they only attend 1.6 sessions of treatment. Despite this, evidence-based brief interventions are not routinely offered at service entry to maximise the potential benefit of the initial treatment sessions. Value-based Healthcare (VBHC) which shifts the focus away from the volume of service delivery towards client outcomes, relative to the resources and costs required, provides a potential solution to these problems. Over the past 6 years we have worked in partnership with Lives Lived Well (LLW) a large AOD service in Australia to develop and implement a VBHC model of AOD treatment. A novel online system was first developed to collect data on a standard set of core outcome measures (COMs) directly from clients at service entry, 1 and 3 months follow up. A three-module brief intervention for AOD use, comprised of assessment feedback/psychoeducation, motivational interviewing and risk targeted cognitive behaviour therapy coping skills training, was then co-designed with nine LLW counsellors. This presentation describes the implementation, outcomes, and sustainability of the COM system and First Step brief intervention. The COM system was implemented into four LLW outpatient AOD services in April 2020. The implementation phase of the First Step intervention occurred between October 2020 and September 2021, sustainability commenced in November 2021 and continued until October 2022. During the implementation phase, 73% of clients completed COMs at service enquiry, 65% within 1-2 days; 42% and 23% of clients completed COMs 1- and 3-months follow up. Just over 80% (n = 841) of 1022 eligible clients were enrolled in the First Step program. 420 (51%) were enrolled in treatment within a month and consented to participate. A total 332 (80%) completed module 1, 293 (70%) module 2 and 198 (47%) completed all three First Step modules respectively. Clients achieved positive AOD (alcohol, cannabis, methamphetamine), mental health, wellbeing and vocational outcomes at 6 and 12 months follow up. Overall, the number of clients who received at least one treatment session increased 25% during the implementation phase. Since the sustainability phase commenced, 10 to 20% reductions in the proportion of clients receiving the First Step modules occurred. Further treatment and service outcomes during sustainability will be reported. The COMF system and First Step brief intervention were successfully implemented, COMs were completed by 75% of clients entering community AOD services and, almost 50% completed the First Step brief intervention. The delivery of COMs and a brief intervention during the critical first two sessions of AOD treatment could improve the efficiency, efficacy and cost effectiveness of AOD treatment.



### **Computational Markers of Treatment Outcomes in Smoking Cessation: A Longitudinal EMA Study in Real-World Clinical Settings**

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Success rate of smoking cessation is low and it is challenging to predict successful cessation after treatment. Previous studies showed that several psychological variables such as craving or depression are primary predictors of smoking, but individual differences that prompt smoking decisions and successful cessation remain unclear.

To address this gap, we conducted a longitudinal study using ecological momentary assessment (EMA) via smartphone application and decision-making tasks. Treatment-seeking smokers (N=87) participated in the smoking cessation clinic for 5-6 weeks. Participants provided daily self-reports on psychological variables (i.e., anxiety, craving level for smoking, depression, mood, and stress) and completed two decision-making tasks powered by adaptive design optimization (ADO). With ADO, which is a way to optimize experimental design with information theory and Bayesian data analysis, we could substantially reduce the number of trials required for each task and increase the reliability and precision of individual measures. The two tasks, choice under risk and ambiguity (CRA) and delay discounting (DD) task, produced individual parameters of risk-taking, ambiguity-aversion, and impulsivity (i.e., discounting rate of delayed reward) based on computational models.

Our results demonstrated that (1) decision-making task parameters improved classification performance of the prediction model for successful smoking cessation, (2) smaller propensity of ambiguity-aversion but bigger impulsivity during the early phase of the clinic significantly predicted better treatment outcomes (i.e., reduced amount of smoking), and that (3) daily ambiguity-aversion was associated with a higher likelihood of smoking on the next day. These findings suggest that computational modeling using decision-making tasks provides insights for identifying predictors of smoking decisions. We expect that these results might lead to the development of individually-tailored interventions and improve the prognosis of nicotine-cessation clinics.

### **Decision-Making by Binge Drinkers and Healthy Controls**

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Decision-making has been defined as a dynamic cognitive-emotional process where risks such as excessive alcohol consumption are constantly presented, which is a characteristic risk behaviour in which people seek pleasurable effects despite possible negative consequences such as aggression, drunk driving, and sexual risk-taking. Therefore, the objective of this research was to find the main differences in risk Decision-making between a control group and a risk alcohol consumption group. The sample was composed of 43 controls (age  $M = 21.55$ ,  $SD = 3.09$ ) and 25 consumers (age  $M = 22.4$ ,  $SD = 4.68$ ). We used the following cognitive tasks to contrast the performance: BART, IGT, delay discounting, cold-CCT and hot-CCT tasks. Significant differences were found for the BART ( $t = 2.34$ ,  $p = .022$ ), and CCT tasks in their cold version ( $t = 2.04$ ,  $p = .045$ ). The difference in task performance was consistent with other studies. Pearson's correlation analysis showed a significant relationship with alcohol consumption: the BART ( $r = -.261$ ,  $p < .05$ ); the hot-CCT ( $r = -.297$ ,  $p < .05$ ); and cold-CCT ( $r = -.248$ ,  $p < .05$ ). In the exploratory factor analysis the tasks were grouped according to their measurement context: risk taking, uncertainty risk-tasking, and dual process. The discrimination analysis showed that the BART and CCT cold tasks are the best predictors of the excessive alcohol consumption. In conclusion, the study confirms that there are differences between the groups in their performance of the tasks. These results can be used for future studies, and social prevention programs.

### **The Role of Maladaptive and Five-Factor Personality Traits in Mental Health during the COVID-19 Pandemic Situation: A 11-Month Longitudinal Study**

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#### INTRODUCTION

Personality traits are one of the factors explaining the mental health problems, which were heightened during the Coronavirus disease (COVID-19) pandemic (Aschwanden et al., 2021; Bahk et al., 2020; Modersitzki et al., 2021; Nikčević et al., 2021). Despite the growing interest in the relationship between personality traits and mental health problems during the COVID-19 pandemic, their longitudinal relationships or interaction effects have not been fully understood. The aim of the current study was to examine the longitudinal effects of the five-factor and maladaptive personality traits (i.e., extraversion, conscientiousness, negative affectivity) on mental health during the COVID-19 pandemic situation.

#### METHOD

We conducted a longitudinal survey and collected a total of 1,167 Korean samples across seven different time points between May 2020 and April 2021 through an online survey company. We employed the Mental Health Screening Tool for Depressive Disorders (MHS: D), Mental Health Screening Tool for Anxiety Disorders (MHS: A), Mental Health Screening Tool for Suicide Risk (MHS: S), and the Short Form of Bright and Dark Personality Inventory (BDPI-SF). After excluding inconsistent responses, a total of 1,137 samples (576 male and 561 female) were included in the analysis. For analyzing longitudinal data, a hierarchical linear mixed model using the SAS PROC MIXED procedure and independent samples t-tests were conducted.

#### RESULTS

Results indicated that all three personality traits, especially negative affectivity, were significant predictors of changes in mental health outcomes over the 7-time points. Specifically, across all time points, there were statistically significant differences in MHS: D, MHS: A, and MHS: S scores between low and high levels of negativity affectivity groups ( $p < .01$ ). People with high negative affectivity reported higher mental health problems than people with low negativity affectivity. Participants with low levels of extraversion and conscientiousness had significantly higher levels of mental health problems than people with higher levels of those personality traits. However, the significant effects of extroversion and conscientiousness on mental health problems disappeared when considering negative affectivity in the model, indicating that negative affectivity would be the strongest predictor for mental health-related problems during the COVID-19 pandemic.

#### DISCUSSION

The current findings have implications for understanding the role of personality traits in mental health problems during the COVID-19 pandemic. Especially, the findings highlighted the crucial role of negative affectivity on mental health problems over the 7-time points during the COVID-19 pandemic, and thus personality-informed treatments and assessments (especially targeting negative affectivity) should be developed in the future.

## Changes in Structural Connectivity Associated with Long-Term Benefits of Cognitive Behavioral Therapy with Mindfulness Training

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### INTRODUCTION

We have recently demonstrated that Cognitive Behavioral Therapy with Mindfulness component (CBTm) improved sub-threshold symptoms of depression and anxiety in public safety personnel (PSP) (Bolton et al., under review), which was associated with increases functional connectivity between the left ventrolateral prefrontal cortex (VLPFC) and posterior cingulate cortex (PCC) (Khanam et al., under review). We further investigated if structural connectivity was also affected between the left VLPFC and PCC.

### METHOD

PSP (n=25) with no or few symptoms of common mental disorders like depression, anxiety, post-traumatic stress disorder completed this randomized neuroimaging study. Participants either underwent a 5-week CBTm intervention (n=11) or were waitlisted (n=14). The detailed sample characteristic is described elsewhere (Khanam et al., under review). All participants were scanned with diffusion tensor imaging (DTI) protocol at baseline, within 1 weeks, and after 2 months since the last CBTm session (or 5-week and 12-week follow-up). The deterministic fiber tracking was conducted using Fiber Assignment by Continuous Tracking (FACT) [1] from two seed regions (left VLPFC and PCC) previously identified from the functional connectivity analysis (Khanam et al., under review). The number of fibers overlapping from the two tractography was counted, and its changes from baseline were compared between the groups using Mann-Whitney Test.

### RESULTS

The behavioral (Bolton et al., under review) and functional connectivity changes (Khanam et al., under review) have been previously described. Among 25 individuals, one participant's data was excluded due to technical errors in DTI acquisition. The structural connectivity changes (overlapping voxel counts from FACT analyses from two regions) were significantly different between who received CBTm and waitlisted at 5-week ( $Z=2.486$ ,  $p=0.014$ , 2-tailed exact) and 12-week ( $Z=2.043$ ,  $p=0.041$ , 2-tailed exact). In CBTm cohort, 5 out of 10 participants showed increased connectivity while the other 5 showed no change at 12-week. In waitlist cohort (n=14), 2 showed increased connectivity, 8 showed no changes, and 4 showed decreased connectivity at 12-week.

### DISCUSSION

The present study suggests that the functional connectivity changes associated with CBTm intervention is also associated with structural connectivity changes, which may explain the longer term benefits of CBTm that outlasted the 12-week follow up period (Bolton et al., under review). It should also be noted that there are no known anatomical white matter tracts that directly connect the left VLPFC and PCC, hence we proposed a novel white matter tractography method which counts the number of fibers overlapping each other from FACT using two seed regions. This suggests that there may be a mediating brain region that strengthened the functional connectivity between the left VLPFC and PCC. Further analyses are warranted.

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### **Comparing Effectiveness of Two App-Based Cognitive Behavioral Self-Regulation Programs for Problematic Smartphone Use among College Students**

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#### INTRODUCTION

Due to the high prevalence rate of Smartphone addiction among college students, the development of early prevention is an urgent priority. This study was designed to develop app-based cognitive behavioral self-regulation programs and evaluate their effectiveness in reducing college students' non-academic smartphone use time, the level of Problematic Smartphone Use, and motivation for healthy use of technology.

#### METHOD

after obtained informed consent from students and parents, a total of 72 freshmen with Problematic Smartphone Use screened through online survey participated in the present study. They were randomly assigned to 8 weeks of intervention groups of "Goal-setting and gradual reduction of smartphone use time" vs "receiving message of intragroup social comparison for smartphone use time". The data was collected in the pre-test, post-test following 8 weeks of intervention, and follow-up tests for one and four months.

#### RESULTS

The results using GEE analyses showed that both groups significantly reduced the levels of Problematic Smartphone Use and increased the levels of motivation for healthy use of technology at post-test, one and four month follow-up. Moreover, there were no intergroup differences between two groups. However, compared with the "social comparison group", the "goal-setting group" had a greater reduction on smartphone and online use time during holiday.

#### CONCLUSION

These findings provide evidence that delivering app-based CBT programs can lead to clinically improvements in improving Problematic Smartphone Use risk. The effectiveness of two programs will be further discussed.

### **A Longitudinal Investigation of Sleep and Technology Use in Early Adolescence: Does Parental Control of Technology Use Protect Adolescent Sleep?**

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#### INTRODUCTION

A bi-directional relationship between technology use and adolescent sleep is likely, yet findings are mixed, and it is not known whether parental control of technology use can protect sleep. The current study examined bi-directionality between technology use on school nights and morning/eveningness, sleep duration and daytime sleepiness in early adolescents. We also examined whether time spent using technology mediated the relationship between parental control of technology and adolescent sleep.

#### METHODS

Adolescents and their primary caregiver (96% mothers) completed questionnaire measures of sleep, technology use and parental control across three, annual waves: Wave 1 (N = 528, M<sub>age</sub> = 11.18, SD = 0.56, range = 10–12, 51% male), Wave 2 (N = 502, M<sub>age</sub> = 12.19, SD = 0.53, 52% male) and Wave 3 (N = 478, M<sub>age</sub> = 13.19, SD = 0.53, 52% male).

#### RESULTS

When examining the direct relationship between sleep and technology use, cross-lagged panel models showed that time spent using technology predicted shorter sleep duration and greater daytime sleepiness in adolescence, and evening diurnal preference and shorter sleep duration contributed to increased technology use over time. The relationship between technology use and sleep duration was bi-directional. Time spent using technology and adolescent sleep predicted, yet were not predicted by, parental control of technology use.

#### DISCUSSION

While normative changes in sleep (eg, increased eveningness) may promote increased technology use, technology use may further impinge upon sleep. Results suggest it may be pertinent to instead find creative ways in which adolescents themselves can mitigate their risk of inadequate sleep.

Link to Published Paper: <https://www.sciencedirect.com/science/article/pii/S1389945721003348>

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### **The Common and Specific Roles for Inattention, Hyperactivity, Use Expectancy, and Refusal Self-Efficacy in the Development of Gaming Addiction and Social Networking Addiction Among Adolescents: A One-Year Longitudinal Study**

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#### INTRODUCTION

With the development of technology, internet addiction has gradually received attention over the past two decades, especially among adolescents. One of the most important issues currently is how to identify individuals at risk of addiction at an early stage and intervene promptly. Previous research has found that ADHD symptoms are significant risk factors in internet addiction. However, it remains controversial whether attention deficit and hyperactivity have the same predictive power for different types of internet addiction, and most of the studies have been cross-sectional. Therefore, the first aim of this study was to investigate whether attention deficit and hyperactivity symptoms could predict changes in the degree of gaming addiction and social network addiction in the following year after controlling the levels of addiction in the first year. Secondly, based on Bandura's social cognitive theory and Brand's I-PACE model, internet use positive expectancy is expected to be mediated by refusal self-efficacy, which further affects internet addiction. However, their specific role playing in developing different types of internet addiction needs further examination. Thus, the second aim of this study attempted to reveal whether there was specificity in predicting the development of gaming and social network addiction with use positive expectancy and refusal self-efficacy.

#### METHOD

A total of 1,308 Taiwan adolescent students (age:11–18 years old, education: 22.2% primary school, 40.4% junior high school, 37.5% senior high school). were sampled through a stratified and random cluster sampling in time 1 (T1), and were followed up one year later (T2). A comprehensive survey was administered.

#### RESULTS

The hierarchical multiple regression results showed that, T1 attention deficit symptoms significantly predicted both T2 gaming addiction and social network addiction, while T1 hyperactivity symptoms only significantly predicted social network addiction. Regarding the role of cognitive factors, results indicated that in predicting T2 gaming addiction after controlling T1 gaming addiction, T1 higher positive expectancy for gaming, lower positive expectancy for social network, and low refusal self-efficacy for gaming were significant risk factors. In predicting T2 social network addiction after adjusting for T1 social networking addiction, T1 higher use positive expectancy for social networks and lower use refusal self-efficacy for social networks were significant factors.

#### CONCLUSION

The findings of this study shed light on possible common and unique risk factors for gaming addiction and social networking addiction in adolescents. The results suggested that inattention may be a common risk factor for both addictions, and that higher levels of positive expectations for coping with emotional distress using specific online activities and lower levels of refusal self-efficacy using specific online activities may contribute to different specific addicted to Internet.

### **Enhancing Acceptance and Outcome of Cognitive Behavior Therapy With Neuroscience Informed Psychoeducation in Young Adults**

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#### INTRODUCTION

Cognitive Behavior Therapy (CBT) has been the mainstay of psychotherapy for many mental health issues and is an evidenced based treatment for depression, anxiety and many more clinical conditions. It has been well accepted in non-western cultures and there is ample literature over its indication. Psychoeducation often has been suggested as a recommended augmentation for CBT to enhance clients understanding of his clinical condition by knowing its etiology, sign and symptoms, course, treatment alternatives which eventually helps in improving treatment compliance as well as prognosis. However, despite providing psychoeducation there might be a certain degree of hesitation and doubt in engaging into CBT on part of client due to their conventional dependence on pharmacological methods of treatment. In certain occasions even therapists may have apprehensions over efficacy of CBT due to their ignorance of the neuroscience of psychotherapy. It is postulated that a neuroscience informed module of psychoeducation can bring better acceptance of CBT and improve outcome.

#### METHOD

The study aimed to see whether the acceptance and outcome of CBT can be enhanced by augmenting neuroscience informed psychoeducation. 30 consecutive clients of both sexes in the age range of 18-25 years with symptoms of depression and anxiety were randomly divided into two groups who underwent standard module of CBT. The first group received the CBT module with generic psychoeducation detailing the etiology, signs and symptoms and treatment requirements for their condition. The second group received psychoeducation module which had specific inputs about the neuropsychological changes in the brain due to psychotherapy (CBT) process. Pre and post comparison of symptom severity and follow up compliance was done.

#### RESULTS

Both groups had significant improvement in their clinical symptoms. However, the group receiving neuroscience-based psychoeducation showed better compliance and follow up rates as well as quicker response to the CBT process.

#### DISCUSSION

Neuroscience based psychoeducation can bring better acceptance and better outcome for the CBT process. The modified psychoeducation program can help better prognosis in population who conventionally rely on pharmacological treatment methods, as well as in young adults who often are reluctant to seek help for mental health issues.

Keywords: Neuroscience, Psychoeducation, CBT, Young adults



### **The Patient's Ambivalence Attitude in Therapy: Toward an Integrative Perspective in Combining Motivational Interviewing with TEAM-CBT**

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The aim of the current lecture is to uncover the similarities and differences toward ambivalence in TEAM-CBT and Motivational Interviewing, in order to consolidate the therapists ability to increase patients' inner motivation toward change.

There is ample evidence demonstrating the advantages of combining Motivational Interviewing (MI) with Cognitive-Behavioral Therapy (CBT) (e.g., Allot & Earnshaw, 2007; Naar-King et al., 2013; Earnshaw, 2020; Westra & Norouziyan, 2018), with promising results: improving treatment outcomes (e.g., Westra et al., 2009; Westra & Dozois, 2006), greater homework adherence (Westra et al., 2009; Westra & Dozois, 2006), and decreased resistance during the therapy (Aviram & Westra, 2011).

Surprisingly, little attention has been paid for comparing their position toward an ambivalence issue in therapy. The patient's ambivalence toward the change is a critical issue in therapy in particular, when he or she is adhering to the status quo and doesn't make the necessary change (Eysenck, 1976; Miller & Rollnick, 2009). The ambivalence explanation for this circumstance is the existence of confronting wishes to do and not to do the change, simultaneously (Miller & Rollnick, 1991).

Whereas in depth discussion on the patient's ambivalence on MI approach alongside specific strategies and theory (e.g., Earnshaw, 2020; Miller & Moyers, 2017) there is a room for more discussion on this issue in CBT, specifically when considering the combination with MI.

Both of the therapies have the assumption that people are more persuaded by their own arguments in favor of change than by the therapist's statements. However, each one of the therapies suggests different ways for achieving this goal and resolving the ambivalence.

In the current presentation we will focus on comparing MI with TEAM-CBT (Burns, 2020),

in regard to this topic. Understanding the unique attitude toward the ambivalence, as well as the similarities between MI and TEAM-CBT, contributes for expanding the theoretical background of the successful integration of MI with CBT. Moreover, the comparison might help therapists to solve the patient's ambivalence effectively by adopting the most relevant strategies from both of the theories.

The first speaker, who works mainly with the MI approach- will describe the concept and strategies for resolving ambivalence at MI approach and the 3 main ways of integration of MI with CBT. The second speaker, who works with TEAM-CBT will introduce the attitude and strategies of this approach toward ambivalence. We will analyze the similarities and differences between these two approaches and we also demonstrate a clinical example for the integration of MI with TEAM-CBT to enhance the patient's inner motivation toward change. A theoretical and practical implication of the integration will be discussed.

### **Do Adherence, Competence, and Alliance Predict Long-Term Outcomes of Cognitive Behavioral Therapy for Youth Anxiety Disorders?**

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#### INTRODUCTION

Cognitive behavioral therapy (CBT) is a well-established treatment for anxiety disorders in youth, with favorable outcomes across treatment modalities and settings including both specialized clinics (James et al., 2020) and routine clinical care (Wergeland et al., 2021). However, a large proportion of youth are non-responders at post-treatment, or not in stable remission at long-term follow up (Ginsburg et al., 2018; Kodal et al., 2018). One way to potentially improve CBT is to investigate therapist effects (e.g., therapist adherence to the manual and therapist competence in delivering the intervention) and patient-therapist alliance to identify potential targets for training and supervision of therapists (Baldwin & Imel, 2013). The current study\* investigated therapist adherence, therapist competence, and patient-therapist alliance as predictors of long-term outcomes of cognitive behavioral therapy (CBT) for anxiety disorders in youth. Furthermore, potential differential effects for group versus individual CBT, for therapists with or without formal CBT training, and based on youth symptom severity were examined.

#### METHOD

Videotapes (n=181) from treatment sessions in a randomized controlled effectiveness trial care (Wergeland et al., 2014) comprising youth (N = 170, M age = 11.6 years, SD = 2.1) with anxiety disorders were assessed for therapist adherence and competence. Alliance was rated by therapists and youth. Participants completed a diagnostic interview and an anxiety symptom measure at pre-treatment, post-treatment, one-year follow-up, and long-term follow-up (M = 3.9 years post-treatment, SD = 0.8, range = 2.2 - 5.9 years).

#### RESULTS

Although change in anxiety symptoms or diagnostic status from pre-treatment to long-term follow-up was not significantly related to any predictor variables, several interaction effects were found. For loss of principal diagnosis, therapist competence predicted positive outcome when therapist adherence also was high. Adherence was found to predict positive outcome for individual CBT. Therapist-rated alliance was related to both loss of principal diagnosis and loss of all diagnoses in group CBT.

#### CONCLUSIONS

Interaction effects indicated that therapists displaying both high adherence and high competence produced better long-term outcomes. Further, the alliance may be particularly important for outcomes in group CBT, whereas adherence may be particularly important for outcomes in individual CBT.

\*This paper is currently in review in *Research on Child and Adolescent Psychopathology*. Full list of authors are: Bjaastad, Jon Fauskanger, Gjestad, Rolf, Fjermestad, Krister, Öst, Lars-Göran, Haugland, Bente Storm Mowatt, Kodal, Arne, Heiervang, Einar R., Wergeland, Gro Janne

### Exploring the Concept of Digital Therapeutic Alliance

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**Background** Fully automated mental health apps are an important part of modern mental health care. However, app use is often short lived with the potential for people to stop using apps before any benefit in mental health is realized. Therapeutic alliance refers to the relationship between a client and a healthcare professional, and is a key predictor of engagement and clinical outcomes in face-to-face therapy. Given the significance of therapeutic alliance in traditional therapy, the concept of digital therapeutic alliance has arisen which refers to extent to which app users perceive a relationship or bond with the app. The majority of research into digital therapeutic alliance has taken measures of alliance used in face-to-face therapy and applied them to the study of apps with minimal adaptations. However, there are likely to be key differences in the conceptualization of therapeutic alliance in face-to-face therapy and digital therapeutic alliance. These two studies explore app users' perceptions the digital therapeutic alliance with the aim of identifying the key dimensions comprising digital therapeutic alliance.

**Method** Study one was based in Australia and interviewed 20 self-identified mental health app users who were not in current contact with mental health services. Study 2 was based in the UK and interviewed 17 self-identified mental health app users, but the majority had been diagnosed with mental health problems and were under the care of mental health teams. Both sets of interviews were conducted online using topic guides that focused on motivations for app use, factors influencing engagement and any perceived differences between face-to-face therapy and the support offered through app usage.

**Results** Although conceptualizations of digital and traditional therapeutic have shared dimensions, flexibility is a unique domain in digital alliance. Levels of self-initiative were also more important in determining levels of engagement with apps compared to therapists, as there was a reduced sense of accountability. Opportunities to build connections through more personalized interactions with apps were a key mechanism through which users developed a sense of emotional connection with the app. Whilst some participants expressed concerns about data security which impacted on information shared via the app, others perceived that the app enabled more openness due to removing concerns about how they might be perceived. The concept of shared goals was less relevant in the context of digital therapeutic alliance but app users had clear reasons for using apps which are likely to impact on level of engagement.

**Discussion** Understanding the digital therapeutic alliance is an important research endeavour which may lead to knowledge about how to improve engagement with mental health apps and ultimately improve user outcomes. Our research suggests that models of digital therapeutic alliance differ from those developed in the context of traditional therapeutic relationships. Thus far, our findings suggest that apps which are flexible, promote self-initiative to engage, use more personalized interactions and address concerns about data security are more likely to foster engagement. Given the importance of shared goals to therapeutic alliance, apps should also develop mechanisms for setting and rewarding goals in order to enhance engagement.

### **Cognitive Behavioral Approaches to the Psychology of Climate Change**

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Nearly a decade ago, adoption of the Paris Agreements confirmed the need for a global shift away from emissions producing energy sources in an effort to limit warming of the earth's surface to 1.5°C. Psychology can play a key role in fighting climate change by translating technology and engineering to socially-oriented contexts so that knowledge may actively be converted to behavior (Devine-Wright, 2006). Cognitive-behavioral psychology is particularly well-suited to understand the ways in which human beings can achieve clear understanding of the science behind the need to motivate habit change. This presentation discusses global a trifold approach to employing cognitive behavioral techniques to connect cutting edge science related to climate change. Data were collected between 2022-2023 from 34 leaders of national, regional and international psychological associations across the globe responded. Each participant responded to a survey soliciting their knowledge about the science behind climate-based choices, the degree to which that knowledge informs their level of motivation, and how they can shift their thinking processes to increase their own thoughts in terms of behavioral growth. In concert with prior research (Sawitri et al., 2014), findings indicated that where participants demonstrated cognitive awareness of the harmful impact of specific lifestyles, they were also more amenable to reframing their behavior in this context and initiating change.

### **Client Perceptions of Internet Delivered Acceptance Commitment Therapy: Helpful and Unhelpful Aspects**

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Client perception is considered crucial in the outcome of therapy as clients are the site of change as well as greatest contributing variable of change. Clients' perception of change in therapy is central in advancing understanding of processes of therapy. The present study explored the helpful and unhelpful factors from clients' perspective with depressive disorder who have undergone acceptance commitment therapy. The study utilized qualitative approach using post intervention semi-structured change interview by Elliott & Rodgers (2008). Six clients participating in RCT with inclusion criterion of 0-13 score on BDI-II post intervention and having undergone complete intervention for 12 session based on treatment manual for depression developed by Zettle (2007) were included in the study. Interviews were conducted by independent interviewer via audio/video call. A descriptive and interpretive framework (Elliott and Timulak (2005) was used to analyse the interviews. Four main domain were identified from transcript were Changes experienced, Helpful Aspects of Therapy, Difficult (but Helpful) Aspects of Therapy, and Unhelpful Aspects of Therapy. The changes experienced were around Emotional awareness, increased insight into the problem, behavior shift and self-relating aspects. The theoretical hypothesised processes like defusion, acceptance, and value work were described as the most helpful therapy processes. Clients explained difficult but helpful aspect as opening up about difficult memories, giving space to difficult and painful emotions and trying out new ways of relating to painful and self-critical thoughts. Practical and logistic issue like privacy issue at home for video sessions; short duration of therapy, insufficient time to address all agendas in session were identified as some of the unhelpful aspect of therapy. The implications of the results, potential future directions of research and limitations will be discussed.

### Evaluation of a Computerized CBT Program: Overcome Fertility Stress

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#### INTRODUCTION

Computerized therapies can play a key role in solving the gap in access to evidence-based treatments. Computerized therapy uses software to administer dynamic mental health interventions with no (or limited) therapist involvement. This is related to internet-supported treatments, in that both involve the use of a computer. However, the key distinction is that online therapy uses the computer as a means of delivery, whereas the computer plays a more active role in computerized therapy. For example, encoded logic (algorithms) can automatically formulate an individualized treatment plan for each user. Overcome Fertility Stress (OFS) is a computerized system that tackles the psychological distress couples with fertility problems face. It has been documented that people who are trying to conceive are at a high risk of experiencing psychological distress. However, only a small proportion receive appropriate care, although interventions such as cognitive behavioral therapy (CBT) can effectively reduce levels of distress. The aim of the current study was to determine the efficacy and feasibility of the OFS program.

#### METHOD

Fifty-five women who were struggling with conception were offered 3-month access to OFS, which is a fully automated yet individualized CBT program via pre-programmed text, video, and audio files. The program tailors its intervention around the symptoms the users report to the program. Inclusion criteria were: (a) a diagnosis of fertility problems or a history of unsuccessful conception for twelve months or longer, (b) being at least 18 years old, (c) being able to read and understand English, and (d) access to a computer with internet and a valid e-mail address. The Fertility Problem Inventory, FPI (Newtown, 1999), and the Depression, Anxiety, and Stress Scale, DASS (Lovibond & Lovibond, 1995) were administered before and after treatment. Furthermore, qualitative feedback was collected.

#### RESULTS

**Efficacy.** There were significant improvements on all FPI subscales from pre- to post-treatment (all  $p$  values  $< .05$ ). The improvements on the FPI subscales yielded small-to-medium effect sizes ( $d$ s range from 0.49 to 0.72). The overall global score of FPI decreased significantly ( $t(33) = 4.35, p < .05$ ), with a large effect size ( $d = 0.75$ ). A comparison of the mean DASS-21 scores with paired  $t$ -tests at pre- and post-treatment indicated a significant decrease in symptoms of depression ( $t(33) = 2.46, p < .05$ ) and stress ( $t(33) = 2.43, p < .05$ ) at post-treatment, with a small effect size ( $d$ s = 0.42 and 0.41, respectively). **Feasibility.** To determine treatment adherence, we assessed participants' number of completed modules, which were automatically recorded by the program. 43% of participants were considered to adhere to the program. A qualitative questionnaire about the feasibility and acceptance of internet-based interventions yielded both positive feedback and identified ways to improve the program.

#### DISCUSSION

These preliminary results suggest it is feasible and effective for women who experience fertility stress to receive a computerized internet-based CBT intervention. Finally, these results add to the literature on the effectiveness of psychological treatments for those who struggle with fertility issues. Although these preliminary results demonstrating a reduction in distress are promising, the overall efficacy of OFS remains unclear, until a randomized controlled trial is conducted.

### **Development, Implementation, and Utilization of a Web-Based Skill-Building Program for Insomnia, Anxiety, and Depression**

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#### INTRODUCTION

As symptoms of insomnia, anxiety, and depression have been rising in the general population over the course of the COVID-19 pandemic (Shah et al., 2021), access to evidence-based treatments for these conditions has been more challenging (Bogucki et al., 2021). Prior to the development of vaccines and therapeutics, stay-at-home orders and social distancing further interrupted usual routes to care delivery (e.g., primary care) and compounded challenges with access to effective interventions. As such, digital solutions needed to be strategically developed and rapidly disseminated in order to bridge interventions to those in need (Liu et al., 2021). The empirical literature has demonstrated the efficacy and effectiveness of internet-based and computerized cognitive behavioural therapy (CBT) for a range of clinical problems (Newby et al., 2016). The aim of the current paper is to summarize Mayo Clinic's efforts in developing, implementing, and disseminating a series of free-to-use, internet-based skill-building modules that were designed during the early stages of the pandemic to assist patients and staff struggling with insomnia, anxiety, and depression.

#### METHOD

Based on transdiagnostic case formulations (Wilamowska et al., 2010), we developed three skill-building modules to address high-impact clinical interventions: Cognitive Behavioural Therapy for Insomnia (CBT-I), Managing Negative Thinking, and Behavioural Activation. An enterprise-wide, multidisciplinary team dedicated to addressing the acute mental health needs of our patients and staff collaborated with Mayo Clinic's Learning Solutions Center and the Center for Digital Health in designing the content of these modules, developing a dashboard to assess uptake and utilization of module content, and advertising these resources to our population spread across the United States.

#### RESULTS

Utilization data between January to December 2022 indicated high uptake for the CBT-I (6,352 individual users), Managing Negative Thinking (2,163 individual users), and Behavioural Activation (2,187 individual users) modules, with over 23,000 unique page views. The CBT-I module was the first to be developed and released, hence the higher degree of uptake across the institution. We will summarize the design of the dashboard and the content of each interactive skill-building module, including updated data on the most frequently viewed content and the percent of individuals completing the full module.

#### DISCUSSION

Lessons learned regarding the design, implementation, assessment, and advertisement of digital health solutions will be highlighted and discussed. Future directions for how to use these interactive skill-building modules to complement evidence-based treatments and improve clinical outcomes will also be summarized.

### **Internet-Based Psychological Treatment for Perfectionism: A Randomized Controlled Trial Comparing Cognitive Behavior Therapy To Unified Protocol**

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#### INTRODUCTION

Perfectionism is characterized by setting high standards and being overly concerned about performance, which can negatively impact psychological wellbeing and interpersonal relationships. Cognitive Behavior Therapy (CBT) has been shown to reduce perfectionistic problems and anxiety, while improving mood and quality of life. Research on CBT delivered via the Internet (iCBT) also suggest that these benefits are possible to achieve in other modalities than face-to-face. However, no clinical trial has so far used an active comparator when testing the efficacy of iCBT for perfectionism, which is why the current study compared iCBT to Internet-based Unified Protocol (iUP).

#### METHOD

In total, 138 self-referred participants were randomized to iCBT or iUP for an eight week-treatment with guidance on demand from a therapist. The treatment consisted of psychoeducation, exercises, and homework assignments. Self-report measures of perfectionism, the Clinical Perfectionism Questionnaire (CPQ), and depression were assessed weekly throughout treatment, and at six and 12-month follow-up. Self-report measures of anxiety, quality of life, and self-criticism were administered at pre, post, and six and 12-month follow-up. Statistical analyses were made using linear mixed effects models.

#### RESULTS

Large within-group effects were obtained on the CPQ for both conditions pre-post, iCBT Cohen's  $d = 2.03$ , and iUP  $d = 2.51$ , with maintained benefits at follow-up assessments, but no interaction effect. All other outcomes demonstrated moderate to large within-group effects, which were also maintained at follow-up assessments, but no interaction effects. There were no differences between conditions in terms of the number of opened modules, contact with a therapist, credibility ratings, relevance ratings, or quality ratings. In total, 39.1% in iCBT were classified as recovered on the CPQ at post, compared to 40.6% in iUP. Non-response rates were 39.1% (iCBT) and 30.0% (iUP). No participant deteriorated during treatment.

#### DISCUSSION

The current study is the first randomized controlled trial comparing iCBT to an active comparator, with both conditions demonstrating promising results with regard to treating perfectionism, while at the same time having a positive impact on other aspects of wellbeing. This replicates prior findings on the benefits of CBT in general, and iCBT in particular, for individuals who experience difficulties due to perfectionism. Further research is however warranted in order to understand what specific interventions are most useful in treatment.



### **Practicing Online CBT in India: The Shift, Challenges and Future**

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#### INTRODUCTION

Cognitive Behavior Therapy is an evidenced based treatment for anxiety, depression, and related conditions. Owing to its simplistic approach CBT is often the preferred mode of psychotherapy among practitioners, who customize it as per the requirement of their clients. Practice of CBT is conventionally face to face in person, however online consultations modes have also been in practice for years around the world. Online delivery of CBT in India was not unheard of, but very less in number. The Covid pandemic essentially changed the scenario, almost forcing therapist and clients to switch to online mode during the lockdown period. The shift to unconventional mode of delivery was not easy for both therapists as well as clients and came with its own apprehensions, fears as well as doubts. As the pandemic receded after around two years, therapist and clients came up with their own experiences with the online mode of CBT and subsequent willingness or unwillingness to do CBT in online mode.

With this background the present study aimed to find out the nature of online CBT delivery by practicing therapists in digital format. It also studies how well online mode of CBT has been accepted among therapist and clients in India.

#### METHOD

Data were collected post – lockdown from CBT practitioner (N= 30), and from clients (N = 50) receiving CBT, from different parts of India. A specially made questionnaire was circulated to all, and a brief interview also taken from each. Mean age of the therapist and clients is 32 and 38 years, respectively.

#### RESULTS

Findings suggest, both therapists and clients have an inclination towards digital mode of CBT, however, therapists prefer combined type more, and clients are more interested in online format. It has been seen that; digital CBT has enhanced the chances to access psychotherapy to individuals who needed therapy from professionals. Other findings were prominent enough that, even after the pandemic ended people are preferring online CBT more than person-to-person therapy sessions. The guidelines for online delivery of psychotherapy are recently framed and not many therapists are aware of them.

#### DISCUSSION

The online mode of CBT has come handy for both therapists as well as client and found good acceptance in Indian setup primarily due to convenience as well as being more economical. While in-person therapy sessions still may have better efficacy, people's preference has changed post pandemic and online CBT has grown its outreach. Despite some limitations, the online mode of CBT can be very well mixed with in-person mode for a better therapy experience. There is a need of awareness as well as adherence to the standard guidelines of online delivery of psychotherapy.

Keywords: Online CBT, Acceptance, Challenges

### **How Does Social Comparison Impact Mental Health: A Meta-Analysis of Current Findings and a Theoretical Framework**

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#### INTRODUCTION

Social comparison processes are omnipresent in every-day life and play a crucial role in psychological well-being. Nonetheless, the clinical implications of social comparison have not been examined systematically. This is arguably due to lack of a comprehensive theoretical model of social comparison as it relates to psychological well-being.

#### METHODS

To this end, we have crafted a theoretical framework of social comparison, which defines social comparison as a process consisting of a) the selection of the social standard, b) the basic comparison process comprising evaluating (dis-)similarities between the target and the standard as well as the comparison outcome (i.e., perceived discrepancy between the target and the standard), and c) the engendered affective, cognitive or behavioural responses. Furthermore, we conducted a systematic review in PsycINFO, Medline and Web of Science of available empirical data on social comparison collected with individuals with a mental disorder.

#### RESULTS

The included studies reported on the correlation between social comparison and measures of psychopathology, on social comparison orientation, and on reactions following social comparison. Social comparison behaviour correlated significantly with psychopathology ( $r = 0.57$ ;  $k = 23$ ) and clinical populations showed a significantly stronger tendency to compare themselves to others than non-clinical populations (Hedges'  $g = .88$ ;  $k = 12$ ). Furthermore, clinical populations reported stronger emotional and cognitive responses following social comparison than non-clinical populations (Hedges'  $g = 1.23$ ;  $k = 7$ ).

#### DISCUSSION

Overall, the existing data support the role of social comparison in psychopathology. The presentation will use the framework to structure the current findings and make recommendations for prospective research on the role of social comparison in well-being.

### **Brief Online Cognitive Bias Modification Training for Social Anxiety in Young Adults: Efficacy and Acceptability during the Transition Out of Social Restrictions**

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#### INTRODUCTION

Social Anxiety Disorder (SAD) is a prevalent condition characterized by excessive fear and worry of evaluation, humiliation, and social interactions in ambiguous situations. Young adults are particularly vulnerable to this disorder, and the COVID-19 pandemic has further increased the severity of symptoms in SAD sufferers due to apprehension about returning to face-to-face contact (Itani, et al. 2021). The cognitive model of SAD posits that biased processing of social information underlies the thoughts, emotions, and behaviours associated with the disorder (Clark & Wells, 1995; Rapee & Heimberg, 1997). Specifically, individuals with SAD pay more attention to threatening stimuli and are more likely to interpret neutral stimuli as negative (Beck & Clark, 1997; Beard & Amir, 2009). Biased processing at these two stages can cause and maintain symptoms (Mathews & McLeod, 2002) but when cognitive bias modification (CBM) training is successful, consequent reductions in symptoms have been found in pre-pandemic laboratory-based trials (Beard, et al. 2011; Yeung & Sharpe, 2019). This study adapted Beard, et al. (2011) and developed a brief web-based CBM training, called Modification of Information-processing Networks using Digital tasks (MIND), with the aim of determining its efficacy, feasibility and acceptability during the transition from digital to physical social contact.

#### METHOD

Of the initial 48 participants aged 18-30 with mild to severe social anxiety symptoms, 25 completed the randomised, placebo-controlled trial. Recruitment and all communication in the randomised placebo-controlled trial was conducted asynchronously by email and text. The MIND training consisted of two digital tasks: (1) a picture-response task using facial expressions to address biased attention and (2) a word-sentence association task to address biased interpretation. The treatment group received four staggered sessions of MIND and was compared with the placebo group, which received similar tasks but did not address biased processing.

#### RESULTS

In comparison to the placebo group, MIND participants reported significant reductions in social anxiety symptoms (Cohen's  $d = 1.35$ ,  $p < .01$ ) on the Liebowitz Social Anxiety Scale (LSAS, Liebowitz, 1987) and negative affect (Cohen's  $d = 1.17$ ,  $p < .01$ ) on the Positive and Negative Affect Schedule (PANAS, Watson, Clark & Tellegen, 1998), but increased in positive affect (Cohen's  $d = -1.41$ ,  $p < .01$ ). Biased attention and interpretations of a virtual public speech activity also reduced (Cohen's  $d = 0.57$ ,  $p < .01$ ). However, credibility was only met before receiving MIND, expectations of change were not satisfied; acceptability was moderate, and satisfaction criteria were not met.

#### DISCUSSION

The study suggests that MIND, with its ability to correct information-processing biases, is a novel and efficacious solution for addressing the need for social anxiety treatment among young adults during the early transition from pandemic restrictions. Although further development and larger trials are needed, the results of this study suggest that MIND is practical to deliver because it was entirely online. However, its credibility, acceptability, and satisfaction were not highly rated, which may account for an increased attrition rate. Implications for future uptake as a stand-alone treatment in unique situations or as a supplement to face-to-face therapy should be considered along with further research.

### **Decreasing Anticipatory Anxiety for Public Speaking Using a Virtual Reality Exercise “FutureMe”**

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Public speaking anxiety (PSA) is highly prevalent, and high levels of PSA cause impairments or significant distress in social or occupational functioning (Pull, 2012; Stein et al., 1996). The recommended treatment for anxiety symptoms, including for PSA, is exposure. However, the drop-out rates are high and willingness for exposure is low (Bentley et al., 2021). Previous research showed that positive mental imagery of a public speaking scenario helps with lowering anticipatory anxiety and distress during subsequent exposure, although the willingness for exposure did not improve (Landkroon et al., 2022). Besides, lab studies have shown that dual tasking, during which participants simultaneously activate their stressful memory while performing a secondary distraction task, decreases emotionality and vividness of these memories (van den Hout & Engelhard, 2012). This mechanism is the best explanation for the workings of Eye Movement Desensitization and Reprocessing (EMDR) therapy, which is used to treat PTSD and anxiety disorders (van den Hout & Engelhard, 2012).

In an experimental study with a between-subjects design and repeated measures, we are investigating whether a VR exercise called “FutureMe” will help to increase willingness for exposure and decrease anticipatory anxiety for public speaking in a student population. This VR exercise consists of 1) a positive mental imagery task, where participants imagine a positive way to present, and 2) an eye-movement distraction task whenever a participant feels distressed (i.e., dual tasking). The FutureMe will be compared to a positive mental imagery task in VR (VR-PMI) and a VR-filler task (VR-control).

We aim to examine the effects of FutureMe and VR-PMI in comparison to VR-control on subjective and physiological outcome measures regarding public speaking anxiety, as well as to examine whether the FutureMe (which includes VR-PMI and dual tasking) has additional effects compared to VR-PMI. We hypothesize that both the FutureMe and VR-PMI are effective in dampening the physiological reactions towards presenting, decreasing distress, emotionality and anticipatory anxiety when thinking about giving a presentation, and that willingness for presenting will increase, compared to the VR-control. Moreover, we expect that the FutureMe will have additional beneficial results compared to the VR-PMI, regarding a further reduction of distress, vividness, emotionality and anticipatory anxiety. Data collection will take place from the 13th of February until March/April 2023. We will present our FutureMe VR-application and present and discuss our preliminary data. This study is preregistered: <https://osf.io/yf8v6>.

### **Rumination in Response to a Social Interaction: Psychometric Properties of the Socially Anxious Rumination Questionnaire (SARQ) In Social Anxiety Disorder**

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#### INTRODUCTION

Negative rumination is an intrusive and persistent pattern of thinking that can have a profound impact on those with social anxiety disorder. Both pre- and post-event rumination are understood as interwoven processes, with post-event rumination hypothesised to confirm negative assumptions about the self, and pre-event rumination likely reactivates negative imagery of perceived social failures. Pre- and post-event rumination can occur in relation to performative situations or/and social conversations, it is essential that psychometric properties of rumination measures are validated following both social experiences. The Socially Anxious Rumination Questionnaire (SARQ) is a measure with two parallel versions that reflect pre-event rumination (i.e., SARQ-pre) and post-event rumination (i.e., SARQ-post). The current study aimed to investigate the psychometric properties of the SARQ in relation to a social conversation task, as well as whether the amount of pre-event and post-event rumination following different social tasks varies (i.e., conversation vs. speech task).

#### METHOD

All participants had a principal diagnosis of social anxiety disorder. Participants completed the SARQ-pre (n = 134) and SARQ-post (n = 124) in relation to a 5-minute conversation and a 3-minute speech in counterbalanced order. Participants also completed measures related to social anxiety (SPS, SIAS, BFNE) and depression, anxiety and stress.

#### RESULTS

Confirmatory factor analyses endorsed a unidimensional interpretation for the SARQ-pre and SARQ-post in relation to a conversation task, with good fit across all indices [SARQ-pre: chi-squared/df = 1.77; TLI = 0.96; CFI = 0.97; RMSEA = 0.08; SARQ-post: chi-squared/df = 1.35; TLI = 0.98; CFI = 0.99; RMSEA = 0.05. Both versions had good construct validity, excellent internal consistency, and treatment sensitivity following cognitive behavioral therapy. The SARQ-pre scores were significantly higher in anticipation of a speech when compared to scores on an upcoming conversation. The SARQ-post scores were significantly elevated one-week following a conversation, in comparison to the scores collected regarding a speech.

#### DISCUSSION

The current study demonstrated that the SARQ is a valid and reliable instrument to use as a measure of pre-event and post-event rumination in relation to a conversation. Interestingly, the observed patterns of rumination preceding and following the two social threats were significantly different. That is, people with social anxiety disorder ruminate more in anticipation of a performance-based speech but experience greater levels of post-event rumination in relation to a social conversation with a stranger. One hypothesis to explain these findings is that the two types of social experiences may differ in the levels of ambiguity that they elicit. That is, social interactions are intrinsically more ambiguous and complex, thus appraisals of perceived failure and negative images of the self are more readily available as there is increased bias that one may have behaved in a potentially unacceptable way. Despite being more structured, the speech may be perceived as a 'higher stakes' task leading to increased anxiety and threat and associated rumination. These findings further elucidate the importance of validating state based social anxiety measures in relation to different social tasks.

### Linguistic Features of Individuals with High Neuroticism

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#### INTRODUCTION

Neuroticism is one of the most important traits for clinicians due to its strong association with mental and physical health (Brown & Barlow, 2009; Lahey, 2009). Kotov et al. (2010) highlighted the importance of neuroticism since neuroticism is the strongest predictor of mental disorders. The present study utilized natural language processing (NLP) to find salient linguistic features of individuals with high neuroticism, and to predict person with elevated level of neuroticism. Researchers have reported the feasibility and advantages of language-based personality assessment combined with computational science. Literature, however, has mainly focused on maximizing the predictive power at the expense of psychometric validity and interpretability. Despite the importance of context in language analysis, previous studies have heavily relied on readily accessible language data, failing to consider contexts in language use. The current study conducted language analysis on 425 adult participants with 18 open-ended questions we developed in the previous study (Jang et al., 2022) with recent NLP technologies. Among 18 open-ended questions we developed, the present study introduces questions with higher prediction performance for neuroticism. The current study also introduces linguistic features of respondents with high neuroticism.

#### METHODS

Study design, methods, and development phase of 18 open-ended questions is included in pre-registered article published by Jang et al. (2022). 425 adult participants were recruited using a convenience sampling method and provided text data in response to the 18 open-ended questions. The participants also finished online survey including demographic information and self-report questionnaires. Lexical analysis was utilized to examine the salient features of language use in individuals with high neuroticism. Predictive power of models generated from each question were compared.

#### RESULTS

Prediction models for neuroticism were generated for each of the 18 questions to examine which question showed highest predictive performance. Questions with higher predictive power showed better content validity for neuroticism while questions with lower predictive power showed less theoretical relevance to neuroticism. Overall, individuals with high neuroticism often used the expressions such as 'distrust', 'self-conscious', 'lie down', 'afraid', 'sensitive', 'listen to music', 'other people', 'eat something', 'depressive', 'happened to me' while individuals with low neuroticism often used the expressions such as 'activity', 'exercise', 'my best', 'learn', 'get along with', 'fun', 'thankful'. We further introduce linguistic features of individuals with high neuroticism in specific questions.

#### DISCUSSIONS

We will present potential linguistic markers of individuals with high neuroticism in the specific open-ended questions. The findings will be discussed with theories of personality and psychopathology. The present study will add empirical evidence to previous language analysis literature in psychology. Suggestions for future studies and limitations will be provided as well.

\*Pre-registered protocol article: doi: 10.3389/fpsyg.2022.865541

### **Exploring the Dynamics of Anxiety, Mind-Wandering and Cognitive Flexibility via Network Analysis**

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#### INTRODUCTION

High levels of anxiety in the general population are associated with discrete changes in cognition, including reduced cognitive flexibility, repetitive, negative thought profiles and worry. Empirical research bridging the domains of cognitive flexibility and how it affects anxiety symptomatology is lacking. This study aimed to address this gap by exploring how anxiety, cognitive flexibility and mind-wandering interact.

#### METHOD

Participants comprised university students ranging from 18-47 years old (N=347). Participants completed validated questionnaires online to assess anxiety (Spielberger Trait Anxiety Inventory), worry (Penn State Worry Questionnaire) cognitive flexibility (Cognitive Flexibility Inventory), and mind-wandering characteristics (Four Factor Imagination Scale). To identify and examine the influence of central variables, a regularised partial correlation network of cognitive flexibility, mind-wandering attributes and anxiety symptoms was estimated.

#### RESULTS

Hypervigilance and viewing situations from multiple angles emerged as central nodes in the obtained network model. A Louvain community analysis revealed four main symptom clusters, namely, dissatisfaction, negative self-view, uncontrollable worry and flexibility in perspective taking.

#### CONCLUSION

This study provides a comprehensive investigation of cognitive flexibility and its association with symptoms of anxiety. Our findings highlight a potential role for cognitive flexibility as a therapeutic target.

### **Cognitive Mechanisms That Underpin the Tendency to Experience Heightened State Anxiety Responses To, and Adaptive Preparation For, Impending Stressors**

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#### BACKGROUND

Exposure to stressful events are inevitable occurrences in life that are highly common and often unavoidable. Importantly, in the face of such circumstances, individuals differ in both the degree to which such impending stressors serve to evoke heightened state anxiety responses and drive elevated engagement in adaptive preparatory responses to mitigate the threat. Understanding these individual differences is crucial, as a disproportionate tendency to experience heightened state anxiety, and a lack of engagement in adaptive preparation, can adversely impact an individual's emotional and situational well-being (Pirkis et al., 2000). Variation in two psychological mechanisms may contribute to individual differences in the tendency to experience heightened state anxiety response to impending stressors. Firstly, the degree to which individuals selectively attend to negative event-related information in the lead up to an impending stressor, known as attentional bias to negative information (AB-N). Secondly, the degree to which individuals engage in thinking concerning the negative and undesirable implications of the upcoming stressor, termed negative thinking. Likewise, variation in two other psychological mechanisms may contribute to individual differences in the tendency to engage in adaptive preparative behaviours to impending stressors. Firstly, the degree to which individuals selectively attend to information that conveys utility in guiding engagement in adaptive preparatory behaviours, termed attentional bias to preparation utility information. Secondly, the degree to which individuals engage in strategic thinking and mental problem-solving concerning adaptive preparatory behaviours to mitigate the threat of the upcoming stressor, termed constructive thinking. To date, no research has sought to investigate whether these mechanisms play a role in heightened state anxiety to, and adaptive preparation for, an upcoming stressful event. This was the purpose of the present study.

#### METHOD

Participants were forty-nine psychology students, who were told that they had to complete a stressful event at the end of the test session, which in this study was a quiz task. Beforehand, participants were provided information about the quiz task, in the form of pairs of video clips depicting people who had previously completed the task. In some pairs the information conveyed emotionally negative vs. benign aspects of the quiz task or conveyed adaptive vs. non-adaptive ways to prepare for the quiz task. Attentional bias was assessed using the novel dual-probe approach (Grafton, Teng & MacLeod, 2021). The former video pairs permitted assessment of AB-N and the latter AB-PU. Participants' adaptive preparatory behaviour was assessed, along with state anxiety responses, and the degree to which participants engaged in constructive thinking and negative thinking.

#### RESULTS

Analyses revealed an association between heightened state anxiety responses to the impending quiz stressor and AB-N. Furthermore, this association was mediated by negative thinking. No association was found between AB-PU and adaptive preparatory behaviour responses to the quiz task, however, constructive thinking was associated with adaptive preparatory behaviour responses to the quiz task.

#### CONCLUSIONS

The present research not only usefully informs understanding of the mechanisms that give rise to heightened state anxiety responses and elevated engagement in adaptive preparatory responses to impending stressors but may contribute to the development of targeted interventions for enhancing emotional and situational well-being.



### **Effect of Mindfulness on Delay Discounting and Social Discounting**

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Mindfulness is a practice of attention with the intent to observe, describe, and engage nonjudgmentally, in the present moment, and effectively in a given context. Various studies have found an effect of mindfulness training on decision-making tasks and executive functioning, arguing that this training benefits people to be less impulsive and biased in their choices. However, the hypothesis has emerged that this practice increases prosocial behaviour, understood as a donation of goods. This implies that there is a common mechanism, and a potential escalation, between making decisions that directly benefit a single human and subsequently the humans around them. Therefore, the objective of the present study was to evaluate the effect of Mindfulness on self-control and prosocial behaviour with objective execution tasks: delay and social discounting with the manipulation of two magnitudes. A total of 38 participants were voluntarily recruited, of which 19 were women and 19 men, with a mean age of 30.31 ( $SD = 11.7$ ). Two groups were formed, one group was given mindfulness training for 45 minutes prior to the social and delay discounting tasks, while the other group saw a musical video (45 min), and after the discounting tests. The tests of the experiment were carried out on the LabExp-1630 platform. It was found that the group with the mindfulness video had a lower delay discounting in the two magnitudes (more self-control), while in the social discounting no differences were found for the two magnitudes. We conclude that the prosocial behaviour of donating goods is not influenced by mindfulness training in the present sample, we consider that the modelling of this practice is aimed at promoting self-control, so the influence on the prosocial behaviour of donating should be also modelled with behaviours that show the donation of certain goods and their reinforcing consequences.

### Shared and Distinct Neurocognitive Features of Internet Gaming Disorder and Alcohol Use Disorder

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#### BACKGROUND

An imbalance between goal-directed (model-based) and habitual (model-free) decision-making systems is a common feature in addictive disorders. However, little is known about whether similar decision-making deficits appear in internet gaming disorder (IGD). This study compared neurobehavioral features associated with model-based and model-free systems in IGD and alcohol use disorder (AUD).

#### METHOD

Inside the functional magnetic resonance imaging (fMRI) scanner, individuals diagnosed as IGD (n = 22) and AUD (n = 22) and healthy control (HC; n = 30) performed the two-step task, a well-validated task for assessing the contribution of model-based and model-free systems in decision-making. We provided a mechanistic account of choice behavior using computational modeling and hierarchical Bayesian analysis. Then, we performed a model-based fMRI analysis to identify neural correlates of model-based and model-free prediction errors in each group.

#### RESULTS

Computational modeling results suggest that the model-based weights did not differ among the three groups. However, neural correlates of the model-based prediction error dissociated the IGD group from the others. The IGD group showed significantly lower activation in the right orbitofrontal cortex compared to the AUD group ( $t=-4.82$ ,  $p<0.001$ ) and greater activation in the bilateral insula compared to the HC group ( $t=4.66$ ,  $p<0.001$ ).

#### CONCLUSIONS

We found distinct neural mechanisms underlying goal-directed behaviors in IGD, compared to AUD and HC. This finding suggests that excessive gaming might entail aberrant decision-making processes.

### **Effectiveness of an Online Targeted Group-Based Parenting Program to Prevent the Development of Anxiety Disorders in Inhibited Toddlers**

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Anxiety disorders are one of the most common forms of psychopathology. The high burden of disease, along with the large rates of under-diagnosis, under-treatment, and low help-seeking behavior, emphasize the importance of early prevention (Lawrence et al., 2017; Mian, 2014). As the first onset of anxiety disorders can already occur at a very young age, prevention programs targeting these young children are necessary. Literature shows that targeted, group-based parenting programs are potentially the most (cost-)effective in preventing the development of internalizing disorders in young children (Barlow et al., 2016; Rapee et al., 2005; Wolgensinger, 2015). Unfortunately, group-based parenting programs are often hard to implement sustainably within the regular service (Olofsson et al., 2016). Online interventions could address these issues, by making the intervention more accessible. Yet, online parenting programs that focus on the prevention of internalizing disorders are scarce and evidence for their effectiveness is mixed. In addition, all of these existing online programs were designed to complete individually which potentially affects their effectiveness.

Hence, the current research aims to investigate the effectiveness of an online targeted group-based parenting program to prevent the development of anxiety symptoms in anxiety-prone children aged 3-6 years living in the Netherlands. The program is based on the Dutch version of the Australian Cool Little Kids (CLK) program: a six-session training for parents of inhibited children aged 3-6 years, in which a group parents of 6-8 children learn about (coping with) their child's inhibited behavior (Rapee et al., 2005). The protocol of the original CLK-program is followed but is executed via the video conferencing platform 'Zoom'.

To assess the effectiveness, we use a randomized controlled trial with two conditions: parents are randomly allocated to either online CLK-program or an active control condition consisting of a book with general parenting advice. Measures are carried out at four moments (pre-intervention, post-intervention, 6- and 12-months follow-up) and consist of a clinical anxiety interview about the child and a parent-, child-, and teacher-questionnaire. Measures include amongst other child and parental anxiety and overprotective parenting. The program is currently implemented in three large cities in the Netherlands in collaboration with several child (mental) health organizations who are involved in the screening and recruitment of parents of inhibited children and the execution of the program. Therefore, the effectiveness of the online CLK-program can be studied in its real-life circumstances.

We will present the preliminary results on the effectiveness and parent satisfaction measured at post-intervention of the approximately 120 participating parents. These results can inform future research, as well as mental health organizations on the effectiveness of this unique live, online group-based intervention. This is especially relevant considering the impact of the COVID-19 crisis on the mental health of the global population, wherein online alternatives were necessary. The findings and its clinical implications will be discussed in the presentation.

## Cognitive Control Training for Reduction of Anxiety and Depression in Children

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### INTRODUCTION

Cognitive neuroscience has shown that problems with attentional control play a critical role in the aetiology and maintenance of anxiety (Moran, 2016) and depression (Koster et al., 2017). There is growing evidence that cognitive control training (CCT) comprising daily memory training (~ 10 minutes per day for 2 weeks) improves mood and reduces emotional vulnerability in adults (Hoorelbeke et al., 2015; Hoorelbeke et al., 2016; Course-Choi et al., 2017; Grol et al., 2018) and adolescents (Hotton et al., 2018; Beloe & Derakshan, 2019; Roughan & Hadwin, 2011). However, there is scant literature testing the efficacy of CCT for the relief of anxiety and depression in children.

### METHOD AND RESULTS

We report on a program of research using CCT for reduction of anxiety and depression in children. First, we conducted a systematic review of available research with young people (Edwards et al., 2022). We followed PRISMA guidelines and preregistered our synthesis plan with PROSPERO ([https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=218541](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=218541); ID: CRD42020218541). We conducted extensive database searches (Web of Science, Medline, APA PsycINFO, EMBASE, CINAHL, PubMed) between December 10-15, 2020, and used a range of terms to describe CCT: cognitive control therapy OR cognitive control training OR cognitive control task OR neurocognitive training OR cognitive training OR executive control training OR working memory training OR cognitive emotional training OR cognitive remediation OR neurobehavioral therapy; entered at the record title level. Terms child\* OR adol\* OR you\*, were entered at the level of abstract to specify the population of interest. We identified 12 studies which suggested that cognitive transfer was a necessary precondition for emotional transfer, irrespective of CCT paradigm. There was promise for CCT using adaptive, targeted inhibition, shifting, or updating tasks (for children under 12 the valence of the stimuli was less important), for 11-15 sessions, and assessing anxiety and depression using specific, sensitive, and age-appropriate scales. Commercial working memory training appeared to require longer training sessions than targeted inhibition, shifting, or updating tasks. Second, we developed a protocol for a randomised control trial (RCT) using CCT for reduction of emotional symptoms (anxiety, depression, rumination, emotion regulation) in a non-select sample of children aged 8 to 12 years (<https://doi.org/10.17605/OSF.IO/P5TEU>). Children were asked to complete 15 sessions of daily training at school using an adaptive Paced Auditory Serial Addition Task (aPASAT; Trained Group), compared to a low-load cognitive training condition (Control Group). Emotional transfer was assessed via self-report questionnaires. Cognitive transfer was measured using the non-adaptive PASAT (task-specific cognitive transfer), n-back task (updating), Go/No-Go task (inhibition) and colour shape shifting task (shifting). Data collection for our RCT is ongoing, nonetheless, in line with other studies (e.g., Beloe & Derakshan, 2019) our preliminary findings have shown that attrition is high and participating children have provided verbal feedback that the training was challenging and boring. Third, our laboratory is investigating gamification in CCT for children, in particular which game elements increase engagement, motivation and adherence with training ([https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=394343](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=394343); ID: CRD42023394343).

### DISCUSSION

Our systematic review suggested that anxiety and depression seem to be attenuated by CCT. However, more research is needed to demonstrate an evidence-base for CCT with typically developing children. We are conducting a program of research in this area and will share our findings, lessons learned and recommendations for future research.

### **Virtual Reality Exposure before Elective Day Care Surgery to Reduce Anxiety and Pain in Children: A Randomised Controlled Trial**

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Anxiety in children that need to undergo surgery under general anaesthesia is very common and is associated with adverse outcomes such as emergence delirium, poorer recovery, more post-operative pain as well as an increased risk for post-traumatic stress disorder. A promising innovative intervention is virtual reality (VR). VR is especially engaging for children, as they often become truly captivated by imaginative play. VR is often used as a distraction tool during medical procedures. However, research has demonstrated that exposure is more effective than distraction in reducing anxiety. VR exposure has already been proven effective in treating anxiety disorders, such as specific phobias but very limited research has been conducted on the effect of VR exposure as preparation for medical procedures. To this end we conducted a randomised, controlled single blind trial, comparing levels of anxiety, pain and emergence delirium in children 4-12 years old receiving VR exposure (n=100) to children receiving care as usual (n=100). On the day of surgery, children receiving VR exposure were exposed to a realistic child-friendly immersive virtual version of the operating theatre, so that they could get accustomed to the environment and general anaesthesia procedures. Children in control condition received. The primary outcome was anxiety during induction of anaesthesia (modified Yale Preoperative Anxiety Scale, mYPAS). Secondary outcomes were self-reported anxiety, self-reported and observed pain, emergence delirium, need for rescue analgesia (morphine) and parental anxiety. 191 children were included in the analysis. During induction of anaesthesia, anxiety levels as measured by mYPAS (median [IQR]) were similar in VRE, 40.0 [28.3 to 58.3] and CAU, 38.3 [28.3 to 53.3];  $p = 0.9$ ). No differences between groups were found in self-reported anxiety, pain, emergence delirium or parental anxiety either. However, after painful procedures, children in the VRE condition needed rescue analgesia significantly less often (55.0%) than in the CAU condition (95.7%) ( $p = 0.002$ ). In addition, the subsequent development of a mobile phone based version of the VR environment and the randomised controlled trial planned for it in children undergoing painful surgeries will be discussed.

NOTE: Colleague dr. Legerstee from the same research group will submit a sister abstract concerning related research in an MRI setting.

### **Virtual Reality Exposure for Children Undergoing an MRI: An RCT**

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Magnetic resonance imaging (MRI) can cause serious preprocedural and periprocedural anxiety in children. The loud noises generated during an MRI scan and the prolonged time spent in a confined space are frightening. One study found that about 50% of children between aged 5 to 12 years experienced anxiety and discomfort during an MRI scan. Especially younger children can be overwhelmed by the MRI environment with noises they have never heard before and by the MRI machine, whereas older children can experience claustrophobic feelings. This can result in poor cooperation, eg, problems with following breathing instructions or excessive movements. This has a negative effect on the scan quality since up to 90% of the MRI artifacts can be attributed to movement. To combat MRI-related anxiety and discomfort, children are often sedated or completely anesthetized up to the age of 6 years. Anaesthesia comes with side effects such as emergence delirium, respiratory depression, nausea, vomiting, agitation, and cardiovascular bradycardia. Different psychological methods have been implemented to reduce the need for anesthesia and pre- and periprocedural anxiety, such as behavioral rehearsal using mock MRI scans, play therapy, and distraction during the procedure using MRI-compatible audiovisual tools, but these interventions are time-consuming and costly, limiting their clinical use. Virtual reality exposure (VRE) is a promising way to overcome these limitations in the preparation of children before an MRI scan.

We developed a VR smartphone intervention to prepare children at home for an MRI procedure using a family mobile phone and cardboard VR glasses provided by us. With a smartphone VR app, children can get prepared in their own home environment under parental supervision at their own pace and as often and as long as they need. Another advantage of a smartphone VR app is that it can be employed on a large scale and requires limited involvement of health professionals. We studied the effectivity of this VRE app in a randomized controlled trial, in 128 children (aged 6-14 years) in which the VR intervention was compared to care as usual (CAU). CAU involves an information letter about an MRI examination. The primary outcome was the child's procedural anxiety during the MRI procedure. Secondary outcomes included preprocedural anxiety and parental anxiety. Results will be presented and discussed.

NOTE: Colleague dr. Dierckx from the same research group will submit a sister abstract concerning related research in a surgery setting.

### **Investigating the Efficacy of a Dialectical Behavior Therapy Universal Intervention on Adolescent Social and Emotional Well-being Outcomes**

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There is increasing research interest as to whether DBT, specifically the group skills training component, is an effective early intervention approach when delivered universally in schools. The current study aimed to provide the first large-scale examination of a universal DBT-based intervention and determine the extent to which home practice of DBT skills predicted changes in social and emotional outcomes over time. A controlled trial design was employed whereby 1071 participants (51.30% Male; M age = 13.48 years) completed either an adapted eight-session DBT-STEPS-A intervention ('WISE' Teens) (n = 563) or class-as-per-usual (n = 508). Unexpectedly, the majority of outcomes were significantly poorer in the WISE Teens condition relative to control immediately post-intervention. This pattern in outcomes was generally significantly more marked in males relative to females. The majority of group differences across outcomes had dissipated at follow-up, however, WISE Teens participants continued to report significantly poorer quality parent-child relationships relative to control. Nevertheless, greater home practice was generally associated with more positive outcomes both immediately post-intervention and at follow-up. Further consideration is needed to determine how to increase participant engagement whilst additionally considering adolescents' developmental needs to ensure greater feasibility and efficacy of DBT-based universal interventions in schools.

### **Text Analysis of Adolescent Non-suicidal Self-Injurious Behaviors Using Online Unstructured Big Data**

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#### INTRODUCTION

Adolescent self-injurious behaviors (SIBs) have recently emerged as a serious social problem. More and more adolescents are disclosing their impulses for and attempts of SIBs and are posting SIB-related issues or distress on-line. Given the situation, this study aimed to identify the topics related to adolescent SIBs through analyzes of the texts posted on Naver Q&A service (Jisik iN in Korean) and the trend of yearly changes in topics.

#### METHOD

Data were adolescent SIB-related texts posted on Naver Jisik-iN from Jan. 2012 to Dec. 2021. Initial text data were collected through web crawling and then a total of 18,092 text data written by adolescents were selected for the final analyses data. We analyzed the data through words frequency and topic modeling related to adolescent SIBs. Keywords related to adolescent SIBs were extracted and visualized through word frequency. Major topics were derived through topic modeling to identify the meaning of adolescent SIBs in Korea.

#### RESULTS

A total of 13 topics were found, including "self-injury methods", "depression", "psychiatric treatment and psychological counseling", "unstable family environment", "school violence", "academic stress", "anger", "self-hatred", "anxiety with panic symptoms", and "comfort and advice". As a result of analyzing the yearly trend of topics, topics with a rising pattern were "depression", "psychiatric treatment and psychological counseling", and "results of self-injurious behavior". On the other hand, topics with a falling pattern were "methods of self-injury", "anger", "self-hatred", "unstable family environment", and "school violence".

#### DISCUSSION

The results of this study are expected to be used as basic data for early diagnosis and intervention studies on adolescent SIBs in the future. Practical directions for prevention and intervention of adolescent SIBs were discussed.



### **Towards a Formulation Model to Understand Distress in Parents/Carers of Young People Who Self-Harm**

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#### INTRODUCTION

Parents/carers (hereafter “parents”) of young people who self-harm may experience significant distress. Whilst it is vital to support parents in helping their young person, it is also imperative that we attend to the parents’ own wellbeing. Systematic reviews of this literature have noted the significant impact on parental mental health and parents’ functioning, for example their ongoing engagement in work. Few interventions have been designed to support the parents’ own wellbeing and despite multiple literature reviews, there was no model of how parents’ distress may be functioning. A formulation model or framework to conceptualise parents’ wellbeing is needed, and can help guide the development of clinical interventions that target evidence-based needs. We present initial steps towards that formulation model.

#### METHODS

We conducted a systematic literature review of qualitative and quantitative studies that examine the impact of young person’s self-harm on parents. Focus groups and interviews were conducted with 8 parents of young people who had/were self-harming and further interviews were conducted with two health professionals and two young people with a history of self-harm. Eleven parents with lived experience then attended co-design workshops to help create an intervention to support parents of young people who self-harm. Qualitative data relating to how parents’ distress is maintained were analysed, creating an initial formulation. Findings from the systematic review provided an evidence based for elements of this tentative formulation. Here, the proposed cognitive-behavioural specific elements are presented.

#### RESULTS

Qualitative data show the shock of discovering their young person’s self-harm effects parenting confidence. Together with lack of specific knowledge about how to support their young person, this creates a worry they have failed them. Understandable anxious feelings drive information seeking, worry, and increased checking and control over young person. Avoidance may be used as a coping mechanism. Messages from others and parents’ interpretations of the situation as their fault led parents to experience self-blame and guilt, further increasing anxiety and low mood, maintained by rumination and a sense of isolation. These factors linked to worsened sleep, self-care, and relationship with partner. The literature review highlighted: the emotional impact of uncertainty and needing information; how anxiety, self-blame and guilt drive changes in parenting behaviours which may inadvertently maintain stress; how shame breeds isolation that worsens parental wellbeing; and how parents’ own needs are subjugated, again maintaining stress and distress. Parents’ own mental and physical health, work and financial situation, family and social setting were also relevant.

#### DISCUSSION

The proposed formulation highlights the role of uncertainty and several core psychological processes of rumination, worry and avoidance in understand the parents’ distress. Issues of self-blame and guilt link to the stigmas that persist around mental health. Empirically supported intervention techniques should be used to support parents by targeting these modifiable psychological processes. Broader issues of stigma, attitudes towards parents of young people with mental health difficulties, and the practical challenges parents face must also be considered.

## Effectiveness of Manual-Based Cognitive Behaviour Therapy for Managing Non-suicidal Self Injury Among Adolescents in India

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### INTRODUCTION

Non-suicidal Self-injury (NSSI), which is the deliberate, self-inflicted damage of body tissue without suicidal intent and for purposes not socially or culturally sanctioned (Gratz, 2001) is an emerging mental health concern among adolescents with high prevalence rates (Muehlenkamp et al., 2012). It can have different clinical presentations, functions and psychiatric comorbidities. The understanding of NSSI is limited due to a dearth of research on NSSI and role of psychotherapy for its treatment. There is evidence for some psychotherapies, including Cognitive Behaviour Therapy (CBT), for their effectiveness in addressing NSSI (Glenn et al., 2015), without any clear indication of superiority of any one approach (Ougrin et al., 2015), which implicates the need to explore the role of non-specific variables that may be playing a role across different psychotherapies. The present study was planned to explore the effectiveness of a manual-based CBT, the Cutting Down Programme (CDP) (Taylor et al., 2011) in addressing NSSI and other secondary variables, and exploring the role of patient motivation and patient's perceptions of therapy, on therapy outcome.

### METHOD

The present study has a single-group experimental research design with a sample of 28 adolescent patients recruited from the Child & Adolescent Psychiatry OPD, NIMHANS. They were screened using MINI Kid Screen 7.2 (Sheehan et al., 2010) and McLean Screening for Borderline Personality Disorder (MSI-BPD) (Zanarini, et al, 2003), and the NSSI profile was elicited using the Functional Assessment of Self-Mutilation (FASM) (Lloyd et al., 1997). The CDP intervention was delivered over 8-12 weeks, and patients were assessed weekly for NSSI acts and urges using a semi structured interview prepared by the researchers. Pre- and post-tests included 6-item Kutcher Adolescent Depression Scale (KADS-6) (Kutcher, 2002), Difficulties in Emotion Regulation Scale (DERS-18) (Gratz & Roemer, 2004), Acceptance and Action Questionnaire (AAQ-II) (Bond et al., 2011), Dysfunction Attitude Scale - Short Forms (DAS-SF1&2) (Beevers et al., 2007), and Children's Global Assessment Scale (CGAS) (Schaffer et al., 1983). The Client Motivation for Therapy Scale (CMOTS) (Pelletier et al., 1997) and Individual therapy process questionnaire (ITPQ) (Mander et al., 2014) were used for assessing patient motivation and patients' perceptions of therapy.

### RESULTS

The socio-demographic profile of participants indicates that they belonged to urban background with middle socio-economic status. Majority of the participants were females (n=24). The mean age was 16 years (SD = 0.97). The NSSI profile revealed that the adolescents engaged in various methods of self-harm including cutting, hitting, scratching and excoriation of past wounds for different reasons.

### DISCUSSION

The effectiveness of CDP in reducing NSSI acts, NSSI urges, and intensity of urges will be examined using repeated-measures ANOVA or Friedman test, and secondary variables of depressive symptoms, emotion regulation, experiential avoidance, dysfunctional attitudes and global functioning will be compared before and after CDP intervention using paired-samples t-test or the Wilcoxon signed rank-test. The role of non-specific factors of therapy including patient motivation and patient perceptions of therapy on the therapy outcome will be examined using Pearson's r or non-parametric Spearman's rank correlation coefficients. The findings will be discussed.

## Effects of Brief Dialectical Behavior Therapy (DBT) Skills Training on Malay-Speaking School Teachers in Malaysia: A Quasi-Experimental Study

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Teachers are susceptible to mental health issues due to the challenging responsibilities the profession entails. While several interventions have demonstrated effectiveness in improving teachers' mental health, little work has evaluated the potential of dialectical behaviour therapy (DBT) skills training in enhancing teachers' social emotional competencies and mental health. Originally developed to treat suicidality in borderline personality disorder, DBT has been adapted for treating a variety of mental health conditions, such as depression, binge eating disorder, and substance use disorders. DBT skills training (DBT-ST) is a component of DBT that teaches four core sets of skills: mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness. To date, no research has yet evaluated the effects of DBT-ST among teachers in Malaysia. This study aimed to assess the effects of a brief, Malay-translated DBT-ST program on social and emotional competencies, psychological symptoms (anxiety, depressive symptoms, stress, burnout), self-compassion, DBT skills use, and dysfunctional coping in a sample of school teachers based in Sabah, Malaysia. Fifty-three participants were recruited and self-selected into DBT-ST or a control group (consisting of attending a mental health talk). The DBT-ST program consisted of five weekly, three-hour sessions focusing on teaching selected modules of core DBT skills, including mindfulness, emotion regulation, interpersonal effectiveness, and distress tolerance. Participants completed several self-report measures assessing psychological symptoms, social emotional competencies, burnout, self-compassion, dysfunctional coping, and use of DBT skills before and right after the intervention. Analyses using mixed ANOVA showed that compared to the control group, participants in the DBT-ST group reported significantly greater decreases in student-related burnout ( $p = .028$ ) and dysfunctional coping ( $p = .023$ ), and greater increases in DBT skills use ( $p = .047$ ). No significant differences were observed in pre- to post-intervention changes in social and emotional competencies, depression, anxiety, stress, personal burnout, work-related burnout, and self-compassion between both groups. Overall, DBT-ST participants reported feeling satisfied with the DBT skills group (mean satisfaction score = 4.70, on a 1 to 5 scale). The lack of effect on several outcome measures suggests that a more intensive or longer intervention may be required for DBT-ST to exert a greater impact on school teachers' mental health. Overall, this study demonstrated the promise of brief DBT-ST in lowering burnout and reducing dysfunctional coping among school teachers. Future research should evaluate the effects of a longer DBT-ST program using a randomized controlled design.

### **CBT-Focused Integrative Group Psychotherapy for Patients with Somatic Symptom Disorder**

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#### OBJECTIVE

Somatic symptom disorder (SSD) is highly prevalent in general hospitals. Previous studies showed that cognitive behavioural therapy (CBT) was effective in the symptom relief and function improvement in the somatoform disorders patients. This study aimed to explore whether the specific integrative group psychotherapy (IGPT) based on CBT for SSD is superior to non-specific supportive group psychotherapy (SGPT) and treatment-as-usual (TAU) to reduce SSD-B criteria.

#### METHOD

A randomized controlled trial was conducted, 120 patients with SSD were recruited and randomly assigned to three parallel groups: IGPT, SGPT and TAU. A novel psychotherapy group programme based on cognitive behavioural therapy has been used in IGPT group while SGPT group applied supportive group psychotherapy. The SSD severity was measured by the SSD-B Criteria questionnaire (SSD-12), before treatment and at 4, 8, and 12 weeks after treatment.

#### RESULTS

At the primary endpoint, there was no significant difference in the SSD-12 between the patients in IGPT. But both groups showed better results than TAU alone ( $p < 0.001$ ). Over time, there were positive changes in the secondary outcomes in the three groups' somatic symptom severity, depression, anxiety, social functioning, and quality of life.

#### CONCLUSIONS

IGPT was not superior to SGPT, but both the psychotherapy groups were better than TAU group. Psychotherapy should be recommended to improve the treatment of SSD.

### **Increasing Access to Psychological Therapy on Acute Mental Health Wards: Talk, Understand and Listen for InPatient Settings (TULIPS)**

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#### BACKGROUND

People with severe mental health problems often rely on inpatient mental health care at times of crisis, but care in these settings is costly and in the UK is typically poor quality. The main treatments offered are medication and containment for risky behaviours, with patients having limited access to evidenced-based psychological therapies, such as Cognitive Behavioural Therapy. There is good evidence that inpatients want talking therapies and these may be helpful in terms of reducing length of stay, reducing re-admission rates and improving perceptions of quality of care. However, the inpatient environment presents a unique set of challenges to delivering therapy which require empirical investigation. This talk will describe a programme of UK-based research funded focused on the delivery of and outcomes of CBT-based interventions on acute mental health wards. The research includes a large cluster randomised control trial and extensive qualitative research to understand challenges to implementation and how these can be overcome.

#### METHOD

The first stage of this research programme involved a meta-synthesis of existing studies implementing new interventions in acute mental health settings and interviews with fifty-six people (patients, ward staff and carers) about their experiences and views of therapy for inpatients. Using expert consensus methods, these findings were used to develop an intervention to improve patient access to psychological-informed care and evidenced-based treatments such as CBT in inpatient settings. The intervention is currently being trialled in a large cluster randomised control trial where 34 wards (with 384 patients and 510 staff) are randomised to receive the intervention or treatment as usual. We are assessing the impact of the intervention on serious incidents (acts of violence, aggression and self-harm), patient well-being, staff burnout and ward atmosphere. We are also carrying out ethnographic observations and interviews with staff and patients to understand barriers and facilitators to implementation in practice.

#### RESULTS

We identified barriers to implementing psychological therapies inpatient settings that related to patient attitudes, staff attitudes, organisational barriers and factors associated with the ward culture. The intervention we devised to help overcome these barriers involved psychological therapies being well integrated into the ward environment and providing interventions to improve staff as well as patient well-being. It also involved three levels of intervention: 1) formulation for all patients; 2) nurse-led CBT-informed interventions; 3) CBT-informed interventions with psychological therapies focused on understanding the reasons for admission and relapse prevention. The trial is ongoing but data relating to uptake and retention in the study will be presented along with preliminary results from the qualitative research taking place alongside the trial.

#### DISCUSSION

This research has direct implications for everyday practice as it presents empirical data on a comprehensive range of barriers to the delivery of therapy that are specific to both the inpatient environment and CBT. Moreover, we also present solutions to overcoming these barriers that are derived from existing data and currently being evaluated in real world settings.

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## CONCLUSION

Our findings provide a psychological service model for acute inpatient wards which is based on the best available evidence. Findings are important and timely as there is a growing recognition of the value of therapy for inpatients from service user and carer groups and mental health service commissioners, but a lack of evidence about how to actually deliver it in practice to ensure that it optimises patient, staff and ward outcomes.

### **The Effectiveness of Cognitive-Behavioural Group Therapy among People with Clinically Diagnosed Anxiety Disorders**

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#### BACKGROUND

Cognitive behavior therapy (CBT) has been shown to be effective for a wide variety of mental health disorders including anxiety disorders (Watts SE, 2015, Olatunji BO, 2007). CBT is often offered individually, but can also be offered in groups. Hoeksema (2000) found that rumination contribute to the feeling of hopelessness which is one of the key depressive symptoms, and uncertainty which is one of the anxiety traits. Covid-19 pandemic has affected worldwide beginning of 2020 until end of 2021. Undoubtedly the pandemic has somehow contributed to the heightened anxiety symptoms. Therefore, This study will focus on using CBT group therapy in order to manage adult patients who are clinically diagnosed with anxiety disorders including during the period of Covid-19 pandemic in Malaysia.

#### OBJECTIVES

This study will specifically looking at ; 1) To determine the rate of reduction in anxiety symptoms pre- and post-group therapy, 2) To determine the rate of reduction in anxiety symptoms pre- and post- covid-19 pandemic, 3) To determine the rate of reduction in automatic negative thoughts, 4) To explore the outcome post CBT group therapy in terms of clinical improvement, 5) To explore the association between demographic and anxiety symptoms and 6) To determine the rate of depressive symptoms found among anxiety patients.

#### METHODOLOGY

A group of psychiatrists, clinical psychologists, and medical officers underwent training on CBT group therapy for anxiety in April 2017. The training was conducted by a trained CBT therapist and the module was adopted from Firdaus Muhktar and Tian Po Oei (2011). There are eight modules in total. Each groups consisted of either a psychiatrist or a clinical psychologist as the therapist and were assisted by a medical officer as the co-therapist. Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI) and Automatic Thought Questionnaire (ATQ) were used to measure the outcome of the therapy. A total of 42 patients, aged between 18-70 years old, has participated in this group therapy session beginning from July 2017 until December 2022. The group therapy was delivered via physical mode, except during covid-19 pandemic, it was delivered via online.

#### RESULTS

Full results of this study will be made available by Mei 2023. As for the analyses, descriptive statistics will be used to examine the outcome post CBT group therapy in terms of clinical improvement. Paired T-Test will be used to explore the rate of reduction in anxiety symptoms pre- and post-group therapy before and after Covid-19 pandemic. Descriptive statistics will be used to explore the rate of depressive symptoms found among anxiety patients. Paired T-test will be used to examine the rate of reduction in automatic negative thoughts. Chi-square or Fisher Exact test will be used to explore the association between demographic and anxiety symptoms.

#### DISCUSSION AND CONCLUSION

Group CBT may help to reduce automatic negative thought, anxiety and depressive symptoms and may improve clinical outcome among the participants as similar to previous study (Erickson DH. et al, 2007). Regardless of the barriers faced in conducting group intervention, the study result will be helpful to understand the group CBT in adult with anxiety disorder and factors that associates with good clinical outcome and the reduction of automatic negative thought, anxiety and depressive symptoms. Group models may offer more positive peer modeling opportunities, reinforcement, and social support (Wolgensinger L, 2015) and their potential barriers required further study to explore.

### **A CBGT Intervention Targeting Stress, Anxiety and Symptoms of Depression Among Icelandic Female University Students: A Pilot Study**

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#### BACKGROUND

The prevalence of stress, anxiety and depression has been found to be common among university students, especially in females and younger students. Adverse health habits, such as smoking, and problem drinking have been associated with the distress as well as physical illness and acute infectious illnesses. Therefore, a CBGT intervention was developed to address stress, anxiety, and symptoms of depression among female university students in Iceland. The Cognitive Behavioural Group program was conducted in 6 consecutive weekly group sessions for 90 minutes. The group was divided into five sub-groups with three to five women enrolled in each group. All had been screened with anxiety and/or depression prior to the intervention. The purpose of this study was to explore the female students' mean stress, anxiety and depression levels on the DASS questionnaire, as part of pilot testing this intervention, immediately pre and post intervention and six months later.

#### METHODS

The study design was quantitative with a quasi-experimental design. The questionnaire consisted of the 42 items DASS instrument and questions on background variables. The sample consisted of 22 undergraduate and graduate female students, aged 21-42 years and the mean age was 28 years. Most participants were in a steady relationship, cohabiting or married (73%). Thirty seven percent were mothers and 68% were employed part-time. Forty percent were graduate students. Data was analysed with repeated measures of ANOVA to assess outcome differences between times.

#### RESULTS

The preliminary results of this pilot study revealed that participants' mean stress, depression, and anxiety scores on the DASS instrument decreased significantly between pre-intervention and 6 months post intervention.

#### CONCLUSION

This pilot study indicates positive results of six 90 minutes CBGT sessions for psychologically distressed Icelandic female university students, provided by advanced psychiatric nurses. Further, these results may contribute to the development of internet-based services for psychologically distressed university female students.



### **Higher Frequency of Psychological Interventions for Adult PTSD Is Not Associated with Treatment Efficacy and Acceptance; A Meta-Analysis of Randomized Controlled Trials**

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#### INTRODUCTION

Literature suggests that higher treatment frequency of psychological interventions for adult PTSD may lead to higher efficacy and less dropout relative to lower treatment frequency. However, a quantitative review of available literature is missing.

#### METHODS

We conducted a systematic search for literature on treatment efficacy in adults with PTSD in the databases Medline, PsycINFO, Web of Science, and PTSDpubs. We focused on randomized controlled trials (RCTs) that addressed treatment of adult PTSD as primary treatment focus. We analysed treatment session frequency dichotomously ( $< 1.5$  vs.  $\geq 1.5$  sessions/week) and continuously (sessions per week & minutes per week).

#### RESULTS

We identified a total of 160 RCTs. Results suggested similar treatment efficacy irrespective of treatment frequency definitions and whether differential efficacy was estimated directly via head-to-head trials or indirectly via comparisons to the same comparison group. Yet, intense ( $\geq 1.5$  sessions/week) vs. standard ( $< 1.5$  sessions/week) delivery was associated with significantly lower dropout rates for trauma-focused interventions (18.64% vs 11.54%, respectively, but not for non-trauma-focused interventions).

#### DISCUSSION

Current literature does not indicate any significant differential treatment efficacy of intense vs. standard psychological interventions for adult PTSD. Yet, evidence for increased acceptability was found for intense (vs. standard) trauma-focused interventions.

### **Effectiveness of Modified Cognitive Processing Therapy on Neurocognitive Functions in Post-traumatic Stress Disorder: Preliminary Data from an Indian Tertiary Care Psychiatry Center**

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#### BACKGROUND

Recently modified applications of the traditional Cognitive Processing Therapy (CPT) have been proposed for Post-traumatic Stress Disorder (PTSD) treatment to closely mimic real-world clinical practice, and such treatments have been proven effective in both civilians and veterans. Modified application of CPT might open the avenue for exploring variables beyond symptom reduction because of their flexibility and more personalized approach compared to the traditional CPT. One of the less explored variables with regard to the effectiveness of CPT and other trauma-focused interventions is neurocognitive functions. Research on the neurocognitive outcome of PTSD interventions is in the preliminary stage. Very limited research has been carried out on the neurocognitive outcome of trauma-focused interventions despite having well-established neurocognitive theories of PTSD. In the present study, we adapted a fixed 12-session manualized CPT protocol to our tertiary care psychiatric setting. We followed a variable-length CPT, and also we added stabilization sessions and stressor sessions.

Aim: To examine the effectiveness of Modified CPT on neurocognitive functions in adults with PTSD.

#### METHODS

Twenty adults with PTSD underwent Modified CPT in a single-arm open-label trial. The neuropsychological assessment was administered at baseline and endpoint. Neuropsychological tests were Colour Trails 1 and 2, Paced Auditory Serial Addition Test, Digit Symbol Substitution Test, Verbal N Back 1 and 2, and Stroop Colour and Word Test.

#### RESULTS

Our preliminary analysis of the demographic and clinical characteristics showed that the majority of the patients were females (80%), survivors of interpersonal traumas (85%), and had comorbid depression (75%). Improvements in Attention, Information processing speed, and Response Inhibition were found after the intervention. Further data analysis will be carried out and the findings will be shared during the presentation.

#### CONCLUSIONS

Modified CPT brings about changes in neuropsychological functioning in patients with PTSD

### **Efficacy of an Internet-Based Written Imagery Rescripting Intervention for Survivors of Institutional Abuse – A Randomized Controlled Trial**

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#### INTRODUCTION

The significant need for interventions to support individuals who have suffered of institutional abuse is evident while treatment is not always accessible or appropriate. To address this, an internet-based writing intervention was developed incorporating important elements of imagery rescripting aiming at the reduction of commonly occurring psychological sequelae of institutional abuse in adult survivors. The aim of this randomized controlled trial was to examine the efficacy of a newly developed internet-based imagery rescripting intervention in reducing symptoms of depression, anxiety, PTSD, and CPTSD in adult survivors of institutional abuse.

#### METHODS

A single-blind, two-arm randomized trial was conducted comparing the intervention with a waitlist control condition among adult survivors of institutional abuse in the former GDR. Seventy-two participants were included and randomized either to the intervention (n = 38) or the waitlist control condition (n = 34). The intervention consisted of 10 modules based on written exposure and imagery rescripting methods. Contact with the therapist was written via an online platform. Primary outcomes included symptoms of depression (PHQ-9), anxiety (GAD-7), PTSD (ITQ), and CPTSD (ITQ DSO).

#### RESULTS

Intention-to-treat analyses revealed a significant symptom reduction from baseline to post-assessment with large effects for depression, anxiety, PTSD, and CPTSD symptoms for participants in the intervention condition compared with the control group. The symptom reduction remained significant at 3- and 6-month follow-up for all participants after receiving the intervention. There were significantly higher reliable and clinically meaningful changes from pre- to post-treatment for all main outcomes for the intervention when compared with the waitlist condition.

#### DISCUSSION

Internet-based imagery rescripting interventions can be efficacious in the treatment of psychopathological symptom distress among survivors of childhood abuse. The relatively low attrition rates and the meaningful symptom reduction point to the applicability of online imagery rescripting interventions for this population.

### **The Effects of an Automatic Self-Help Written Exposure Intervention for Posttraumatic Stress Symptoms During COVID-19: A Randomized Controlled Trial**

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#### INTRODUCTION

In the context of Covid-19, we developed a self-help writing program to provide easily accessible intervention for people with posttraumatic stress symptoms (PTSS) in a health information platform affiliated with a major Chinese social media. The randomized controlled trial examined the feasibility and effectiveness of the written exposure program.

#### METHODS

Eligible adult participants assessed by Primary Care PTSD Screen for DSM5 (PC-PTSD-5) were randomly allocated to the expressive writing (EW) group with the same instruction for 3 days to write about a traumatic event or the guided narrative technique-writing (GNT-W) group, which especially highlighted negative and positive emotion expression with different instructions for 3 days. The feasibility and acceptance were investigated by dropout rates and participants' qualitative feedback. The primary outcome was probable PTSD diagnostic rate measured by PC-PTSD-5. Secondary outcomes were the symptom numbers measured by PC-PTSD-5 and PTSS severities measured by PTSD Checklist for DSM5 (PCL-5). Online assessments occurred at pre-intervention, post-intervention, 2-week, 1-month, and 3-month follow-ups. Logistic and linear mixed-effects models were utilized.

#### RESULTS

Of the 521,580 individuals who signed up for the written exposure program, 1558 were eligible and randomized to GNT-W ( $n = 788$ ) and EW ( $n = 770$ ). Of these participants, 210 finished the 1st pre-writing assessment, and 79 completed all 3-day writings. Among treatment completers, 40.5% provided positive feedback, and 24.1% gave negative feedback. Significant decreases in probable PTSD diagnostic rates were found in both groups from baseline to post-test, whereas a continued decrease was found in the GNT-W group from the post-test to the 3-month follow-up. At the post-test, EW participants were less likely to be screened positive for probable PTSD than GNT-W participants ( $OR = 3.55$ ,  $p = 0.002$ , 95% CI: [1.60, 7.91]). Regarding secondary outcomes, participants' PTSS decreased over time in both groups. EW participants showed fewer PTSS than GNT-W participants, with a medium effect size of  $d = 0.52$  at posttest ( $b = 0.61$ ,  $t = 3.87$ ,  $p < 0.001$ , 95% CI = [0.30, 0.91]) and faster improvement ( $b = 0.49$ ,  $t = 4.12$ ,  $p < 0.001$ , 95% CI = [0.25, 0.73]). However, for the severity of PTSS, the EW group exhibited a significant increasing then declining trend discontinued from the post-test, while no significant change was observed in the GNT-W group.

#### DISCUSSION

Under the negative impact of COVID-19, we attempted to disseminate a short, brief, evidence-based, self-help psychosocial intervention to the general public by setting up an automatic program on a mainstream social media website and examining its feasibility and effects. Our results indicated that such written exposure programs reduced probable PTSD screens and the number of PTSD symptoms in real-world settings. However, the findings should also be explained with caution of the high dropout rates and warrant future exploration of writing content to uncover the underlying mechanism. Moreover, how to better administrate online self-help intervention to increase retention in light of the scalability is worthy of the effort from different stakeholders.

Trial Registration: Chinese Clinical Trial Registry ChiCTR2000034836.

### **The Efficacy of Psychological Interventions for PTSD Symptoms in Incarcerated Forensic Populations: A Meta-Analysis of Randomized Controlled Trials**

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#### OBJECTIVE

The high prevalence of PTSD symptoms in incarcerated forensic populations indicates a need for effective treatment. Little is known however about the efficacy of current methods to treat PTSD symptoms and the quality of outcome research in these populations. The goals of the present study are therefore to estimate the combined efficacy of these methods, explore variables that are related to their efficacy, and contribute to a research agenda based on limitations of the current literature.

#### METHODS

Randomized controlled trials (RCTs) of psychological or psychotherapeutic interventions aimed at ameliorating PTSD symptoms in incarcerated forensic populations were included. By means of meta-analysis a combined Hedges' g effect size was synthesized. Quality assessments and Cochrane risk of bias analyses were performed, and publication bias was assessed. Gender and type of control group were explored as potential mediators.

#### RESULTS

A total of eleven studies were included in the statistical analysis, encompassing a total of 814 participants. A small to medium combined effect size was found. A secondary meta-analysis using available follow-up data indicated robustness of these effects. Overall study quality was poor, and studies of well-established first choice PTSD treatments were lacking. Inactive control groups but not gender predicted larger effect sizes.

#### CONCLUSIONS

Present interventions for the treatment of PTSD symptoms in forensic populations generate a small to medium overall effect. Outcome research is limited in both quantity and quality, however. Rigorous RCTs in these populations are therefore recommended, especially of evidence-based, first choice PTSD treatments such as Prolonged Exposure and Eye Movement Desensitization and Reprocessing therapy.

### **A Meta-Analysis on Effects of Post-Intervention Program for Adolescent Victims of School Bullying: Focusing on Cognitive-Behavioral Treatment**

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This study is a meta-analysis on the effectiveness of Cognitive-Behavioral Treatment (CBT) among post-intervention programs for adolescents who have been victims of school bullying in Republic of Korea (ROK). This study further examined intervention programs' research trends, and verifies the effect sizes based upon dependent and moderator variables. For the purposes, 14 dissertations and journals domestically published in ROK between 2000 and 2021 were selected according to the PICOS standards. This study implemented Comprehensive Meta Analysis (CMA) Version 3 for the analysis. The results are as follows. First, the overall effect size of the CBT program for adolescent victims of school bullying was .996, showing a large effect size. Second, as a result of examining the effect size according to the dependent variable, CBT for adolescent victims were in the order of self-related (ES = 1.41), sociality-related (ES = 1.17), and school adjustment-related (ES = .93) variables. In contrast, emotion-related variable (ES = .58) showed an effect size similar to that of the median effect size standard. Also, when the dependent variables were compared based on age groups, elementary school students showed large effect sizes for all related variables including school adjustment (ES = 1.57), self-related (ES = 1.49), and sociality-related (ES = 1.25) variables. For middle and high school students, self-related (ES = 1.38) and sociality-related (ES = 1.15) variables showed large effect sizes, while school adjustment-related (ES = .69) and emotion-related (ES = .58) variables remained higher than that of the median effect size standard, but not large enough effect sizes. Therefore, CBT is expected to have an effect in common on self and sociality-related variables among elementary, middle, and high school students who are victims of school bullying. Third, by examining the effect size according to the moderator variable, the difference in the effect size between groups was statistically significant depending on the number of people, total number of sessions, number of sessions per week, session's total duration, and each session's duration. However, the difference in effect size between groups was not significant for moderator variables such as age, gender, and place. This study is meaningful in that it both provides useful clinical information for designing of a CBT program for adolescent victims of school bullying, and equally suggests the direction for future research. The limitations of this study and direction for future study were discussed.

## Moderation of Peer Pressure in the Effect of Korean Adolescents' BAS/BIS on Smartphone Over-dependence

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### INTRODUCTION

Adolescents' addictive use of smartphones has been the focus of clinical attention and the ratio of adolescents reporting smartphone overdependence (SO) has been increasing, particularly in Korea. Therefore, it seems very important to explore variables that affect smartphone overdependence. It has been consistently reported that temperaments involving Gray's two neuropsychological systems, behavioral activation system (BAS) and behavioral inhibition system (BIS) predict a high tendency of SO in various age groups. Also considering that adolescence is a developmental period that is most influenced by peer relationships and peer culture, peer pressure demanding smartphone use seems to be an important factor affecting SO, especially among adolescents. Given the situation, this study aimed to investigate the relative effects of intra-individual factors, BAS and BIS, and peer factor, peer pressure, on adolescents' SO and further explore whether these two factors interact with each other in influencing adolescent SO.

### METHOD

Data were collected from a total of 489 students in middle schools in 8 cities and provinces in Korea through the survey. To evaluate individual differences in BAS/BIS, we administered the BAS/BIS Scales developed by Carver & White(1994) which was adapted and validated in Korean. Additionally, the Smartphone Overdependence Scale of the National Information Society Agency was used to measure the level of SO. Moreover, we have developed a tool to measure peer pressure directly related to smartphone use. For data analysis, a factor analysis was conducted to first verify the validity and reliability of our developed tool, and then hierarchical regression analysis was conducted to verify the main effects of each of temperament (BAS or BIS) and peer pressure and the interaction effects of temperament and peer pressure on adolescents' SO. Previous studies have shown gender differences in variables such as SO and peer pressure, this study analyzed data according to gender.

### RESULTS

The main findings are as follows. First, as a result of conducting exploratory factor analysis, the validity and reliability value of the tool we developed were at an appropriate level. Second, as a result of hierarchical regression analysis, it was found that both BAS/BIS temperament and peer pressure predict SO significantly(male BAS, Peer pressure: step1[B=.12, R2=.07], step2[B=.32, R2=.31], male BIS, Peer pressure: step1[B=.61, R2=.14], step2[B=.30, R2=.33], female BAS, Peer pressure: step1[B=.22, R2=.07], step2[B=.32, R2=.29], female BIS, Peer pressure: step1[B=.56, R2=.11], step2[B=.30, R2=.29]). Third, there was a gender difference in the patterns of interactions, which is that the moderating effect was significant only in the male adolescent group(BAS ×Peer pressure: B=.01, R2=.33, BIS×Peer pressure: B=.02, R2=.35).

### DISCUSSION

This study found that both BAS/ BIS and peer pressure are important in predicting adolescents' SO. This study also suggests that peer pressure aggravates the effects of BAS and BIS on SO, particularly in male adolescents. In addition, it can be seen that the SO of Korean adolescents is more influenced by peer pressure than the temperament (BAS or BIS) known to be related to behavioral addiction. Through these findings, preventive or reactive interventions for adolescent smartphone overdependence were recommended and limitations and suggestions for follow-up studies were discussed.

## Perceived Peer Pressure for Perfection Leads to Conflict Behaviors, Depressive Symptoms, and Problematic Drinking: Implications for CBT Interventions

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Friendships play a vital role in the lives of emerging adults (Arnett, 2005; Barry et al., 2016). However, certain personality traits can impede emerging adults' ability to maintain positive friendships. Perfectionism is one such trait that can contribute to relationship dysfunction, negative emotions, and maladaptive coping (Flett et al., 1997; Hewitt et al., 2006, 2018). Though all perfectionism dimensions are destructive (Smith et al., 2021), socially prescribed perfectionism (i.e., perceived pressures to be perfect from others) is generally the most consistent predictor of adverse outcomes (Flett et al., 2022). However, the impact of socially prescribed perfectionism within friendships is not well understood. To address this gap, our study aimed to investigate the role of friend-specific socially prescribed perfectionism (i.e., perceived pressures to be perfect from the friend) in conflict behaviors, depressive symptoms, and problematic drinking. We used a 4-wave, 4-month dyadic design to examine 174 emerging adult friendship pairs (mean age = 18.7 years) who drank together and had known each other less than a year. At least one friend was a first-year undergraduate.

We modified the 5-item Socially Prescribed Perfectionism scale (Hewitt et al., 2008) to be friend-specific (e.g., "My study drinking buddy expects me to be perfect"). Conflict behaviors (i.e., critical, hostile, and/or rejecting behaviors enacted toward the friend) were measured using the 7-item Partner-Specific Rejecting Behaviors Scale (Murray et al., 2003). Depressive symptoms were measured using 12-item a general distress subscale from Watson et al.'s (1995) Mood and Anxiety Symptom Questionnaire. The 23-item Rutgers Alcohol Problem Index was used as an index of problematic drinking (White & Labouvie, 1989). Data were analyzed using longitudinal actor-partner interdependence models (L-APIIM; Gistelinck & Loeys, 2019).

The effects were decomposed into time-averaged (between-subjects) and time-specific (within-subjects) components. We found time-averaged friend-specific socially prescribed perfectionism was positively associated with increases in conflict behaviors toward ( $\beta=.27$ ) and from the friend ( $\beta=.10$ ), own depressive symptoms ( $\beta=.16$ ), and own problematic drinking ( $\beta=.11$ ). As for time-specific effects, we found individuals who reported an increase in friend-specific socially prescribed perfectionism at a particular timepoint relative to their average also reported greater conflict behaviors toward their friend ( $\beta=.19$ ) and more depressive symptoms ( $\beta=.08$ ).

Findings lend credence to longstanding theoretical accounts and case histories suggesting socially prescribed perfectionism confers risk for negative individual and relational outcomes and extends it to the specific context of friendships. This highlights the importance of addressing friend-specific socially prescribed perfectionism in CBT in order to reduce the risk of negative outcomes. For instance, CBT interventions can focus on changing the perfectionistic expectations an individual might perceive from their friend and/or help the individual recognize and challenge their friend's actual perfectionistic expectations. CBT can also address the negative consequences of having perfectionistic expectations, such as friendship conflict, depression, and problematic drinking. The evolution of the friendship over time should also be taken into consideration, as an increase in perceived peer pressure for perfection can lead to a worsening of these negative individual and relational outcomes over time.



### **Cyberbullying Among Visually Impaired Community: The Mixed Method Finding in Malaysia**

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Technological advancement has revolutionized our communications, especially with the influx of social networking with youths being the main users. However, an emerging global phenomenon of cyberbullying has been a concern of youth advocates with the leading edge of technology. Malaysian visually impaired youths are vulnerable to cyberbullying, however, this aspect was understudied in Malaysia. Therefore, this study aims to investigate the prevalence rate of cyberbullying from the view of victims, perpetrators, and bystanders among Malaysian visually impaired youths. Also, little is known about the factors associated with cyberbullying experiences and social support. This study thus aims to examine the factors associated with cyberbullying experiences and social support. This study also aims to examine the role of social support as a mediator. The variables namely technological exposure, self-efficacy, and social support were investigated. 199 Malaysian visually impaired youths participated in this cross-sectional study with Braille paper-and-pen survey and voice-over online survey. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) and Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine proposed research hypotheses. 12 individuals further consented to join the focus group interview sessions and data were analyzed using NVivo software. The results revealed that among the participants, 50% of them are cyber victims, 77% are cyber perpetrators, and 53% are cyber bystanders. Social support among teachers is found to be the leading factor that negatively influences cyberbullying experiences, followed by empathic self-efficacy and defending self-efficacy. Results also showed that defending self-efficacy was positively associated with social support among family and friends and social support among teachers. Indirect mediation relationships were investigated and showed that social support among teachers mediate the relationship between defending self-efficacy and cyberbullying experiences, and empathic self-efficacy and cyberbullying experiences. For cyberbullying awareness, an education programme focusing on increasing awareness of cyber-bystanders can be considered. Implementation of education programmes on the importance of support from school counselors and teachers should be considered to educate students on skills such as cyberbullying coping mechanisms in light to reduce cyberbullying occurrences.

## **Development of an Internet-Based Prevention against Victimization for Youth-in-Care and Care Leavers (EMPOWER YOUTH): A Consensus-Based Participative Approach**

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### INTRODUCTION

Given the increased likelihood for youth-in-care and care leavers (Y-IC) to be victimized, there is a strong need to develop a low-threshold intervention targeting the specific needs of this vulnerable group. There are a variety of possible revictimization experiences, e.g., social exclusion, verbal abuse from peers and siblings, partner violence or other forms of sexual or physical abuse. For adolescents and young adults, internet-delivered interventions have a number of advantages compared to traditional face-to-face treatments. To ensure the translation of research into practice, a consensus-based participative approach was chosen for the development of such an internet-based intervention against re-victimization for Y-IC.

### METHOD

Focus groups with Y-IC as well as professional experts, such as child and adolescent psychologists, social workers from the foster care system, were conducted. Interview transcripts were analyzed using the qualitative content analysis according to Mayring. General themes for the focus groups were victimization experiences, intervention contents, modes of delivery and ways to ensure compliance.

### RESULTS

Three focus groups with Y-IC (N=18, Mage=18 years, 56% female) and four focus groups with professional experts (N=16, 69% female) were conducted. The qualitative analyses revealed a wide range of victimization experiences, both face-to-face as well as on social media or online group chats. The participants frequently mentioned the importance of avoiding stigmatization of Y-IC. An adaptability to various devices was often brought up. A mix of modes of delivery was preferred, such as video, audio, quiz elements. Moreover, the option of interaction with peers or psychologists was frequently stated. Finally, time efficiency of the intervention was emphasized.

### DISCUSSION

Overall, the idea of an internet-based intervention for Y-IC was well-received as long as stigmatization would be avoided. A wide range of topics were found to be relevant with a focus on social interaction, risk perception and behavior. Based on the qualitative results, the CBT-based intervention "EMPOWER YOUTH" was developed consisting of six interactive modules. Real-life-examples of victimization experiences could be taken from the focus groups with Y-IC.

## **A Mixed-Methods Feasibility Study of an Internet-Based Intervention against Victimization of Youth-in-Care and Care Leavers (EMPOWER YOUTH)**

Birgit Wagner\*, [Betteke Van Noort](#)

*Medical School Berlin, Germany*

### INTRODUCTION

Young people in out-of-home care and care leavers (Y-IC) are considered a high-risk group for (re-)victimization experiences. Repeated victimization experiences are associated with far-reaching negative consequences. There are however, no evidence-based interventions, which address this specific problem. The current study aims to evaluate a newly developed internet-based intervention against victimization developed for Y-IC in an uncontrolled feasibility pilot study.

### METHODS

The prevention program EMPOWER YOUTH contains six interactive modules and is specifically developed for Y-IC aged 14 to 21 years. Elements of the program are CBT-based. A mixed methods approach was chosen to evaluate user experiences, usability, acceptance, and adherence. Hence, participants filled out the Perceived Website Usability (PWU-G) and Visual Aesthetics of Websites Inventory (VisAWI-S) at follow-up. Moreover, focus group interviews were conducted after program completion. The transcripts were analyzed according to Kuckartz and a deductive-inductive category system was derived.

### RESULTS

A total of 38 participants registered for the study, of which 21 ( $M_{age}=16.7$  years, 62% female) participated in the baseline assessment. 10 participants partook in the follow-up assessment with a dropout-rate of 41%. PWU-G and VisAWI-S values ranged between 5.4-6.1, which are above-average ratings for the usability and aesthetics of the intervention. Two main categories were derived from the focus groups ( $n=8$ ) with five and six subcategories respectively.

### DISCUSSION

The feasibility of the internet-based intervention EMPOWER YOUTH was confirmed with a high level of acceptance by its users. Minor adaptations were implemented based on user feedback, primarily to prohibit high dropout-rates. A randomized controlled trial is warranted to verify its efficacy.

## Development and Evaluation of Psychosocial Preventive Intervention Program for Adolescents (PPI) in Malaysia

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### INTRODUCTION

Prolonged school closure during the pandemic has put young people, especially adolescents at risk of high levels of depression and anxiety during and after physical distancing measures (Bilu et al., 2023; Chi et al., 2021). Therefore, an effective school-based psychosocial preventive intervention program is needed to mitigate the negative impact of the pandemic. This study aims to determine the effects of a preventive psychosocial intervention program on Malaysian adolescents. The program was informed by several strong evidence-based psychotherapeutic approaches, including cognitive behavior therapy (CBT), dialectical behavior therapy (DBT), and the Program for Education and Enrichment of Relational Skills (PEERS).

### METHOD

A single-arm trial that included a total of 116 adolescents aged between 13 to 17 years was conducted. Participants were recruited from three secondary schools in Malaysia. The intervention program was delivered in a half-day interactive workshop, with a maximum of 40 participants per session. The effects of the program was evaluated using pre-and post-test data of mental health outcomes, with post-test data collected 2 weeks after the program ends. The primary outcome measures were depression, anxiety, stress, and social connectedness, as measured using the Patient Health Questionnaire (PHQ-9), the Generalized Anxiety Disorder questionnaire (GAD-7), the Perceived Stress Scale (PSS-4), and the revised Social Connectedness Scale (SCS-R) respectively.

### RESULTS

The results of the study showed that the intervention program significantly reduced anxiety symptoms among healthy adolescents and stress symptoms among high-risk adolescents. Although the results indicate that there were no statistically significant changes for participants in depressive symptoms after the program, a medium effect size was found for changes among the high-risk group, suggesting that the programme has somewhat alleviated depressive symptoms among high-risk students.

### DISCUSSION

While preliminary, the program showed positive effects in reducing anxiety and stress among participants. Considering the brevity of the programme, this finding is very encouraging as they suggest that even a brief intervention may have at least short-term benefits for those who are at risk of anxiety and stress. A larger scale of randomised controlled trials with representative sample is warranted to ascertain the effects of the programme.

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### Innovative Approaches to Mental Health Prevention among Children and Young People

## Adapting and Implementing a Mental Health Teacher Consultation Model in a Large Urban U.S. School District

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### INTRODUCTION

Bridging Mental Health and Education in Urban Schools (BRIDGE) is an intervention that embeds teacher consultation and coaching activities into school mental health teams' regular workflow. BRIDGE increases effective classroom interactions, enhances youth functioning, improves teacher-student relationships and academic self-concept, and reduces peer victimization by increasing educators' ability to support student mental and behavioral health needs in their natural environment, the classroom.

### METHOD

In partnership with a large urban school district in the Mid Atlantic area of the United States and a local managed care organization, we are rolling out BRIDGE with approximately 180 clinicians across 150 schools over a four-year period which began in November 2021. The implementation process was guided by the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. We examined feasibility of implementation, perceived knowledge, and self-efficacy within the context of the largest implementation of BRIDGE to date. To date, 29 clinicians have completed training and consultation and an additional 60 will have complete data by June 2023. Consultation records were used to select intervention strategies that clinicians identified and recommended to teachers for implementation in the classroom to foster positive teacher-student and peer interactions, and student engagement. Pre- and post-training knowledge and self-efficacy data were collected from all clinicians. Expert consultants rated clinician competence.

### RESULTS

We will describe (1) the collaborative exploration process that led to the selection of BRIDGE as the intervention; (2) preparatory work including adaptations made in partnership with the BRIDGE developer (e.g., streamlining interventions to align with clinician scope of work in this funding model, increasing cultural responsiveness, improving feasibility for under-resourced classrooms); (3) adaptations necessitated by the COVID-19 pandemic (e.g., virtual trainings and consultations, adapted strategies), and (4) sustainment plans.

Preliminary feasibility data from the first two cohorts of trained clinicians indicate that all clinicians who completed training, scheduled an initial consultation with a teacher, and were still employed in their current role continued to participate in consultation and use BRIDGE six months later. Clinicians completed 77% of live consultation visits and 97% of virtual consultations. Prior to training, clinicians endorsed the greatest knowledge and comfort with behavior management strategies and less knowledge and comfort with class-wide routines and transitions, instructional learning formats and cooperative learning strategies. Clinicians utilized a variety of class-wide (Tier 1) and targeted (Tier 2) strategies as specified by the BRIDGE model. The most commonly used interventions were aimed at improving classroom structures and routines, positive reinforcement (token economies, specific labeled praise), and self-monitoring. Expert consultants provided post-consultation ratings of clinician knowledge of BRIDGE strategies ( $M = 3.55$ ,  $SD = 0.75$ ), commitment to BRIDGE consultation ( $M = 3.81$ ,  $SD = 1.24$ ), and likelihood of continued use of BRIDGE ( $M = 3.59$ ,  $SD = 1.39$ ) on a 1 to 5 Likert scale where

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1 = not at all and 5 = extremely. These results will be updated with data from the approximately 60 additional clinicians who are actively enrolled in training.

## DISCUSSION

Results of this evaluation will inform future iterations of the BRIDGE training and implementation model, reveal further adaptations, and provide guidance to others seeking to implement BRIDGE or other similar school-based social-emotional interventions and positive behavioral support. Preliminary data suggest that, with minor adaptations to the BRIDGE model, it can be rapidly implemented and scaled in a large, under-resourced school district and that clinicians can sustain their use of BRIDGE over time.

## Dissemination of the Preventure Program in Australia: Feasibility of Teacher Delivery in Secondary Schools

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### INTRODUCTION AND AIMS

Adolescence is a vital period for the prevention of substance use and mental disorders, yet existing school-based prevention programs are limited. The Preventure program targets established personality risk factors for substance use, internalising and externalising problems. Preventure has a strong evidence base when delivered by research psychologists; this trial tests implementation by school staff.

### DESIGN AND METHODS

A cluster-randomised controlled trial was run in Sydney, with Year 8/9 students (aged 13-14 years at baseline). Nine schools were randomly allocated to Preventure or control (usual health education). Preventure consists of two 90-minute group sessions of cognitive-behavioural therapy and motivational interviewing to teach personality-targeted coping skills. Student alcohol use, internalising and externalising symptoms were measured through self-report survey. School staff reported implementation fidelity, feasibility, and acceptability.

### RESULTS

564 students completed the baseline survey (47%F, mean age 13.8 years). Past 6-month alcohol use was reported by 10% of students, tobacco cigarettes by 2% and e-cigarettes by 9%. Mental health symptoms were high; in the past 6-months, 32% reported feeling depressed most days, 38% felt anxious most days, and 32% had a panic attack. Students gave positive feedback on Preventure, particularly regarding the supportive group feel, helpful and understanding facilitators, learning about themselves, and learning skills. School staff rated the program highly, and fidelity was sound. Staff identified barriers to program implementation including delays through parent consent methods, workload, and timetabling issues. Staff made suggestions to improve delivery, such as considering student literacy levels, engaging students, and workplace demands.

### DISCUSSION

Upskilling existing school staff has the potential to increase the uptake and sustainability of the evidence-based Preventure program in Australian secondary schools, but workplace demands are a major barrier for teachers. Dedicated wellbeing staff in schools offers a promising solution for Preventure delivery specifically, and student wellbeing programs generally.

## Videoconferencing Two-Session Contextual Couple Therapy in Japan: A Feasibility Randomised Controlled Trial

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### INTRODUCTION

Despite an estimated divorce rate of 30%, no empirically supported couples therapy program has been established in Japan (Mitamura, 2021). As a new technology, videoconferencing psychotherapy is not only promising during the COVID-19 pandemic era but also useful for busy adult partners who find it difficult to coordinate their schedules for sessions. In this context, we developed the Two-Session Contextual Couple Therapy (Two-CCT), a short-term program for couples in Japan who wish to improve their relationship. The Two-CCT is in the tradition of functional contextual couple therapies (Christensen, Doss, & Jacobson, 2020; Cordova, 2014; Gurman, 2013) and utilises and accommodates empirical data on couples' relationships (e.g., Gottman, & Gottman, 2018) and innovative interventions (e.g., Johnson, 2020) into the high-contextual Japanese culture (Hall, 1976).

### METHOD

The Two-CCT was conducted by the first author, a certified public psychologist and cognitive and behavioural therapist. The Two-CCT does not have a fixed protocol but is instead based on change principles (Christensen et al., 2020) and flexible, pluralistic practices (Cooper, & McLeod, 2010; Gurman, 2013). The intervention aims to cultivate smooth emotional and behavioural interaction between partners to the maximum extent within two sessions. Each individual is encouraged to show their soft or vulnerable emotions and to access their partner's emotional responses in safe circumstances (Christensen et al., 2020; Cordova, 2014; Johnson, 2020).

A total of 18 heterosexual couples (36 individuals) participated in the present study. Ninety-seven per cent were married, and 3% had lived together for more than seven years but were not married. On average, couples married for 8.51 years ( $M = 7.08$ ;  $SD = 7.66$ ), and 89% had children (number of children = 1.44,  $SD = 0.98$ ); of these, 31% had preschool children. A Japanese version (Mitamura, Hitokoto, Tsuchiya, & Tani, 2022) of the Couple Satisfaction Index (CSI; Funk & Rogge, 2007) was used to measure relationship quality as a primary outcome. Eight couples were randomised into the Two-CCT condition, and 10 couples were randomised into the waitlist control condition. Couples were repeatedly assessed at pre-intervention, post-intervention, and one- and three-month follow-ups using the CSI.

### RESULTS

All eight couples (100%) assigned to the intervention completed the entire program. We classified couples in both the Two-CCT and waitlist conditions as 'deteriorated', 'unchanged' or 'improved' based on the reliable change in CSI scores from pre-therapy to post-therapy, and one- and three-month follow-up using Jacobson and Truax's (1991) formula.

In the Two-CCT condition, 38% (three of seven), 67% (four of six), and 60% (three of five) of couples showed reliable improvement at the post-intervention and the one- and three-month follow-up, respectively. No couples were categorised into the 'reliable deterioration' category at any time point. Effect sizes in the Two-CCT condition were medium to large; within-group Hedges's  $g = 0.87$  CI [0.13-1.60] ( $n = 16$ ), 0.73 CI [0.12-1.57] ( $n = 12$ ), 0.81 CI [0.12-1.75] ( $n = 10$ ), at pre-intervention to one-month follow-up, and pre-intervention to three-month follow-up, respectively.

In the waitlist condition, 10% (one of ten), 0% (zero of seven), and 0% (zero of seven) of couples showed reliable improvement at post-intervention, one-month follow-up, and three-month follow-up, respectively. Two couples were categorised into the 'deteriorated' category at the one-month and three-month follow-up, respectively. Additionally, one couple reported that they had separated at the time of the post-intervention.



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## DISCUSSION

Although there is room for improvement in the rate of relationship enhancement, considering that there was no improvement in the waitlist group, we conclude that the Two-CCT was effective for Japanese couples despite only two sessions. The Two-CCT was also an acceptable intervention for Japanese couples because 93% of partners reported wanting to participate again and that they would recommend the program to other couples. Training therapists on administering the Two-CCT and evaluation of its effectiveness on larger samples is required.

Pre-registration: UMIN000048502. [https://center6.umin.ac.jp/cgi-open-bin/ctr\\_e/ctr\\_view.cgi?recptno=R000055268](https://center6.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000055268)

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### Internet-Based Cognitive Behavioral Therapy in Primary Care – Health Economic and Clinical Outcomes

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#### INTRODUCTION

The efficacy of internet-delivered cognitive behavioral therapy (ICBT) for common mental disorders, CMDs, has been demonstrated in clinical trials (Domhardt et. al. 2019, Sztein et. al. 2018, Lindsäter et. al. 2018 & Seyffert et al 2016). The rationale for developing ICBT has been to increase the access to cost-effective treatment. However ICBT has only recently been introduced in primary care and little is known about the outcomes in regular primary care settings.

Aim: The aim is to present an example of how ICBT to treat CMDs has been implemented in a primary care setting in a Swedish region, as well as to discuss preliminary treatment results and future research plans for the evaluation of ICBT delivered in a regular primary care.

#### METHODS

The evaluation of ICBT implemented within regular primary care in a Swedish county is based on 1152 patients treated between 2018 and 2021. The number of patients treated for each CMD were; 442 for depression, 456 for insomnia, 190 for stress related disorders, 44 for social anxiety and 20 for panic disorder.

Data for almost 100% of the patients receiving ICBT was registered in The National Quality Registry for Internet-delivered treatments in Sweden (SibeR). Results on treatment outcomes were collected with the help of this national quality register aimed at supporting the dissemination and quality assurance of internet delivered treatments. Rating scales validated for evaluating treatment outcomes for each disorder were reported and used as follows:

- Depression MADRS-S
- Insomnia: ISI
- Social Anxiety: SPIN
- Panic disorder: PDSS-SR
- Stress related disorders: PSS-10

#### RESULTS

Treatment effects and costs were estimated. Differences between the pre- and post-measures of the rating scales were analyzed and all proved to be significant with p-values below 0.01. Totally 36% of the patients were classified as responders and had a significant improvement in symptoms. The cost per treatment, including implementation costs, was approximately 1300 US dollars per patient. Clinical outcomes were translated to quality adjusted life years (QALYs) and estimated cost per QALY for each treatment program were within the Swedish willingness-to-pay threshold threshold of 700 000 Swedish kronor (appx. 80 000 US dollars). Up-to-date results including data from 2022 and 2023 will be presented at the conference. The number of patients treated has already increased to over 2200 and two more treatment programs have been implemented for generalized anxiety disorder and health anxiety.

#### DISCUSSION

The preliminary results indicate that ICBT significantly reduced symptoms and was likely to be cost-effective, indicating that ICBT could have a place in treating CMDs in primary care. However, we need to understand more about the population needs and current practice of utilization of societal resources, as well as the impacts of ICBT on treatment outcomes, healthcare consumption and related costs, when delivered within regular care, as well as the maintenance of the overall quality and reach over time. To fill this knowledge-gap we have

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planned a research project in which we will combine registry data and evaluate outcomes for all patients treated in this setting between 2018 and 2030.

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### **Telemental Health Services: Nuances and Implications from an Indian Perspective**

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The COVID-19 outbreak imposed the adoption of extraordinary containment measures, including the strict necessity to limit interpersonal contact. Face-to-face psychotherapy collided with this requirement as well as endangered both therapists and clients' safety. Telepsychotherapy thus came to the aid, ensuring therapeutic continuity and the possibility to reach people who could benefit from extra psychological support. However, telepsychotherapy remained unknown until before the pandemic for a number of reasons. There is a paucity of literature highlighting delivery of psychotherapy services through virtual reality with only eighteen published studies (Poletti et al., 2021) between 2015 to 2020. When mental health services were regarded as essential during the pandemic, mental health practitioners were compelled to switch to telepsychotherapy. This period witnessed chaos within the mental health community due to unclear guidelines and limited infrastructure. This is when a number of governmental institutions as well as private setups drafted protocols to ensure ethical and competent care. However, till date there are only three published studies from India on the subject. Limited use of telepsychotherapy has also been attributed to negative beliefs about its efficacy both by therapists and clients. The aim of the present study is to highlight these nuances, along with strengths and challenges posed by delivery of therapy through virtual media. The paper brings forward these factors, their implication, and the way in which these challenges can be overcome. This is also elaborated upon as we trace the journey of one such online mental health organization, based out of India, and with approval from the organization's internal ethics board. This will aid an in-depth understanding of telepsychotherapy services as they continue to gain momentum.

Files will be reviewed, over a 12 month period, for socio-demographics of the clients (age, gender, education, occupation, socio-economic status, location, marital status), reason for referral, common diagnoses, types of services sought - assessments, therapy, and so on, source of referral, client suitability, languages used, and will be quantitatively analyzed. Issues around privacy and confidentiality, need for various standard operating protocols to deal with certain anticipated situations, will also be discussed. Similarly, therapists' accounts with respect to telepsychotherapy will be qualitatively analysed and after obtaining a written informed consent. This will help understand various process issues, unique challenges and implications for emerging nations, and future directions. Thus, the results will focus on the above mentioned variables and their interplay with telemental health, specifically in emerging nations.

Keywords: Telemental health, telepsychotherapy, mixed methods, CBT, pandemic

## An Intervention for Adolescents With Treatment Refusal and Refractory Anxiety Disorder During COVID-19 in China

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A substantial proportion of adolescents with anxiety disorders refuse treatment or remain symptomatic after individual medication and psychotherapy, and there is an urgency to develop intervention for these adolescents. Recent studies showed the family accommodation behavior from parents may maintain and exacerbate pediatric anxiety. Interventions for parental accommodation may be a practicable way to intervene adolescents with treatment refusal and refractory anxiety disorders. Supportive Parenting for Anxious Childhood Emotions (SPACE) is a program focused on family accommodation and has been supported by empirical evidence. We adapted SPACE to fit in the local Chinese context. Since mental health resources in China are insufficient, and in the context of the COVID-19, an online format may help increase the accessibility of interventions. We developed an online parent group based on SPACE, developed a parent reading manual for families, and adapted the cases to make it more adaptable to Chinese families. The purpose of the current article is to test the feasibility of the program. In this study, 66 parents of adolescents ( $M$  age = 14.50,  $SD$  = 1.64) with treatment refusal and refractory anxiety disorders were selected for a 12-week, 90-minute online group treatment. The Family Accommodation Scale-Anxiety (FASA) and State Anxiety Inventory (SAI) were administered to parents, and the Screen for Child Anxiety Related Emotional Disorders (SCARED) were administered to adolescents. First the efficacy of parent online groups were examined and paired sample T test showed significant reduction in family accommodation ( $t=6.004$ ,  $P<0.001$ ), parental anxiety ( $t=3.706$ ,  $P=0.002$ ), and adolescent anxiety ( $t=3.492$ ,  $P=0.001$ ) after the intervention. Then this study explored the experiences of parents in participating in the intervention, the non-structured interviews were carried out with these parents who participated in this program, and thematic analysis was applied. The interview data analysis identified four themes, namely: (a) Parents have learned more about anxiety and are better equipped to understand and help their children. (b) During the intervention the children tried to cope with the anxiety situation independently with pressure and increases his or her self-confidence. (c) The children are more likely to regain composure when the parents remain sensible when the child is anxious. (d) Parental anxiety levels have decreased. Online parent group focused on family accommodation has good feasibility. It may be a promising way for adolescents with treatment refusal and refractory anxiety disorders.

### **Increasing Access - Findings From a Virtual Counseling Helpline in Rural India**

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Much research has focussed on the paucity of mental healthcare services globally. A unique challenge, in the Indian setup however, is that of poor help seeking. Lack of awareness and knowledge about mental health and illness, stigma and discrimination, lacking or inaccessible mental healthcare services, poor quality of existing services are some of the barriers explored in literature (Kermode et al, 2009; Marques, 2010). Additionally, poverty of resources and paucity of trained therapists (Stewart 2007), as well as geographical and economic barriers (Mancebo, 2011) play an important role in determining help seeking, and act as impediments to treatment seeking and dissemination. Alternate modes of therapy dissemination may help overcome these barriers to facilitate better mental health, and greater treatment seeking as well as gains from therapy. Fairburn (2011) suggested that newer technology may help solve these problems. The objective of the current study, therefore, was to set up a virtual mental healthcare setup for counselling services in rural communities across North India, and to evaluate the feasibility and acceptability of virtual counselling services among the community population. The helpline seeks to increase access of mental healthcare to previously untapped areas, by providing quality supervised care to otherwise underserved populations, while addressing challenges of unequal access due to both geographical and economic barriers. To this end, using the digital infrastructure set up during the COVID years for increasing awareness and outreach of mental healthcare is a step forward in tech-assisted counseling. The services are carried out as part of tie-ups with local NGOs with the necessary technological infrastructure to be able to support basic, uninterrupted video calling. The helpline is run by postgraduate and doctoral trainees in applied psychology at the Jindal Institute of Behavioural Sciences, JGU, where students are trained and supervised by therapists and faculty in cognitive behavioural interventions for common mental disorders as well as sub-clinical concerns among the rural community, such as exam stress, interpersonal conflict, emotional regulation etc. Services are provided online via video call, with additional hours of supervision for the team running the helpline. The current paper focusses on the establishment of the helpline as well as results on feasibility and acceptability during the pilot phase. The pilot study is currently in progress, and is expected to conclude by April 2023. Results and discussion will be presented during the paper presentation.

### Social Learning and CBT in Autism

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The scientific community has long held the idea that individuals with autism have inborn, genetically determined social deficiencies that are permanent and cannot be improved by intervention. For adolescents, the Program for the Education and Enrichment of Relational Skills (PEERS®) (Laugeson et al., 2009) - an empirically supported, parent-assisted social skills group intervention based on cognitive behavior therapy (CBT) principles - has been shown to be effective in several independent studies (Idris, Jagersma, van Pelta, et al., 2020; Laugeson & Park, 2014; Mandelberg et al., 2013; Marchica & D'Amico, 2016; Rabin, Israel-Yaacov, Laugeson, Mor-Snir, & Golan, 2018; Rabin, Laugeson, Mor-Snir, & Golan, 2020; Schohl et al., 2014; Shum et al., 2019; Yamada et al., 2020; Yoo, Bahn, Cho, & al., 2014; Platos, Wojaczek, & Laugeson, 2022). First, psychoeducation increases social knowledge by teaching concrete rules and steps for social skills that are ecologically valid (i.e., the skills used by socially successful adolescents). This provides a cognitive basis on which social skills can grow. Second, role-play demonstrations are used to model relevant skills and translate abstract skills into concrete and feasible behavioral steps, which stimulates numerous parts of social cognition. Cognitive methods are used while watching role-play demonstrations. They evaluate the appropriateness of social circumstances by asking perspective taking questions. Third, behavioral rehearsal and homework exercises are used to ensure that adolescents actively practice newly learned social skills in the treatment setting as well as at home and in the community, resulting in new social experiences that allow for repeated practice and eventual strengthening the social skills. The crucial final stage of the acquisition process is active experimenting with newly learnt concepts and behaviors. Without exercising the skills, an individual will have merely knowledge, possibly some understanding, but no skills to employ in real-life situations. Completing exercises is thus a necessary step in achieving the final goal, namely, i.e., developing social skills to form and maintain relationships necessary to participate in society. The RCT data of 106 adolescents with autism that were randomly assigned to either experimental condition (PEERS®) or active treatment control condition (ROAD) was presented. Effects of interventions on social skills were assessed pre, post, and follow-up test. Results on the primary measure of social skills revealed improvements in positive affect, overall quality of rapport, as well as starting and ending a conversation, irrespective of condition. Compared to ROAD, PEERS® participants showed increased overall self-reported social skills (SSIS). Parent reports showed decreased overall social skill impairment (SRS) as well as improved social communication (SSIS subscale), with significantly more progress in the PEERS® group. In conclusion, PEERS® intervention for adolescents with autism is an effective program to improve social skills.

### **Dialectical Behavior Therapy to Treat Emotion Dysregulation in Autism Spectrum Disorder**

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An increasing body of evidence shows that self-harm and suicidal behaviors are prevalent in autism spectrum disorder (ASD) (Steenfeldt-Kristensen et al., 2020; Cassidy et al., 2014), particularly in autistic adults without intellectual disability (Hirvikoski et al., 2016). Recent findings have identified emotion dysregulation (ED), i.e., the difficulty modulating one's emotions, as a key factor involved in the emergence and maintenance of these behaviors (Conner et al., 2020; Moseley et al., 2019). However, studies evaluating psychotherapies that target ED in autistic adults without intellectual disability are scarce and address this difficulty in the absence of suicidal behaviors and severe co-occurring disorders (Conner & White, 2018; Hartmann et al., 2019).

Dialectical behavior therapy (DBT) (Linehan, 1993), a third-wave cognitive behavioural therapy (CBT), has gathered a solid body of evidence supporting its effectiveness in treating ED in borderline personality disorder (BPD) (Linehan et al., 2006; Panos et al., 2014). It has also proven to be effective in the reduction of ED in other psychiatric and neurodevelopmental disorders, such as bulimia (Safer et al., 2001), depression (Harley et al., 2008) and attention deficit/hyperactivity disorder (ADHD; Hirvikoski et al., 2011). However, to our knowledge, DBT has not been evaluated in the treatment of ED in autistic people. In a series of studies conducted by our team, we first aimed to assess the feasibility of DBT then its efficacy in autistic adults without intellectual disability.

In a first study which included a group of seven autistic adults who presented with self-harm and/or suicidal behaviors associated with a high ED, we found that DBT is feasible and highly acceptable by this population (Bemmouna et al., 2021). Our preliminary efficacy findings were also promising, as the mean score in the difficulties in emotion regulation scale (DERS; Gratz & Roemer, 2004) decreased significantly post therapy compared to baseline, this result being maintained at the 4-month follow-up (Bemmouna et al., 2021).

Following this, we aimed to evaluate the efficacy of DBT through a pilot randomized controlled trial (RCT) involving 64 autistic adults without intellectual disability exhibiting self-harm and/or suicidal behaviors associated with a high ED. Preliminary results of the RCT (n=32) suggest a significant improvement in self-reported ED as evidenced by a significant decrease in the mean DERS score post therapy compared to baseline and the control group (TAU). This improvement in ED is associated with increased emotion regulation skills assessed by the DBT-Ways of coping checklist (DBT- WCCL; Neacsiu et al., 2010). Upcoming follow-up results at 6 months will provide insight into the maintenance of these clinical gains.

The aim of this open paper is to present our ongoing pilot RCT and share some preliminary results supporting the efficacy of DBT in autistic adults with suicidal and/or self-harming behaviors.



### Testing a Cognitive Behavioural Therapy Program for Anxiety in Teenagers on the Autism Spectrum: A Feasibility Study

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Autism spectrum disorder (ASD) includes core symptoms affecting general and social development. Up to 60% of adolescents with ASD suffer from comorbid anxiety disorders which can negatively influence educational, social and general development together with quality of life. Cognitive behavioural therapy (CBT) programs adapted to children with ASD have shown to be effective in reducing anxiety. The majority of this evidence, however, is from studies with younger children. This study is the first to investigate the feasibility of adjusting a manualised CBT group program in to a version suited for teens.

#### METHODS

Fifteen adolescents, aged 14–17 years, with ASD were enrolled in the study. Adjusting and amending the CBT programme ‘Cool Kids Anxiety Program Autism Spectrum Adaptation’ for younger children, a version called ‘Chilled ASA’ suited for teens and targeting topics related to this age group was developed. Outcome measures were collected from both teens and parents pre- and post-treatment and at 3-month follow-up and included evaluation and satisfaction with the program, school attendance, scores from a semi-structured anxiety interview, together with questionnaires on anxiety symptoms, life interference, and children’s automatic thoughts.

#### RESULTS

92% of the families who completed the program found it useful and would recommend it to other families in a similar situation. All families attended 7 or more sessions – the minimum requirement for completing the program. At follow-up, 36% of teens were free of all anxiety diagnoses and 45% no longer met the criteria for their primary anxiety diagnosis. Of the five teens who did not attend school before treatment only two remained school absent after treatment.

#### CONCLUSION

This study suggests that the adaptation of the CBT programme ‘Cool Kids Anxiety Program Autism Spectrum Adaptation’ into a teen version ‘Chilled ASA’ is feasible creating important and satisfactory treatment for this age group and enhancing possibility of education, development and independence in future life.

### **A Meta-Analysis of Single-Subject Research Designs on Family Participation Intervention for Children with Autism Spectrum Disorders**

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#### INTRODUCTION

There has been issues that interventions for children with ASD are difficult to generalize and hard to remain effective when interventions are discontinued. Family participation intervention (FPI) for children with ASD is known as treatment that can have a positive and long-term effect on children's behaviours and generalize to daily life because it changes family environment as well as a child. However, no meta-analysis to integrate effectiveness of FPI has been attempted, although recent studies have tried to confirm effectiveness of them. In the present study, we tried to verify the effectiveness of FPI by performing a meta-analysis that integrates effect sizes of single-subject studies. In addition, this study analysed the effect size according to independent variables (approach of intervention), dependent variables (goals of intervention), and other variables (e.g., gender and age of subject children, severity of ASD, and number of sessions).

#### METHOD

For these purposes, we performed meta-analyses using a random effects model. Twenty-seven dissertations and journals addressing treatment effects of FPI published in Republic of Korea between 2000 and 2021 were selected. This study used Comprehensive Meta Analysis (CMA) Version 3 for the analysis.

#### RESULT

First, the overall effect size of FPI for children with ASD was Tau-U .88 that showing a middle effect size and the overall effect size for maintenance was Tau-U .95 showing a large effect size.

Second, as far as approach of intervention is concerned, community-centered therapy (Tau-U 1.00) and play (activity)-centered therapy (Tau-U .98) showed a large effect size. However, effect size for augmentative and alternative communication (AAC) was the lowest, with Tau-U being .76.

Third, there is a high treatment effect of FPI when the goals were set to adaptive behaviours (Tau-U 1.00). Effects for challenging behaviours (Tau-U .90), communications (Tau-U .89), and social interactions (Tau-U .88) were followed, all showing middle effect size. On the other hand, effect for cognition and learning was at the lowest, with Tau-U being .71.

Fourth, the analysis of effect size of FPI depending on participant age demonstrates that effects for elementary school students (Tau-U .97) is the highest. Tau-U for elementary school students was significantly higher than Tau-U for pre-schoolers (Tau-U .86) and for middle school students (Tau-U .89). However, for the other variables such as participant gender and severity of ASD, the difference in effect size between subgroups was not significant.

Lastly, in FPI, the effect size was the highest when the number of sessions was between 21 and 30 (Tau-U .90) and was the lowest when the number of session was between 1 and 10 (Tau-U .59). The effect size tended to increase as the number of sessions increased.

This study suggests that when the goals of FPI are set to adaptive behaviours for elementary school students while using community-centered or play (activity)-centered approach and FPI lasts for at least 20 sessions, it is likely to produce relatively good intervention effect.

#### DISCUSSION

This study is meaningful in that it verified the effectiveness and validity of FPI for children with ASD. Also, this study provided detailed information on factors affecting the effectiveness of intervention. Thus, it is expected that findings of this study can be used in designing proper intervention in various clinical settings. The limitations of this study and direction for future study were discussed.

### **The Effectiveness of an Attention-Based Intervention for School-Aged Autistic Children With Anger Regulating Problems: A Randomized Controlled Trial**

Pamela Clifford\*

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Anger regulation is a challenge for children with autism spectrum disorders (ASD). We investigated if attention-based cognitive behavioral treatment ("Anger Can Go!", Clifford et al., 2022), based on mindfulness cognitive therapy (MBCT) and dialectical behavior therapy (DBT), reduces aggressive behavior and improves anger coping in school-aged autistic children (n = 51).

Children were randomized to an active-control or a treatment condition. The treatment included nine weekly sessions attention-based individual therapy. Parents in both conditions received three weekly psychoeducation group sessions to heighten awareness of expressed emotion (EE).

For aggressive behavior, treatment reduced temper tantrums and arguing. No effect was found on destroying things and physical violence.

For anger coping, treatment increased adaptive coping strategies of diffusion and social support seeking, but had no effect on assertion, rumination, and maladaptive coping direct anger out and avoidance. Treatment did not impact secondary outcome measures concerning children's quality of life (QoL) and parental stress-levels and psychological well-being.

In conclusion, school-aged autistic children are able to acquire selfregulation skills reducing temper tantrums and arguing and increasing the use of adaptive anger coping strategies. The intervention shows potential to improve behavior and regulation, but little transfer to other domains. Limitations and future directions involving the child's social environment, including parents, siblings, and teachers are discussed.

This study was published in Autism Research in 2022. An outline of the intervention "Anger Can Go!" is attached to this article as an Appendix.

Clifford, P. , Gevers, C. , Jonkman, K. M. , Boer, F. , & Begeer, S. (2022). The effectiveness of an attention-based intervention for school-aged autistic children with anger regulating problems: A randomized controlled trial. *Autism Research*, 15(10), 1971–1984.

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## Treatment Expectations and Psychological Flexibility Levels in Individuals with Opiate Use Disorder

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### INTRODUCTION

Substance use disorders are a chronic public health problem with serious costs to both the society and the individual. Opiate use disorder is a chronic condition that progresses with frequent relapses and has a significant relationship with mortality and morbidity (Kakko et al. 2019). Even with treatments that have been shown to be effective, effect size of the treatments is small and not long lasting (Lee et al. 2015). Especially with the increasing use of opiates in the last 20 years, the need for effective interventions that prevent relapse and recurrence has increased, and this issue has gained importance (Wang et al. 2019). Psychological flexibility; is defined as being in full contact with the thoughts and feelings that arise in the present moment without trying to eliminate or get rid of them and behaving in line with chosen values. Acceptance and Commitment Therapy, which aims to improve psychological flexibility, has been shown to be effective in opiate and other substance use disorders (Lee et al. 2015). Although many factors play a role in the effectiveness of the treatment, we think it would be useful to determine what the treatment recipients expect, what they think would benefit them if an intervention was developed, and how they would like to receive this service. The aim of this study; is to determine the treatment expectations of people whose preferred substance is opiate, and to investigate whether there is a relationship between their psychological flexibility, craving and addiction severity levels.

### METHOD

The research was conducted with opiate-using participants among those treated in a government addiction outpatient clinic in Ankara, Türkiye. In order to collect the data, the Addiction Profile Index (BAPI) (Ögel et al. 2012), which measures the severity of addiction; Penn Alcohol Craving Scale (PACS) Revised Version for Substance Craving (Evren et al. 2011), which measures the levels of craving; and the Acceptance and Action Questionnaire-substance abuse (Uygur et al. 2020), which measures the degree of psychological flexibility in substance use, were used. Descriptive statistics, correlations between variables, independent t-test were used for statistical analyses.

### RESULTS

146 participants participated in the study. The mean age was  $28.4 \pm 6.24$  (19-57). 134 of the participants were male (91.8%). Of the participants, 104 (71.2%) were single, 81 (55.5%) were not working, and 17 (11.6%) were using IV heroin. Among the reasons that directed the participants to treatment, the most common reasons were 'problems with the family' with 58.2% and 'symptoms of opiate crisis' with 45.9%. When the participants were asked what they wanted the treatment to be; 58 (39.7%) of them stated that they wanted it to be for crisis symptoms, 50 (34.2%) for opiate cravings, 52 for reducing their negative emotions, and 100 (68.5%) for establishing a regular fulfilling life. When the participants were asked what they needed to quit the substance; 69 (47.3%) stated that they needed to get rid of crisis symptoms, 68 (46.6%) to get rid of heroin craving, 66 (45.2%) stated that they needed to get rid of their problems. When the participants were asked how they preferred the treatment; 22 (15.6%) self-help books, 39 (26.7%) smartphone applications, 19 (13%) websites, 28 (19.2%) videos, 78 (4%) 53.4% preferred face-to-face interviews, 37 (25.3%) preferred telephone interviews. A significant negative correlation was found between addiction severity and Acceptance and Action Questionnaire-substance abuse, a significantly positive correlation between addiction severity and substance craving scale, and a significantly negative correlation between substance craving scale and Acceptance and Action Questionnaire-substance abuse.

# OPEN PAPERS

## DISCUSSION

It is important to evaluate individuals using opiate not only in terms of addiction but also in terms of their interactions with the social environment. Craving is one of the main phenomena in the persistence of addiction. Developing coping strategies with craving may be an important clinical goal. Psychotherapy interventions for psychological flexibility skills can make meaningful contributions to the treatment of opiate addiction.

### Public Perception towards Drug Abuse in South Korea: The Effects of Overconfidence and Affirmation

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#### INTRODUCTION

The misuse of prescription drugs and over-the-counter medicines has been a major issue addressed as a serious public health problem worldwide. This study aimed to explore the factors contributing to substance abuse in Korea by examining the status of substance abuse among Korean adults, evaluating their knowledge, attitudes, and intentions for substance abuse.

#### METHODS

Data was collected online from a sample of Participants 19 years of age or older from May 20th 2020 to June 1th 2020. The survey consisted of demographic questions, perceptions of drug risk, motives for drug use, and questions about attitudes toward drug addiction treatment. Principal component analysis and univariate logistic regression analysis were used to explore the factors contributing to perception of drug abuse.

#### RESULTS

A total of 1020 subjects were enrolled in the survey, 518(50.8%) were male. In the multivariate regression analysis, overconfidence in handling drug usage, acceptance of addictive substances and affirmation of public support for drug abuse were associated with opioid misuse (Nagelkerke R<sup>2</sup> = .486), and additionally, Affirmation of legal cannabis usage and motivation to use diet pills were associated with diet pill misuse (Nagelkerke R<sup>2</sup> = .569). The tendency of substance abuse was stronger as the subjects were more confident in coping with drug addiction. The more people do not support the government's drug treatment policy or think that drug addiction is an individual's responsibility, the higher the tendency of substance abuse.

#### DISCUSSION

Opioid misuse was predicted by the tendency to accept daily addictive substances, indicating that their routine intake of various addictive substances (such as alcohol, cigarette, energy drink, or caffeine) or lack of resistance to them is also linked to another addictive substance, opioids. This suggests that people (or at least those who have misused opioids) think opioids are an extension of other daily substances. The affirmation of legal cannabis usage only predicted diet pill misuse. Phentermine, phendimetrazine, and diethylpropion have been withdrawn in most countries due to side effects such as drug abuse and cardiotoxicity; however, these were not addressed in the existing clinical guidelines for the pharmacological management of obesity in adults in South Korea (Jo et al. 2021). Findings of this study suggest the actual situation of substance abuse among Korean adults, for increasing the awareness and attitudes of drug use related to substance abuse.

### **Impulsivity and Risk-Taking in Decision-Making by Substance Abusers**

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High impulsivity and risk-taking has been correlated with substance-related disorders. However, it is unclear the decision-making process due to factors such as uncertainty environments, risk, and time manipulation in different decision-making procedures. The main objective of this study was to identify behavioural differences between substance abusers and healthy control participants in a behavioural test battery, including (1) two uncertainty decision-making tasks, the Balloon Analog Risk Task (BART) and the Iowa Gambling Task (IGT, trial 1–40); (2) three risk-taking tasks, the Columbia Card Task Hot version (CCT-hot), Columbia Card Task Cold version (CCT-cold), and the IGT (trial 41–100); and (3) an impulsivity task, the Delay Discounting task (DD). We worked with a sample of 54 adult participants (Substance abusers:  $n = 28$ ; Healthy controls:  $n = 26$ ). The results showed no statistically significant differences between the groups in any of the tasks. However, the results showed an upward trend of impulsive (i.e., steeply discounting curve) and risk-taking behaviours (i.e., a low learning curve in IGT) in substance abuse participants. The factor analysis results showed four different main factors: (1) risk-taking task in the IGT (trial 40–100), (2) uncertainty task in BART, (3) impulsivity in DD, IGT (trial 1–40), and (4) deliberate process in the Columbia card task (cold and hot). We conclude that factors such as the uncertainty tasks in the BART and the first block of IGT trials; the risk cues in the CCT tasks (i.e., number of loss, number of gains, and loss cards; and the time to deliver in the DD task, these tasks can affect the complex decision-making process in both clinical and healthy groups.

Keywords: decision making, discounting, risk-taking, substance abuse, methamphetamine

### **Contrasting the Effect of Substance Abuse in a 3D Multiplayer Video Game**

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Substance use disorders are associated with high criminal justice costs, costly healthcare expenses, decreased social functioning, and impaired decision-making. People with SUDs tend to exhibit increased risk-taking and a preference for immediate rewards in non-social decision-making tasks. However, there has been limited research on their behaviour in social decision-making scenarios where resources and profits depend on real-time interactions. The aim of this study was: 1) Compare the proportion of “producers” (individuals who search for resources) and “scroungers” (those who steal or join previously discovered sources) among individuals with substance use disorders and healthy participants, 2) compare the proportion of producer responses with the Rate Maximization Model predictions, and 3) investigate the relationship between social foraging strategies, prosocial behaviour, and impulsivity. In this study, 20 participants with substance use disorders and 20 healthy controls were exposed to the Guaymas Foraging Task, the Social Discounting Task, and the Delay Discounting Task. Results showed that control participants tended to produce and obtain higher profits than the substance use disorders group. Additionally, results were consistent with those predicted by the Rate Maximization Model. Concerning the relationship between social foraging strategies, prosocial behaviour, and impulsivity, results indicated that the social discount rate was higher for scroungers than producers. This new real-time interaction task allowed for the evaluation of participants’ adjustments in behaviour in response to others. Our results showed evidence that producers tend to be more altruistic and less impulsive. Knowing more about social strategies and producers’ characteristics could help develop substance abuse prevention programs.



## **Integrated Yoga Nidra-Based Comprehensive Intervention for Adolescents with Substance Use Disorders: A Pilot Study**

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The adolescent community has a high risk for substance abuse problems. It has been the leading cause of years lived with disability (YLD) among adolescents and young people (10–23 years) accounting for 22.9% of the total global YLDs (Whiteford et al., 2013). A greater number of lifetime trauma incidences was the best predictor of addiction. Also, research has repeatedly demonstrated that parents' substance use is a predictor of adolescent substance use (Patton et al., 2013). These problems have significant adverse impacts on individuals, families, and society, are frequently associated with poor academic, occupational, and psychosocial functioning, and contribute to premature mortality (Roy et al., 2018). Therefore, there is a need to target such a population focusing on prevention, early intervention, building self-efficacy, and enhancing positive growth. Yoga nidra or psychic sleep is a systematic method of guided relaxation that profoundly affects the body, mind and emotions. Goswami et al. (2015) reported that by reducing deep seated conflicts and tensions yoga nidra promotes a general feeling of well-being, which helps to curb excessive consumption of coffee, cigarettes and alcohol as well as aiding in the management of drug abuse and addiction. Based on a comprehensive literature review of substance use disorders in adolescents and interventions for the same, the current study attempts to integrate Yoga Nidra with techniques of other therapies (Motivational Enhancement Therapy, Cognitive Behaviour Therapy, Dialectical Behaviour Therapy, Acceptance and Commitment Therapy, Gestalt Therapy) so as to work on comprehensive recovery outcomes. These techniques would take into account the life values and the context of life situations together for the holistic development of adolescents. The index study aims to assess the efficacy of integrated yoga nidra based comprehensive intervention in adolescents with substance use disorder with a history of childhood trauma and parental substance exposure. The sample consisted of 10 adolescents in the age group of 12-19 years who received the integrated yoga nidra based comprehensive intervention. The proposed intervention module consisted of 12 sessions with 45-60 minute sessions every alternate day. Participants completed self-report measures of craving, self-efficacy, emotional regulation and quality of life pre and post treatment (at 4 weeks). It was found that there was a significant reduction in craving in adolescents with substance use disorders receiving the proposed intervention. However, there was no significant difference in these adolescents' self-efficacy, quality of life and emotional regulation. Therefore, the integrated yoga nidra based comprehensive module could be helpful in reducing craving in adolescents with substance use disorders. Also, techniques used from other therapies such as distress tolerance, role plays, empty chair technique helped adolescents to distract from self-destructive behaviours and control urges.

## Pilot Randomized Trial of Virtual Reality-based Eye Movement Desensitization and Reprocessing Therapy for Major Depressive Disorder with Childhood Trauma

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Major depressive disorder (MDD) is a chronic mental disorder that contains emotional and cognitive symptoms. However, only one-third of MDD patients achieve remission after initial treatments. One of the reasons may be that MDD is a heterogeneous entity: patients with MDD show various clinical characteristics, which may impede patients' treatment response. Therefore, providing personalized treatment based on patients' specific characteristics is a necessity. Eye movement desensitization and reprocessing (EMDR) is one of the trauma-focused psychological therapies which can be used in the treatment of mood disorders with the traumatic experience. Childhood trauma plays an important role in the development and maintenance of MDD. Therefore EMDR may be one of the optimal psychotherapies for treating MDD with childhood trauma. However, nowadays the utilization of EMDR in China is limited. On the one hand, the patients' demand for EMDR is far greater than the supply of skilled therapists. On the other hand, the cost of EMDR is unaffordable for many MDD patients, and there is still an imbalance in the distribution of psychotherapeutic resources in China. Virtual reality (VR) is an advanced technology that allows users to interact with computers in a computer-generated environment. For the past few decades, VR has been increasingly utilized in treating mental disorders due to its convenient accessibility. Nevertheless, the combination of VR and EMDR in treating MDD with childhood trauma is rare. This study aimed to utilise the VR-based EMDR in treating MDD patients with childhood trauma, and evaluate its effects on emotional, cognitive symptoms and traumatic experience. A total of 76 MDD patients were recruited and randomly assigned to a VR-EMDR group and a control group. The VR-EMDR group received an intervention of 30 minutes/time, 2 times/week, for a total of 6 weeks with the VR-based EMDR, while the control group did not receive that intervention. Patient Health Questionnaire-9 (PHQ-9) and Hamilton Depression Scale-24 version (24-HDRS) were utilized to assess the patient's subjective and objective depressive symptoms. The PTSD Checklist-Civilian Version (PCL-C) was used to assess the patient's traumatic experience. The Massachusetts General Hospital Cognitive and Physical Functioning Questionnaire (CPFQ) and the MATRICS Consensus Cognitive Battery (MCCB) were used to assess the patient's subjective and objective cognitive functions. Repetitive Measure Analysis of Variance (ANOVA) was used to analyse the main effects and group (intervention group and control group) by time (pre-treatment and posttreatment) interactions. After 12-session VR-based EMDR treatment, the group by time interaction effects were statistically significant in anxiety/somatization, weight, and total score of 24-HDRS. Simple effect analysis showed that the scores of anxiety/somatization, weight, and 24-HDRS total score of the VR-EMDR group were significantly lower than those of the control group. Compared with pre-treatment, the scores of PHQ-9, anxiety/somatization, weight, 24-HDRS total score, and PCL-C in the VR-EMDR group were significantly reduced after the treatment. Besides, the group by time interaction effects were statistically significant in CPFQ, information processing speed, attention/vigilance, working memory, and social cognition. Simple effect analysis showed that after intervention, the scores of working memory and social cognition were significantly higher in the VR-EMDR group than those in the control group. Compared with pre-treatment, the CPFQ score of the VR-EMDR group decreased significantly after treatment, and the scores of information processing speed, attention/vigilance, and working memory increased significantly after treatment. Our study showed that the VR-based EMDR is effective in treating MDD patients with childhood trauma, and can significantly improve the subjective and objective depressive and cognitive symptoms, and traumatic experience. This treatment can be a promising intervention in treating MDD patients with traumatic experience in the future.

## A Meta-Analysis of Metacognitive Therapy for Major Depressive Disorder

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### INTRODUCTION

Cognitive Behavioral Therapy (CBT) is a highly effective and recommended treatment for major depressive disorder (MDD). However, evidence indicates that CBT for MDD has some limitations, such as a low treatment response rate and moderate dropout rates. Metacognitive therapy (MCT) was developed to treat emotional disorders characterized by maladaptive emotional responses, including MDD and anxiety disorders. Clinical studies of MCT for emotional disorders have shown its effectiveness in reducing depression and anxiety, characteristic of emotional disorder symptoms. In addition, several randomized controlled trials (RCT) have demonstrated the efficacy of MCT in MDD. While MCT is considered to be an effective treatment for MDD, its effectiveness has yet to be sufficiently examined. MCT addresses cognitive functions involved in maintaining MDD symptoms, such as metacognitive beliefs, cognitive biases, and ruminative thinking styles, which CBT does not directly address in treatment. It has been shown that the treatment effects of CBT for MDD are closely associated with metacognitive transformations, and one goal of MCT is to achieve metacognitive change mediated by these cognitive functions. Thus, MCT, which primarily targets metacognition, may be more effective than CBT. Therefore, in this study, we conducted a systematic review and meta-analysis of RCTs to examine the effectiveness of MCT for MDD.

### METHODS

RCT studies conducted on MCT for MDD and published until November 30, 2022, were included in our systematic review and meta-analysis. PubMed, PsycINFO, PsycArticles, Cochrane Library, and ClinicalTrials.gov were used for the literature search. The eligibility criteria are as follows. (a) The intervention used is MCT, developed by Wells (2009). In addition, the MCT is not limited to using a specific technique (e.g., attention training technique and detachment mindfulness). (b) Patients or participants must be diagnosed with MDD in either by Diagnostic and Statistical Manual of Mental Disorder: DSM 5th edition (American Psychiatric Association: APA, 2013), DSM-IV-TR (APA, 2000), or DSM-IV (APA, 1994). (c) MDD symptoms must be measured by assessment scale. (d) Active control or waitlist group must be present as a control group. (e) The study design must be RCT. (f) Patients or participants must be 18 or older. Standard mean differences in posttreatment depression symptom scores for the included studies were used for calculating the effect size of comparisons between the MCT and the waitlist and active control groups. The pooled effect size was calculated using a random-effects model. We then tested heterogeneity and publication bias. Risk of Bias 2.0 was used to assess risk bias.

### RESULTS

A total of seven studies met the inclusion criteria. Since one of the studies was a follow-up study of another, six were included in our final meta-analysis. MCT was effective compared to the waitlist group and showed a large effect for MDD (Hedges's  $g = 2.69$ , 95%CI: 0.99 - 4.40,  $k = 4$ ). When compared to CBT, behavioral activation, and citalopram, MCT was more effective than those with control group intervention and showed moderate effect (Hedges's  $g = 0.45$ , 95%CI: 0.10 - 0.80,  $k = 5$ ). However, heterogeneity was observed in the MCT compared to the waitlist ( $I^2 = 91.62$ ,  $Q = 35.79$ ,  $p = .000$ ,  $k = 4$ ) and the active control group ( $I^2 = 67.2$ ,  $Q = 12.12$ ,  $p = .016$ ,  $k = 5$ ).

### DISCUSSION

Our study is the first meta-analysis to examine MCTs' effectiveness specific to MDD. The results of our study suggest that MCT is highly effective for MDD. The results also indicate that MCT is more effective than other psychotherapy and medication treatment. However, concluding its actual treatment effects is difficult due to the small number of included studies in our meta-analysis. To allow for rigorous examination of heterogeneity and publication bias, further RCT studies needs to be conducted in the future.

## Integrating Metta into CBT: A Randomized Controlled Trial of Metta-Based Therapy for Chronic Depression

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Loving kindness meditation is a traditional Buddhist practice that has recently been introduced in psychotherapy. Metta is a mental state of positive energy and kindness towards oneself and other beings, as opposed to self-criticism or hostility, that often accompany depression. For instance, chronic depression is a highly prevalent and disabling mental disorder that has been related to interpersonal problems, dysfunctional strategies of emotion regulation and emotional abuse in childhood. Current treatments such as Cognitive Behavioral Analysis System of Psychotherapy have focused primarily on reducing interpersonal problems and negative affect, but paid little attention to promoting prosocial motivation and positive affect.

Metta meditation which usually builds upon mindfulness meditation has been repeatedly shown to enhance prosocial behavior, increase psychological well-being, improve interpersonal relationships and reduce symptoms of emotional distress. Furthermore, in three pilot studies with chronically depressed patients, we found metta meditation in group settings to be effective in reducing depressive symptoms.

In the present study, we tested the efficacy of a combined group and subsequent individual treatment focusing on the enhancement of kindness (Metta-based Therapy). Group sessions integrated mindfulness and metta meditation with dyadic exercises, psychoeducation and structured personal reflection on the meaning of kindness in personal life. The individual interventions focused on the activation of kind behavior and the modification of dysfunctional schemas which impede positive attitudes towards oneself and others, by using schema therapy techniques. In the present study, the hypothesis was tested that Metta-based Therapy will achieve greater improvements in depressive symptoms than a wait-list control group (WLC) in patients with chronic depression.

Forty-eight patients with DSM-5 persistent depressive disorder were randomly assigned to combined group and individual treatment or a wait-list control condition. Outcome was assessed after group treatment, after subsequent individual therapy, and at 6-month follow-up. Primary outcome measure was independent and blind rating of depressive symptoms at post-assessment, using the Quick Inventory of Depressive Symptomatology. Secondary outcome included changes in self-reported depression, behavioral activation, rumination, social functioning, mindfulness, compassion, and a clinical rating of emotion regulation.

Mixed-design analyses showed significant changes at post-assessment in clinician-rated and self-reported depression, behavioral activation, rumination, social functioning, mindfulness, and emotion regulation, but not compassion. Most of the changes occurred during group meditation and were associated with large effect sizes. Improvements were maintained at 6-month follow-up.

Concomitant antidepressive medication was associated with less favorable outcome.

These results support the effectiveness of Group Metta meditation combined with individual CBT in the treatment of chronic depression. Targeted Mechanisms and processes involved in Metta-based CBT will be highlighted.

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### **Breaking Bad: Efficacy and Mechanisms of Positive Affect Treatment for Reward Hyposensitivity**

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Extant psychological and pharmacological treatments are relatively ineffective for low positive affect. Affective neuroscience has elucidated deficits in the appetitive reward system that may underlie anhedonia and should be targeted in therapy. We determine whether a novel psychosocial treatment improves clinical outcomes and reward sensitivity (anticipation-motivation, response to attainment, and learning) more than cognitive-behavioral therapy that targets negative affect and whether improvements in reward sensitivity correlate with outcomes. Adults with clinically severe and impairing anxiety or depression with anhedonia were randomized to 15-session PAT or NAT (RCT1=96, RCT2=85). We examined clinical improvements in anhedonia (RCT 1+2) and changes in experiential, behavioral, and physiological target measures of reward anticipation, response to reward attainment, or reward learning (RCT2). In RCT1 (Craske, Meuret. et al. 2019), at 6-months PAT, compared to NAT, resulted in (1) greater improvements in positive affect and higher positive affect approaching normative levels in the population than NAT, (2) greater improvements in and lower levels of negative affect and symptoms of depression, anxiety, and stress, and (3) lower probability of suicidal ideation ( $p < .05$ ). In RCT2 (Craske, Meuret et al., 2023), analyses replicate the findings of RCT1 ( $p < .05$ ). PAT led to greater changes in selective target measures, including increased heart rate accelerations in response to reward attainment, self-reported reward motivation and consumption, and greater behavioral disengagement of sad faces ( $p < .05$ ). PAT addresses an unmet therapeutic need by specifically targeting deficits in reward sensitivity. PAT more effectively improves positive affect, depression and anxiety, and reward sensitivity than NAT. In addition to PAT efficacy, unpublished findings on mediation and moderation will be presented.

### **The Effects of Intranasal Oxytocin on the Therapeutic Alliance, In-Session Behavior, and the Efficacy of Psychotherapy for Major Depressive Disorder**

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#### INTRODUCTION

Although different psychological interventions are considered to be efficacious in the treatment of major depressive disorder (MDD), at least one third of patients do not respond to treatment and many suffer residual symptoms post-treatment. In this double-blind placebo-controlled randomized control trial (RCT; ClinicalTrials.gov: NCT02405715), we assessed whether intranasal oxytocin (OT) augments the therapeutic efficacy of psychotherapy for MDD, improves the therapeutic alliance, and increases in-session positive behaviours in participants.

#### METHOD

Twenty-three volunteers (12 female) with MDD underwent 16 sessions of interpersonal therapy. Prior to each session, volunteers self-administered 24 International Units of intranasal OT (n= 12; Syntocinon) or placebo (n=11). Depressive symptoms were assessed with the Inventory of Depressive Symptomatology at pre- and post-treatment, and at a six-month follow-up, and the therapeutic alliance was assessed with the Working Alliance Inventory – Patient Short Form (reported by participant) after each session. In-session positive behaviours (i.e., gazing towards speaker, leaning in towards speaker, expressions of positive affect such as smiling or laughing) were coded by blind raters using an in-house coding scheme based on the Specific Affective Coding System.

#### RESULTS

Multilevel modeling using Hierarchical Linear Modeling (version 7) found a significant effect of OT on the negative slope of depressive symptoms over time (t-ratio= -2.12,  $p < .05$ ), with medium-large effect sizes at post-treatment (Cohen's  $d=0.75$ ) and follow-up (Cohen's  $d=0.82$ ). Drug intervention also predicted the intercept when examining the weekly ratings of the therapeutic alliance (t-ratio= 22.4,  $p < .001$ ), such that volunteers receiving OT, relative to placebo, reported improved therapeutic alliance at session 1. Behavioral coding of therapy sessions showed greater instances of positive behavior in participants receiving OT than placebo across the active intervention [ $F(1, 22) = 5.41, p = .03, \eta^2p = .20$ ]. To better understand the robust effect of OT on the efficacy of psychotherapy, exploratory mediation analyses (ordinary least squares regression with 95% confidence interval bias-corrected bootstrapping) were conducted with the therapeutic alliance and in-session behavioural change as potential mediators. The agreement of goals between therapists and clients (indirect effect,  $ab = -4.14, SE = 2.72; CI: -10.5 \text{ to } -0.11$ ), a facet of the therapeutic alliance, mediated the relationship between drug intervention and clinical outcome, but no significant mediation effect was found for in-session positive behavior.

#### DISCUSSION

In this pilot study, the administration of intranasal OT, relative to placebo, improved therapeutic efficacy of psychotherapy in persons with MDD, as well as the therapeutic alliance at the beginning of therapy and positive behaviors in participants across all sessions. Mediation models tentatively suggest that changes in aspects of the therapeutic alliance, but not in-session behaviour change, explain OT's effects of therapeutic efficacy. Although preliminary, the present findings suggest strong benefits of using OT in psychotherapy with few costs (no side effects greater than placebo). To replicate these findings in a larger sample with a different therapeutic modality, we are currently conducting a RCT in persons with MDD receiving cognitive-behavioural therapy.

The efficacy and therapeutic alliance findings are currently under review (revise and resubmit) at Psychological Medicine.

### **The Development and Validation of the Psychosis Attachment Measure Revised**

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#### INTRODUCTION

The Psychosis Attachment Measure (PAM) is currently the most widely used and validated measure of attachment in psychosis. However, the PAM does not assess disorganised attachment, the type of attachment that has been most closely linked with vulnerability to psychosis. The studies described in this presentation aimed to expand the PAM to capture the concept of disorganised attachment and to examine its psychometric properties in a psychosis sample.

#### METHOD

Clinical and academic experts in the field of psychosis and service user representatives were asked to assess the comprehensiveness and comprehensibility of the pool of disorganised items. Highly endorsed items from the pool were then included with the original items of the PAM. In study one, a sample of 144 individuals with either a self-reported diagnosis of or treatment for a psychosis-related condition completed a battery of online measures comprising the revised PAM, existing measures of adult disorganised attachment, and constructs hypothesised to be conceptually related to disorganised attachment. An exploratory factor analysis was conducted as a preliminary test of the measure's factor structure. In study two, a similar sample of 407 participants completed the same battery of measures and a confirmatory factor analysis was undertaken to test the model derived from study 1.

#### RESULTS

Across both studies, there was evidence for a three factor model of attachment representing anxious, avoidant and disorganised attachment. The factors displayed good internal consistency, test-retest reliability and concurrent validity. The disorganised factor also displayed good construct validity with measures of theoretically-related constructs including earlier betrayal trauma and dissociation.

#### CONCLUSIONS

The results provide evidence that the revised PAM captures the concept of disorganised attachment. The PAM provides a brief but reliable and valid measure of attachment styles for use with psychosis samples that can be used in future research or in clinical practice to support assessments and formulations of interpersonal relationships.

## Emotional Schema Moderates the Relationship Between Dysfunctional Coping and Anxiety

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Coping strategies have long been an important research topic due to its impact on mental health. Empirical evidence supports the link between coping strategies and anxiety, suggesting that reducing maladaptive strategies and increasing adaptive strategies might alleviate stress and anxiety. This approach has been found useful by the effectiveness of the coping-based interventions (Gabrielli et al., 2021; Craig et al., 2017; Livingston et al., 2013). In addition, emotional schema, which refers to an individual's theory about their own emotions, has been recognized as another contributing factor of anxiety (Leahy et al., 2019a). Leahy(2015) proposed that negative emotional schema leads to emotional avoidance or nonacceptance, resulting in the adoption of problematic coping strategies. Given the significant role of emotional schema on both anxiety and coping, the current study aims to investigate whether emotional schema moderates the relationship between coping and anxiety levels. 180 Korean adults (77 male, 103 female; mean age = 31.90 years, SD = 9.90) participated in an online survey. Responses of Bright and Dark Personality Inventory (BDPI; Kim et al., 2020), Korean version of Brief COPE (Joo, 2008; Carver, 1997) and Mental Health Screening Tool for Anxiety Disorders (MHS:A; Kim et al., 2018) were used for analysis. Emotional Stability, a subscale of the BDPI that includes emotional awareness, acceptance and expression was used to assess emotional schema. Brief COPE is a theory-based 28-item inventory that assesses individual's general approach to coping with stress, presenting 14 coping mechanisms. Adaptive and maladaptive coping was classified based on collected data patterns and previous literature. In current study, functional coping includes acceptance, active coping, emotional support, informational support, planning and positive reframing while dysfunctional coping includes behavioral disengagement, denial, self-blame, substance use and venting. MHS:A is an 11-item validated measure for anxiety. The moderation effect was analyzed using the PROCESS macro by Hayes (2013). The moderation analysis revealed that Emotional Stability significantly moderated the relationship between dysfunctional coping and anxiety ( $b = .024, p = .01$ ). When Emotional Stability was low, the effect of the use of dysfunctional coping on anxiety was smaller than when Emotional Stability was high. More specifically, emotional awareness ( $b = .027, p < .01$ ) and expression ( $b = .019, p < .05$ ) moderated the relationship between dysfunctional coping and anxiety, while emotion acceptance ( $b = -.012, p = .18$ ) did not. This moderation was not found for functional coping ( $b = -.010, p = .17$ ). These results demonstrated the moderating role of emotional schema on the relationship between coping strategies and anxiety levels by revealing the significant main and interaction effect of maladaptive coping and Emotional Stability. The concept of adaptive and maladaptive strategy gives the impression that increasing adaptive coping and decreasing maladaptive coping could help improve one's mental health. This approach can be supported by the significant main effect of dysfunctional coping on anxiety. However, the current result also shows that when one has negative emotional schema, only focusing on coping might not efficiently reduce anxiety. Focusing on the effective use of coping strategies to reduce anxiety level might benefit more from the improvement in emotional awareness, acceptance, and expression. This highlights the importance of addressing emotional schema in anxiety intervention, and this could be achieved by referring to the components of Emotion-Focused Therapy (Greenberg, 2004) and Emotional Schema Therapy (Leahy, 2019b).



## Relationship Between Schemas, Fear of Death and COVID-19 Vaccination Attitudes (Preliminary Results)

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The schema in Young's theory stands for the cognitive construct that organises and interprets incoming information, allowing us to understand ourselves, other people, and external phenomena and predict the consequences of life events. Recent studies in health psychology using Young's theory have provided a better understanding of the relationships between schemas and health behaviours in the adult population (D'Onofrio, 2019, Fathabadi et al., 2020). Interestingly, research so far has not linked the schemas to vaccination for COVID-19. Despite existing recommendations (WHO, 2022), data from various studies indicate a developing problem of mistrust toward vaccination in the Polish population (de Figueiredo et al., 2020). From the onset of the pandemic until June 2022, only 58% of young adults population has been vaccinated with one dose (approximately 50% with two doses) (Central Statistical Office, 2021; Ministry of Health, 2022). Current research shows that beliefs about vaccination (mistrust) and fear significantly correlate with a lack of vaccination among Polish citizens (Burger et al., 2022; Chaudhuri et al., 2022, Wang et al., 2022). The study aims to explore the relationship between beliefs about vaccination, fear of death, and COVID-19 vaccination doses with early maladaptive schemas (EMS). A total number of 39 women and 21 men from Poland were included in the study (mean age  $\pm$ SD of 30.5  $\pm$ 7.55). To evaluate EMS, we used the Polish Version of the Young Schema Questionnaire S3 (Oettingen et al., 2017, Young, 2005); this is a 90-item self-report that assesses 18 EMS and 5 schema domains. To evaluate fear of death, we administered the Polish Adaptation of the Death Attitude Profile - Revised (DAP-R-PL, Brudek et al., 2020). To measure vaccine attitudes we used the Polish Version of The Vaccination Attitudes Examination Scale (VAX, Martin and Petrie, 2017). Statistical JAMOVI analyses consisted of a correlation analysis using each EMS and domain as independent variables and vaccine attitudes, fear of death and vaccine doses as dependent variables and variable analysis (ANOVA) with vaccine doses as the dependent variable. Results yielded significant correlations concerning many EMS, 4 schema domains and fear of death as well as other DAP-R-PL sub-scales. Moreover, significant correlations were found for fear of death, vaccine attitudes and doses. There were no significant correlations between EMS and vaccine attitudes or doses. In the discussion, we address the implications of these mixed results in the context of further applications of Young's theory in health psychology, particularly concerning post-pandemic behaviour. Considering ongoing research, during the discussion we will include the results of the n=100+ population.

### **The Mediating Effect of Affective Instability Between Emotional Schema and Depression: Using Ecological Momentary Assessment**

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#### INTRODUCTION

Due to the low level of well-being and high prevalence of mental disorders among young adults, addressing the mental health of young adults is a public health priority. Negative emotional schema is known as a transdiagnostic risk factor of depression, and a high level of affective instability is associated with depression. Specifically, negative beliefs about emotion result in dysfunctional emotional regulation strategies, which lead to affective instability in a real-time environment. However, there have been limited empirical studies focusing on the effect of affective instability and emotional schema together on the level of depression. This study aims to investigate the mediating role of affective instability between emotional schema and depression using ecological momentary assessment (EMA), which enables tracking the momentary emotional dynamics of individuals.

#### METHOD

A total of 100 young adults aged between 19-39 years ( $M = 26.23$ ,  $SD = 3.98$ ) participated in the study. Self-reported data were collected between February and March 2022, including a brief version of the Leahy Emotional Schema Scale (LESS-10), the Center for Epidemiologic Studies Depression Scale (CES-D), the Positive and Negative Affect Schedule (PANAS), and demographic information. Additionally, EMA protocol was used to collect respondents' momentary levels of negative and positive affect. The participants were prompted randomly four times per day for consecutive 7 days through a smartphone-based application. The affective instability of the individual was calculated as the value of the mean squared successive difference (MSSD) over response time using the collected EMA data. Data were analyzed employing ANOVA and mediational analysis.

#### RESULTS

The individuals with maladaptive emotional schema experienced higher levels of momentary negative affect than those with adaptive emotional schema in their daily lives. Additionally, people with maladaptive emotional schema significantly showed more frequency of feeling sadness, depression, sleepiness, discontent, and anxiety in daily lives than the adaptive emotional schema group. As a result of cross-sectional mediation, the instability of negative emotion significantly mediated the relationship between emotional schema and depression. However, the mediating role of positive affective instability was not significant.

#### CONCLUSION

The findings highlight the importance of affective instability in depression, particularly with respect to negative emotions among young adults. These contribute to the rationale of the intervention targeting emotional schema to improve emotional instability, since it is common in depression.

### **The Effect of Perfectionism on Depressive Symptom: The Moderation Effect of Response Styles to Positive Affect**

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#### INTRODUCTION

Nowadays, perfectionism is a widely recognized personality trait, often associated with both positive and negative psychological outcomes. While adaptive forms of perfectionism can lead to positive affect, self-control, adaptive social skills, and academic achievement, maladaptive perfectionism has been linked to depressive symptoms, suicidal ideation, and anorexic tendencies. Several of studies have been conducted to explore the different dimensions of perfectionism and their characteristics. Maladaptive forms of perfectionism have been found to be associated with a low level of positive emotion. The way in which people experience positive emotions plays a crucial role in maintaining and increasing their positive emotional experiences. Furthermore, positive emotions can help nurture the growth of psychological resources. In this study, we sought to examine the relationship between perfectionism and emotion regulation strategies for positive affect.

#### METHOD

We administered the Multidimensional Perfectionism Scale (MPS; Hewitt et al., 1991), the Response Styles to Positive Affect Scale (RSPAS, Kim, 2019), and the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) to 371 individuals (111 men, 260 women) with a mean age of  $21.45 \pm 2.9$ . The Korean version of the MPS consists of 45 items, measuring three dimensions of perfectionism (self-oriented perfectionism, other-oriented perfectionism, and socially-prescribed perfectionism). The RSPAS consists of 32 items, measuring six subscales of emotion regulation strategies (strengthening positivity, savoring, emotional balancing, dampening, inhibition of emotion expression, and non-acceptance of positive emotions). The Korean version of the CES-D consists of 20 items measuring four factors of depression. We first examined the correlation coefficients between the dimensions of the MPS, RSPAS and CES-D. We then investigated the moderating effect of positive emotion regulation strategies.

#### RESULTS

Our findings indicated that socially-prescribed perfectionism, a dimension considered dysfunctional, has a positive correlation with downward strategies of positive emotion ( $r=0.40, p<.01$ ). And our results demonstrated that positive emotion regulation strategies have moderating effects on the relationship between socially-prescribed perfectionism and depression ( $p<.01$ ). It indicates that the upward strategies weaken the association between socially-prescribed perfectionism and depression and the downward strategies strengthen it.

#### CONCLUSION

Our results are consistent with earlier theorizing and empirical findings (Frost et al., 1993; Harper et al., 2005; Joachim et al., 2010; Juliana Castro, 2016). This study expands upon existing research on perfectionism, providing critical insight into the distinction between adaptive and maladaptive perfectionism in relation to emotion regulation strategies for positive emotion. This provides an empirical basis for psychological intervention aimed at educating depressive adults with a tendency towards socially-prescribed perfectionism on positive emotion regulation.

### **Parent Enhancement of Cognitive Behaviour Therapy for Child and Adolescent Anxiety: An Overview of Systematic Reviews Over Time**

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#### INTRODUCTION

The last 20 years has seen discourse and debate regarding the merits of involving parents in cognitive behaviour therapy (CBT) for youth anxiety played out across systematic reviews. These reviews examined varying CBT treatment formats in relation to parent involvement, including youth only CBT (Y-CBT), parent only CBT (P-CBT) and family CBT (youth and parent; F-CBT). This presentation describes an overview study currently in review at Clinical Child and Family Psychology Review<sup>1</sup>.

#### METHOD

This is an exploratory overview of systematic reviews examining evidence for parental involvement in CBT for youth anxiety over the period this was studied. Two coders systematically searched for studies in medical and psychological databases using the categories "Youth", "Anxiety", "Cognitive Behaviour Therapy", "Review" and "Parent/Family".

#### RESULTS

N = 25 reviews which compared the effects of CBT for youth anxiety with varying parent involvement were identified. Reviews were heterogeneous in outcome, design, inclusion criteria and often had methodological limitations. Of the reviews, the majority found no difference between formats and most were inconclusive. Nevertheless, consistent patterns in the direction of effects were detected. P-CBT was less effective than other formats, suggesting the importance of directly treating anxious youths. Early reviews favoured F-CBT over Y-CBT, however, later reviews did not.

#### CONCLUSIONS

Results suggest children should attend CBT anxiety treatments sessions where possible, to get the best outcome. There is a movement away from the efficacy F-CBT over time, suggesting the importance of directly and independently treating anxious young people. The variable effect of parent involvement on anxiety outcomes may be partly explained by the variable response to parent guided exposure therapy. Finally, we also consider how to manage heterogeneity in primary studies and reviews to better detect treatment differences where they exist.

<sup>1</sup>Byrne S, Cobham, V, Richardson, M, & Imuta, K. (in review). Do Parents Enhance Cognitive Behaviour Therapy for Youth Anxiety? An Overview of Systematic Reviews. Clinical Child and Family Psychology Review.

### **Parent Mental Health and Anxiety Symptom Trajectories Predict Depression Symptom Trajectories Up to 4 Years After CBT for Youth Anxiety Disorders**

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#### BACKGROUND

Cognitive behavioral therapy (CBT) is the recommended treatment for youth anxiety disorders. Youth with co-morbid anxiety and depression have a poorer prognosis than youth with only one disorder, and there is considerable overlap between anxiety and depression. Parent mental health influences anxiety and depression symptoms in children. We examined parent mental health and anxiety symptom trajectories as predictors of long-term outcomes for youth who received CBT for anxiety disorders.

#### METHOD

The sample were 179 youth aged 8 to 15 years with a primary disorder of social phobia, generalized anxiety disorder or separation anxiety disorder who participated in a randomized controlled trial. The comparison arms were individual CBT, group CBT, or waitlist. The main outcomes showed that both active arms outperformed waitlist. Youth- and parent-reported anxiety and depression symptoms were measured before, after, and one and four years after CBT.

#### RESULTS

The results showed that anxiety trajectories predicted the depression trajectories from pre-treatment to four-years follow-up, both for youth self-report and parent-report about youth. In the models predicting parent-reported depression trajectories, parent mental health was also a significant predictor, but not above and beyond anxiety symptom trajectories. More parent mental health problems predicted smaller recovery from depression symptoms.

#### CONCLUSIONS

CBT for youth anxiety disorders also affect long-term depression symptoms. Improvement in anxiety symptoms appear to be a main driver of these effects, but parent mental health also matter for parent-reported outcomes.

### **A Longitudinal Investigation of Sleep Hygiene as a Mediator Linking Parental Warmth With Adolescent Sleep**

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#### INTRODUCTION

Parental warmth in adolescence protects sleep in early adulthood, yet the nature, directions, and mechanisms of this association across adolescence are unknown. This study examined parental warmth, adolescent sleep hygiene and sleep outcomes (morning/eveningness, school night sleep duration and daytime sleepiness) across five annual waves, spanning four years, using a cross-lagged panel design.

#### METHODS

Adolescents and one primary caregiver (96% mothers) completed questionnaires assessing parental warmth (child- and parent-report) and adolescent sleep hygiene and sleep (child-report), across five annual waves: Wave 1 (N = 531,  $M_{age} = 11.18$ ,  $SD = 0.56$ , 51% male), Wave 2 (N = 504,  $M_{age} = 12.19$ ,  $SD = 0.53$ , 52% male), Wave 3 (N = 478,  $M_{age} = 13.19$ ,  $SD = 0.53$ , 52% male), Wave 4 (N = 440,  $M_{age} = 14.76$ ,  $SD = 0.47$ , 51% male) and Wave 5 (N = 422,  $M_{age} = 15.75$ ,  $SD = 0.49$ , 51% male).

#### RESULTS

Greater child-reported parental warmth was indirectly associated with better adolescent sleep (greater morningness, longer school night sleep duration, less sleepiness) through healthier sleep hygiene. The inverse was also often observed. Warmth had a direct relationship with sleep duration and sleepiness, independent of sleep hygiene. Parent-reported parental warmth did not predict, nor was predicted by child-reported adolescent sleep.

#### DISCUSSION

Parental warmth may protect against developmental changes in adolescent sleep, partially by improving sleep hygiene practices. Similarly, inadequate adolescent sleep may negatively impact parental warmth via deteriorating sleep hygiene. Sleep hygiene emerged as a key mechanism for protecting adolescent sleep and parent-child relationships.

Link to Published Paper: <https://academic.oup.com/sleep/advance-article/doi/10.1093/sleep/zsac267/6809320>

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## Parallel Process of Parental Harsh Parenting and Youth's Delinquency Among Families at High Risk for Child Maltreatment

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### INTRODUCTION

Adolescents at-risk of maltreatment are also at a higher risk for developing delinquent behaviors and subsequent criminal activities and violence (Mersky et al., 2012). In order to predict adolescent's development of delinquency, researchers have examined parenting behaviors. Longitudinal studies found bidirectional associations between parental harsh parenting (e.g., use of verbal and psychological aggression) and youth's delinquency (e.g., Piquart, 2017). While these past studies considered adolescent delinquency as developmental outcomes that change across time, most of them did not consider simultaneous parental changes (Zhu & Shek, 2021). Changes in levels of parents' use of harsh parenting across adolescence are possible, as frequency and intensity of parent-adolescent conflicts tend to change over time during adolescence (e.g., Mastrotheodoros et al., 2020). There might be potential decrease in harsh parenting, as youth spend less time and disclose less to parents, while parents also monitor and control youth less as they age (Lionetti et al., 2018). Given the possibility of change in parents' harsh parenting across adolescence, parallel development between harsh parenting and adolescent's delinquency may occur. The current study examines the trajectories of youth's delinquency and parents' harsh parenting across adolescence among families identified as high-risk for child maltreatment and investigate associations between the trajectories. The current study hypothesizes increasing trajectories of adolescent's delinquency. Directionality of harsh parenting trajectories across adolescence will be explored without a specific hypothesis, given the lack of previous literature. Positive associations between the intercepts and between the slopes of harsh parenting and adolescent's delinquency are expected. Additionally, we predict that the intercept of harsh parenting would positively predict the slopes of youth's delinquency, while the intercept of youth's delinquency would positively predict the slopes of harsh parenting.

### METHODS

The current study leveraged data from the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN), which included 1131 parent-youth dyads from five sites in the U.S. Youth were identified as being at risk for child maltreatment before age 4 and the families were interviewed biannually from age 4 to 18. The current study examined parent-reported adolescent's delinquency and parenting behaviors during youth's age 12, 14, and 16 interviews. Separate unconditional growth curve models for harsh parenting and youth delinquency and final parallel process growth curve models with covariates (e.g., youth's and parent's gender, race, and poverty status at age 12) were tested.

### RESULTS

Unconditional growth curve models demonstrated decreasing trajectories of harsh parenting with a significant negative quadratic slope and increasing trajectories of adolescent's delinquency with a significant linear slope. In the final parallel process growth curve models with covariates, both the intercepts (age 12) of harsh parenting and adolescent's delinquency and the slopes were significantly correlated,  $B = 1.05$ ,  $p < .001$ , and  $B = .32$ ,  $p = .046$  respectively. The quadratic slope of harsh parenting and linear slope of adolescent's delinquency were significantly negatively correlated,  $B = -.08$ ,  $p = .03$ . Lastly, intercept of harsh parenting did not significantly predict the adolescent's delinquency slope,  $B = .08$ ,  $p = .49$ , and vice-versa,  $B = -.02$ ,  $p = .27$  (linear slope of harsh parenting) and  $B = .003$ ,  $p = .51$  (quadratic slope).

### DISCUSSION

Decreasing trajectories of harsh parenting may reflect increases in adolescents' autonomy-seeking behaviors outside of their families and decreases in parental involvement. Despite the decrease, harsh parenting was associated with youth delinquency at age 12 and across adolescence. Additionally, harsh parenting during early adolescence did not predict the trajectories of adolescents' delinquency, which might indicate changeability and importance of overall adolescence as time to intervene and prevent adolescent's delinquency through effective, evidence-based parental management interventions. Although existing interventions often focus on working individually with adolescents, our findings point to the importance of involving parents and decreasing maladaptive parenting behaviors.

### **Trauma-Informed Parenting Interventions for Traumatized Parents: A Meta-Analysis on the Effectiveness and Components**

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#### BACKGROUND

Exposure to trauma could affect adult survivors' caregiving capacity. Parental trauma could translate into undesirable child outcomes via various pathways, including parental psychopathologies, parenting practice, and parent-child interaction, which leads to the intergenerational transmission of trauma. Effective parenting interventions can help interrupt the vicious cycle. Several parenting interventions have targeted high-risk populations, but interventions for parents who have experienced trauma or have PTSD are rare and recent. While the trauma-informed approach appears increasingly prevalent, there is no good working definition for trauma-informed parenting interventions. It is also unclear how effective they are.

#### OBJECTIVE

We conduct a three-level meta-analysis to examine the effect of trauma-informed parenting interventions on parental trauma-related psychopathologies and parenting outcomes. Furthermore, we will investigate which specific trauma-informed components (e.g., trauma narrative, mindfulness training) could add to the overall effectiveness of trauma-informed parenting interventions.

#### METHODS

We conduct a literature search for primary studies that report on the effectiveness of trauma-informed parenting intervention for parents who have experienced trauma or have PTSD. After the abstract screening, the search yielded 198 results. The full-text screening is ongoing. A coding scheme has been developed. When study selection and coding are completed, we will use a three-level meta-analytic approach to include all relevant effects reported in each primary study. This approach accounts for variance of the observed effect sizes (Level 1), variance between effect sizes extracted from the same study (Level 2), and variance between studies (Level 3). Several study- and program-related characteristics will be tested as moderators.

#### RESULTS

We will present the final results during the presentation.

#### DISCUSSION

Addressing trauma is becoming one of the essential tasks for public health and the social welfare system. This meta-analysis synthesizes empirical evidence on implementing a trauma-informed approach to parenting interventions. Focusing on the trauma-informed components of interventions, we hope to provide practical solutions for tailoring existing evidence-based parenting interventions for the often-overlooked traumatized parents.



## Perceived Stress and Sleep Quality in Daily Life: The Role of Emotion Regulation

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### INTRODUCTION

Sleep quality is closely related to physical and mental health. A meta-analysis study showed that 23.5% of Chinese undergraduates have sleep problems, and the rate is increasing with time (Chen et al., 2022). Subjective sleep quality is the individual's perception of sleep, which fluctuates with context (Difrancesco et al., 2021). Researchers mostly use single cross-sectional designs to study sleep quality, which cannot reflect its fluctuations (Buysse et al., 1998; Ahrberg et al., 2012; Matsui et al., 2021). Therefore, experience sampling method (ESM) is getting popular in the field of sleep quality to better reflect its fluctuation in daily life (Kasanova et al., 2020; Minaeva et al., 2021; Difrancesco et al., 2021).

The cognitive model of insomnia can explain the low level of sleep quality (Harvey, 2002). It indicates that both arousal (e.g., vasoconstriction) and distress (e.g., perceived stress), may cause sleep deprivation through maladaptive processing.

Perceived stress (PS) is the perceived level of subjective stress (Cohen et al., 1983; Katana et al., 2019), which interacts with sleep quality (Yan et al., 2010). Higher PS may lead to lower sleep quality, and lower sleep quality may lead to higher PS.

Cognitive reappraisal (CR) and expressive suppression (ES) are the two most common emotion regulation strategies (Gross, 1998; Gross, et al., 2003). CR regulate emotions by changing the understanding of emotional events and the perception of meaning, whereas ES by suppressing the emotions that are occurring or will occur (Nezlek & Kuppens, 2008). Individuals with poor sleep quality are more likely to use ES in daily life, but less CR (Harvey, 2002; Katana et al., 2019; Ye et al., 2021).

Meanwhile, not only sleep quality, but also perceived stress and emotion regulation strategies change over time (Cohen et al., 1983; Nezlek & Kuppens, 2008; Sinnaeve et al., 2021; Tan et al., 2023). But the cross-sectional design cannot capture this dynamic characteristic. Therefore, this study used the ESM for data collection. The ESM could obtain realistic and dynamic data, which can provide favorable support for the trajectory of factors within person (Eisele et al., 2022; Velozo, et al., 2022; Wrzus et al., 2022).

Generally, this study investigated the relationship between perceived stress and sleep quality and the role of emotion regulation by ESM to improve the ecological validity and clarify their covariations in daily life.

### METHODS

During a 10-day sampling period, 154 university students recorded their sleep quality, PS, CR, and ES five times a day at semi-random intervals. The study collected data from a total of 7,700 observations.

As the data from experience sampling design is nested, each subject contains observations from different time points. Multilevel linear analyses were conducted by Mplus8.0 and R4.2.2. Level 1 is the within level, focusing on the intraindividual changes over time. Level 2 is the between level, focusing on the inter-subject processes.

### RESULTS

At the within level, the PS significantly negatively predicted sleep quality at night, as well as sleep quality significantly negatively predicted PS next day. The CR positively predicted sleep quality. The effect of PS on CR is to be tested. And the effects of ES will be reported.

At the between level, the bidirectional relationship of perceived stress and sleep quality was also significant. The results of the two mediated pathways, as well as the trait variables obtained from the baseline measurements will be reported.

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## DISCUSSION

The findings suggest that: (1) There is an internal reinforcement cycle for PS and sleep quality. Both PS and sleep quality can be used as an intervention goal for clients with low sleep quality. (2) There is a positive effect of CR on sleep quality. In practice, CBT techniques can be applied to help clients use more cognitive reappraisal strategies to improve sleep quality. (3) The pathways of ES will also be discussed to provide insight into the treatment.

### Emotion Regulation Strategies and Well-being: Korea vs. US

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#### INTRODUCTION

Following stressful events, ineffective emotion regulation increases the frequency, intensity, and duration of negative emotions, thereby increasing or maintaining symptoms of anxiety and depression (e.g., Gross & Munoz, 1995). Importantly, how emotions are regulated depends on personal evaluations of whether the emotion is desired, which are influenced by culture (Ford & Gross, 2019). Furthermore, the adaptiveness of a particular emotion regulation strategy is dependent on whether the strategy is consistent with the cultural norms (Ford & Mauss, 2015). If the adaptiveness of emotion regulation strategies depends on one's cultural background, our intervention approach should be tailored to one's cultural background. Although limited research has demonstrated cultural differences in the link between symptoms of emotional disorders and emotion regulation (e.g., Kwon et al., 2013), most cross-cultural research focused on expressive suppression. To better understand potential cultural differences in the adaptiveness of emotion regulation strategies, it is critical to assess a wider range of emotion regulation strategies. The current study was designed to address this significant gap in the literature, which in turn could enhance culture-specific intervention efforts.

#### METHOD

In college students in Korea (n=102) and the US (n=94), we examined the relations between emotion regulation strategies and emotional well-being. We assessed individuals' tendency to use nine emotion regulation strategies using the Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001). To assess emotional well-being, we assessed depressive symptoms (Patient Health Questionnaire-8; Kroenke & Spitzer, 2002), worry (Penn State Worry Questionnaire, Meyer et al., 1990), life satisfaction (Satisfaction with Life Scale; Diener et al., 1985), and happiness (Oxford Happiness Questionnaire; Hills & Argyle, 2002). All the measures have been translated in Korean and validated in Korean samples.

#### RESULTS

Measurement invariance across the two samples was established. Preliminary results indicate similarities and differences between the two samples in their associations between emotion regulation and well-being. Whereas a greater tendency to blame themselves and/or others was associated with lower levels of well-being in American students, it was associated with higher levels of happiness and life satisfaction in Korean students. A higher tendency to refocus on planning was also associated with higher levels of happiness and life satisfaction in Korean students, but not in American students.

#### DISCUSSION

The preliminary results highlight the importance of considering cultural context in understanding the adaptiveness of emotion regulation strategies. Differences in norms and values between Korea and US will be discussed as potential mechanisms underlying the final results.

### Leveraging Machine Learning and Digital Technology To Understand Momentary Contributors to Effective Emotion Regulation in Daily Life

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#### INTRODUCTION

Emotion regulation, or the modulation of an emotional trajectory, is a transdiagnostic treatment target and mechanism of change in numerous CBT interventions, but it can be challenging to implement emotion regulation tools in one's daily life at the moments they are needed. Furthermore, emotion regulation is a contextually-bound, dynamic process that interfaces with shifting needs and demands (Gross, 2015). Specifically, theory suggests that effective emotion regulation requires flexible modulation of strategy use to optimally fit current goals, the internal context (e.g., type and intensity of emotions, cognitive resources, motivation), and the external context (e.g., what one is doing, the presence and need of others, controllability of the situation), all of which are in flux over time (Aldao, 2013; Bonanno & Burton, 2013; Doré et al., 2016). Thus, certain emotion regulation strategies may be more effective in certain situations for people with particular abilities and characteristics, suggesting a "match" between person, situation, and strategy variables. However, this yields a large array of possible combinations (i.e., three-way interactions) in daily life that are largely untested (e.g., Catterson et al., 2017; Haines et al., 2016), and are difficult to test with standard statistical methods. It is critical to develop a framework that delineates effective combinations of these variable, as it would enhance therapeutic interventions by providing nuanced and personalized guidance for optimal ER strategies in specific contexts, delivered via just-in-time adaptive interventions (JITAI) with smartphones. The current study provides a proof-of-concept and initial findings that might guide the development of a JITAI focused on enhancing emotion regulation in daily life.

#### METHOD

129 treatment-seeking adults completed a 10-day ecological momentary assessment on their smartphone three times per day, assessing 20 variables including the effectiveness of their emotion regulation attempts, variables related to the current situation (e.g., emotion intensity, perceived control, presence of other people), and which emotion regulation strategies they used (e.g., reappraisal, distraction, avoidance). Multiple demographic variables and relevant skills (e.g., working memory, emotion differentiation), were measured at baseline and included in analyses as person variables that may impact emotion regulation. Machine learning (i.e., iterative random forests) was used to identify three-way interactions among person variables, situation variables, and strategy variables that predicted strong emotion regulation effectiveness on that occasion.

#### RESULTS

Five-fold cross-validation indicated adequate model performance ( $\kappa = .38$ ). Nineteen robust interactions among these variables (i.e., interactions appearing in 80% or more of the simulations) were identified that were predictive of effective emotion regulation. As one example, using a greater number of emotion regulation strategies was associated with more effective emotion regulation, and this effect was strongest for older participants.

#### DISCUSSION

While there is a need for further replication, this study presents a method for creating a data-driven model to describe, using real-time data, which emotion regulation strategies are likely to be effective for whom and under what circumstances. Based on these results, this approach appears to be feasible, and the analyses yielded conceptually-sensible findings. We discuss ongoing research that builds upon these findings, as well as how it may inform the delivery of momentary digital interventions that provide personalized assistance when coping with a difficult emotion. These JITAIs could complement standard CBT sessions, by helping the client to enact the skills they have learned in therapy during moments of distress in their daily lives.

### **Maladaptive Beliefs About Emotions for Self and Others: Distinguishing Their Role in Psychopathology and Emotion Regulation**

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#### BACKGROUND

Beliefs shape our thinking and influence our behaviour. An impactful but understudied type of beliefs are our beliefs about emotions. According to Ford and Gross (2019), people vary in their beliefs about the usefulness of emotions (i.e., the extent to which emotions are or are not helpful), and their beliefs about the controllability of emotions (i.e., the extent to which emotions can or cannot be changed at will). Recent research has shown that believing emotions to be low in utility and in controllability may have detrimental consequences for emotion regulation, depression, anxiety and stress. However, studies to date examined individuals' beliefs about emotions either in general or for their own emotions, and it is unclear whether individuals' beliefs about their own emotions is independent from their beliefs about others' emotions and if these two sets of beliefs are independent, whether they independently contribute to one's psychopathology and emotion regulation.

#### OBJECTIVES

The first objective of the current study was to replicate findings of Becerra et al. (2020) that found general maladaptive beliefs about emotions are associated with poor emotion regulation and higher levels of depression, anxiety, and stress. The second objective was to determine whether such effects are carried by beliefs concerning one's own emotions, beliefs about the emotions of others, or both. The third objective was to evaluate the possibility that observed associations between maladaptive beliefs about emotions and elevated levels of negative emotions may be mediated by variation in the degree to which individuals exhibit poor emotion regulation.

#### METHOD

Participants were 257 adults residents of the US, who were recruited using Amazon Mechanical Turk (MTurk; Litman et al., 2017), and completed the questionnaires online. To assess participants' beliefs about emotions, the Emotion Belief Questionnaire (EBQ) was employed, which has been recently developed to systematically measure beliefs about controllability and usefulness of emotions. Participants completed the original version of the EBQ, as well as an extended version of the EBQ designed to assess the beliefs for self and others (EBQ-Self, EBQ-Others). Participants then completed the Emotion Regulation Questionnaire, and the Depression, Anxiety, and Stress Scale-21.

#### RESULTS

First, the findings of the previous study were replicated showing that general maladaptive beliefs about emotions are associated with poorer emotion regulation (less frequent use of reappraisal, greater use of suppression) and higher levels of depression, anxiety, and stress. Second, it was found that both maladaptive beliefs about one's own emotions and others' emotions significantly and independently predicted higher levels of negative emotions. Importantly, this association was mediated by less effective emotion regulation for both maladaptive beliefs for self and for others.

#### CONCLUSION

The current study is the first that distinguished beliefs about emotions for self and others and examined their potential distinctive role in psychopathology and emotion regulation. The present findings underscore the important role of beliefs about emotions in psychopathology and highlight the significance of distinguishing between beliefs about one's own emotions and beliefs about others' emotions. The research and clinical implications of these findings will be discussed.

### **Further Examination of the Original and Novel Intolerance of Uncertainty Models of Generalised Anxiety Disorder: Pathways and Processes**

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#### INTRODUCTION

The ability to navigate uncertainty in a constantly changing world is emerging as a crucial factor for well-being. Intolerance of uncertainty is one cognitive vulnerability implicated in a range of emotional disorders, particularly generalized anxiety disorder (GAD). Intolerance of uncertainty is described as a set of negative beliefs about uncertainty and its consequences. Dugas et al. (1998) proposed the Intolerance of Uncertainty Model of GAD (IUM) suggesting that intolerance of uncertainty is the primary process driving excessive worry for individuals with GAD. The model also proposes three secondary processes, namely positive beliefs about worry, cognitive avoidance, and negative problem orientation. Subsequently, Hebert and Dugas (2019) proposed a novel conceptualisation of the intolerance of uncertainty model in GAD to integrate current research and attempt to improve formulation-driven treatment. Specifically, the novel IUM suggests that intolerance of uncertainty influences the individual's perception of situational triggers and feelings of uncertainty, this then triggers catastrophic misinterpretations (i.e., threat appraisals) leading to a combination of worry, anxiety and safety behaviours seen in GAD. The current study was the first to test the hypothesised pathways proposed by the two separate intolerance of uncertainty models using structural equation modelling (SEM) in a sample of individuals with GAD.

#### METHOD

Participants were 112 adults with a primary diagnosis of GAD. SEM was used to test the hypothesised relationships within each of the original IUM model and the novel IUM model.

#### RESULTS

The IUM model (Dugas et al., 1998) demonstrated good fit for the data: chi-squared test = 0.123 (1),  $p > .05$ . The direct path from intolerance of uncertainty to excessive worry was significant; however, all indirect paths were non-significant. The novel IUM model (Hebert & Dugas, 2019) also represented good fit for the data chi squared test = 5.00 (2),  $p > .05$ . The direct effect of intolerance of uncertainty on excessive worry was significant ( $b = 0.227$ ,  $p = .025$ ). Tests of indirect effects were significant for all paths tested: 1) intolerance of uncertainty to excessive worry via threat ( $b = 0.153$ ,  $p = .002$ ); 2) intolerance of uncertainty to anxiety via threat ( $b = .144$ ,  $p = .002$ ); 3) intolerance of uncertainty to safety behaviours via threat ( $b = .206$ ,  $p < .001$ ).

#### DISCUSSION

The original IUM fit the data, and intolerance of uncertainty appears to have a direct relationship with excessive worry. However, SEM for the original IUM found neither positive beliefs about worry or cognitive avoidance to significantly mediate the relationship, suggesting that neither substantively impact worry. In contrast, findings from the novel IUM SEM found that threat appraisals mediated the relationship between intolerance of uncertainty and each of the hypothesised symptoms of GAD, including worry, anxiety and safety behaviours. This indicates that threat appraisals appear to play an important role in the maintenance of GAD symptoms, and are likely to be an important target for therapeutic intervention

### **Experience of Stress, and Perceived Need for Stress Reduction Intervention Among Health Care Professionals in India During COVID-19: A Qualitative Study**

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Adverse effect of any emergency health situation on the mental health of health care professionals is ubiquitous. COVID-19 has necessitated the need for quick and structured intervention for the front-line workers. Negative impact of COVID-19 on mental health is widely discussed; however, structured short-term intervention is rarely delivered. It is imperative that brief intervention to protect the mental health of front-line workers should be made available.

This study focuses on experiences, challenges and perceived need for stress reduction intervention among health care professionals. The sample comprised of health care professionals providing service to persons identified to have COVID-19 as well as those involved in screening, conducting investigations and taking care of persons in quarantine. The HCPs included in the study are medical doctors, nurses, and lab technicians. Purposive sample was used in the study. Consent from HCPs from different parts of the country (N=17) was sought and interviewed in an online mode. Interview transcripts were analysed using thematic analysis. The major themes emerged were stress related to work environment, the impact of stress: physical, psychological and social' and coping strategies used and the perceived need for brief intervention to deal with stress. The study highlights the need for a structured short term crisis intervention program for HCP in any health emergency situation. It is critical that such an intervention should keep the cultural aspects in mind and made freely available in all private and public sectors.

### Psychological Treatments for the Mental Health Symptoms Associated With COVID-19: A Preliminary Report on a Scoping Review

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#### INTRODUCTION

Mental health symptoms such as depression, anxiety, and sleep problems are commonly observed in individuals suffering from acute coronavirus disease (COVID-19) infection to post-acute sequelae of covid-19 (PASC). According to a meta-analysis, the pooled prevalence was 45% for those meeting the diagnoses of depression, 47% for anxiety, and 34% for sleep disturbances patients (Deng et al., 2021). This study seeks to provide a synthesis of the published and ongoing research on treatments for the wide range of mental health symptoms associated with COVID-19. This scoping review has been registered with the Open Science Framework (<https://doi.org/10.17605/OSF.IO/WVR5T>).

#### METHODS

This scoping review protocol was developed according to the PRISMA Extension for Scoping Reviews. Systematic searches were carried out on four scientific databases (PubMed, Web of Science, PsycINFO, and Scopus) and four clinical trial registries (ClinicalTrials.gov, WHO ICTRP, EU Clinical Trials Register, and Cochrane Central Register of Controlled Trials) to identify studies that have or will assess the efficacy or any aspects of psychological treatment for acute infection to PASC. The search was conducted on 14 October 2022. Six investigators independently carried out titles and abstract screening, full-text screening, and data charting.

#### RESULTS

One hundred eleven studies (45 published results and 66 registered trials and published research protocols) were identified. Seventy-eight studies adopted a randomised controlled study design while others included single-arm, non-randomised, quasi-experimental, and pre-post study designs. Treatments most studied patients with acute COVID-19 infection (81 studies) while a few focused on those who had recovered (n=13) or were suffering from PASC (n=8). Of the identified studies, 79 studies measured anxiety and 63 measured depression symptoms. Others such as trauma and stress (n=37), sleep (n=29), quality of life and functioning (n=34) were also found to be frequently investigated outcomes.

Cognitive and behavioural therapies were the most studied type of interventions (n=33), including cognitive behavioural therapy, acceptance and commitment therapy, compassion-focused therapy, mindfulness-based stress reduction, and progressive-muscle relaxation to name a few. This was followed by multidisciplinary interventions (n=19), mindfulness, meditation, and yoga techniques (excluding those incorporated as cognitive behavioural treatments) (n=17), programs designed for COVID-19 patients drawing from different orientations (n=10), music therapies (n=5), and eye movement desensitisation and reprocessing (n=4). These interventions were often delivered via telehealth (n=39) or in person (n=31), while others were self-administered (n=17) or used a mixture of the three (n=15).

#### DISCUSSION

This scoping review was the first study to explore the full breadth of the literature on treatments for the ranging mental health symptoms associated with COVID-19 infection, including PASC. The results highlight that research has predominantly focused on the acute phase of the condition. As more recent studies have shown the mental health-related PASC, this finding calls for more emphasis on treatments for this stage of the disease. Additionally, despite being the most studied type of intervention, only a few individual sub-approaches within the family of cognitive and behavioural therapies were investigated in multiple studies due to their diversity. As the infectious virus remains present, interventions that are scalable, effective, and easy to implement in various contexts and regions with limited resources are still in need.



### **Efficacy of an Online Cognitive Behavioral Therapy Program for Healthcare Workers During the COVID-19 Pandemic: A Randomized Controlled Trial**

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#### INTRODUCTION

The COVID-19 pandemic increased the awareness about the need for solutions to prevent psychiatric disorders and moral injury in healthcare workers (HCWs). Indeed, studies have shown high psychopathology among HCWs related to the recent pandemic, with reviews finding 21–29% self-reported anxiety, 21–26% depression, and 20–29% PTSD (e.g., De Pablo et al., 2020). Several programs were implemented to respond to these findings, such as telephone hotlines and face-to-face group or individual psychotherapy sessions (Cao et al., 2020). However, HCWs' use of these interventions was limited, probably due to workload, fear of contamination and stigma (Chen et al., 2020). In this context, CBT web-based programs represent a more feasible format, because of their efficacy for stress reduction, their high dissemination potential and flexibility (Pospos et al., 2018). However, very few web-based CBT programs exist, especially targeting stress-related conditions specific to HCWs. The aim of our study is to investigate the efficacy and the acceptability of a 7-session internet-based CBT program we have developed (Weiner et al., 2020) to address the immediate stress and prevent its long-term consequences in HCWs during the COVID-19 pandemic. To do so, we compared the effects of the internet-based 'My Health too' 7-session CBT intervention to that of bibliotherapy on self-reported measures of perceived stress, rumination, depression and PTSD symptoms following the 8-week intervention as well as at 3- and 6-months follow-up. We hypothesized that efficacy would be increased in the CBT group compared to the passive control group (i.e., bibliotherapy).

#### METHOD

The participants (aged 18-70 years) were included in the study between July 2020 and February 2021, if their initial score on the Perceived Stress Scale-10 (PSS-10) > 16. They were randomized in one of the two treatment arms (online CBT or bibliotherapy).

#### RESULTS

A total of 155 participants were recruited. For both interventions, mean changes on the PSS-10 were significant post-therapy and at the follow-up, with no significant difference between the two interventions. Significant differences between groups were found in rumination about work and PTSD symptoms, with superior effects of the online CBT intervention compared to bibliotherapy. Causal mediation analyses showed that the decrease in posttraumatic stress symptoms was significantly mediated by the decrease in affective ruminations about work ( $p = 0.046$ ).

#### DISCUSSION

Our research revealed that a brief online CBT intervention was not superior to bibliotherapy to reduce perceived immediate stress in HCWs during the COVID-19 pandemic. However, lower levels of work-related ruminations post-therapy as well as fewer PTSD symptoms at follow-up were observed in the CBT group compared to the active control group. Our results thus suggest that the My Health too online CBT intervention is effective in preventing psychiatric disorders and moral injury in HCWs probably through its effect on rumination about work.

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### **Bereavement During the COVID-19 Pandemic: Mental Health and Unmet Support Needs in an Australian Sample**

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#### INTRODUCTION

The COVID-19 pandemic resulted in widespread disruptions to culturally expected end-of-life and bereavement practices, changing how many died and grieve. Regardless of the cause of death, many bereaved families and friends found themselves isolated and alone, unable to visit the dying person and unable to gather to either give or receive support. Further, many support services were closed or switched to online formats, disrupting normal systems of care. The Bereavement During COVID-19 Project was established to explore the experiences of Australians bereaved during this time, focussing both on psychological distress and resilience. This study reports on mental health outcomes and predictors of distress, and examines unmet support needs for those experiencing chronically high levels of distress.

#### METHODS

A convenience sample of Australians (n=1992) bereaved during 2020-2021 completed online surveys indexing bereavement experiences, formal and informal support use, unmet support needs and symptoms of grief, depression, anxiety. Latent class analysis was used to group participants based on shared symptom co-morbidity. Pandemic-related and sociodemographic predictors of group membership were explored using multinomial regression.

#### RESULTS

The LCA identified four classes (Low symptom 46.8%, Grief 17.3%, Depression/anxiety 17.7% and Grief/depression/anxiety 18.2%). Pre- and post-death pandemic challenges showed differential associations with group membership. Participants reported a range of unmet needs including needs for social connectedness, information about grief, community supports and professional mental health supports.

#### CONCLUSIONS

These findings contribute to a global understanding of bereavement during COVID-19. Consistent with pre-pandemic literature many bereaved Australians were able to find ways of adapting to their loss; however, many were also experiencing ongoing distress. Findings highlighted factors associated with chronic psychological distress to inform future pandemic planning and identified gaps across health, community and mental health sectors

### **Internet-Based Cognitive Behavioral Therapy During the COVID-19 Pandemic: Results From Two Randomized Controlled Trials and a Qualitative Study**

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Large disasters and crises are in principle always associated with increased mental illness. Patients infected with the SARS-CoV-2 have been shown to have worse mental health in both short and long term but related psychological symptoms has also elevated in the non-infected population. Internet-based cognitive behavioral therapy (ICBT) could be one way to address psychological symptoms during a and related to a pandemic and, more specific, the COVID-19 pandemic. Psychological impact during the pandemic has been reported but these imprints does not necessarily disappear only because the spread of the virus decrease. Since the COVID-19 pandemic with greatest possibility will not be the last pandemic, it is essential to examine the psychological symptoms related to the pandemic and whether they can be addressed somehow. One pilot RCT (2020) and, based on the pilot, one RCT (2021) was conducted to investigate whether ICBT could be effective to address psychological symptoms related to the COVID-19 pandemic. In the RCT, eight weeks of individually tailored ICBT with weekly guidance by a therapist was given to those participants randomized to the treatment group (n = 37) while participants in the control condition was on a waitlist (n = 39). To explore how the treatment was experienced, a qualitative study was also carried through, interviewing participants from the pilot RCT. In the spring 2023, a pilot study also investigating ICBT were examined during another phase of the pandemic in Sweden, namely when the associated illness was not considered as public dangerous anymore. In the pilot study conducted in 2020, moderate to large between-group effects were found in favor to the treatment group (n = 26) compared to the control condition (n = 26) on depression and anxiety symptoms, as well as for stress symptoms and alcohol use. No effects were observed on measures of quality of life, insomnia, symptoms of post-traumatic stress and anger. The RCT performed in 2021, currently not published, shows similar results with significant effects on measures of depression but also for insomnia and anger in favor for the treatment group in comparison to the control condition. Themes found within the qualitative analysis, based on interviews with participants in the pilot study 2020, was for instance "Functions of the treatment" and "Treatment(effects) equals work". The pilot study performed this spring 2023 are currently running and results are expected to be available in May 2023. The individually tailored ICBT investigated in the studies shows initial promise to be effective addressing psychological symptoms related to the COVID-19 pandemic. These results are shown during the COVID-19 pandemic, indicating that this therapy alternative could be helpful and decrease psychological symptoms during pandemics.

### **Efficacy of an Online-Group Intervention After Suicide Bereavement: A Randomized Controlled Trial**

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#### INTRODUCTION

People bereaved by suicide are at high-risk for developing mental disorders and suicidal tendencies. Grief after suicide differs in some significant ways from grief after other types of death, and bereaved persons may require specific support. In this study, we evaluate an online intervention for individuals bereaved by suicide and its effectiveness on mental health.

#### METHODS

A total of 140 participants were included in the intervention and randomized to either the treatment or the waitlist control group. The intervention consisted of 12 weekly modules based on cognitive-behavioral methods and took place as a webinar in a group format. Primary outcomes were depression and suicidality; secondary outcomes were symptoms of prolonged grief, PTSD, post-traumatic cognitions, hopelessness, and grief-specific symptoms.

#### RESULTS

Symptoms of posttraumatic avoidance improved significantly in the intention-to-treat analyses ( $d_{\text{between}} = 0.43$ ) and in treatment completers ( $d_{\text{between}} = 0.56$ ), posttraumatic intrusion improved in treatment completers ( $d_{\text{between}} = 0.50$ ) compared to the waitlist control group. In the intervention group, psychopathological symptoms decreased significantly from baseline to 6-months follow-up. Further, we identified factors such as higher scores of depression, grief, suicide ideation, and posttraumatic stress symptoms at baseline that had an impact on the effectiveness.

#### CONCLUSIONS

The results of this study indicate that completing an online group intervention for the suicide bereaved could reduce trauma-related outcomes. However, the waiting control group also improved significantly from pre- to postmeasurement in all other outcomes. Future studies with active control groups are needed to further examine the effectiveness.

### Engaging Primary Care Patients at Risk for Suicide in Mental Health Treatment

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#### INTRODUCTION

Primary care is an ideal setting to intervene to reduce suicide risk. People across the lifespan visit primary care more than any other medical specialty, and the majority of individuals who die by suicide interact with a primary care clinician in the year prior to death. Increasingly, primary care is being called on to identify individuals at risk for suicide by systematically screening using instruments such as the Patient Health Questionnaire-9 (PHQ-9) and to connect these patients to mental health providers. However, only half of referred patients attend an initial mental health visit. Factors that influence patients' willingness to engage in mental health services, nor the strategies that best support engagement through the Collaborative Care Model (CoCM), have not been rigorously studied.

#### METHOD

(1) We used electronic health records to identify characteristics of patients at risk for suicide who did or did not attend a CoCM visit following referral. The sample comprises adults reporting  $\geq 1$  on the PHQ-9 suicide item referred for collaborative care from Penn Medicine primary care practices between 2018 and 2022 (N = 772). We first compared follow-up rates for patients with and without an elevated PHQ-9 suicide item. Next, we stratified follow-up rates by patient characteristics (e.g., race/ethnicity, financial security, clinical characteristics) associated with CoCM engagement and calculated 95% confidence intervals for comparison. (2) We conducted semi-structured qualitative interviews with 60 stakeholders including primary care and behavioral health clinicians, leaders, and patients to understand barriers and facilitators to engagement in mental health services following a referral from primary care. Quantitative and qualitative data, along with a review of the literature and expert consensus, were used to develop a menu of engagement strategies to be pilot tested in the spring of 2023. We also are examining response to CoCM treatment for the subgroup of patients with elevated suicide risk who did engage in care; these analyses will be completed prior to the conference.

#### RESULTS

Overall, follow-up rates after a referral to CoCM were lower for patients who reported suicidal ideation (62.0%) than for patients who did not (67.3%). Among patients at risk for suicide, follow-up rates were similar across sexes and ages. While Asian American and Hispanic identifying patients were less likely to attend a CoCM visit than Black and White identifying patients, the differences were not statistically significant. Follow-up rates were significantly lower for patients who were unemployed compared to patients who were employed. The most-cited barriers in qualitative interviews were financial concerns and long waitlists for care in the community. CoCM was viewed as a solution to community waitlists. Facilitators to treatment initiation included access to an appointment with a CoCM clinician in their primary care practice and referral management support.

#### DISCUSSION

Early findings suggest that individuals at risk for suicide are willing to engage in CoCM but have a harder time engaging in community-based mental health care. Additionally, we found that Asian American and Hispanic identifying patients and unemployed patients

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were less likely to follow-up after referral to CoCM. While preliminary, these analyses are informing the development of implementation strategies to increase treatment initiation for individuals at risk for suicide, which will be iteratively tested and have the potential to reduce mortality for this at-risk population. We anticipate that the strategies we will pilot will include brief interventions (e.g., motivational interviewing, problem solving, single session waitlist interventions), strategies that leverage technology and automation, and streamlining workflows and steps in the triage, assessment and referral processes.

### **Integrated Cognitive and Dialectical Behavior Therapy for Reducing Nonsuicidal Self-Injury (NSSI) in College Students: A Study in Indian Context**

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The International Society for the study of Self Injury has described Nonsuicidal Self-Injury (NSSI) as the deliberate, self-inflicted destruction of body tissue without suicidal intent and for purposes not socially sanctioned, includes behaviors such as cutting, burning, biting and scratching skin. Many researches are been done to search behind the cause and factors for suicide, but the Nonsuicidal Self-Injury (NSSI) is limited to only fewer studies, specifically focussing towards borderline personality disorder. Although Dialectical Behaviour Therapy has been proven to be an effective treatment for Borderline Personality Disorder, only a limited studies have been conducted integrating Cognitive Behaviour Therapy (CBT) and Dialectical Behaviour Therapy (DBT) in addressing the NSSI amongst youth population, without a clinical diagnosis of Borderline Personality Disorder. This study is aimed to report on the administration of integrated CBT and DBT approaches on 37 college going students in an Indian Tier I metro city detailing the improvement in their symptoms. All the participants in this study are between the age ranges from 18-24 years. The students were screened for the presence of Nonsuicidal Self-Injury using The Non-Suicidal Self Injury Assessment Tool (NSSI-AT). Post selection of the participants who displayed presence of NSSI, the Difficulties in Emotion Regulation Scale (DERS), Beck Depression Inventory II (BDI II), Beck Suicide Ideation Scale and Perth Emotional Reactivity Scale (PERS) were used as a pre and post treatment measurements. Post treatment the results indicated the frequency and intensity of the Nonsuicidal Self-Injury were significantly reduced along with the reduced scores in the Difficulties in Emotion Regulation Scale, Beck Depression Inventory II, Beck Suicide Ideation Scale and Perth Emotional Reactivity Scale were improved. The subjective report indicated increased positive self and social and general wellbeing. In this current study, the major types of NSSIs the students were used to engage in were scratching skin and preventing the wounds to heal (n=11), hitting self (n=14), starving self (n=8), eating spicy red chillies and creating painful burning sensation in oesophagus and stomach (n=4). The study has shown significant improvement in post treatment condition with integrated Cognitive Behaviour Therapy and Dialectical Behaviour Therapy. The change may be contributed to the fact that there may be a possible change in schemas which were associated with self-harm. The primary symptoms other than the Nonsuicidal Self-Injury these students had displayed were impatience, irritability, anger issues and poor emotional reactivity. The skills training through CBT and DBT helped the students in reducing those confounding factors hence resulted in favourable outcomes.



### **Predicting Subtypes of Depression and Their Relationship With Suicide in Korea Using Machine Learning and Latent Profile Analysis**

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#### **BACKGROUND**

Identification of suicide risk by depression subtype is essential for effective suicide prevention. Additionally, a comprehensive understanding of risk factors of depression subtypes is necessary to improve mental health and quality of life. This study aimed to identify subtypes of depression and explore their determinants and in the end study the risk of suicide for each subtype.

#### **METHODS**

Data from 10,504 samples from the Community Health Survey in Korea and the local environmental data by region were used in this study. Among relevant 36 predictors collected from the literature, the top 10 variables were selected based on their degrees of importance using machine learning. Subtypes of depression were identified via latent profile analysis and crucial variables were statistically evaluated. Differences in suicidal ideation and suicide attempts among depression subtypes were identified.

#### **RESULTS**

Among the machine learning models applied in this study, Gradient boosting showed the highest performance, demonstrating that happiness, stress, population density, subjective health, single-person household ratio, age, green area per person, living alone rate of older adults, sleep, and job were more important than other factors. Particularly, three depression subtypes were derived: "moderate depression," "physical symptom," and "severe depression." The determinants of the group classifications were happiness, subjective health, sleep, age, and job. Suicidal ideation and suicide attempts were higher in severe depression, followed by moderate depression, and physical symptom.

#### **CONCLUSION**

This study used machine learning and latent profile analysis to identify the subtypes of depression, investigated the variables that predict each subtype, as well as the differences in suicide risk by subtype. Heterogeneous symptoms of depression existed in the national sample in Korea, and the characteristics of each subtype of depression were different. This study can help develop tailored personal and social interventions to lower depression and suicide.

## Online Self-Compassion Training for Shame, Self-Criticism and NSSI

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### INTRODUCTION

Shame is a major component of a range of psychopathology such as borderline personality disorder, depression and nonsuicidal self-injury (NSSI). Self-criticism is also significantly associated with NSSI. As NSSI is highly comorbid with mental health disorders and associated with medical complications, it is vital to understand the relationship among NSSI, shame and self-criticism to facilitate prevention and intervention. To reduce shame and self-criticism, it may be key to cultivate the generation of warmth and self-soothing. Rather than responding to distress or shortcomings with judgment and rumination, self-compassion engenders self-kindness, mindfulness and connectedness to others, with each of these components tackling shame and self-criticism. However, existing treatments such as compassion-focused therapy (CFT) are costly and intensive. The present study is the first to investigate the effectiveness of a brief online self-compassion training (SCT) for individuals high in shame and self-criticism. Its secondary aim is to investigate any correlational relationships among NSSI, shame and self-criticism.

### METHOD

Participants were screened for high shame and self-criticism scores according to cut-offs from the Internalized Shame Scale (ISS) and the Inadequate Self (IS) and Hated Self (HS) subscales of Forms of Self-Criticising/Attacking and Self-Reassuring Scale (FSCRS). The final sample comprising 140 healthy individuals aged between 18 and 54 were randomly assigned to either the SCT or control group and engaged in daily online writing and audio exercises for a week. Participants in the SCT group read the treatment rationale, listened to a 10-minute loving-kindness meditation audio, before writing a self-compassionate letter. Participants in the control group read the rationale for journaling, listened to a 10-minute progressive muscle relaxation audio before journaling. Outcomes were assessed via the ISS, FSCRS and a modified Self-injurious Thoughts and Behaviors Interview Short-Form (SITBI-SF).

### RESULTS

No significant interactions between condition and time were found for shame and self-criticism (IS and HS) as well as NSSI thoughts and acts frequency ( $ps > .05$ ). There were main effects of time on shame, IS and HS (all  $ps < .001$ ), and pairwise comparisons showed significant reductions in shame and self-criticism from preintervention to postintervention ( $ds = -0.86, -0.80, \text{ and } -0.26$ , respectively) and from preintervention to 1-week follow-up ( $ds = -1.01, -1.04, \text{ and } -0.35$ , respectively). Shame was significantly positively correlated with lifetime presence of NSSI thoughts ( $r = .20$ ), NSSI thought frequency ( $r = .30$ ) and perceived future likelihood of NSSI acts ( $r = .46$ ). For self-criticism, IS was significantly positively correlated with NSSI thoughts lifetime presence ( $r = .21$ ), thought frequency ( $r = .40$ ) and lifetime presence of NSSI acts ( $r = .21$ ). HS was significantly positively correlated with all NSSI variables ( $rs$  between  $.19$  and  $.45$ ).

### DISCUSSION

The present study did not find evidence for the SCT in reducing shame, self-criticism or NSSI as compared to control. As predicted, there were negative relationships between self-compassion and shame as well as self-criticism at baseline. As expected, shame was positively associated with NSSI thoughts lifetime presence, thoughts frequency, and perceived future likelihood. IS of self-criticism was also positively associated with lifetime presence of NSSI thoughts and acts as well as frequency of NSSI thoughts, and results found positive correlations among HS of self-criticism and all NSSI variables. The theoretical and clinical implications of these findings will be discussed. Future research could consider utilising a clinical sample actively engaging in NSSI and a longer follow-up period, and incorporate other elements from CFT in the intervention.

### **Food Categorisation Biases in People With Anorexia Nervosa**

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Anorexia nervosa (AN) is a serious eating disorder characterised by body image disturbances and severe restriction of caloric intake. Exceedingly high relapse rates (Berends, Boonstra, & van Elburg, 2018; Khalsa, Portnoff, McCurdy-McKinnon, & Feusner, 2017) suggest that, post-treatment, many individuals with AN have difficulty maintaining diets that are not overly restrictive in terms of calorific value. Understanding why people with AN engage in persistent restriction of caloric intake remains a fundamental challenge in the study and treatment of this debilitating illness. This work proposes that cognitive distortions involving the categorisation of food in terms of calorie content may contribute to restrictive eating in AN. The current study sought to discriminate the validity of two categorisation bias accounts: 1) People with AN more readily categorise food in terms of calorie content rather than in terms of tastiness, and 2) people with AN have difficulty reclassifying food initially categorised in terms of calorie content, in terms of tastiness. To test these accounts, a novel food categorisation task was developed and delivered to people with a self-reported lifetime diagnosis of AN and to people with no history of an eating disorder. Participants categorised food in terms of either calorie content or tastiness. Results revealed that the AN group, relative to the comparison group, was faster to categorise food in terms of calorie content and slower to reclassify food initially categorised in terms of calorie content. These findings suggest that people with AN exhibit both an inflated tendency to categorise food in terms of calorie content and to become subsequently stuck on this categorisation. Implications include targeting food categorisation biases in interventions designed to reduce restrictive eating behaviour in AN.

### **Meaning-Centered Psychotherapy for Eating Disorders: A RCT in Women With High Weight and Shape Concerns**

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#### INTRODUCTION

Recently, low meaning in life has been proposed as an important factor in the maintenance of eating disorders (EDs). Theory suggests that the overvaluation of weight, shape, and eating behavior frequently seen in individuals with an ED, might narrow the individual's behavioral repertoire to activities related to weight and shape. In the short run, these activities can provide an individual with a sense of consistency, identity, and structure in their lives. However, in the long run, these dysfunctional goals and values interfere with and reduce access to adaptive sources of life meaning, leading to a lowered sense of life meaning and thereby maintaining the ED. As empirical findings showed that individuals with EDs indeed report lower meaning in life, several authors suggested that it could be beneficial to add a treatment component focused on life meaning to current psychotherapies for EDs. Therefore, we adapted meaning-centered psychotherapy (MCP), an intervention originally developed for individuals with advanced cancer which has been shown to be effective in improving life meaning, to be suitable for individuals with ED symptoms (MCP-ED). The purpose of the present study was to test the efficacy MCP-ED to increase meaning in life among women with high weight and shape concerns.

#### METHOD

We conducted a randomized controlled trial in which female students with high weight and shape concerns ( $N = 134$ ) were randomly assigned to the waiting-list control condition ( $N = 67$ ) or the experimental condition ( $N = 67$ ). In the experimental condition, participants followed six weekly online individual sessions of MCP-ED. During each session of MCP-ED, one of the four themes is discussed: your personal life story, dealing with life's limitations, creating your own life, and meaningful experiences. Self-report measures of meaning, ED symptoms, general distress, psychological well-being, and satisfaction with meaningful life domains were completed at baseline ( $N = 134$ ), after the final session of MCP-ED or a seven-week waiting period ( $N = 125$ ), and at four week follow-up ( $N = 124$ ).

#### RESULTS

Participants in the experimental condition showed a stronger increase in meaning than participants in the waiting-list condition after the intervention ( $\eta_p^2 = .25$ ) and at follow-up ( $\eta_p^2 = .11$ ). The intervention also resulted in lower ED symptoms and general distress, and higher psychological well-being and satisfaction with meaningful life domains. No effects were found regarding the search for meaning and BMI.

#### DISCUSSION

Thus, we found evidence that MCP-ED is effective in increasing meaning in life in women with high weight and shape concerns. Promising, MCP-ED also proved to be effective in decreasing eating disorder symptoms directly after the intervention and at one-month follow-up. The results of the present study point to the relevance of examining whether adding MCP-ED to regular treatment might increase treatment effectiveness in individuals with EDs. If this is the case, MCP-ED could potentially be an important add-on intervention to the treatment of EDs.

## Evaluation of the Transdiagnostic Model of Eating Psychopathology in the General Mexican Population

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### INTRODUCTION

The transdiagnostic theory of eating disorders is an evidence based explanation about the origin and maintenance of eating disorders. It suggests that four factors interact with a core psychopathology composed by indicators of overevaluation of shape, weight and eating. This study aimed to evaluate the influence of these four factors (clinical perfectionism, low self-esteem, mood intolerance and interpersonal difficulties) on the core eating psychopathology in adults from the Mexican general population.

### METHOD

598 women ( $M = 24$  years,  $SD = 5.32$ ) and 464 men ( $M = 25$ ,  $SD = 5.12$ ), aged 18-40, from the Metropolitan area of Mexico Valley, answered the Eating Disorder Examination-Questionnaire (EDE-Q  $\alpha = .919$ , women;  $\alpha = .897$ , men) and a psychometric battery (all the instruments were adapted, previously, to Mexican population) to evaluate clinical perfectionism (Clinical Perfectionism Questionnaire;  $\alpha = .852$ , women;  $\alpha = .813$ , men), low self-esteem (Rosenberg Self-Steem Scale;  $\alpha = .894$ , women;  $\alpha = .875$ , men), mood intolerance (Perth Emotion Regulation Competency Inventory;  $\alpha = .811$ , women;  $\alpha = .813$ , men) and interpersonal difficulties (Intrafamily Relations Assessment Scale [IRAS] and Perceived Social Support from Friends Scale [PSS-Fr];  $\alpha = .835$ , women;  $\alpha = .837$ , men). We performed a multiple regression analysis, with the enter method, for both sexes. To test the model in people with high eating psychopathology, we conducted a second analysis considering only participants who showed a score higher than the 49th percentil in the EDE-Q (298 women,  $M = 24$ ,  $SD = 5.23$ ; 232 men,  $M = 25$ ,  $SD = 5.07$ ; aged 18-40).

### RESULTS

Study 1: In women, perfectionism, self-esteem and mood intolerance were predictors ( $F = 84.173$ ,  $p < .001$ ;  $R^2 = .362$ ,  $p < .001$ ;  $f^2 = .567$ ,  $1-\beta = 1$ ); in men, only perfectionism and self-esteem ( $F = 53.390$ ,  $p < .001$ ;  $R^2 = .318$ ,  $p < .001$ ;  $f^2 = .466$ ,  $1-\beta = 1$ ).

Study 2: In women, perfectionism, self-esteem and mood intolerance were predictors ( $F = 20.036$ ,  $p < .001$ ;  $R^2 = .215$ ,  $p < .001$ ;  $f^2 = .273$ ,  $1-\beta = .999$ ); in men, only perfectionism and self-esteem ( $F = 21.834$ ,  $p < .001$ ;  $R^2 = .278$ ,  $p < .001$ ;  $f^2 = .385$ ,  $1-\beta = .999$ ).

### DISCUSSION

Clinical perfectionism and low self-esteem were predictors in women and men, highlighting the role of cognitive dysfunctions in eating psychopathology. We found that mood intolerance only had an influence on women, which could be explained in terms of the differences that exist in emotional regulation mechanisms between sexes (for example, women tend to develop more specific strategies, or the social stigma about the way men should manage their emotions). As has been found worldwide, interpersonal difficulties did not show significance. The eating psychopathology treatment should point to the maladaptive process in the cognitive context, mainly those that are shared with perfectionism and low self-esteem.

### **Stability and Change in Patterns of Emotional Eating in China: A Latent Transition Analysis**

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#### INTRODUCTION

There is considerable evidence indicating that negative emotional eating is closely linked to disordered eating behaviors and obesity (Péneau et al., 2013; Ricca et al., 2009). However, previous research in this area has primarily focused on emotional overeating (EOE) but neglected emotional under-eating (EUE). Emotional under-eating is a prevalent issue in community populations, with a higher incidence than EOE (Macht, 2008). Childhood EUE has been associated with an increased risk of anorexia nervosa in adult women (Kim et al., 2011). According to the five-way model of emotional eating (Macht, 2008), the effect of emotions on eating is variable, and EOE and EUE may coexist. Meanwhile, earlier studies have primarily employed variable-oriented methods, reducing negative emotional eating to a single dimension, which has limited our comprehension of individual differences. Additionally, few studies have investigated patterns of emotional eating from both EOE and EUE perspectives. To the best of our knowledge, He et al. (2020) is the only one that has explored the patterns of EOE and EUE simultaneously. They found that individuals with mixed EOE and EUE experienced the highest level of psychological distress. However, He et al. (2020) simplified emotional eating into a binary dimension, which may have overlooked the impact of the severity of emotional eating. Moreover, the extent to which various patterns of emotional eating represent stable conditions or transitory states is still unclear.

#### METHODS

The current study employed latent transition analysis (LTA) to derive syndromes of EOE and EUE in a sample of 755 Chinese participants. Data was collected at two time points, approximately 6 months apart (T1: 2021.12.21-2022.2.19; T2: 2022.7.15-2022.8.10), to investigate how patterns of emotional eating evolve over time.

#### RESULTS

Four latent statuses were identified: (1) low EOE and EUE (T1: 11.5%; T2: 15.8%), (2) high EUE (T1: 40.5%; T2: 31.1%), (3) High EOE (T1: 18.3%; T2: 15.9%), and (4) middle EOE and EUE (T1: 29.7%; T2: 37.2%). These four patterns showed significant differences in eating disorder symptoms and psychological distress, but not in BMI. Participants in the high EOE class exhibited the highest level of depression and anxiety, as well as eating disorder symptoms. Membership in each latent status tended to be unstable over time. When movement occurred, it tended to move toward the class of middle EOE and EUE. The transition probability was influenced by the level of self-esteem, while the class memberships in T1 were influenced by gender, the level of self-esteem stability, and emotion regulation difficulty.

#### DISCUSSION

These findings suggest that there are distinct, prevalent, and unstable forms of negative emotional eating in the Chinese population, indicating that emotional eating is a complex and dynamic phenomenon. Addressing emotional eating from both EOE and EUE perspectives is essential for effective intervention and prevention of disordered eating behaviors and obesity. For individuals with persistent high EOE, interventions of higher intensity may be necessary compared to those who experience a temporary state of high EOE.

### **The Mediating Role of Psychological Distress on the Effect of Self-Efficacy to Academic Resilience of Emerging Adults: Implications for CBT Intervention**

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The COVID-19 pandemic has affected many individuals' mental health, including emerging adults. Changes in the environment and the mode of education made students vulnerable to psychological distress. However, there has been little empirical research on psychological distress, academic resilience, and self-efficacy. The study sought to determine the mediating role of psychological distress in the effect of self-efficacy on academic resilience—350 Filipino emerging adults recruited from various Metro Manila colleges and universities. Multi-aspect questionnaires were utilized to assess psychological distress, self-efficacy, and academic resilience. Structural equation modeling was used to explain the relationships, mediation, and causality and test the hypothesized model. SEM revealed that psychological distress mediates self-efficacy and academic resilience; higher self-efficacy leads to higher academic resilience; higher psychological distress leads to lower academic resilience, and higher self-efficacy leads to lower psychological distress. The study's findings have implications for a Cognitive-Behavioral Therapy Intervention for psychologically distressed students. A proposed individual intervention is recommended for implementation, which mental health practitioners can use to address the variables of the study.

## The Mechanisms of Cognitive Behavioral Curriculum for Preliminary School Students: The Role of Emotional Awareness and Cognitive Flexibility

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The COVID-19 pandemic has significantly impacted student life. Enhancing the resilience of children and adolescents during such major crisis events is vital. Currently, well-implemented class-based cognitive behavioral curricula have been shown effectively reduce depression and anxiety symptoms in students, but few have explored the underlying mechanism.

Emotion awareness is an analysis of the exact nature of the emotion, including both the eliciting antecedents and the possible consequence. Emotions activate automatic action patterns when facing challenges. When we focus on the emotion, the automatic program is interrupted and open for control activities. Therefore, being aware of the emotion is the first step in coping with a certain situation. Cognitive flexibility refers to the mental ability to adapt effectively to changing tasks or environmental demands. It is a key cognitive function that allows individuals to simultaneously switch cognitive strategies, considering two or more aspects of an object, idea, or complex situation and adjusting behavioral strategies accordingly. Both emotion awareness and cognitive flexibility may play an essential role during a cognitive behavioral intervention.

This study analyzed data from a randomized controlled trial that examined the effectiveness of a cognitive behavioral curriculum in reducing anxiety symptoms among fifth-grade primary school students. We hypothesized that emotional awareness might mediate the changes in anxiety during the intervention, and cognitive flexibility might moderate changes longitudinally. Four classes (N= 221) of fifth-grade primary school students from a rural area in Hubei Province, China, participated in the study. All students attended cognitive behavioral lessons for about 45 minutes each on 3 consecutive days. After the course, students were randomly assigned to either guided narrative writing as the intervention group or guided narrative drawing as the active control group. Anxiety, emotion awareness, and cognitive flexibility were assessed at baseline, post-course (i.e., pre-writing or drawing), post-writing or drawing, 1-month, 3-month, and 6-month follow-up. Anxiety was measured by the Revised Child Depression and Anxiety scale. The Emotion Awareness Questionnaire measured emotion awareness, and cognitive flexibility was measured by the smartphone version of the Wisconsin card sorting test (WCST).

Lagged mediational analyses were applied to examine whether emotional awareness led the changes in anxiety during the intervention, and cognitive flexibility was tested as a moderator. The results indicated that differentiating emotions, not hiding one's emotion, bodily awareness of emotions, and attention to others' emotions each significantly mediated changes in anxiety from baseline to 6-month follow-up. In a combined model of all six subscales of emotion awareness questionnaire, the mediating effect of differentiating emotions was more significant than verbal emotion sharing, and other emotion awareness subscales were insignificant. Moderated mediation analysis revealed that the mediating effect of sharing emotion was greater in students with higher cognitive flexibility. The moderating effect of cognitive flexibility was significant from differentiating emotion and sharing emotion to anxiety, but not for the path from time to differentiating emotion and sharing emotion, suggesting that students' cognitive flexibility did not impact learning cognitive-behavioral skills, but influenced whether they could use what they learned to regulate their anxiety. Our findings indicated that extra efforts are needed for students with lower cognitive flexibility levels to demonstrate how to use learned knowledge and skills to cope with practical problems. Emotional awareness, as a mediator, can be assessed during a cognitive behavioral curriculum to adjust the course accordingly.



### **The Efficacy of a Transdiagnostic Internet-Delivered Intervention for Romanian Adolescents Diagnosed With Anxiety and Depressive Disorders**

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Anxiety and depressive disorders are prevalent in adolescents and are associated with a high burden of disease (Klaufus et al., 2022). Internet-delivered cognitive behavioral interventions (iCBT) have demonstrated efficacy in reducing anxiety and depressive symptoms and improving quality of life in adult populations (Păsărelu et al., 2017). Research is limited regarding the efficacy of such interventions delivered in low- and middle-income countries. The aim of study was to investigate the efficacy of a newly developed Internet-delivered intervention based on Rational Emotive Behavioral Therapy with adolescents. Eligible participants were adolescents aged between 11 and 17 years old, with a primary anxiety (Social Anxiety Disorder, Generalized Anxiety Disorder, Panic Disorder) or depressive disorder diagnosis (Persistent Depressive Disorder, or Major Depressive Disorder) as assessed by a child psychiatrist, with sufficient understanding of Romanian language and with Internet access. Adolescents undergoing treatment (psychotherapy or pharmacological treatment) and those with suicidal ideation were excluded. From an initial number of 372 children screened, a total of 106 adolescents diagnosed with anxiety and/ or depressive disorder were randomly assigned either in the experimental (REBTonAd group) and waiting list (WL) group. The intervention was clinician-guided and consisted of nine modules delivered over 6 weeks. Results indicate significant time and time X group interaction effects for primary (internalizing problems) and secondary (anxiety symptoms, depressive symptoms and quality of life) outcomes. Satisfaction with the intervention was high. In conclusion, a transdiagnostic Internet-delivered intervention is effective in reducing anxiety and depressive problems in adolescents. Limitations of the present study and implications for future studies will be discussed.

Clinical trials no.: NCT04179526

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Anxiety and depressive disorders are prevalent in adolescents and are associated with a high burden of disease (Klaufus et al., 2022). Internet-delivered cognitive behavioral interventions (iCBT) have demonstrated efficacy in reducing anxiety and depressive symptoms and improving quality of life in adult populations (Păsărelu et al., 2017). Research is limited regarding the efficacy of such interventions delivered in low- and middle-income countries. The aim of study was to investigate the efficacy of a newly developed Internet-delivered intervention based on Rational Emotive Behavioral Therapy with adolescents. Eligible participants were adolescents aged between 11 and 17 years old, with a primary anxiety (Social Anxiety Disorder, Generalized Anxiety Disorder, Panic Disorder) or depressive disorder diagnosis (Persistent Depressive Disorder, or Major Depressive Disorder) as assessed by a child psychiatrist, with sufficient understanding of Romanian language and with Internet access. Adolescents undergoing treatment (psychotherapy or pharmacological treatment) and those with suicidal ideation were excluded. From an initial number of 372 children screened, a total of 106 adolescents diagnosed with anxiety and/ or depressive disorder were randomly assigned either in the experimental (REBTonAd group) and waiting list (WL) group. The intervention was clinician-guided and consisted of nine modules delivered over 6 weeks. Results indicate significant time and time X group interaction effects for primary (internalizing problems) and secondary (anxiety symptoms, depressive symptoms and quality of life) outcomes. Satisfaction with the intervention was high. In conclusion, a transdiagnostic Internet-delivered intervention is effective in reducing anxiety and depressive problems in adolescents. Limitations of the present study and implications for future studies will be discussed.

Clinical trials no.: NCT04179526

## Internet-Based Behavioral Activation (iBA) for Adolescents With Depressive Disorders: Treatment Overview and a Pilot Randomized Controlled Trial in Korea

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Depression in adolescence is a major public health problem worldwide (Lopez et al., 2006) with high prevalence and relapse rates (Costello et al., 2005; Dunn & Goodyer, 2006) and accompanies functional impairments (Copeland et al., 2009; Esposito & Clum, 2002; Keenan-Miller et al., 2007; Marmorstein, 2009; McCarty et al., 2012). Although existing evidence-based psychological treatments for adolescent depression (e.g., cognitive behavioral therapy and interpersonal therapy) have proven their efficacy in the treatment of adolescent depression, the results indicate some improvements are needed for larger treatment effects and intervention accessibility (Weisz et al., 2006; Kennard et al., 2009; Mufson et al., 2011). Behavioral activation treatment (BA) is a promising candidate for adolescents with depression in that its simple, specific, and behavior-focused delivery not only goes well with adolescents' cognitive and neurodevelopmental characteristics but also enables a wide range of therapists with different education and experience levels to provide the intervention in diverse settings. Prior research results on the effectiveness of BA treatment in young people (e.g., Chu et al., 2016; McCauley et al., 2016; Pass et al., 2018) support the feasibility and efficacy of BA as a treatment for adolescent depression. However, considering the lack of accessibility to evidence-based psychological treatments in Korea due to socio-environmental and economic reasons (e.g., global pandemic, social stigma, cost, lack of mental health professionals in rural areas, etc.), efforts to overcome these limitations were needed when delivering psychological interventions. Therefore, this study aims to investigate whether an internet-based behavioral activation (iBA) for depressed youth would be provided effectively to Korean adolescents with depressive disorders. A pilot randomized controlled trial was conducted with 38 adolescents with a depressive disorder who were randomized to receive either eight sessions of individual iBA (via videoconferencing) or an active control intervention (i.e., internet-based supportive therapy). Measures of depressive symptoms, global functioning, behavioral activation, and environmental reinforcement were obtained through clinical interviews and/or adolescent self-report at preintervention, end of intervention, and 3-month follow-up. Both conditions showed statistically significant improvement from pretreatment to end of treatment in depression, global functioning, activation level, and environmental reinforcement. However, participants in the iBA condition showed (1) a greater reduction in depression, as evidenced by larger effect sizes from preintervention to postintervention and a greater response rate, and (2) a more significant trend-level increase in behavioral engagement. These findings provide the first evidence that iBA would be an effective treatment for adolescents with depression and support the need for ongoing research.

### **Efficacy of DBT-Children Program**

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Many studies have shown the efficacy of the DBT program within the school context, in order to implement in the child the ability of frustration tolerance, emotional regulation and reducing impulsiveness (Haskell et al., 2014; Mazza & Hanson, 2014a; Miller et al.; 2014). In particular, the time and energy invested in interventions for students who break school rules are reduced. This program has turned out to have a great preventive power: in fact, it significantly reduces the cases of children with both emotional and behavioral difficulties (Mazza; Dexter-Mazza; Miller; Rathus; Murphy; 2016). The objectives of the DBT-Children program are teaching children coping skills and a troubleshooting method, and providing to caregivers the same plant of skills and indications to create a validating and flexible environment to change.

120 children aged 3 to 11 participated to the study. The children recruited belonged to educational institutions in Campania; the DBT-Children program was composed of 16 meetings, 2 times a week. Program included teaching skills divided in four DBT - modules (mindfulness, distress tolerance, emotive regulation and interpersonal efficacy); teachers were instructed by trainers during the entire DBT - Children Program. A psychological assessment was conducted on the parents and teachers of the participants with the following tests: CBCL, G-TRF, BRIEF, QUIT. Tests were submitted pre and post intervention to the parents, teachers and control group.

Significant reduction in depressive and anxious states, as well as lower acting out and improvements in oppositionality in some children was shown. Both parents and teachers during the Post -treatment phase found an important change in children's emotional-behavioral states.

The results are in line with those already described in the international literature on the efficacy of the DBT- Children program.

The present study provides evidence in support of the DBT- Children program, showing its effectiveness in bringing benefit both in children with high emotional vulnerability and in children with no emotional/behavioral problems, giving useful skills to regulate emotions and behaviors and improve interpersonal relationships. The effectiveness of the program, therefore, also has cascading effects in peer relationships, with teachers and with parents.

## Patient Profile & Treatment Modalities for Adolescents with Anxiety: A Comparison Between 3 Special Populations in Singapore

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Patient Profile & Treatment Modalities for Adolescents with Anxiety: A comparison Between 3 Special Populations in Singapore  
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Autism Spectrum Disorder (ASD) is classified under neurodevelopmental disorders, a group of conditions characterized by onset during the early developmental period (American Psychiatric Association, 2013). The condition is frequently referred to as a spectrum disorder due to wide variation in symptom presentation and severity across individuals diagnosed with the condition. This retrospective study sought to understand the profile of adolescents with Autism Spectrum Disorder (ASD) who co-present with anxiety symptoms. Data was extracted from the clinic database for patients who fell between the ages of 10-16 with a clinical diagnosis of ASD, ID or chronic illness and who were referred for psychological support over a 7-year period (2014 to 2021). A total of 1846 patients with these conditions were seen at a regional paediatric hospital which provides care across a full range of medical specialties, out of which 224 were referred to the paediatric psychology team. A total of 92 patients were eventually surfaced to present with anxiety symptoms and in need of therapeutic support. The ethnic distribution of anxious patients in the present study mirrored national data reported in Singapore's census, with Chinese youth accounting for 75% of anxious adolescents. Age at which anxiety first presented peaked is nine years old, with the majority detected between eight to fifteen age range. Similar to internationally reported figures, adolescents with ASD presented with the highest risk for developing anxiety. In addition, adolescents with ASD were twice to four times more likely to present with anxiety compared to intellectually disabled and chronically ill peers, pointing to a need to pay special attention to this population. Psychotherapy (e.g., Cognitive Behaviour Therapy being the most commonly adopted therapy at the clinic), was the first line treatment for anxious paediatric population, with up to 80% of adolescents receiving this form of treatment. Close to half of anxious adolescents (49%) received psychotherapy as the only form of treatment, in contrast to 3% who received purely pharmacological treatment. Up to 30% of adolescents received medication as part of their treatment, followed by 22% who received art or play therapy which was delivered either on its own or in combination with psychotherapy and/or medication. Treatment duration for adolescents with ASD was significantly longer compared to the other two groups. However, treatment duration and modality provided to patients varied widely, with scope for further studies to be conducted to better understand reasons that shape clinical decision making in the delivery of mental health services to the paediatric population within the Asian context. The current study points to a possible under detection of anxiety within the local paediatric population. Only 12% of paediatric patients seen at the clinic were referred for psychological support and a much smaller percentage picked up by clinicians as requiring help for anxiety (5%).

Case studies featuring 3 psychologists who use CBT for the treatment of anxiety in adolescents with ASD will be included, with a special focus on surfacing challenges and suggestions for adaptation of CBT for this special population (e.g., what are treatment barriers and modifications they have made).

## Impact of Psychological Trauma on Neuropsychological Functioning Among a Group of Child and Adolescent Sample in Bangladesh

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Usual stress reaction or brain's Hypothalamic-Pituitary-Adrenal (HPA) axis response becomes traumatic stress reaction due to prolonged exposure to distress. In the developing brain of the children, repeated traumatic events creates a hyperarousal state which means HPA axis reaction being activated constantly, this in turn alters the brain development in those children (Perry et al. 1995, Teicher, Andersen, Polcari, Anderson, & Navalta, 2002). Consequently, trauma affect the neuropsychological functioning in children (Gabowitz et al, 2008; Flor & Karl, 2010; Brenner, 2011; Malarbi, Abu-Rayya, Muscara & Stargatt, 2017) which can further lead to poor academic and social functioning. Specific brain regions such as the prefrontal cortex, the amygdala and the hippocampus are presumed to be mostly affected by traumatic experiences though there are some contradictory findings (Bremner, 2006). Consequences of interpersonal trauma like sexual or emotional abuse, neglect or exploitation are less addressed issues in a developing country like Bangladesh. Therefore, neuropsychological consequences of psychological trauma need to be explored to minimize the long-term damaging consequences. The present study aims to see whether the children who experienced different types of psychological trauma have challenges in neuropsychological functioning. Data were collected from participants who had trauma (clinical) and who did not have mentionable trauma (control). 34 participants were in clinical group (16 male; 18 female) and 30 participants were in the control group (10 male; 20 female). Participants were recruited from National Institute of Mental Health and Hospital (NIMHH) and psychiatric units of different hospitals following a purposive sampling technique and data were collected following a survey method. Children's Revised Impact of Events Scale (CRIES-8), Wechsler Abbreviated Scale of Intelligence (2-subtests WASI), Wechsler Intelligence Scale for Children (WISC-IV - Letter-number sequencing and Digit span subtests) and Strength and Difficulties Questionnaire (SDQ) were used for data collection. Descriptive statistics and Independent-samples T-test were used to analyze the data using SPSS 22. Among the clinical sample, 64.7% and 23.5% were found to have borderline and impaired level of IQ respectively; 32.4% (borderline) and 14.7% (impaired) in memory functioning; 38.2% (borderline) and 38.2% (impaired) in language processing. Among the control sample, 40% and 10% were in borderline and impaired level respectively for IQ, 16.7% (borderline) and 3.3% (impaired) in memory functioning and 40% (borderline) and 6.7% (impaired) in language processing. Higher percentage of children are in borderline and impaired level of functioning in the abovementioned domains though similar results have been found in attention and cognitive flexibility for both groups. Significant statistical differences between clinical and control groups were found in Intelligence [ $t(61) = 3.835$ ;  $p = .000$ ], language ability [ $t(61) = 3.651$ ;  $p = .001$ ], verbal memory [ $t(59) = 3.163$ ;  $p = .002$ ], visuo-spatial ability [ $t(58) = 2.214$ ;  $p = .031$ ], and emotional and behavioral difficulties [ $t(54) = 5.327$ ;  $p = .000$ ]. The findings of this study were partly coherent with previous literature that children with psychological trauma demonstrated impairments in several cognitive domains and indicated problems in emotional and behavioral indicators. However, some of the findings raised questions regarding the moderating effects of cultural factors within the impact of trauma on developing brains. The discussion section will include the interpretations and the arguments of the findings as well as the implications for comprehensive assessment of cognitive and behavioral profile for trauma.

### Addressing an Unmet Need for Mental Health Services Within Paediatric Hospitals

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#### INTRODUCTION

Children with long term conditions (LTCs) are significantly more likely to develop mental health symptoms than otherwise healthy children and there remains a need to improve access to evidence-based mental health interventions in paediatric hospitals. Previous research demonstrated that a mental health drop-in centre delivering low intensity CBT (LICBT) was beneficial for this patient group, reducing emotional and behavioural symptoms and improving quality of life for children and their families. This study aimed to implement the mental health drop-in centre model at other hospitals across the UK.

#### METHODS

Two days of hybrid training on LICBT interventions were delivered to clinicians from paediatric services. Attendees were introduced to guided self-help, information gathering and CBT based strategies to support young people with LTCs with their anxiety, low mood and/or challenging behaviour. A brief online questionnaire measured understanding of the areas covered. Data have been collected to characterise the families who have accessed the service so far, considering different LTCs, ages and demographics and how the service has been implemented at different sites, reflecting the local service provision.

#### RESULTS

Thirteen attendees completed the LICBT training questionnaire and the sign test was used to compare scores before and after training. Total scores significantly increased from pre-training ( $M = 24.77, SD = 6.13$ ) to post-training ( $M = 33.62, SD = 1.76$ ),  $p < .001$ . Scores on each specific area were also significantly higher post-training ( $p < 0.01$ ). Between November 2022 and February 2023, 72 referrals have been received from 4 hospitals, 37 families have consented to participate and completed baseline measures. Referrals have been made from a variety of clinical teams. The current sample is made up of young people with a mean age of 14.86 (17 female, 12 male, 1 non-binary) with a range of LTCs (e.g. cancer, respiratory disease, endocrine disease, neurodevelopmental conditions). Each hospital site has had a different approach to setting up a mental health drop-in service, with some set up in specific clinical services due to staff constraints (e.g. epilepsy) and others opening the service to all hospital patients.

#### CONCLUSION

It is possible to effectively train pre-existing hospital staff in LICBT and implement a drop-in mental health service at paediatric hospitals. There is significant demand for such a service. Young people and their families living with different LTCs are accessing and utilising the service provided. Implementation at different hospitals requires flexibility and consideration of local cultural and staffing needs. Future results will report on the effectiveness of this service.

### **Mental Health Interventions for Children and Young People With Long-Term Health Conditions in Children and Young People's Mental Health Services in England**

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#### INTRODUCTION

Children and young people (CYP) with a long-term health condition (LTC) are much more likely to develop mental health difficulties than the general population. However, little is known about the routine provision and efficacy of mental health interventions for CYP with LTCs who are in contact with Children and Young People's Mental Health Services (CYPMHS) in England.

#### METHODS

This study analysed national service-reported data in England from two secondary datasets. Data on CYP who received care from mental health services were submitted by clinicians between 2011 and 2019, although some admission dates were prior to this. CYP were included in the analysis if there were data on the presence or absence of a physical health issue, including neurological issues, and which psychological interventions they were offered. Mental health outcomes were also reported for the sample across a range of measures.

#### RESULTS

A total of 789 CYP were flagged as having serious physical health issues and 635 as having neurological issues. The most common intervention for CYP with a serious physical health issue was Cognitive Behavioural Therapy (CBT) (26%) and for those with a neurological condition the most common was Parent Training (21%). However, a large percentage of interventions remained unclassified. The majority of young people showed improvements across all outcome measures in both groups.

#### DISCUSSION

The findings suggest that CYP with LTCs improve across a range of mental health outcomes following interventions delivered by CYPMHS. Many interventions were unable to be categorised, however the most commonly delivered interventions were CBT and Parent Training. This suggests that these standard, evidence-based treatments may be effective in CYP with LTCs, which is in line with emerging evidence. Future research should use larger samples to map the range of interventions in use across services nationally and evaluate the effectiveness of these treatments for this population.



### **Mental Health Intervention for Children With Epilepsy (MICE): A Randomized Controlled, Multi-Center Clinical Trial Evaluating the Clinical Effectiveness of Psychological Therapy in Addition to Usual Care Compared to Assessment-Enhanced Usual Care Alone for Children and Young People with Common Mental Health Disorders and Epilepsy**

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Mental health difficulties are elevated in children and young people with Long Term Conditions (LTCs) such as epilepsy but many of those in need cannot access evidence-based psychological treatments such as CBT. This talk will present the clinical outcome of a large RCT of an integrated mental health treatment delivered remotely by Health Care Professionals within physical healthcare services for young people with epilepsy. The study design was a multi-center, parallel group, blinded, randomized controlled trial including 334 participants aged 3-18 years, attending epilepsy clinics, who met diagnostic criteria for a common mental health disorder. They were randomized to receive a Mental Health Intervention for Children with Epilepsy (MICE) intervention based on MATCH-ADTC in addition to usual care, or assessment-enhanced usual care alone (control). The primary outcome, analysed by intention-to-treat was the parent-report Strengths and Difficulties Questionnaire (SDQ) at six months post-randomization. At six months the mean (SD) SDQ difficulties for 166 MICE patients was significantly lower than for 168 control patients ( $p < 0.01$ ). MICE also demonstrated significant positive results for the mental health of the parents/carers compared to the control arm. The trial demonstrates that multiple mental health comorbidities can be effectively treated within a singular intervention across a wide range of age groups and in the context of additional complexities, including LTCs and neurodevelopmental disorders. The presentation will end with a discussion of the implications of the development and evaluation of MICE for the treatment of mental health disorders in the context of other chronic illnesses.

### **Sharing Psychological Skills at the Time of War – Presentation of the Polish Digital Program ‘Amie School of CBT for Ukraine’**

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#### INTRODUCTION

Most of the CBT work is done in a context of peace. War brings new challenges. Therapists have to address extraordinary trauma cases, yet they often feel unprepared for such complex clinical situations. They need special assistance. The paper presents a crisis-response program of supporting therapists at the point of distress.

#### METHOD

When the Russian war started in Ukraine The AMIE School of CBT, in collaboration with prof. Robert Leahy, set up a program of online webinars for therapists involved in helping refugees and Ukrainian citizens. The program is based on voluntary work of the leading world CBT authorities on trauma, eg. Robert Leahy, William Miller, Patricia Resick, Paul Gilbert, Lata McGinn, David A Clark, Cory Newman and others.

It consists of 30 webinars on trauma related topics, of 1-2 hrs duration, presented on a regular weekly basis, for 3 groups of receivers:

- CBT therapists – presentations on a wide range of interventions such as PTSD, major depression, sleep disturbance etc. and special issues such as: specific style of conducting CBT therapy for people traumatized by war (e.g. no psychological debriefing, more validation), cultivating compassion at the time of war, fostering resilience in the wake of traumatic events
- therapists and volunteers – focus on ways to provide concrete support at the time of trauma (e.g. Psychological First Aid)
- sufferers - focus on practical methods of relieving trauma and regaining control over life

All presentations are recorded in 3 languages (English, Polish and Ukrainian). A website platform was also created which makes the webinars easily available to therapists who work with trauma related problems (<https://amie.ppv-stream.pl/>).

The Ukrainian participants access the webinars for free. Others are requested to make a small donation to an NGO – KIK (<https://donate.kik.waw.pl/en>) that helps Ukrainians (eg. they evacuated several hundred of Ukrainian children with severe physical and intellectual disabilities from their orphanages homes in East Ukraine locating them in Poland).

#### RESULTS

Our program is a joint international input. Speakers offered their expertise, know how and reputation for free, and all the organizational work is also done for no costs.

Overall a several thousands of people took part in the online trainings (some of the Ukrainian specialists were watching from bomb shelters, for some this was the only contact from the outside world).

Therapists in both the Ukraine and Poland say that the program mean a lot to them. The webinars gave them a sense that they are not alone and tools to address while working with traumatized people.

The website serves now those impacted by the horrific earthquakes in Turkey and Syria.

#### DISCUSSION

In the face of catastrophe of such a monumental scale like war or earthquakes therapists need to get support to work at the point of distress and to support constantly increasing global refugee populations. It is important to look for new ways of meeting their needs. Our program demonstrates that this work can be very positive.

### The Co-Therapist Agreement

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#### BACKGROUND

Therapist behavior influences group cohesion and the outcome of group psychotherapy. The group members make firsthand observations of the therapists in action and experience the benefit or adversity from it. Recent studies have demonstrated the complexity of being a group leader and have suggested that the therapists must flexibly switch between different types of leadership behavior such as structuring behaviors and facilitation of the emotional climate in the group. In a recent study investigating co-therapist behaviors in CBT groups, the importance of the interaction between the two co-therapists was highlighted. The importance of this was underscored by the patients' investment in attempts to make meaning of their interplay when it was not harmonic. Therefore, the co-therapist relationship and leadership behaviors should be a part of the training of therapists delivering group therapy. Previous literature suggests the need for thorough preparation and a therapist contract - however, no such tool has been developed and tested empirically.

#### METHODS

Based on the findings in previous literature, the co-therapist agreement was developed. The co-therapist agreement is a dialogue tool for co-therapists starting up new groups. The agreement covers 8 themes: individual style, emotional engagement, steering of time and space, role and task division, adverse events, handling conflict in the co-therapist relationship, evaluation of the course and the co-therapist agreement and other. The therapist agreement was tested with 50 therapists working in the Danish Mental Health Services in 4 distinct workshops.

#### RESULTS

All therapists provided a written evaluation consisting of 8 items on a likert-scale and 9 open ended questions. The questions were centered around the utility, relevance, and satisfaction with the dialogue tool. All workshops ended with a collective discussion about the experience of using the tool. Finally, 8 pairs audio taped their practice sessions. The quantitative and qualitative data will be held together in a mixed methods analysis. The tool will be adapted based on therapist's feedback.

#### CONCLUSIONS

We will present the final tool and the results of its utility.

### **Assessing Student Clinical Psychologists' Self-Competence in CBT as Part of a Professional Training Programme in South Africa**

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Cognitive behavioural therapy (CBT), an evidence-based psychological treatment used to treat various mental health conditions, is included in the training of student clinical psychologists as part of their Masters in Clinical Psychology at most South African universities. On completion of their training, students are expected to demonstrate professional competencies to deliver treatment interventions using CBT, to patients, albeit under supervised practice. However, CBT is underutilized amongst practicing professionals in South Africa, and may be related to self-competence and also to adapting CBT to suit culture and context. The aim of this study was therefore, to explore student clinical psychologists' perceived self-competence, through self-reflection, to deliver CBT in practice following learning it in their training year at one South African university.

In this qualitative study we purposively invited all 8 clinical students in the 2022 cohort to take part in semi-structured interviews. Participants were interviewed in December 2022 by a trained research assistant. We conducted 5 out of 8 in-depth interviews and asked participants what their experience of the CBT training was like for them, what they thought was meant by a competent CBT therapist and if they felt competent to deliver CBT. We also asked participants to reflect on the feedback they had received on their CBT training over the past year.

Our preliminary findings demonstrate that student clinical psychologists perceived themselves as competent to deliver CBT during sessions with their patients and clients, and explained that this confidence stemmed from their perceptions of client improvement. Students reported feeling less competent and confident to deliver CBT following feedback on their sessions with clients and have explained that this is related to the manner in which feedback is provided. Students report that constructive feedback with clear guidelines on what they can do to improve their delivery of CBT may enhance self-competence. Our research, although limited at this stage, is beginning to provide important insight into the underutilization of CBT in South Africa. These findings are likely to enhance the training programme and promote the use of CBT in practice.

### **The Effectiveness of an Online-Training in Improving Chinese Counselors' Knowledge, Behavior, Confidence, and Attitudes for Evidence-Based Practice: A Randomized Controlled Trial**

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#### INTRODUCTION

Evidence-based practice (EBP) in mental health counseling refers to the integration of the best available research evidence, clinical expertise, and client values and preferences in the delivery of mental health counseling services (APA, 2006). EBP aims to ensure that mental health counselors make informed decisions about assessment, treatment planning, and intervention selection based on the most up-to-date and rigorous research rather than relying solely on intuition, personal experience, or tradition. Evidence-based practice is an effective way to ensure the quality and efficiency of treatment for patients (Oliver & McDaid, 2002). In recent years, psychological counseling in China has rapidly developed. However, counselors' awareness, understanding, and real-world usage of EBP are deficient. Specific training for psychological counselors to better understand and apply EBP in clinical settings are of great importance for laying a solid empirical foundation for the future development Chinese mental health service system. Moreover, EBP is also vital for providing services that are informed by the best available research evidence and improve the quality and effectiveness of care for clients. Thus, in this study, we designed an online EBP training course and examined its effectiveness in improving counselors' knowledge and behavior, confidence, and attitudes toward EBP with a randomized controlled trial.

#### METHODS

Counselors (N=186) through the Clinical and Counseling Psychology Registration System (CCPRS) platform and WeChat were recruited and randomly assigned to the EBP training, case study, and waitlist groups. The EBP training group attended a two-day online EBP training course for 16 hours. The case study group participated in a two-day online case discussion workshop. An online questionnaire were designed to assess the counselors' knowledge and behavior, confidence, and attitude toward EBP through the SurveyStar platform. These outcomes were assessed at baseline, post-intervention, 1 month, and 3 months after the intervention. The study was registered with the Chinese Clinical Trial Registry (ChiCTR2200060478).

#### RESULTS

Between July 2022 and October 2022, 186 counselors were enrolled, and 158 people completed the pre-intervention assessment, including 60 in the EBP training group, 47 in the case study group, and 51 in the waitlist group. Participants in both the training and case study groups showed increased knowledge, behavior, attitude, and confidence in EBP. Participants in the training group showed greater improvement in confidence than the case study group.

#### DISCUSSION

The EBP training and case study improved counselors' knowledge and behavior, confidence, and attitude toward EBP. However, facilitating EBP in counselors' routine practicals may need sustained work, such as specific evidence-based training and supervision.

### **Utilizing ChatGPT as a Tool for Supporting CBT Therapists' Training: A Mixed Method Analysis**

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Cognitive-behavioral therapy (CBT) is a widely used and effective form of psychotherapy that helps clients identify and modify negative patterns of thinking and behavior. However, despite the growing demand for CBT, there is a shortage of trained therapists, and those who are trained may lack resources and support to develop their skills further. One of the biggest challenges of implementing CBT is the ability of therapists to accurately conceptualize clients, plan for therapy, and modify the plan as the sessions progress. To address this challenge, we propose using ChatGPT, a large language model trained by OpenAI, as a tool for supporting CBT therapists' training. The objective of this research is to evaluate how well ChatGPT can conceptualize clients and plan for the therapy, and to assess its effectiveness as a training tool for CBT therapists. The current training methods for CBT therapists may involve attending workshops or courses, reading textbooks, and receiving supervision from experienced therapists. While these methods are valuable, they may be limited in their effectiveness. For example, attending workshops or courses can be costly and may not be accessible to all therapists, especially those in remote areas. Additionally, reading textbooks may not provide enough personalized support for therapists to apply CBT principles to their clients' specific needs. Supervision from experienced therapists can be a helpful support, but it can require more resources and may not be available to all therapists. To overcome these limitations, we propose using ChatGPT as a tool to support CBT therapists in their training. ChatGPT is a language model that uses machine learning to generate human-like responses to natural language inputs. It has been trained on a large corpus of text and has the ability to understand and respond to complex languages. Using ChatGPT, therapists can receive personalized support for their clients' specific needs, regardless of their location or level of experience. This study will use mixed method analysis with both quantitative and qualitative research methods. Participants will include licensed psychologists who will evaluate how well ChatGPT conceptualizes clients and plans for therapy. Quantitative data will be collected through a Likert-scale questionnaire, while qualitative data will be gathered through semi-structured interviews. Data analysis will include descriptive statistics, content analysis, and triangulation of the results. The findings of this research will contribute to the understanding of how ChatGPT can be utilized as a tool for training CBT therapists. This research will also provide insights into how therapists can use ChatGPT to improve their ability to conceptualize clients and plan for therapy. Ultimately, this research has the potential to improve the effectiveness of CBT therapy, which can positively impact the lives of individuals seeking mental health treatment. This research has the potential to address the current limitations of CBT training by providing a personalized and accessible tool for therapists. By utilizing ChatGPT as a training tool, therapists can improve their ability to conceptualize clients and plan for therapy, ultimately leading to better outcomes for their clients.

### **Exposure and Response Prevention and Danger Ideation Reduction Therapy in Long Standing Contamination Obsession Patients in India: An Open-Label Comparative Study**

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#### AIM

Psychological treatment of Obsessive Compulsive Disorder (OCD) typically involves Exposure and Response Prevention (ERP). Despite the success of ERP in alleviating the symptoms, there are some limitations, such as treatment refusal and relapses. Danger Ideation Reduction Therapy (DIRT) is a comparatively new, integrated therapy that has been uniquely developed for contamination obsession and washing compulsion. In this study, we aimed at comparing the efficacy of ERP and DIRT among long-standing OCD patients in India on core psychopathology and also on fear and disgust propensity that may be a maintaining factor in the obsession.

#### METHOD

OCD patients with predominantly contamination obsession were randomly allocated to one of two treatment conditions: DIRT (n=20) and ERP (n=20). Participants received 12 1-hour individual sessions and were assessed at pre-treatment, post-treatment, and one monthly follow-up with a set of questionnaires assessing OCD symptomatology, depression, anxiety, disgust propensity, and differential fearfulness. The subjective perception of fear and disgust was substantiated by biofeedback measures of Galvanic Skin Response (GSR), Electromyogram (EMG), and Heart Rate Variability (HRV).

#### SUMMARY OF RESULTS

Findings showed that both ERP and DIRT were effective in symptom reduction. There was no significant difference in OC symptoms, depression, and anxiety measures in both treatment groups. However, DIRT subjects experienced significantly greater after-treatment reductions in core disgust, contamination-based disgust, sex-moral disgust, and harm avoidance and disgust avoidance measures than ERP subjects. A similar finding was noted for the biofeedback measures. Both therapies had a similar effect on the follow-up measures, however, patients who received DIRT showed slightly greater maintenance (follow-up) measures of disgust sensitivity.

#### CONCLUSION

The findings suggest that DIRT and ERP may be equally effective in reducing core psychopathology; however DIRT seems to be more effective in reducing specific beliefs in threat perception and experience of acute disgust which may act as a maintenance factor in contamination OCD and therefore may produce better treatment outcomes and prevent relapse than ERP.

### **Efficacy of Cognitive Behavioral Group Psychotherapy With Religiously Extended Psychoeducation in Patients With Religious Obsessions and Compulsions**

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#### INTRODUCTION

“Scrupulosity” is a common; yet, understudied subtype of Obsessive Compulsive Disorder (OCD) defined by religious obsessions and compulsions. The type of OCD symptom varies according to the cultural context. Religious obsessions are more common in the Middle East and Latin America than in Western Europe (Tek & Uluğ, 2001). Compared to other subtypes of OCD, scrupulosity has its own difficulties (Buchholz et al., 2019; Deacon & Nelson, 2008). Creating frameworks suitable for the unique sensitivities of religious patients to overcome these difficulties; it is recommended that the existing treatments be reconsidered accordingly (Abramowitz, 2001; Huppert & Siev, 2010; Purdon & Clark, 2013; Siev & Huppert, 2017; Toprak, 2018). In this sense, a research conducted in Turkey proposes a psycho-educational model known as the “4T Model” (the first letters of the four cognitive levels in Turkish), which is developed by Toprak based on Islamic scholars’ conceptualizations of human psychological structure and, in particular, cognitive functioning and is applied in several case studies (Siev & Huppert, 2017; Witzig, 2017; Toprak, 2018; Huppert et al., 2007). Although, in cognitive therapy, cognition is explained with two concepts and without hierarchy as “image” and “thought”; 4T Model explains “image”, “suspicion”, “thought” and “belief-faith” as four concepts with hierarchical differences and defines cognitive functioning in terms of proximity to action and being non-volitional. The aim of this study is to investigate the effectiveness of Religious Psychoeducation -4T Model- Integrated Cognitive Behavioral Group Therapy in the treatment of religious obsessions and compulsions, to compare its effectiveness with the Cognitive Behavioral Group Therapy (CBGT) and to examine whether the 4T intervention provides a significant difference.

#### METHOD

This study was conducted with an experimental design. Yale Brown Obsessive Compulsive Scale, Brown Assessment of Beliefs Scale, Beck Depression Inventory, Beck Anxiety Inventory, Penn Inventory of Scrupulosity, Obsessive Beliefs Questionnaire and Thought- Action Fusion Scale were used as data collection tools. 32 OCD patients meeting the inclusion criteria were randomly assigned to two groups as, 4T Integrated CBGT and CBGT. Variables such as gender, education, medication and type of OCD as autogenous or reactive were controlled for.

In addition, written and verbal feedback was received from the patients at the end of the therapy sessions; however, this was not designed as a qualitative data collection method from the beginning.

#### RESULTS

The results of the study showed that both of the treatments were strongly effective in the treatment of OCD, and this effect continued during the 1-month follow-up period. Also, there was no significant difference between the two groups of treatment, except that implementation of 4T Model produced better insight with moderate effect. Considering the in-group effects, results showed that 4T Integrated CBGT was more effective in insight and obsessive beliefs, while CBGT was more effective in both general anxiety and religious obsessions/anxieties. During the weeks of the 4T intervention, it was found that 4T was more effective than CBT in obsessive and compulsive symptoms and depressive symptoms in addition to obsessive beliefs.

Patients’ verbal and written feedback support the quantitative findings that both treatments are highly effective, religious sensitivity in therapy has a positive effect, and the unique contributions of 4T provide a significant difference for patients, particularly in the



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explanation and interpretation of the cognitive processes.

## DISCUSSION – CONCLUSION

In conclusion, the fact that both treatments are effective in reducing obsessions and compulsions, as well as in reducing the severity of obsessive beliefs that cause these symptoms and increasing the level of insight, reveals two fundamentally important points: CBT is a powerfully effective treatment for OCD as well as for many psychopathologies. Religiously sensitive treatments are strongly effective in treating religious OCD symptoms.

### Experimentally Testing Variations in an Imagery Re-Scripting Protocol for Obsessive-Compulsive Disorder

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#### INTRODUCTION

Recent research suggests that imagery re-scripting holds promise as an adjunctive treatment for obsessive-compulsive disorder (Maloney et al., 2019; Tenore et al., 2020; Veale et al., 2015). A common protocol for imagery re-scripting targets aversive memories and introduces an older figure who intervenes to provide security and comfort (Arntz & Weertman, 1999). The target memory is typically chosen based on its relevance to a client's core schemas driving distress. The older figure meets emotional needs and provides a corrective view of self, taking a temporary attachment role. In contrast, alternative approaches have targeted episodic future imagery or nightmares, rather than memories, and focused on self-efficacy or more benign outcomes, rather than introducing an attachment figure (Kunze et al., 2019; Landkroon et al., 2022; Ovanessian et al., 2019; Rachman et al., 2015, p. 113). These variations might be helpful in flexibly applying imagery re-scripting to OCD given that intrusive imagery can relate to feared future actions or consequences, and not all people with OCD report related aversive memories (Cromer et al., 2007; Pinciotti & Fisher, 2022). Re-scripting episodic future imagery may be also simpler to facilitate when focusing on self-efficacy or more benign outcomes rather than introducing an older figure to a future image. The aim of this study was to experimentally test the effects of these variations on imagery experience, emotion, and beliefs among people high in OCD traits.

#### METHODS

The study was a 2 (past / future image) × 2 (self-efficacy / attachment) × 2 (pre-post) design. We used a survey platform (Prolific.co) to pre-screen and recruit adults in the UK who scored high in OCD traits (n = 250). Participants were randomised between two target imagery conditions (memories / episodic future imagery) and engaged in respective audio-guided imagery exercises to elicit and enhance target imagery. After completing baseline measures, participants were randomised between two re-scripting method conditions (self-efficacy / attachment). Before and after re-scripting, all participants completed measures to report their imagery experience (vividness, intensity, urge to neutralise), aversive emotions, and strength of beliefs regarding themselves represented in the imagery.

#### RESULTS

Participants who recalled an OCD-related memory reported higher anger before re-scripting than those who imagined episodic future imagery. There were no differences between target imagery for any other variables at baseline. On average, participants across all four conditions reported increases in state attachment security, and decreases in imagery vividness, intensity, urge to neutralise, aversive emotions, and strength of maladaptive beliefs. There were no differences in these results between target image (memory / episodic future imagery). Participants assigned to the attachment re-scripting condition reported greater increases in attachment security than those assigned to the self-efficacy re-scripting condition. There were no other differences in results between re-scripting methods (self-efficacy / attachment). However, there was one interaction effect involving target image and re-scripting method. Participants assigned to target episodic future imagery reported greater reductions in state anxiety when also assigned to re-script their imagery based on self-efficacy than those assigned to the attachment-based method.

#### DISCUSSION

Overall, these results suggest that re-scripting OCD-related imagery may yield beneficial effects, regardless of whether the target image is based in the past or future, and regardless of whether it invokes a temporary attachment figure or fosters self-efficacy. This online study was entirely automated using pre-recorded audio tracks and involved analogue versions of imagery re-scripting. However, it holds clinical relevance in suggesting there is no single way to facilitate imagery re-scripting for OCD. We tentatively suggest that clients may benefit from a flexible approach to re-scripting that is informed by their individual formulation, target imagery, and preferences. We are currently refining other aspects of this experimental research. Future research should seek to confirm these findings among a clinical OCD sample and examine their effects on symptoms.

### **Concentrated Group Treatment for Patients Suffering From OCD in Iceland**

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Obsessive-compulsive disorder (OCD) is a debilitating disorder that tends to run a chronic course (Koran et al., 1996). Effective treatments have been developed, particularly exposure and response prevention (ERP) and cognitive behaviour therapy (Öst et al, 2015; Skapinakis et al, 2016). Long term gains of those treatments have not been optimal however and there is some dropout from treatment (Sunde et al, 2017, Öst et al, 2015). The Bergen 4-day treatment is a highly concentrated format of ERP developed in Bergen, Norway, for patients suffering from OCD. It is delivered over four consecutive days in a group of 3-6 patients with the same number of therapists. Over 2000 OCD-patients have completed the treatment in Norway by now and the results are promising (Havnen et al, 2014; 2017). A recent study indicated that of 77 patients receiving the treatment, 73% fulfilled the international consensus criteria for remission posttreatment and 69% at four-year follow-up. The mean scores on the Yale-Brown Obsessive Compulsive Scale (YBOCS) changed from 25.9 at pre- to 10.0 post-treatment and 9.9 at long-term follow-up. Only one patient dropped out from treatment and the patients' satisfaction with treatment was high (Hansen et al, 2018). The current paper reports on the treatments first implementation outside of Norway. A total of 117 patients suffering from OCD have received the treatment at the Icelandic Anxiety Clinic and none has dropped out of treatment. The results are in line with the aforementioned studies, the patients scored 30,2 on YBOCS pretreatment, 10,8 posttreatment and 11.4 at one-year follow-up. These results will be presented, discussed and compared to the results of other studies.

### **The Inhibitory Learning Approach to Exposure and Response Prevention: A Case Series**

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#### INTRODUCTION

Cognitive behaviour therapy (CBT) comprising exposure and response prevention (ERP) is the first-line treatment for OCD, along with serotonin reuptake inhibitors (SSRIs). A substantial number of patients fail to achieve clinically significant symptom relief from traditional exposure-based therapies. This has led to studies to determine how the effects of ERP can be optimised. Employing principles of Inhibitory Learning (IL) such as expectancy violation, variability, deepened extinction, labelling of affect and removal of safety signal as the core mechanism of extinction can help in achieving a favourable long-term outcome in OCD. The goal of inhibitory learning-based exposure is to maximise the likelihood of new non-threat associations formed during ERP, inhibiting retrieval of older threat associations.

#### AIM

This case series, examines the application of Inhibitory learning-based techniques in Exposure response prevention therapy for patients with OCD.

#### METHODOLOGY

A clinical case study approach has been adopted. The sample consists of (n=4) patients with a primary diagnosis of OCD as per DMS 5 with (age: M = 29) recruited from the outpatient department of a tertiary care hospital and was measured on YBOCS at baseline and post-intervention. Each patient has received IL-based ERP sessions ranging from 10-14. Functional analysis has been used to understand OCD and related behaviour.

#### RESULTS

On Y-BOCS, the baseline scores were 26, 21, 26 and 19, respectively, for the four patients. Detailed results and discussion will be presented during the presentation, highlighting the application of IL-based techniques, planning and preparing patients for exposure, and challenges in implementing the IL-based techniques. Clinical implications will be discussed, with the present study providing preliminary evidence of IL based ERP for patients with OCD.

## A Randomized Controlled Trial of Cloud-based Instant Messaging i-ACT For Life for At-Risk Young Adults during the COVID-19 Pandemic

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**Introduction:** The global prevalence of mental health issues in the general population has increased significantly since the start of the COVID-19 pandemic.<sup>1</sup> In Malaysia, a majority of those affected are university students<sup>2</sup>. Acceptance and Commitment Therapy (ACT) heavily features cognitive behavioral and mindfulness strategies, both of which have been emphasized for use during the pandemic<sup>3,4</sup>. Past research has shown that religio-spiritual integrated psychological treatments have resulted in more significant psychological and spiritual improvements.<sup>5,6,7</sup> With rising psychological concerns amidst the pandemic, efforts are needed to preserve the mental health of at-risk populations. Furthermore, the pandemic has challenged the ways of modern healthcare delivery, and remote methods of delivering evidence-based mental healthcare are more important now than before.<sup>4</sup> **Objective:** The present study examined the effectiveness of i-ACT for Life, a cloud-based instant messaging ACT-integrated with an Islamic spiritual prevention program to reduce psychological distress among at-risk young adults in Malaysia during the COVID-19 pandemic. **Method:** The study was preregistered at ClinicalTrials.gov (NCT04870385). Purposive sampling was used to recruit university students studying in Malaysia (N=93, 78% female) aged 18-29 years old. The adapted WHO ACT-based module with the elements of Islamic spirituality was used. The prevention program comprises five weekly modules (Grounding, Unhooking, Acting on Values, Being Kind, and Making Room). Each corresponded to an ACT core process and was supplemented with Qur'ānic verses, Hadīth, religious/spiritual activities, and spiritual-relevant poems. The program was designed for delivery through cloud-based instant messaging platforms. Participants were randomized to either receive the prevention program (n=46) or be wait-listed (n=47), and were asked to complete assessments at pre-intervention, mid-intervention, post-intervention, and 1-month follow-up. The outcomes assessed were anxiety, stress, depression, self-compassion, psychological flexibility, and resilience. **Results:** Intention-to-treat analyses using Last Observation Carried Forward reported significant between-group effects at post-intervention and follow-up ( $p < .05$ ), and a significant overall effect of time across the four-time points ( $p < .001$ ), for all the outcome measures. Observations of participants' reflections on the Islamic spirituality elements are generally positive. **Conclusions:** Findings suggest that the i-ACT for Life web-based prevention programs effectively preserve the mental health of Muslim young adults in Malaysia during the pandemic. The program was also found to support the integration of Islamic spiritual elements into traditional cognitive-behavioral and mindfulness techniques in improving the acceptability of mental health interventions. Future studies are encouraged to digitalize the module and its effectiveness is examined among different populations.

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## Effectiveness of Behavioral Activation Approach for Children Considering Declaration of a State of Emergency due to COVID-19

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Children are reported to have had high rates of stress reactions such as depression and anxiety during the COVID-19 pandemic (Samji et al., 2022). The COVID-19 pandemic enforced behavioral restrictions such as school closures and staying at home to combat infection. The stressors associated with the pandemic were essentially difficult to cope with and the coping strategies used thus far were less feasible. As such, the stress management skills learned thus far may not be sufficient for coping with stress. Therefore, in this study, we considered whether stress-coping strategies are feasible in both behaviorally restricting situations and normal life situations. The purpose of this study was to implement a behavioral activation approach in a group of upper elementary school children and determine its effectiveness in behavioral activation/behavioral inhibition (Kasch et al., 2002) and depression.

A total of 91 participants (54 fifth-grade students and 37 sixth-grade students) were included in the study. The target school was an elementary school in Chubu region. The study consisted of a questionnaire survey at Pre in May 2020, the intervention in June 2020, and a questionnaire survey at Post in June 2020. At the same time, a state of emergency was declared in Tokyo. The intervention was implemented in one 45-minute class slot. Specific procedures were based on Koseki et al. (2016), and work was conducted to create a list of pleasant activities and an implementation plan, adding an evaluation perspective of whether the activities could be implemented in life situations outside school, such as at home.

Results of a linear mixed model with DSRS score as the dependent variable showed a significant decrease from Pre to Post ( $\beta = 1.19$ , 95% CI 0.60 to 1.77,  $p = .00$ ). Results of a linear mixed model with BAS scores as the dependent variable showed an increasing trend from Pre to Post ( $\beta = -0.97$ , 95% CI -2.01 to 0.08,  $p = .07$ ). Results of the linear mixed model with BIS score as the dependent variable showed a significant decrease from Pre to Post ( $\beta = 0.89$ , 95% CI 0.26 to 1.50,  $p = .01$ ). Pleasurable activities listed on the worksheet included drawing, reading books, and working on a timetable of participants' choice.

Results of this study indicate improvements in BAS and BIS and a reduction in depression. Therefore, the intervention program implemented in this study, which considered feasibility in behaviorally restricting situations, was effective in reducing children's stress, and described a behavioral pattern to break the vicious cycle that maintains and worsens depressed mood and brings about a virtuous cycle. Each child then searched for pleasurable activities. When examining the action plans, we evaluated feasibility of activities by dividing them into those that could be performed at school or when going out, and those that could be performed even in a behavior-restricting situation. Thus, the children themselves may be able to learn pleasant activities that can be performed in various situations by being reminded of the specific life situations they actually face.

### **What Aspects of the Pandemic Had the Greatest Impact on Adolescent's Mental Health: Duration of Lockdown or Subjective Experience?**

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#### INTRODUCTION

The COVID-19 pandemic had a negative impact on the mental health of adolescents; however, research shows heterogeneity across countries and regions. This is unsurprising, as public health measures (e.g., social-distancing, stay-at-home orders, closure of schools, etc) were implemented differently across countries. In Australia, public health orders enforced during the pandemic were strict relative to other nations. Between 2020 and 2021, Melbourne experienced the world's longest lockdown (nearly nine months) and in Sydney, residents were in lockdown for five and half months. To our knowledge, no studies have investigated how the duration of time spent in lockdown impacted mental health in adolescents, taking into account adolescents' subjective experiences and individual characteristics. This study explores how the duration of time spent in lockdown and subjective experiences of the pandemic impacted the mental health and well-being of a cohort of Australian adolescents in 2021-2022. Individual and contextual mediating factors are examined to understand the risk and protective factors associated with mental health outcomes due to the pandemic. Subgroup differences (i.e., gender, socioeconomic status, culturally and linguistically diverse, LGBTQ+) are examined to determine if certain groups of adolescents were more vulnerable to poorer mental health outcomes than others.

#### METHODS

Data were collected from a subsample of adolescents (N=2605, Mean age=14.07) participating in an Australian cohort study of mental health. [1] Participants completed questionnaires on two occasions: T1 in Oct-Dec 2021 and T2 in Oct-Dec 2022. T1 measures included: mental health and wellbeing; individual and contextual variables (demographics, social support, school connectedness, sleep, screen time, substance use); subjective experience of the pandemic on school, family and social relationships; and length of COVID-19 lockdown experienced (determined from public health orders and home postcode). T2 measures included a follow-up assessment of mental health and wellbeing 12 months later. Regression analyses will examine the association between duration of lockdown and subjective experience of the pandemic on mental health and wellbeing at T1 and T2. Mediation analyses will identify whether individual and contextual factors indirectly affect associations between lockdown duration and subjective experience of the pandemic on mental health and wellbeing at T1 and T2.

#### RESULTS

Analyses are currently underway and will be completed by April 2023.

#### DISCUSSION

This study investigates the short- and longer-term impacts of the COVID-19 pandemic on adolescents' mental health and wellbeing and explores which aspects of the pandemic were most detrimental: length of time spent in lockdown or subjective experience. Findings from this study will inform public health policy and clinical practice by (1) identifying how the length of stay-at-home orders affected adolescents' mental health, and (2) by identifying subgroups of vulnerable adolescents who experienced poorer mental health due to the pandemic. This will help to guide allocation of health resources and inform where best to target intervention and treatment efforts for future public health emergencies. It will also make a large contribution to ensure mental health is integrated into future pandemic planning, interventions and recovery, address social determinants of health, and advocate for vulnerable groups who are experiencing health inequity in such a crisis.



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### **Evaluation of a Low intensity Cognitive Behavioural Therapy (Li-CBT) Classroom-Based Universal Mental Health Prevention Program for Thai University Students During Covid Outbreak in Thailand**

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#### INTRODUCTION

It is necessary for Thai society to develop classroom-based universal mental health prevention program to assist university students in dealing with mental problems during the coronavirus crisis. Li-CBT classroom-based universal mental health prevention program has been proved to be effectiveness with university students in other countries. To date, no study has examined the effectiveness of an evidence based psychological intervention known as a Low intensity Cognitive Behavioral Therapy in Thai university students. The aim of this study is to evaluate the effectiveness of Li-CBT classroom-based universal mental health prevention program titled "Identifying 5 parts, exploring hot thought before restructuring thought Lesson in dealing with mental health problems" through

#### METHOD

A quasi-experimental research in one group with a post-test. The primary outcome variables for assessing 4 cognitive skills: cross sectional formulation (exploring the interactions between a situation, thoughts, emotions, body sensations and behaviors), hot thought identification, distortion identification and cognitive restructuring by using weekly change assessment for 7 weeks. The sample size of the study consisted of worksheets on using cognitive skills made by 203 university students who enrolled in a Health psychology course. Descriptive analysis and Multilevel analysis to analyzed changes over time (7 times) of all cognitive skills. The lessons to develop cognitive skills consisted of 4 components: cross sectional formulation, hot thought regulation, distortion identification and cognitive restructuring. All lessons are delivered in 4 sessions at 2 hours per session.

#### RESULTS

There was a significant higher abilities levels of using cognitive restructuring skills demonstrated in university students. Furthermore, the best predictor of change in cognitive restructuring skill abilities was hot thought identification.

#### DISCUSSION& CONCLUSION

This is the first classroom trial conducted in Thailand evaluating the efficacy of a Li-CBT classroom-based universal mental health prevention program for assisting university students to develop abilities in using cognitive skills with mental problems. Results provide preliminary support that a brief lesson of Li-CBT assists university students in changing the ability level to use cognitive restructuring with statistical significance. Therefore, it represents another resource effective classroom-based universal mental health prevention program in Thailand.

### **An Open Ended Study To Overcome Treatment Failure Caused by Avoidance**

Nimrod Essar, [Nir Essar\\*](#)

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A substantial percentage of people treated for anxiety fail to adhere to CBT protocols. In a meta-analysis, the average weighted dropout rate was 15.9% at pretreatment, and 26.2% during treatment[1]. Part of this 42% attrition was due to avoidance of thinking about an anxiety provoking word or idea.

We have developed an online treatment, called Stop Choking (SC) for self-treatment of suffocation anxiety. It consists of more than a hundred films arranged in 16 chapters that explain and very gradually expose sufferers to apnea and apnea with strenuous exercises. Suffocation anxiety is a feeling of not having enough air to breathe. During an attack of suffocation anxiety, the person is sure that he is going to suffocate and die or that he will not be able to outlive the anxiety itself.

The feeling of anxiety is inherent in each of us stems from a survival instinct, and in emergencies it saves lives - therefore it paralyzes any thought or action that does not meet the goal of survival. But what happens when anxiety attacks in non-emergency situations? No change. A person experiencing a suffocation anxiety attack will stop all his normal activities even if they are very important, because anxiety overcomes everything else. This is a situation in which we act as if we were exposed to some kind of danger, even when we are safe. Suffocation anxiety can accompany most anxiety disorders, but it can also appear alongside OCD, psychosis, and post-traumatic stress disorder[2]. Suffocation anxiety may often accompany day-to-day tensions, such as: fear of making a mistake, fear of poor decision-making in the personal or professional sphere, fear of failure, dealing with various social situations, and more. SC's aim is to separate the anxiety response from the body feelings of shortness of breath.

Twenty CBT therapists were given the opportunity to try to propose SC to patients who dropped from treatment due to avoidance. The second requirement was that one of the symptoms was shortness of breath. Therapists filled a questionnaire about their experience along with assessing patients using the Patient Health Questionnaire-4 (PHQ-4). The scale was filled three times, before treatment, during treatment and after treatment.

We will report about the percentage of patients who returned to conventional CBT after completion of the SC protocol, and the measures needed by the therapists to help patients implement this self-help protocol.

This is a preliminary study made to demonstrate the concept that patients who dropped out of treatment many times resenting the therapist, may be rescued and made return to CBT treatment by the same therapist. It is imperative to enlarge the sample and that the researchers be other than the authors of the SC method.

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## Maximizing the Efficacy of Digital Cognitive Behavioral Therapy for Panic Disorder and Agoraphobia: A Systematic Review Focusing on Interoceptive Exposure, Inhibitory Learning, and Personalization

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### INTRODUCTION

For panic disorder and agoraphobia, cognitive behavioral therapy (CBT) conducted in the digital format is known to be as effective as traditional CBT, but previous meta-analyses (e.g., Fodor et al., 2018; Stech et al., 2020) had considerable heterogeneity in the clinical effect of digital CBT. We expected that such heterogeneity can be unraveled by different clinical factors included. Factors that can change the clinical effectiveness of digital CBT include interoceptive exposure, inhibitory-learning-based intensive exposure (Craske et al., 2008, 2014), and personalized or individually tailored contents based on transdiagnostic approach or precision medicine (Češková & Šilhán, 2021; Smits et al., 2019).

### METHODS

Randomized controlled trials of digital CBT targeting panic/agoraphobia with passive or active controls were included. Studies were identified in OVID Medline, Embase, Cochrane Trials, and PsycINFO. The clinical factors of interoceptive exposure, inhibitory-learning-based exposure, and personalization were dichotomously (applicable or not applicable) assessed by two different raters along with other study characteristics. The overall effects of digital CBT compared to passive and active controls were estimated with their heterogeneity statistics. The stepwise meta-regression models (frequentist and Bayesian) considering the hypothesized clinical factors and other study characteristics were adopted for subgroup analysis. Cochrane's Risk of Bias was assessed. Publication bias was estimated by Egger's regression tests and trim-and-fill analyses.

### RESULTS

Of a total of 1,120 records identified, 31 studies ( $k = 23$ ,  $n = 1,326$  for passive control;  $k = 13$ ,  $n = 663$  for active control) were reviewed. The studies of digital CBT had the overall effect sizes and their heterogeneity of  $g = 0.70$ ,  $I^2 = 52.65\%$  against passive control and  $g = -0.05$ ,  $I^2 = 1.01\%$  against active control. The heterogeneity was reduced to  $I^2 = 0.00\%$  for both types of controls in the meta-regression models. Interoceptive exposure improved the clinical effects for both controls (unstandardized  $B = 0.38 - 0.44$ ), and for passive control only, inhibitory-learning-based exposure ( $B = 0.63$ ) and personalization ( $B = 0.27$ ) increased the clinical effects along with therapist guide/support ( $B = 0.60$ ) and the length of treatment sessions. Many studies were vulnerable to therapist bias and attrition bias. No publication bias was detected.

### CONCLUSION

The heterogeneity in clinical effects of digital CBT for panic and agoraphobia can be explained by their different clinical components included. For effective CBT in digital fields, therapists should care about the clinical factors pertinent to the effectiveness of treatment.

### **Re-encountering the Feared Situation Shortly After a Reconsolidation Intervention for Spider Phobia Is Critical To Trigger a Lasting Fear Reduction**

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#### INTRODUCTION

Memory reconsolidation interventions offer an exciting alternative to exposure treatment because they are thought to reduce fear through a fundamentally different mechanism: instead of forming a new inhibitory memory, disrupting reconsolidation targets the (affective value of the) fear memory directly. This has the potential to prevent relapse. Our research group translated findings from human fear-conditioning studies on memory reconsolidation interference to fears acquired outside of the laboratory. Individuals with sub-clinical spider fear who received propranolol after a memory reactivation procedure with a tarantula transformed their fearful avoidance into approach behaviour, whereas individuals who received placebo did not (Soeter & Kindt, 2015). Interestingly, self-reported spider fear did not initially decrease, but followed the behavioural transformation later (i.e., 'cognitive' changes). In this pre-registered randomized controlled trial, we first aimed to conceptually replicate the placebo-controlled reconsolidation intervention by Soeter and Kindt (2015), extending it to individuals who meet the DSM-5 diagnostic criteria for spider phobia. Second, we aimed to investigate whether re-encountering the feared situation after treatment is necessary to trigger cognitive changes in fear. If so, we tested whether there is a time-limited window after the reconsolidation intervention during which a reduction in fear can be triggered.

#### METHODS

Individuals with clinical spider fear (N = 69) were randomized into three groups (double-blind) and underwent treatment. The treatment involved a memory reactivation procedure with a tarantula that aimed at destabilizing the fear memory, followed by propranolol to interfere with reconsolidation (i.e., reconsolidation intervention) or placebo. The Propranolol and Placebo groups re-encountered spiders two days later in the form of spider behavioural approach tasks (BATs), whereas the Propranololdelayed BAT group re-encountered spiders after four weeks. Avoidance behaviour and self-reported spider fear were followed for three months and re-assessed one year later.

#### RESULTS

We found less avoidance behaviour towards a tarantula two days after the reconsolidation intervention compared to placebo and this effect was maintained one year later. As predicted, re-encountering spiders after treatment was critical to initiate a reduction in self-reported spider fear (i.e., cognitive changes). Unexpectedly, self-reported spider fear in the Placebo group decreased as well, but over the course of one year the Propranolol group reported less spider fear than those who received placebo. Strikingly, the reconsolidation intervention only resulted in a strong decrease in self-reported spider fear when the behavioural test followed two days after treatment (Propranolol group), whereas re-encountering spiders in the form of BATs just four weeks later (Propranololdelayed BAT group) did not initiate a reduction in self-reported spider fear.

#### DISCUSSION

Memory reconsolidation interventions are thought to work through a fundamentally different mechanism than exposure treatment by weakening fear memories directly. Our findings support that they have the potential to prevent relapse. However, re-encountering the feared situation after treatment is critical to trigger a lasting fear reduction, and the window of opportunity to initiate this change is time limited. These findings challenge the idea that disrupting reconsolidation is sufficient to prevent relapse. The experience of a behavioural change shortly after a reconsolidation intervention seems necessary to observe a long-lasting treatment effect.

# OPEN PAPERS

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Please find the pre-registration on the Open Science Framework web page of this study: [https://osf.io/rj5nf/?view\\_only=cf47aa01eb264817bda7c18596aab7e6](https://osf.io/rj5nf/?view_only=cf47aa01eb264817bda7c18596aab7e6)

### Exposure-Based Cognitive-Behaviour Therapy Modifies Functional Connectivity Networks in Panic Disorder

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#### INTRODUCTION

Successful CBT for anxiety disorders has widely been associated with changes in brain activity using task-based functional magnetic resonance imaging (fMRI). However, it is unknown whether these neural effects only reflect an acute manifestation of behavioural changes in response to a specific task, or whether CBT can modify neural networks more substantially in the absence of a task. To investigate this question, resting-state functional connectivity (rsFC) can be used, which explores task-independent neural networks sharing a common time-course of spontaneous brain activity fluctuations.

The aim of this study was to characterise changes of rsFC networks in panic disorder, to then explore their modulation by ultra-brief exposure-based cognitive-behaviour therapy (CBT). Based on current literature on aberrant rsFC patterns in anxiety patients, we expected rsFC changes in the default-mode-network (DMN; self-referential processing), salience network (SN; emotional processing) and executive network (EN; executive processing) in response to CBT.

#### METHODS

Using a waiting-list control design 30 unmedicated patients with panic disorder were randomized to a treatment group versus waiting group, and were compared to 15 matched healthy controls without a history of any psychiatric diagnosis. Treatment consisted of an ultra-brief exposure-based CBT with a weekly session over 4 weeks. rsFC networks were analysed using a whole-brain, data-driven independent component analysis with dual regression, which identified the a-priori brain networks and further divided the DMN into two sub-networks: the primary DMN and a separate precuneus network (pDMN). To test for significant group differences, we used FSL permutation-testing tool 'randomise' with 5000 permutations and a p-value of < 0.05 corrected for multiple comparisons using threshold-free-cluster-enhancement correction.

#### RESULTS

Overall, untreated patients showed higher rsFC within the DMN, pDMN and SN in comparison to healthy controls. CBT treatment seems to normalise these aberrations as treated patients did not differ from healthy controls and show the opposite pattern compared to untreated patients, i.e. lower rsFC in the DMN, pDMN and SN.

In particular, untreated patients show rsFC aberrations in overlapping brain regions compared to both healthy controls and treated patients, i.e. higher rsFC of the precuneus to other areas within pDMN, and higher rsFC of the lateral occipital cortex to other areas of the DMN. In addition, untreated patients show rsFC aberrations in distinct brain regions compared to healthy controls and treated patients. Untreated patients compared to healthy controls showed increased rsFC between the SN, hippocampus and parahippocampus, as well as an increased rsFC between the pDMN, insula and caudate. Compared to treated patients, untreated patients showed an increased rsFC of the SN and the dorsomedial prefrontal cortex. There were no effects in the EN.

#### DISCUSSION

Panic disorder seems to be characterised by changes in neural networks relevant for self-referential processing (DMN, pDMN), emotional processing (SN) and interoception (increased rsFC between pDMN and insula). On the other hand, there were no differences in executive brain networks (EN). While ultra-brief CBT treatment seems to normalise these aberrations, it remains to be investigated in a longitudinal study whether this is a casual relationship and whether changes in rsFC can be used to predict CBT response.

#### CONCLUSION

Our results provide first mechanistic insights of early CBT effects in task-independent neural networks and suggest that one mechanism of action in panic disorder might involve the normalisation of elevated rsFC in networks relevant for interoception, self-referential processing and emotional processing.

### The Importance of Symptom Reduction for Functional Improvement After CBT for Anxiety and Depression: A Causal Mediation Analysis

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#### BACKGROUND

Routine outcome monitoring of symptoms during cognitive behavioral therapy (CBT) has become more common. Still, the usefulness of symptom outcome measures as a quality indicator for service performance is not without controversy. One issue may be to what extent symptom outcomes have carry-over value for other relevant outcomes. So far, few high-quality studies have examined this matter. The aim of the study was to investigate whether intervention effects on symptoms and functioning at 12-month follow-up were mediated by intervention effects on these outcomes at 6-month follow-up.

#### METHODS

Participants with anxiety and/or mild-to-moderate depression were randomly assigned to the Norwegian version of Improving Access to Psychological Therapies (IAPT; n=459) or treatment-as-usual in primary care (n=215). Main outcomes were depressive symptoms (Patient Health Questionnaire, PHQ-9), anxiety (Generalized Anxiety Disorder scale, GAD-7), and functioning (Work and Social Adjustment Scale, WSAS). Outcome data were collected prior to randomization and at 6- and 12-month follow-up. Separate models were estimated for respectively symptoms of depression and functioning as outcomes, and symptoms of anxiety and functioning as outcomes. Parallel mediation models were used to determine to what extent the intervention effects on symptoms and functioning at 12-month follow-up were mediated by intervention effects on these outcomes at 6-month follow-up. Direct/indirect effects were derived using the potential outcomes and counterfactual framework, and were adjusted for relevant baseline variables and exposure-mediator interactions. Sensitivity analyses with regard to missing data assumptions were also conducted.

#### RESULTS

The controlled intervention effect on functioning at 12-months (Cohen's  $d = .41$ ) was largely explained by intervention effects at 6-months on depressive symptoms (51%) and functioning (39%). The controlled intervention effect on depressive symptoms at 12-months (Cohen's  $d = .72$ ) was largely explained by the intervention effect at 6-months on depressive symptoms (70%), but not by functioning at 6-months. The controlled intervention effect on anxiety at 12-months (Cohen's  $d = .59$ ) was only partly accounted for by intervention effects at 6-months on anxiety (29%) and functioning (10%). Considering all three outcome variables simultaneously did not substantially alter the results, and the findings were robust to missing data assumptions.

#### CONCLUSIONS

Our results suggest that late intervention effects of CBT on functioning were to a substantial degree explained by earlier intervention effects on depressive symptoms even after accounting for earlier effects on functioning. Our results support the importance of symptoms as an outcome in the context of CBT delivered in primary health care, in particular symptoms of depression.



### **Beyond Routine Outcome Monitoring: The Case for Theory-Driven Standardized Assessment**

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Evidence-based psychological practice involves assessment with validated, standardized tools to gather reliable information about symptoms and functioning. However, many practitioners do not routinely use them (Ionita and Fitzpatrick 2014; Jensen-Doss et al. 2018; Revill et al. 2022). While time constraints and administrative burden are important barriers, these are being addressed with computerized platforms. However, the clinical “value-add” of standardized assessments remains a frequently cited concern by practitioners (Lewis et al. 2019; Chung and Buchanan 2018). Indeed, a recent meta-analysis found benefits of outcome monitoring are small and fade after one-month follow-up (de Jong et al. 2021). This presentation argues that it is not enough to know where a client is to know where they need to go to achieve their treatment goals. A theory-driven approach to standardized assessment can address this and is needed to move the field forward. Theory informs what aetiological factors and mechanisms of change should be measured, as well as how to meaningfully synthesize the vast array of assessment data to formulate an individual treatment plan. This presentation will outline a series of studies utilizing a theory-driven approach to standardized assessment in substance use disorder treatment employing a custom-built, freely-available platform: iAx (Gullo et al. 2020). This theory-driven approach has led to improved outcomes in the treatment of alcohol ( $d = .38, p < .001, N = 313$ ) and cannabis use disorder ( $d = .49, p = .03, N = 87$ ) beyond those obtained from treatment utilizing “assessment-as-usual.” A pilot study in stimulant use also found promising effects ( $+0.90$  SD,  $N = 55$ ). While the focus is on substance use treatment, the goal of the presentation is to demonstrate that such a theory-driven approach could be applied to any clinical problem using any software.

### **Leveraging the Digital Platform To Track CBT Outcomes in a Large-Scale, Multi-Site Integrated Primary Care Program**

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#### INTRODUCTION

Mental health conditions are common, costly, and treatable, often presenting much earlier in their course of illness within primary care settings. Integrated Behavioural Health (IBH) programs are specifically designed to improve access to mental health services, including evidence-based cognitive behavioural therapy (CBT), right at the point of care. An important element in ensuring quality, sustainable IBH programs is the implementation of a mechanism to track treatment outcomes. The aim of the proposed paper is to describe how we designed and implemented a digital solution for a CBT treatment outcomes database for our IBH programs spread across 22 primary care clinics located in Minnesota, Wisconsin, Iowa, Arizona, and Florida.

#### METHOD

In 2014, key stakeholder interviews were conducted to assess relevant variables to consider in tracking outcomes for our IBH program that serves both adult and pediatric populations. Emphasis was placed on identifying and operationalizing evidence-based CBT interventions, utilization of mental health services, and age-appropriate patient self-report measures. Furthermore, maximizing user efficiency when interfacing with the online tracking platform was prioritized. In 2017, our medical centre transitioned to a unified electronic health record which required our team to make further adaptations to the tracking database to enhance efficiency and consistency with data capture.

#### RESULTS

To date, a total of 16,923 adults and 6,298 children have been enrolled in this tracking database across our IBH programs (updated data will be included; Craner et al., 2017; Roche et al., in press), including 29,301 and 11,331 individual CBT sessions for adults and children, respectively. In addition to patient demographics and clinical characteristics (e.g., age, mental health diagnoses), we are also assessing psychotherapy outcomes (e.g., average number of sessions, length of treatment), CBT principles used in session (e.g., exposure, behavioural activation, cognitive challenging, motivational engagement), mental health service utilization (e.g., 6-months prior to IBH engagement, services recommended and accepted during their course of IBH care), and measurement-based outcomes on self-report questionnaires (e.g., % reaching reliable change, response, remission on the PHQ-9 and GAD-7). The transition to the unified electronic health record allowed our team to make several innovations in designing clinical templates to automatically capture outcome variables for our database.

#### DISCUSSION

A technological solution was necessary to design and implement a large-scale CBT tracking database across our primary care IBH programs (Sawchuk et al., 2020). Data from this registry has allowed us to report on our outcomes to support service growth efforts, quality improvement projects, educational initiatives, and research endeavours. Future efforts to link this large-scale database with other clinical and epidemiological databases within our health system will be discussed.

### Enhancing the Utilization of mCBT: A Digital Phenotyping Approach for Predicting Depression

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#### INTRODUCTION

In the field of mHealth (mobile health), CBT (Cognitive Behavioral Therapy) is the most frequently applied treatment method for diverse mental disorders including depression. Typically, a pre-made set of treatment programs is applied to all users. This one for all approach is practical and cost-effective yet does not account for individual differences in terms of response to treatment. Efforts have been made to identify factors affecting responses to treatment, which is rather challenging due to difficulties in disentangling complex interactions among various factors affecting responses to treatment. Recently, digital phenotyping (DP), which involves collecting passive sensor data from smartphones and generates machine learning algorithms to explain human behaviors, has gained attention as a promising approach to monitor as well as predict depression. In this study, as a first step, a prediction model for depression using DP was generated, which could be used for decision-making for when and whom to use mCBT.

#### METHOD

Participants were 299 adults aged from 20s to 60s (mean age = 31 years; SD = 8.83; males = 126, females = 173) and their data were collected from 3 to 6 months. For active data, which was served as ground truth for model training, data was obtained from Ecological Momentary Assessment (EMA) surveys, utilizing PHQ-9(Patient Health Questionnaire-9), completed by for three times a day at three-day intervals over the data collection period. For passive data, 14 sensor data from each participant's smartphone was collected via the data collection application. Next, the feature data were extracted after the pre-processing, which includes eliminating features with more than 70% missing data, replacing outliers with mean values, oversampling the minority (depressed) group, undersampling the majority (non-depressed) group, and normalizing all features using MinMax scaling. The final dataset consisted of 7,721 EMA records and 285 features. To find the best prediction model, various machine learning algorithms, including logistic regression, KNN, SVM, random forest, LightGBM, and XGBoost, were applied to the data.

#### RESULTS

The final model showed the potential of DP in predicting depression with the best performance with XGBoost algorithm, achieving an accuracy of 0.85, recall of 0.62, specificity of 0.90, and an AUC of 0.76 after 10-fold cross-validation.

#### DISCUSSION

The findings showed the potential of the DP data to predict depression, allowing for more targeted delivery of CBT interventions based on individual differences. This approach could enable to improve treatment response and enhance the utilization of mCBT. However, further research is needed to determine the effectiveness of this method and develop strategies for integrating DP into existing mCBT interventions.

### **Which Client With Generalized Anxiety Disorder Benefits From a Brief Mindfulness App Versus a Self-Monitoring App? A Machine Learning Analysis**

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Harnessing precision medicine methods such as machine learning (ML) can identify which clients with generalized anxiety disorder (GAD) benefit from mindfulness ecological momentary intervention (MEMIs) versus self-monitoring placebos (SMPs). This project used data from a randomized controlled trial of a MEMI versus SMP for GAD, tested eight ML models, and utilized the best-performing ML models to predict one-month follow-up (1MFU) reliable improvement in perseverative cognitions (PC), trait mindfulness (TM), and executive function (EF). Baseline predictors included specific factors within global PC, TM, EF, and sociodemographic domains. Bee swarm plots based on the SHapley Additive exPlanation (SHAP) approach facilitated interpretation of the relative importance of each potential prescriptive predictor and direction of association between the predictor and outcome. Following recursive feature elimination, the final models for determining prescriptive predictors of the three primary clinical outcomes showed excellent performance (area under the receiver operating characteristic curve (AUC) = 0.809 to 0.997). Higher inhibitory dyscontrol, dwelling on the past, older age, lower discordant thoughts, and verbal fluency predicted better likelihood of pre-1MFU reliable improvement in global PC with MEMI (versus SMP). Higher expecting the worst, working memory, verbal fluency, dwelling on the past, and lower nonjudgment predicted increased probability of pre-1MFU reliable improvement in trait mindfulness with MEMI (versus SMP). Lower nonjudgment, EF errors, inhibitory dyscontrol, and higher thoughts discordant with ideal self and non-reactivity predicted greater probability of pre-1MFU reliable improvement in EF with MEMI (versus SMP). Predictive models may optimize MEMI for clients with GAD by prioritizing this digital intervention to those who benefit most from it based on their pretreatment PC, TM, and EF profiles and prime treatment targets.

### **Demonstration of a ‘Leapfrog’ Trial as a Method To Accelerate the Development and Optimization of Psychological Treatments**

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#### INTRODUCTION

Given the scale of the global mental health burden we need much more time- and resource-efficient methods for the development, testing, and optimization of psychological treatments. The ‘leapfrog’ trial design (Blackwell et al., 2019) is a newly-developed simple Bayesian adaptive trial design with potential to accelerate treatment development. We aimed to conduct a first leapfrog trial to provide a demonstration and test feasibility (Blackwell et al., 2022).

#### METHOD

The leapfrog design was applied to a cognitive training intervention aiming to reduce anhedonia, imagery cognitive bias modification (CBM), delivered via the internet over 4 weeks. Ongoing sequential Bayesian analyses were used to eliminate and replace arms, or to promote them to become the control condition based on pre-specified Bayes factor and sample size thresholds. The trial started with 3 arms (a control condition and 2 imagery CBM variants), and 2 further arms (additional imagery CBM variants) were added as the trial progressed. The trial was pre-registered at clinicaltrials.gov (NCT04791137).

#### RESULTS

At the end of the trial (N = 188 randomized participants), one version of the imagery CBM remained as the ‘winner’, i.e. the version most successful in reducing anhedonia, following sequential elimination of other trial arms. All features of the leapfrog design were successfully implemented and no feasibility issues identified.

#### DISCUSSION

The study demonstrates feasibility of the leapfrog design and provides a foundation for its broader adoption as a means for more rapid development and optimization of psychological treatments such as CBT.

### **When Trauma Makes You Feel Unsafe: Implications for Firearm Ownership, Firearm Storage Practices, and Suicide Prevention**

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*A Network Analytic Perspective on Postmigration Stressors and Depressive Symptoms in Refugees*

In the United States (US), there are approximately 400 million privately owned firearms - more firearms than there are people. Firearm ownership and storage practices are associated with an increased risk of unintentional and intentional injuries, including suicide. Indeed, in the US, firearms are the most common suicide method, accounting for over 50% of all suicide deaths each year. As such, it is particularly important to examine firearm ownership and storage practices among at-risk segments of the population, including individuals with posttraumatic stress disorder (PTSD). Individuals who develop PTSD following exposure to a life-threatening or traumatic event are more likely to view the world as a dangerous place and may be more characteristically hypervigilant to threat. The hypervigilance to threat that typifies PTSD can trigger a cascade of behavioral responses, including acquiring a firearm for the first time or storing existing firearms in a non-secure manner, such as loaded and unlocked. In this talk, we will draw from cognitive-behavioral theory to (1) outline a conceptual model describing the intersection between PTSD-related threat expectancies and firearm ownership and storage practices; (2) highlight findings from recent empirical studies of military service members demonstrating that PTSD is positively associated with non-secure firearm storage practices; and (3) discuss findings from a recent randomized controlled trial of firearm-specific lethal means safety counseling that found reduced efficacy of the intervention for individuals with PTSD. In sum, we will present a roadmap for future research and cognitive-behavioral clinical work focused on encouraging secure firearm storage among individuals with PTSD. Given the high prevalence of suicidal thoughts and behaviors among individuals with PTSD, and the increased risk for suicide conferred by firearm ownership and non-secure storage practices, this line of inquiry has the potential to advance suicide prevention among trauma-exposed populations.

## A Network Analytic Perspective on Postmigration Stressors and Depressive Symptoms in Refugees

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Several studies indicate that post-migration difficulties (PMLD) lead to maintenance or even onset of psychological distress in refugees, next to prior experiences of war, violence and persecution. Depressive symptoms are among the most common mental health problems in this population and were associated with the overall burden of PMLDs. Although the association between PMLD and psychopathological distress has been well-investigated, there are only few longitudinal or network analytic studies. As PMLD refers to the social environment, it is crucial to include external factors in network models to better understand the etiology and maintaining factors of mental health problems in refugees. PMLD are a major risk factor for depressive symptoms and deterioration of symptoms. Therefore, interventions targeting PMLD related processes, might improve response and remission rates. However, the interaction of these external factors with depressive symptoms is not yet fully understood in the population of refugees. Thus, we aimed to investigate the complex interaction between PMLDs and depression symptoms. The main objective is the exploration of the network structure and the complex interplay of depressive symptoms and different levels of PMLD. The investigated sample consists of 114 refugees. The symptoms of depression and PMLDs were assessed within a randomized controlled trial among treatment-seeking asylum seekers and refugees via a fully structured face-to-face and interpreter assisted interview. Using a network analytical approach, we explored the associations and network centrality of the depression symptoms and the PMLD factors: discrimination & socio-economical living conditions, refugee determination process, family concerns, health, welfare & asylum problems and social & cultural isolation. The results suggest direct links within and between both constructs. Almost all PMLD factors were interrelated and associated to Depression except for family concerns. The depression symptoms "suicidal ideation", "feeling down", and "being hopeless", and the PMLD factor "social and cultural Isolation" connected the two constructs. The depressive symptom of "feeling down" and "being hopeless" had the highest centrality in this network and the lowest centrality were guilt. These findings emphasize the importance of PMLD in refugees with respect to maintenance and specialized treatment. Interventions that reduce or directly target those processes, e.g. "social and cultural isolation", can be tailored according to findings from network analytic studies.

### **Combined Treatment for Difficulties in Emotional Regulation and PTSD in a Substance Use Treatment Setting; A Feasibility Study**

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#### BACKGROUND/PURPOSE

There are high rates of co-occurring posttraumatic stress disorder (PTSD) and emotional dysregulation among patients receiving treatment for substance use disorder (SUD; Brady, Back, & Coffey, 2004). PTSD and emotion dysregulation are related to elevated psychological burden, higher dropout rates from substance abuse treatment (Tull, et al., 2013) and increased risk of relapse after treatment (Brown et al., 1999). The psychological aspects behind SUD are intricate and the patients are heterogeneous. In some cases, SUD serves as an avoidance of difficult emotions, often-elevated due to memories related to the trauma (Tull et al., 2013). Thus by treating the PTSD and decreasing emotion dysregulation, one could potentially decrease the patients craving or substance use as a means to avoid emotional pain. PTSD and SUD should be treated simultaneously (NICE, 2018), but adults in SUD treatment are often not assessed for PTSD (Mills, Teesson, Ross, & Peters, 2006) nor offered PTSD based interventions (Ouimette & Brown, 2003), e.g. due to worry about increased risk of drop out (Roberts, Roberts, Jones, & Bisson, 2016). There is a need to develop integrated treatment modules and evaluate these models in naturalistic SUD treatment settings.

#### METHOD

We conduct a feasibility study integrating a) Dialectical Behaviour Therapy for Substance Use Disorder skills training (DBT-SUD skills), a therapy targeting difficulties in emotion regulation and b) Narrative Exposure Therapy (NET), a short-term trauma focused therapy particularly for individuals with complex and multiple trauma, into the existing SUD treatment at a rehabilitation clinic. Patients were measured before and after therapy, as well at a 3- and 12-month follow up. The feasibility was measured by assessing relevance and the safety of the treatment, evaluation from the patient as well as evaluation from the health personnel providing treatment, and potential benefits of treatment. Measurement of potential benefits include among other, emotional avoidance, difficulties in emotion regulation, PTSD symptom severity, substance craving, drop-out from treatment and relapse into substance use.

#### RESULTS

We will present preliminary data of 47 inpatients on the feasibility of adding DBT-SUD skills and NET to a standard inpatient treatment for SUD. Preliminary results indicate that the treatment is relevant for the patient population with a great majority of participant experiencing PTSD or SUB-PTSD and difficulties in emotion regulation. Both patient and staff evaluate the treatment as difficult but important, useful and helpful. The treatment combination shows promising results in symptom reduction and reduction in destructive behavior, without a noticeable increase in treatment dropout so far.

#### DISCUSSION

We will discuss our findings and its potential implications on the structure of drug-rehabilitation treatment programs. Preliminary results are promising, indicating that adding the combined treatment presented above is feasible, relevant and safe.



### **Implementing Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) in Specialised Community Agencies in Singapore: Lessons Learned From a Southeast Asian Context**

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#### INTRODUCTION

Trauma-Focused Cognitive Behavioural Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006) is a well-recognised evidence-based trauma-focused intervention for children and youth presenting with traumatic stress symptoms. It has been successfully used across diverse treatment settings and countries, and following exposure to various trauma types. Effective and sustainable implementation of TF-CBT in an agency requires multifaceted implementation efforts ranging from engaging stakeholders and increasing their buy-in, to training support, and sustainability planning. This presentation will provide an overview of the implementation framework, facilitators, and barriers to implementing TF-CBT, and key lessons learnt from Project RiSE (Rebuilding Lives with Strength and Empowerment) – an ongoing implementation of TF-CBT in specialised community agencies in Singapore that provide services to child abuse and family violence clients.

#### METHOD/RESULTS

Participants consisted of three cohorts of social work- or counselling-trained community-based practitioners (N= 34). Each cohort received TF-CBT training, and provided TF-CBT to clients with consultation support from certified TF-CBT trainers over 1 to 2 years. These practitioners provided case management and TF-CBT within the community setting to clients exposed to intrafamilial abuse and family violence traumas. Process (e.g., programme fidelity according to TF-CBT PRACTICE components and organisational readiness and capacity) and outcome data (i.e., clients' traumatic stress symptoms as measured by the UCLA PTSD Reaction Index for DSM-IV or DSM-5) were collected throughout the training period for each cohort. A focus group discussion was conducted with cohort practitioners at the end of each training period, and these were recorded and transcribed. A content analysis was performed on these transcripts to derive facilitators (e.g., practitioners' buy in and resourcefulness, structured components-based approach, provision of training and regular consultations) and barriers (e.g., complexity of clients' circumstances and administrative demands associated with data collection) to implementation. Additional observations based on the qualitative and quantitative data collected (e.g., clients' outcome data), and reflections by the implementation team, will also be shared.

#### DISCUSSION

Project RiSE has helped to achieve our primary goal of increasing trauma-exposed clients' accessibility to receive an evidenced-based trauma-focused intervention in the community. The content analysis has also helped to identify barriers to implementation as well as new perspectives on the delivery of TF-CBT in these agencies and in a Southeast Asian context. This presentation will outline key lessons learned from our experience in implementing and sustaining TF-CBT practice in specialised community agencies, including the challenges faced and strategies used to address them.

### **How Can We Reduce Mental Health Stigma and Improve Access to Care in Refugees With PTSD?**

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Despite reporting elevated rates of posttraumatic stress disorder (PTSD), refugees are less likely than the general population to access psychological treatment (Blackmore et al., 2020; Fuhr et al., 2019). Research suggests that self-stigma represents a key barrier to service utilization in refugees (Byrow et al., 2019; Shannon et al., 2015). However, the development of effective stigma reduction interventions has been hampered by a lack of quantitative research investigating self-stigma in refugee populations. As such, the aims of this study were two-fold; (1) investigate whether self-stigma mediates the association between PTSD, help-seeking from formal sources (e.g. psychologist) and perceived social connectedness (2) identify psychological mechanisms underpinning the association between PTSD and self-stigma. In this online study, 262 Arabic-speaking refugees resettled in Australia completed measures indexing PTSD, two types of self-stigma (self-stigma of PTSD and self-stigma of help-seeking), outcomes of interest (help seeking behaviour, perceived social connectedness) and potential mechanisms (self-esteem, hope and help-seeking beliefs). First, path analyses revealed the unique effects of stigma on outcomes (CFI = 1.00 TLI = 1.00 RMSEA = < 0.001 SRMR = 0.006). Self-stigma of PTSD mediated the association between PTSD and perceived social connectedness while self-stigma of help-seeking mediated the association between PTSD and help-seeking behaviour. Second, path analyses revealed psychological mechanisms underpinning the association between PTSD and self-stigma (CFI = 1.00 TLI = 1.00 RMSEA = < 0.001 SRMR = 0.015). Hope mediated the association between PTSD and self-stigma of PTSD. Negative help-seeking beliefs played a mediating role between PTSD and both types of self-stigma. Findings demonstrate the deleterious effect of self-stigma on refugee mental health, yet also indicate potential intervention targets to reduce the negative impact of self-stigma. As such, results have the potential to inform stigma reduction strategies and improve access to evidence-based care in refugees. Results will be discussed in the context of cultural beliefs and the unique refugee experience.

### Reduced Social Risk-Taking in Depression

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#### INTRODUCTION

The Social Risk Hypothesis (SRH) of depressed mood (Allen & Badcock, 2003) posits that depressed states evolved during the human era of evolutionary adaptation in part to protect the individual's membership of a social group. A defining tenet of the SRH is thus the adaptive inhibition of social risk-taking behaviors in individuals who perceive their social status as critically low such that adverse social outcomes could result in expulsion from the social group. In line with the predictions of the SRH, our hypothesis was that depressed individuals would exhibit greater risk aversion/reduced risk-taking under a 'social' condition of a risk-taking task relative to an 'individual' condition and to never-depressed controls.

#### METHOD

We tested this using a novel adaptation of the Balloon Analogue Risk Task (BART) in participants with major depressive disorder (MDD;  $n=27$ ) and never-depressed comparison participants ( $n=35$ ). The BART requires participants to pump up virtual balloons. The more the balloon is pumped up, the more money a participant gains on that trial. However, more pumps also increase the risk the balloon will burst such that all money is lost. Prior to performing the BART, participants took part in a team induction in small groups in order to prime social-group membership. Participants then completed two conditions of the BART: an Individual condition where they risked only their own money, and a Social condition, where they risked the money of their social group.

#### RESULTS

A two-way repeated-measures ANOVA found no significant main effect of condition, and consistent with our hypothesis, there was however a significant interaction of Group by Condition. The MDD group made significantly fewer pumps in the Social condition compared to the Individual condition, whereas within the Control group, there was no significant difference between conditions. Furthermore, the MDD group made significantly fewer pumps during the Social condition than did Controls, but there was no significant difference between groups during the individual condition.

#### DISCUSSION

The study supports the notion of an aversion to social risk-taking in depression and are broadly in line with our predictions. The SRH posits that taking high social-risks is one of several potential mechanisms that could increase perceived social burden, thereby increasing the risk of exclusion or ostracism from the group. Taking fewer risks with group resources would therefore be one way to help protect status and promote group inclusion. These findings have important implications for understanding the motivations of social behaviour in depression.

#### References

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### **Fear of Depression Recurrence Among Individuals With Remitted Depression: A Qualitative Interview Study**

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#### INTRODUCTION

Major Depressive Disorder (MDD) is the most prevalent debilitating psychiatric condition and the largest contributor to disability worldwide (Kessler et al., 2012; World Health Organization, 2017). MDD is often considered to be chronic as 50-85% of individuals who have had at least one Major Depressive Episode (MDE) experience a second (Mueller et al., 1999; Solomon et al., 2000). Despite high recurrence rates, little is known about the predictors and underlying mechanisms that influence relapse. It has been suggested that individuals may behave differently following a depressive episode out of fear that they will become depressed again (Coyne & Calarco, 1995). Fear of illness recurrence (FIR) is defined as concern, fear, or worry about the chances that one's illness will return in the future (Lebel et al., 2016). Despite being a widely accepted construct in the cancer and chronic illness literature, there is limited research examining FIR in depression. The purpose of this qualitative study was to gain a better understanding of the experiences of fear of depression recurrence (FoDR) among individuals with remitted depression.

#### METHOD

This phenomenological study represents the first paper in a two-part mixed methods research project aimed at developing a psychometrically reliable FoDR questionnaire (Pre-Registration: <https://doi.org/10.17605/OSF.IO/GQR2S>). Semi-structured interviews (60-90 minutes) were conducted using Zoom videoconferencing with adult participants with remitted depression. The interviews explored participant's experiences with FoDR including the frequency, severity, content, triggers, and impact of these fears. All interviews were transcribed verbatim and thematic analysis was used to analyze raw data and identify overarching themes.

#### RESULTS

Thirty participants (83% female; 37% White; Mage=27.7, SD=8.96) with remitted depression participated in this study. Preliminary findings suggest that individuals with remitted depression report experiencing fears about their depression returning. Examples of these fears included re-experiencing symptoms of depression (e.g., weight or sleep changes, low mood, anhedonia, suicidal ideation), social implications (e.g., isolation, withdrawing from friends/family), and difficulties functioning and maintaining roles at home, in school, or at work. Participants described how specific emotions (e.g., loneliness, guilt, disappointment, sadness), reminders of past depressive episodes, and experiencing difficult life events (e.g., losing a loved one, big transitions) served as triggers for these fears. Participants reported that their fears had both positive and negative influences on their daily functioning and behaviours. For some, FoDR served as a reminder to engage in better self-care and be proactive in noticing and addressing warning signs of another MDE. For others, these fears led to feelings of being trapped, immobilized, and worried about the future, which in turn impacted participants' mood (e.g., feeling sad, down, and hopeless) and engagement in avoidance behaviours (e.g., oversleeping).

#### DISCUSSION

We found that individuals with remitted depression do experience FoDR and that these fears may have an influence on the unique cognitive and behavioural changes that occur post MDE. A reliable measure of FoDR must be developed and validated so that we can gain a more concrete understanding of the relationship between FoDR and risk of relapse or other indices of functioning. Future cognitive behavioural interventions may benefit from targeting FoDR within depression relapse prevention efforts. More specifically, clinicians may find it beneficial to evaluate a patient's fears about their depression returning prior to therapy termination so that these fears can be targeted early on and built into relapse-prevention plans.

### Attention Bias in Depressive Disorder

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#### INTRODUCTION

Attention bias to negative information has been suggested to play a role in the onset and maintenance of mood disorders. It has been found that depressive symptoms are related to biases in information processing processes, such as selective attention toward negative emotional stimuli, self-focused attention, and memory bias. Cisler & Koster(2010) suggested that attention bias is comprised of facilitated attention, difficulty in disengagement, and attentional avoidance. Resilience, which is defined as positive adaption facing adversity and stressful events is negatively associated with depression. Also, individuals with high resilience disengaged from negative emotional information faster than individuals with low resilience. The study aimed to examine the difference between the depressed group and the healthy control group for attention bias and resilience. Furthermore, this study explored the correlation between depression, resilience, and attention bias and investigated whether attention bias mediates the relationship between resilience and depressive symptoms.

#### METHOD

The participants were recruited by matching the depressed group and the control group in pairs based on the age, sex, and level of education variables for minimizing the influence of external variables. The depressed group included those who were diagnosed with the depressive disorder at Kangbuk Samsung Hospital. Among the 51 data, 6 missing values and outliers were excluded and finally the data of 45 participants were included in the analysis. Beck Depression Inventory-II(BDI-II) and Connor-Davidson Resilience Scale(CD-RISC) were administered. A spatial cueing task was used for attention bias measurement. Attention bias scores were calculated under conditions in which stimuli were presented at 250ms and 1250ms and it consisted of engagement bias score(EBS) and disengagement bias score(DBS).

#### RESULTS

First, the depressed group had significantly lower resilience, difficulty disengaging from the threat stimulus at 250ms, and made more efforts to avoid attention from the threat stimulus at 1250ms than the control group. Second, the results provide evidence for a significant association between depressive symptoms, resilience, and attention bias. Depressive symptoms were negatively correlated with resilience and positively correlated with 250ms DBS. Third, the regression-based approach and bootstrap method were used to test the mediating effect of attention bias in the relationship between depressive symptoms and resilience. It has been verified that the 250ms DBS mediate the relationship between resilience and depressive symptoms. It suggests that the lower the resilience, the more difficult it is disengaged from threat stimuli and the disengagement tendency affects depression severity. However, other attention bias variables did not mediate the relationship between depressive symptoms and resilience.

#### DISCUSSION

Findings suggests that there were significant differences between the depressed and control group in resilience and attention bias. Furthermore, the difficulty of disengagement on subthreshold condition may mediate the relationship between resilience and depression. It may be some evidence that modifying attention bias on negative information can alleviate depressive symptoms. This study is meaningful in that it provides some evidence of the necessity for Attention Bias Modification(ABM) intervention for depressive disorder.

### **Network Analysis of Depressive Symptoms in South Korean Adults: Similarities and Differences Between Women and Men**

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Findings from previous studies suggest gender differences in depressive symptoms. However, extant literature mostly focused on the magnitude of the symptoms, and it is still unclear how depressive symptoms are interconnected in women and men. The present study compared the depressive symptom networks of South Korean women and men. We used a nationally representative sample collected from 16,569 South Korean adults to analyze the regularized partial correlation networks and directed acyclic graphs (DAG). The results from the network analysis indicated that depressed mood, fatigue, and low self-esteem played a significant role in activating and maintaining the network structure in women and men. Also, the DAG identified probabilistic causal paths between the nodes. These findings provide important insights regarding which symptoms play a key role in depression in South Korean women and men. Our findings may contribute to the development of more tailored interventions targeting depressed populations. Findings from previous studies suggest gender differences in depressive symptoms. However, extant literature mostly focused on the magnitude of the symptoms, and it is still unclear how depressive symptoms are interconnected in women and men. The present study compared the depressive symptom networks of South Korean women and men. We used a nationally representative sample collected from 16,569 South Korean adults to analyze the regularized partial correlation networks and directed acyclic graphs (DAG). The results from the network analysis indicated that depressed mood, fatigue, and low self-esteem played a significant role in activating and maintaining the network structure in women and men. Also, the DAG identified probabilistic causal paths between the nodes. These findings provide important insights regarding which symptoms play a key role in depression in South Korean women and men. Our findings may contribute to the development of more tailored interventions targeting depressed populations.

### **Causal Role of The Dorsolateral Prefrontal Cortex in Modulating The Balance Between Pavlovian and Instrumental Systems in The Punishment Domain**

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Previous literature suggests that a balance between Pavlovian and instrumental decision-making systems is critical for optimal decision-making. Pavlovian bias (i.e., approach toward reward-predictive stimuli and avoid punishment-predictive stimuli) often contrasts with the instrumental response. Although recent neuroimaging studies have identified brain regions that may be related to Pavlovian bias, including the dorsolateral prefrontal cortex (dlPFC), it is unclear whether a causal relationship exists. Therefore, we investigated whether upregulation of the dlPFC using transcranial current direct stimulation (tDCS) would reduce Pavlovian bias. In this double-blind study, participants were assigned to the anodal or the sham group; they received stimulation over the right dlPFC for 3 successive days. On the last day, participants performed a reinforcement learning task known as the orthogonalized go/no-go task; this was used to assess each participant's degree of Pavlovian bias in reward and punishment domains. We used computational modeling and hierarchical Bayesian analysis to estimate model parameters reflecting latent cognitive processes, including Pavlovian bias, go bias, and choice randomness. Several computational models were compared; the model with separate Pavlovian bias parameters for reward and punishment domains demonstrated the best model fit. When using a behavioral index of Pavlovian bias, the anodal group showed significantly lower Pavlovian bias in the punishment domain, but not in the reward domain, compared with the sham group. In addition, computational modeling showed that Pavlovian bias parameter in the punishment domain was lower in the anodal group than in the sham group, which is consistent with the behavioral findings. The anodal group also showed a lower go bias and choice randomness, compared with the sham group. These findings suggest that anodal tDCS may lead to behavioral suppression or change in Pavlovian bias in the punishment domain, which will help to improve comprehension of the causal neural mechanism.

### **Online Game-Based CBT With Children and Adolescents: Validation of the Game-Based Assessment System for Emotion-Regulation Abilities**

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#### INTRODUCTION

Deficits in emotion regulation abilities are considered to be an important predictor for emotional disorders in youths. RETHink is an online therapeutic game based on the rational-emotive behavioral therapy (REBT), with seven levels built to train various emotional regulation skills. The RETHink game was successfully used in rigorous trials and has demonstrated promising results in reducing depressive mood, changing irrational cognitions and improving emotion regulation abilities, changes that were maintained at 6 months follow-up. The RETHink therapeutic game has an assessment system for emotional regulation abilities that are trained within in each level.

#### METHOD

Our study aims at investigating the validity of the RETHink game based assessment system for emotion regulation abilities in youths. In accordance with the established guidelines, we recruited 110 children and adolescents aged 8 to 14 years old ( $M = 10.38$ ,  $SD = 1.95$ ), 60% of which were females. Following informed consent, the participants filled out the standard questionnaires and, subsequently, they played the evaluation module of the RETHink game. The reliability aspect was investigated by employing internal consistency and test-retest reliability analysis.

#### RESULTS

Results showed significant positive associations between the game scores obtained by the participants and the self-report measures for emotion awareness, situational responsibility, emotional control, and compassion for others. In terms of predictive validity, we found significant positive correlations of the game scores with standardized measures for prosocial behaviors and negative correlations with conduct problems.

#### DISCUSSION

Our results showed associations between the RETHink therapeutic game assessment system and standardized measures for measuring emotional regulation abilities in children and adolescents. Moreover, our results showed the total game scores on the assessment system of the RETHink game can be considered predictors for conduct problems and prosocial behaviors. Overall, the RETHink assessment system included in the RETHink therapeutic game is a valid method for assessment of emotional regulation abilities in children and adolescents with implications for both research and practice.



### **Efficacy of a Program Aimed at Mitigating Intimate Partner Violence in Young Adults: Emotional Regulation and Problem Solving**

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#### INTRODUCTION

Intimate partner violence in the young population is a multidimensional, multi-causal, public health problem and one of the most prevalent in the Colombian context. However, despite the increased visibility of this problem during the COVID-19 pandemic, in Colombia there is not enough validated information to know the most appropriate and effective prevention strategies for this problem. While cognitive-behavioral programs to prevent intimate partner violence exist, they often overlook critical vulnerability factors, such as emotional regulation, cognitive restructuring, communication, and problem-solving, and fail to engage both partners. The promotion of problem solving and anger management skills is vital for improving the emotional well-being of couples and fostering a healthy romantic relationship. With this in mind, the aim of the study was to evaluate the efficacy of a promotion program on life skills to mitigate intimate partner violence associated with the COVID-19 pandemic among young adults in Bogotá city.

#### METHOD

The study involved 91 participants aged 18 to 29 ( $M= 22.71$ ;  $SD 3,52$ ) who completed all seven 2-hour sessions of the cognitive behavioral prevention program "Conviviendo en Pareja de Manera Saludable y Segura CON-PAS" which covered awareness sessions, emotional regulation, assertive communication, problem-solving, closure, and follow-up. To evaluate emotional regulation and anger management, we used the Scale of Coping Strategies towards Domestic Violence (Bautista et al., 2011), which has 59 items divided into 13 for anger management, 15 for automatic thoughts and self-esteem, 9 for communication, and 12 for problem-solving. Intimate partner violence was measured using the Spanish version of the Conflict Tactics Scale (CTS-2). Three measurements were made, before starting the program, at the end of it, and one month later (follow-up).

#### RESULTS

The Repeated measures ANOVA results showed a statistically significant difference between the pre-test, the post-test, and the follow-up measurements. The participants' problem-solving scores increased after the program, and these results were sustained one month later. On the other hand, while the anger control scores increased notably after the program, there was a slight reduction at follow-up. Nevertheless, the difference from the baseline was still significant ( $p<0.05$ ).

#### DISCUSSION

Our results suggest that the prevention program led to positive changes that persisted one month after completion. Regarding anger control, the increase in scores may indicate a reduction in impulsiveness and sexist attitudes. In addition, our data show an increase in problem-solving scores, which could indicate improved abilities to identify conflicts, generate non-violent alternatives, put into practice concerted solutions and recognize the benefits for both partners and the relationship. These results suggest that brief cognitive-behavioral programs can improve the acquisition and application of life skills, leading to better relationships. Here we presented preliminary results that need to be related to the presence of violent behaviors before and after the program, measured with the CTS-2. However, we were able to show the program's effectiveness in these two skills.

### Does Recalling Family Interactions Affect Emotion Regulation?

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#### INTRODUCTION

Emotion regulation, or the way that people manage their emotional experiences, has been associated with mental health and wellbeing (Aldao et al., 2016; Kraiss et al., 2020). In turn, family functioning, which reflects the quality of family relationships and interactions, has been shown to play a role in emotion regulation (Cheung & Park, 2010; Hasking et al., 2020). However, it is still unclear whether and how specific dimensions of family functioning are associated with people's ability to regulate their emotions.

#### METHOD

The study was preregistered: <https://doi.org/10.17605/OSF.IO/HMUE6>. A total of 135 adult participants (M = 39.37 years, SD = 11.86; 64.90% males) were recruited via Prolific. Using the survey tool, Qualtrics, participants were asked to recall and write a narrative about a family event that represented a typical example of how their family interacts. From the narratives, we coded the quality of the relationships (closeness & satisfaction) and interactions (level of conflict, special meaning of the event), level of family organisation (degree of chaos/organisation), and communication (clarity, directness) as indices of family functioning (Epstein et al., 1983; Spagnola & Fiese, 2010). To measure people's ability to regulate their emotions, participants were presented with a series of negative images (e.g., scenes of war, snake, etc) and neutral images (e.g., paper clips, landscapes, etc.) in a random order and were instructed to stay unaffected and try to reduce any negative responses to the images. The images were selected from the Open Affective Standardized Image Set (OASIS; Kurdi et al., 2017). After viewing each image, participants were asked to rate how negative they found the image on a 7-point scale ranging from 1 = "not negative at all" to 7 = "very negative." Ratings for the negative images were reverse-scored and averaged to form a measure of emotion regulation where higher ratings indicate more effective emotion regulation. We also collected information on participants' age, gender, ethnicity, household type (single vs living with other members) as well as family size.

#### RESULTS

A hierarchical regression analysis showed that at Step 1, gender significantly accounted for the variance in people's ability to effectively regulate their emotions. The addition of the family functioning variables in Step 2 significantly increased the variance explained in emotion regulation. Individual beta-weights for family functioning dimensions revealed that better quality of communication was the only significant predictor of emotion regulation.

#### CONCLUSION

These findings contribute to our understanding of whether and which aspects of family functioning are associated with emotion regulation. Practically, our results may help to identify vulnerable groups, i.e., those with certain patterns of family functioning associated with poorer emotion regulation, and by implication, mental health.

## Investigating the Association of Physical Activity, Sitting Time and Depression: Repetitive Negative Thinking and Emotion Regulation As Mediators

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### INTRODUCTION

Depression is a global leading cause of disability, in general and in older adult populations (Zenebe et al., 2021). Because depression is a complex mental illness with varied clinical presentations and comorbidities, attention has been shifting towards malleable lifestyle behaviours that may improve the efficacy of traditional interventions. Possibilities include the maintenance of high levels of physical activity and reduction in sitting time, which are feasible to change for many individuals across the lifespan. Physical activity has been associated with reduced risk (e.g., Strawbridge et al., 2002) and symptom severity (e.g., Blake et al., 2009) of depression, while prolonged sitting time has been associated with increased risk and severity of depression (e.g., van Uffelen et al., 2013). However, the psychological mechanisms underlying these associations are not clear, limiting our understanding of their impact on cognitive and behavioural treatment targets. In particular, there is very little known about these associations among older adults, who are at greater risk for physical and cognitive impairments. As such, the present study tested repetitive negative thinking and emotion regulation difficulties as mediators through which physical activity and sitting time are associated with depression among older adults, over the course of approximately one decade.

### METHOD

1189 community-dwelling adults in mid- to late adulthood (697 female, 492 males with a mean age of 57.8 [SD=5.33] at first assessment) living in the Shire of Busselton in Western Australia participated in The Busselton Healthy Ageing Study (BHAS; James et al., 2013) and were tested on three occasions over 11 years. Six serial mediation models were conducted, three pertaining to physical activity and three to sitting time. The models were specified as follows: (1) a cross-sectional model with all variables at the last assessment (2) a prospective model with physical activity or sitting time at the first assessment predicting mediators and depression at the last assessment, and (3) physical activity or sitting time throughout the study (i.e., persistent levels) predicting mediators and depression at the last assessment.

### RESULTS

In testing these serial mediation models, repetitive negative thinking and emotion regulation partially mediated the association between physical activity and depression ( $b = -.01$ , 95% CI [-0.02, -0.001]), and sitting time and depression ( $b = .21$ , 95% CI [0.12, 0.30]) cross-sectionally, but not prospectively or persistently.

### DISCUSSION

Increased physical activity and reduced prolonged sitting time may be associated with reduced depression symptom severity in part due to decreased repetitive negative thinking and fewer emotion regulation difficulties, though effects did not remain over longer time intervals. Implications will be discussed for theory and clinical interventions. For example, if supported by further causal studies, depressed individuals who struggle with cognitive interventions focused on factors like rumination or emotion regulation may benefit from an emphasis on increased physical activity, while achieving similar effects.

## Effectiveness of Emotion Regulation Therapy in Anxiety Disorders

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The literature highlights the importance of emotion regulation and dysregulation in anxiety and mood disorders (Barlow et al., 2014; Turk et al., 2005). Current treatments, such as traditional disorder-specific CBT, have shown efficacy, but there is still a considerable scope for improvement (Hofmann & Smits, 2008). Anxiety and mood disorders are highly prevalent and often comorbid, suggesting underlying emotion processing and regulation difficulties (Menin et al., 2007). Transdiagnostic treatments, which can be applied across anxiety disorders, are a promising approach to address these difficulties and comorbidities, but few have focused specifically on emotion regulation. Emotion regulation therapy (ERT) targets emotion related process and its dysregulation (Mennin & Fresco, 2014). ERT was developed following the NIMH initiatives Research Domain Criteria Initiative (Craske, 2012), “treatment personalization” and consistent with affect science directions. ERT is a theoretically driven and evidence-based intervention that integrates traditional CBT principles and practices with mindfulness and emotion focused interventions in the context of affect science findings. The study aimed to assess the effectiveness of Emotion Regulation Therapy (ERT) in reducing symptoms and improving emotion regulation in patients with generalized anxiety disorder, social anxiety disorder, and panic disorder. A randomized control group design was employed, with baseline, post-treatment, and follow-up assessments, and 60 patients were included in the study. Patients were randomly assigned to either the ERT group or the Treatment as Usual (TAU) group, and the study was completed by 48 patients. The patients in the ERT group underwent 16 sessions of ERT, while the TAU group received standard treatment but no structured psychological intervention. Various screening measures were used to evaluate the patients, and assessments were carried out at baseline, post-treatment, 1-month follow-up, and 3-month follow-up for both groups. Clinical improvement and severity were assessed by an independent rater who was blind to the group allotment of patients at baseline and subsequent assessment points. Statistical analysis was conducted for both the completers and the intent-to-treat sample. The results demonstrated that patients in the ERT group reported significant reductions in difficulties in emotion regulation, symptom severity, depression, and general anxiety compared to the TAU group, with large effect sizes. The analysis of clinical significance supported these findings. Furthermore, the study revealed that ERT led to significant improvements in mindfulness. The moderation analysis indicated that the pre-treatment levels of anxiety sensitivity and trait anxiety did not have any moderating effect on the strength and direction of the ERT’s outcomes. The mediation analysis revealed that mindfulness mediated the outcomes, i.e., ERT led to improved mindfulness, which in turn resulted in reduced clinical severity and emotion regulation difficulties. The study also found that better compliance with homework was associated with better outcomes. The finding will be discussed, compared with the results of other studies, and implications will be presented.

### **Affirmative Group Intervention for Minority Youths' Sexual Health**

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#### INTRODUCTION

Studies have shown that affirmative interventions are effective when working with sexual and gender minority people because an affirmative model can provide a safer atmosphere for them to share their lived experiences (Craig et al., 2021; Langdrige, 2007; Tozer & McClanahan, 1999). Creating affirmative environments for sexual health is especially critical for youths since school curriculums may not fully address sexual orientation and gender identity related contents. Hence, informing sexual and gender minority youths with sexual health negotiation skills and strategies to utilize protection is important. AFFIRM, an intervention created for sexual and gender minority youths' health and well-being, focuses on addressing minority stressors while learning coping strategies through a cognitive behavioral therapy model (Craig & Austin, 2016). Informed by the Minority Stress Theory (Meyer, 2003), a framework that outlines the negative impact of minority stressors on health outcomes and behaviors of marginalized individuals, the study explored the effectiveness of a group cognitive behavior therapy model on sexual and gender minority youths' sexual health decision making by examining abstinence and protection sexual self-efficacy. Sexual self-efficacy refers to individual's perception of their own ability to conduct suitable behaviors when sexually engaging with others. Protection sexual self-efficacy refers to individual's willingness to initiate conversations regarding using protection before sex. In addition, abstinence sexual self-efficacy refers to individual's capacity to let their partners know about their abstinence from sexual activities.

#### METHOD

A total of 30 sexual and gender minority youths between the age of 15 and 18 were part of an eight-module group cognitive behavioral intervention, AFFIRM (Craig & Austin, 2016), which covered materials including identity, stressors, mental health, and sexual decision making. Each participant was given pre and post assessments on their mental health and self-efficacy. The current study examined whether there was a change in sexual self-efficacy. Paired sample t-tests were conducted to observe the difference in sexual self-efficacy levels before and after the intervention.

#### RESULTS

The study's results show that the intervention did not have a significant influence on sexual and gender minority youths' abstinence sexual self-efficacy. However, a significant change in protection sexual self-efficacy was found. Therefore, affirmative group cognitive behavioral interventions like AFFIRM have the potential to inform and impact sexual and gender minority youths' sexual health and decision-making processes by equipping them with stronger sexual self-efficacy to protect themselves and their partners from sexually transmitted infections.

#### DISCUSSION

The current study's findings regarding increased protection sexual self-efficacy points to the importance of providing a venue for sexual and gender minority youths to learn about sexual health decision making skills. Affirmative interventions could be facilitated by different community organizations and be delivered online for minority youths that may not have access to an inclusive space in their community. Clinical and policy implications, as well as how the intervention can be adapted for other vulnerable populations will be discussed. Craig, S. L., Yang, W., & Austin, A. (2020). Promoting the Sexual Self-efficacy of Sexual and Gender Minority Youth through a Group Intervention. *Groupwork*, 29(2), 35-57. <https://doi.org/10.1921/gpww.v29i2.1213>

## The Influence of Sexual Activity on Sleep: A Diary Study

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Aiming to promote overall health and well-being through sleep, the present studies examine to what extent sexual activity serves as a behavioural mechanism to improve sleep. Insomnia symptoms negatively impact quality of life (Lee et al., 2022) and increase the risk for suicidal behaviours (Winsper & Tang, 2014). Research indicates that over 30% of the general population experiences insomnia symptoms and ~6% suffers from insomnia disorder (Ohayon, 2002). Considering the large proportion of people affected by poor sleep and its negative effects on health and quality of life, investigations of behaviours and interventions that may improve sleep are paramount. It is a widely held notion that sexual behaviour, and particularly orgasm, have a positive influence on subsequent sleep. However, only a few studies have aimed to establish the association between sexual activity and sleep (Brisette et al., 1985; Lastella et al., 2019; Pallesen et al., 2020), showing that sexual activity with orgasm is perceived to influence sleep when measured in retrospect using cross-sectional designs. Aiming to clarify several discrepancies that have emerged from the scarce literature, the present research was conducted to clarify to what extent the type of sexual activity (i.e., partnered sex versus masturbation) impacts the effects on sleep, whether having an orgasm is necessary for such effects to become apparent, and lastly, whether the effect of sexual activity on sleep differs between men and women. As the cross-sectional design of existing research may have rendered the results vulnerable to recall bias, the present research examined the relation between sexual activity, i.e., partnered sex and masturbation with or without orgasm, and subjective sleep latency and sleep quality by means of both a cross-sectional and a longitudinal (diary) study. Two hundred fifty-six male and female participants, mainly students, completed a pre-test set of questionnaires and, thereafter, a diary during 14 consecutive days. The cross-sectional study was analysed using analysis of covariance and demonstrated that both men and women perceive partnered sex and masturbation with orgasm to improve sleep latency and sleep quality, while sexual activity without orgasm is perceived to exert negative effects on these sleep parameters, most strongly by men. Accounting for the repeated measurements being nested within participants, the diary data were analysed using multilevel linear modelling (MLM). Separate models for subjective sleep latency and sleep quality were constructed, which included 2076 cases at level 1, nested within 159 participants at level 2. The analyses revealed that only partnered sex with orgasm was associated with a significantly reduced sleep latency ( $b=-0.08$ ,  $p < 0.002$ ) and increased sleep quality ( $b=0.19$ ,  $p < 0.046$ ). Sexual activity without orgasm and masturbation with and without orgasm were not associated with changes in sleep. Further, no gender differences emerged. The present studies confirm and significantly substantiate findings indicating that sexual activity and intimacy may improve sleep and overall well-being in both men and women and serve as a directive for future research. In the discussion, we will present our current findings (Oesterling et al., 2022), while placing them in a wider clinical context and discussing possible mechanisms of the effect, the discrepancies between the results of the cross-sectional and the longitudinal study, and important implications for CBT in the treatment of sleep disorders and for sleep medicine.

### **A Systematic Review and Research Agenda of Internalized Stigma in Sexual Minority Individuals: Evidence from Longitudinal and Intervention Studies**

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#### INTRODUCTION

Cognitive-behavioral interventions for couples focus on addressing modifiable factors that impact the outcomes of their relationships. One such factor is internalized stigma, which is known to be a risk factor for poor mental health among sexual minority individuals. However, there has been a lack of synthesis in the research examining the risk and protective factors that contribute to the development of internalized stigma over time. This may be one reason why most current cognitive-behavioral interventions aimed at addressing internalized stigma among sexual minorities have been ineffective. Thus, this systematic review aimed to synthesize the empirical literature on factors that influence internalized stigma over time.

#### METHOD

Longitudinal studies that examined internalized stigma as an outcome, and randomized control trials that aimed to reduce internalized stigma, were screened and selected from five electronic databases up to December 8th 2022.

#### RESULT

Out of 25 studies (n = 6263) included in this review; 20 studies examined psychosocial and sociodemographic predictors of internalized stigma among sexual minority individuals, and five studies tested the effects of psychological interventions on internalized stigma. Longitudinal studies highlighted the stability of internalized stigma over time, and the role of stigma and discrimination, proximal minority stressors (e.g., outness, concealment), and psychological factors (e.g., depressive and anxious symptoms, coping styles, and demoralization) in predicting subsequent internalized stigma. Demographic factors appeared to play only a limited role in predicting subsequent internalized stigma. Finally, intervention studies found no significant effects in reducing internalized stigma, with one exception finding significant intervention effects among adolescents in a group-based program.

#### DISCUSSION

This is the first systematic review of longitudinal research related to the antecedents of internalized stigma among sexual minorities. These findings can help to advance research testing the determinants of internalized stigma over time, which is crucial for developing theory-driven cognitive-behavioral interventions that target modifiable risk factors (e.g., concealment, psychological factors) to reduce sexual minority internalized stigma. We conclude by outlining a theory-driven model of internalized stigma and research agenda to test more nuanced models of internalized stigma that include multifactorial risk indices.

Disclosure of Interest Statement:

The authors have no conflicts of interest to disclose.

## Effects of Self-Esteem on Dating Anxiety among Single Young Adults

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Recent studies have shown a global rise of singlehood. Studies conducted in America, South Korea, and Malaysia have reported an increased proportion of involuntary singles in the population, with difficulty in establishing and maintaining relationships reported as one of the reasons why. One precursor to the difficulty in maintaining and establishing romantic relationships is dating anxiety. As social relationships are directly intertwined with self-esteem, the current study investigated the effect of state self-esteem on dating anxiety among single heterosexual young adults in an initial interaction with an opposite-sex stranger.

As relationship-initiation context offers both the possibilities of forming a rewarding romantic connection or a painful rejection experience, the risk regulation theory states that self-esteem acts as an interpersonal guidance system in this situation to resolve the motivational conflict between the desire to connect with others which is socially rewarding, or to forego the initiation opportunity to protect the self from social costs (rejection). Specifically, given the low relational value in low self-esteem individuals (LSEs), they are more motivated to take defensive action sooner rather than later to protect their depleted levels of self-worth, whereas high self-esteem individuals (HSEs) are willing to risk rejection and seek for connection, given their high relational self-worth which acts as an assurance against the pain of rejection.

The current study which investigated initial interaction with a potential romantic partner provided a suitable setting to investigate these SE differences in signature social responses in the context of anxious behaviours. This is because the risk of rejection inherent to relationship-initiation is perceived as a threat to formation of new romantic relationships, and appraisal of threat is a core component of anxiety. The current study hypothesised that LSEs would report higher self-reported dating anxiety, behavioural cues of dating anxiety, and overall impression of dating anxiety than HSEs.

Utilising a between-subjects experimental design (46 females, 60 males; 18-30 years;  $M_{age}=20.55$ ,  $SD_{age}=1.33$ ), participants were randomly induced into either a high self-esteem (HSE;  $n=53$ ) or low self-esteem (LSE;  $n=53$ ) condition using a false-feedback paradigm, recorded a self-introduction video, and completed the self-reported dating anxiety measure. Behavioural cues of dating anxiety was evaluated by two trained coders who watched participants' self-introduction video and code their anxious behaviours based on 13 behavioural indicators (Cronbach's  $\alpha=.70$ ). Overall impression of dating anxiety was rated by another independent group of raters ( $n=10$ ;  $IRR=.84$ ) who watched participants' self-introduction video and rated their overall impression of anxiousness.

Manipulation check analyses showed that our false-feedback paradigm was successful in inducing differences in state self-esteem between the HSE-group and LSE-group ( $t=-3.80$ ,  $p<.001$ ,  $d=0.73$ ). As predicted, participants in the LSE-group demonstrated significantly more behavioural cues of dating anxiety than those in the HSE-group ( $t=7.05$ ,  $p<.001$ ,  $d=1.38$ ). We found that LSEs demonstrated poorer eye contact, more speech disturbances, less smiles, more closed body position, and more fidgeting, than HSEs. Previous studies have shown that these anxious behavioural cues minimise LSEs' likelihood of establishing a romantic connection with a potential romantic partner. However, LSEs did not self-report to be more anxious nor were they perceived by others as generally more anxious than the HSEs. It might be that self-esteem differences in dating anxiety were not accurately reflected in these measures which were based on subjective evaluations of level of anxiousness. Specifically, unlike behavioural cues of dating anxiety which was rated based on the presence or absence of specific behavioural cues, self-reported dating anxiety was based on one's subjective perception of their own level of anxiousness and overall impression of dating anxiety was based on raters' perception of how anxious a participant appears in the self-introduction video.

In conclusion, the current study showed that, in an initial interaction with an opposite-sex stranger, young adults with low state self-esteem demonstrated more dating-related anxious behavioural cues than those with high state self-esteem. These findings revealed the role of self-esteem as an interpersonal guidance system in humans social functioning by regulating their behavioural responses in relationship-initiation contexts.



### **Effectiveness of Cognitive Behaviour Therapy on Shyness Among Erectile Dysfunction Patients**

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Erectile dysfunction (ED) is a complex condition wherein men with minimal organic ED may develop a variable degree of pathogenic components sufficient to reduce the efficacy of medical management. Some authors have emphasized the importance of cognitive-affective factors in human sexual response and have developed new conceptual models and therapeutic techniques based on this perspective (Bilal and Abbasi, 2020). Cognitive behavioral sex therapy consists of several treatment components focusing on changing maladaptive sexual thoughts and behaviors. Most empirical studies in this field have been focused on specific cognitive constructs such as cognitive distraction, efficacy expectancies, causal attributions or perfectionism, accordingly researchers are now interested in CBT in various modes. Treatment is conducted in individual or couple format. The present study reports the effectiveness of CBT on shyness among erectile dysfunction patients. A total of 60 patients (30 in the test group and 30 in the control group) were selected for the present study from a tertiary health care center in Kolar city, near Bengaluru, the capital of the Karnataka state. An equal number of patients in the adult and middle-aged categories were considered. They were administered SAT (Shyness assessment test) developed by D'Souza (2006), which consisted of 54 items and measures shyness in 3 domains-cognitive/affective, physiological, and action-oriented domain in the pre-test. The test group underwent CBT for several sessions depending on the individual needs of the patients, whereas the control group didn't. The CBT was administered individually to the men with ED twice a week for a period of 45-60 minutes on each session for a period of 2, 4, 6, 8, 10, and 12 weeks. The decision to CBT administration once/ twice a week was made with a view to keep patients engaged in therapy and to systematically review the effects of CBT. For ethical considerations, the control group was administered CBT after the post-test was completed for the test group. Once the CBT sessions were over, again shyness assessment test was administered after 15 days. Repeated measure ANOVA was employed to find out the effectiveness of CBT on reducing shyness among patients presenting with erectile dysfunction along with effect size calculations. Results revealed that the shyness of ED patients significantly reduced after the CBT intervention, specifically in two of the domains-cognitive/affective and action-oriented domain. The effect size calculations revealed medium to large effect sizes for cognitive/affective and action-oriented domains of shyness respectively. Further, it was found that CBT was more effective in reducing shyness among adult patients ED patients compared to middle-aged patients. It can be concluded that apart from medical intervention, even CBT can play a major role in reducing the shyness of individuals suffering from ED.

### **A Latent Class Analysis of Post-Traumatic Stress Disorder and Depression Among Australian Vietnam War Veterans**

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#### INTRODUCTION

Depression and post-traumatic stress disorder (PTSD) are common, distressing and highly disruptive mental disorders experienced by military veterans. Understanding how these symptoms cluster within individual veterans can provide insight as to how best to treat this population.

#### METHOD

We conducted a Latent Class Analysis (LCA) examining PTSD and depression symptoms in a sample of N = 302 Australian Vietnam Veterans participating in a large cohort study<sup>1</sup>. The sample consisted of veterans meeting criteria for PTSD as measured by the Clinician Administered PTSD Scale (CAPS-5) and veterans who did not have PTSD. We explored stress-related biomarkers (e.g., cortisol, 5-HT and inflammatory markers) as well as psychosocial predictors of group membership.

#### RESULTS

A four-class solution was determined to provide the optimal fit. We labelled the classes as “low symptom” (44.5%; low on PTSD and depression), “high depression” (24.4%; higher depression relative to PTSD), “higher PTSD” (19.8%; higher PTSD relative to depression) and “high symptom” (11.3%; high on both PTSD and depression). Lower mean rates of resilience, higher sleep disturbance, comorbidity and impairment were associated with greater symptoms, particularly for the PTSD and depression group. Biomarkers generally did not distinguish between groups.

#### CONCLUSIONS

This study extends our understanding of psychosocial and biological factors associated with different patterns of symptom comorbidity in veterans. Findings will assist in developing a personalized approach to the assessment and treatment of PTSD and depression in veterans. These tailored treatments will target the predominant symptom profiles in this population.

1McLeay SC, et al. (2017) Physical comorbidities of post-traumatic stress disorder in Australian Vietnam War veterans. *Medical Journal of Australia*, 206, 251-257.

### **The Phenomenology of Nightmares in Post-Traumatic Stress Disorder and Complex Post-Traumatic Stress Disorder**

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#### INTRODUCTION

Post-Traumatic Stress Disorder (PTSD) may arise following exposure to, witnessing or learning about a significantly stressful event, and is commonly characterised by re-experiencing; avoidance of traumatic reminders; changes to mood and cognition and a perceived sense of threat (ICD-11; World Health Organisation (WHO), 2019). Recently, there has been interest in the diagnosis of Complex PTSD (CPTSD) which is often considered to be a more severe manifestation of PTSD that may occur after prolonged trauma that is typically interpersonal in nature (WHO, 2019). CPTSD includes experiencing symptoms of disturbances in self-organisation (DSO) including affective dysregulation, negative self-concept and disturbed relationships in addition to the three symptom clusters of PTSD (Giourou et al., 2018). Nightmares are a re-experiencing symptom of PTSD and CPTSD which are intrusive, involuntary and have a significant impact on wellbeing, suggesting they have substantial clinical relevance. However, little is known about the phenomenological features of post-traumatic nightmares and how they impact the severity of PTSD and CPTSD symptoms.

#### METHOD

Adult participants (N=398) who endorsed at least one lifetime trauma completed online self-report questionnaires related to PTSD symptoms, CPTSD symptoms and nightmare characteristics. Participants also described their sensory experiences and rated the emotional intensity and vividness of their post-traumatic nightmares.

#### RESULTS

Elevated scores for nightmare characteristics including frequency of awakenings, nightmare severity, impact on wellbeing and how real nightmares were perceived to be were associated with more severe PTSD and CPTSD symptoms. However, sensory features were not associated with PTSD or CPTSD symptom severity. Further, increased frequency, vividness, and emotional intensity of nightmares significantly predicted more severe PTSD symptoms but although they were positively associated with CPTSD symptoms, they did not predict CPTSD symptom severity.

#### DISCUSSION

Our study was largely exploratory and was the first to identify that specific nightmare features are related to PTSD and CPTSD symptom severity. With this in mind, imagery rehearsal and similar techniques may lessen some of the symptoms of CPTSD as well as PTSD (Long & Quevillon, 2009). Nonetheless, CPTSD severity maybe driven more by DSO symptoms such as interpersonal, self-concept and emotion-regulation difficulties rather than simply a greater prominence of re-experiencing symptoms such as nightmares.

## Do Trauma Cue Exposure and/or PTSD Symptom Severity Intensify Selective Approach Bias Toward Cannabis Cues in Regular Cannabis Users with Trauma Histories?

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**Introduction.** Posttraumatic stress disorder (PTSD) and cannabis use disorder (CUD) are highly comorbid. Trauma cue-induced cannabis craving acquired through conditioning may be a mechanism contributing to PTSD-CUD comorbidity (Romero-Sanchiz et al., 2022). The strength of automatic cannabis-approach memory associations in those with higher versus lower PTSD symptoms, and their activation by psychological trauma cue exposure, remain to be explored. We hypothesized that, among cannabis users with trauma histories: H1) PTSD symptom severity would be positively associated with the strength of cannabis versus neutral approach bias on the Cannabis Approach Avoidance Task (AAT), and H2) the tendency of those with higher PTSD symptoms to selectively approach cannabis would be intensified following trauma versus neutral cue exposure. **Method.** Fifty adults with trauma histories who use cannabis regularly completed self-reports of PTSD symptom severity (PTSD Checklist-5; PCL-5). Participants underwent two randomized, semi-structured interviews (Sinha & Tuit, 2012) focused on their most distressing lifetime trauma and a similarly detailed neutral personal event. These interviews served as “cues” (reminders) of the respective event. After each cue (trauma vs. neutral), participants completed measures of cannabis craving (Marijuana Craving Questionnaire) and affect (Positive and Negative Affect Scale), and then completed the Cannabis AAT to index their degree of approach toward cannabis and neutral stimuli. **Results.** We conducted cue type (trauma vs. neutral) linear mixed model (LMM) analyses to ensure the validity of the interviews as cue exposures. As expected, the trauma cue evoked greater negative affect and cannabis craving and lower positive affect than the neutral cue. Next, we subjected AAT approach bias scores to a cue type (trauma vs. neutral) x AAT stimulus type (cannabis vs. neutral) x PTSD symptom severity (continuous PCL-5 scores) LMM analysis. Consistent with H1, a significant stimulus type x PTSD symptom interaction emerged involving stronger approach bias toward cannabis than neutral stimuli, at high PTSD symptoms. Inconsistent with H2, the three-way interaction between AAT stimulus type, PTSD symptoms, and cue type on approach bias was not significant. **Discussion.** Among cannabis users with a trauma history, those with higher PTSD symptoms displayed a selective automatic action tendency toward cannabis, extending prior AAT research showing greater cannabis approach bias among heavy cannabis users versus controls (Cousijn et al., 2011). Cannabis approach bias is an automatic cognitive mechanism that may help explain PTSD-CUD comorbidity. Given established prospective correlates of cannabis approach bias (Cousijn et al., 2011, 2012), our results suggest that cannabis users with higher PTSD symptoms may be at risk of escalating their cannabis use/problems. Contrary to expectation, the tendency for those with higher PTSD symptoms to show a selective approach bias toward cannabis was not further intensified by trauma cue exposure, even though trauma cue exposure did induce the expected changes in affect and cannabis craving. Thus, the automatic tendency to selectively approach cannabis may be chronically activated among cannabis users with higher PTSD symptoms. Findings open new intervention possibilities for PTSD-CUD comorbidity given preliminary findings that cannabis approach bias modification can reduce cannabis craving and cannabis use (Sherman et al., 2018).

### **Minority Stress Symptoms of Discrimination: Correlated but Distinct From Post-Traumatic Stress Disorder**

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#### INTRODUCTION

Minority stress (MS) – i.e., insidious, traumatic distress caused by experiences of identity-based, minority stressors such as acts of discrimination, prejudice, and victimization – may constitute a psychopathologic construct akin to posttraumatic stress disorder (PTSD): MS and PTSD are caused by acts that threaten one’s sense of self and integrity (Carlson, 1997; Carter, 2007), share similarities in presentations (Carter & Forsyth, 2010; Dworkin et al., 2018; Pieterse et al., 2012); and are significantly correlated cross-sectionally (Keating & Muller, 2020; Nadal et al., 2019; Robinson & Rubin, 2016; Szymanski & Balsam, 2011) and longitudinally (Bird et al., 2021; Dworkin et al., 2018; Sibrava et al., 2019). While integrating MS into psychopathology models may certainly inform theory advancement and intervention efforts, additional work towards establishing its construct validity is needed. Thus, the current study utilized structural equation modeling to test structural invariance of MS across race, ethnicity, and sexual orientation and discriminant validity of MS from PTSD. Then, regression analyses were conducted to assess whether MS correlated with various experiences of discrimination and psychopathology symptoms above and beyond PTSD symptom variance.

#### METHODS

Data from young adults (N = 217; 53.9% person of color, 41.0% Hispanic/Latine, 45.6% non-heterosexual, 6.9% non-binary or trans; 27.6% with two or more minoritized identities) who endorsed at least one minoritized racial, ethnic, gender, or sexual orientation identity was collected from a southern university in the United States between July 2022 to February 2023. Psychopathology was of considerable relevance in the sample based on empirically determined cutoff scores on established measures (PTSD: 34.6%; moderate depression: 38.2%; high anxiety: 56.7%; past week suicidal ideation: 33.6%). MS was measured using the Trauma Symptoms of Discrimination Scale (TSDS; Williams et al., 2018) with the four TSDS subscales as indicators of an overall MS factor and PTSD symptom severity with symptom cluster severity scores as assessed by the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders-5 (PCL-5) as indicators. Structural invariance of MS as measured by the TSDS was tested through a multigroup confirmatory factor analysis approach. Discriminant validity of MS from PTSD was assessed through comparing fit of a two-factor model with correlated MS and PTSD factors and a one-factor model with all MS and PTSD indicators loading onto a single factor. Structural equation models were estimated using robust maximum likelihood. All statistical analyses were conducted using the statistical software R.

#### RESULTS

Minority stress as measured by the TSDS was invariant across identity factors: results supported residual invariance across race and sexual orientation and metric invariance across ethnicity. The two-factor model of MS and PTSD demonstrated significantly superior fit compared to the one-factor model ( $\Delta\text{chi-square} = 233.52, p < .001$ ). The MS factor shared significant correlations ( $p < .05$ ) with experiences of discrimination measures, depression, anxiety, and suicidal ideation, above and beyond the variance of the PTSD factor.

#### DISCUSSION

Findings support construct validity of MS as measured by the TSDS as a measure of discrimination-based trauma symptoms that is invariant across race, ethnicity, and sexual orientation, distinct from PTSD, and shares theoretically consistent associations with experiences of discrimination and psychopathology.

### **What Type of Stressors Is More Harmful for Aggravating PTSD Symptoms?: Panel Data from COVID-19 Survivors**

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#### OBJECTIVE

This study investigated how COVID-19 survivors' mental health changed over time and identified the stressors that exacerbated their post-traumatic psychiatric responses.

#### METHOD

An online survey was administered to the people who voluntarily participated through the mobile link sent by the National Center for Disaster and Trauma of South Korea. After being confirmed with COVID-19 infection, 1,177 participants completed the questionnaires about their mental health status (PG-PTSD, PHQ-9, and GAD-7) twice and answered infection related information including COVID-19 related stressors at once on the second time point. Both factor analysis for identifying underlying factors of COVID-19 stressors and generalized linear square (GLS) analysis for the panel data regression were employed.

#### RESULTS

The results showed that the severity of PTSD symptoms had marginally increased at the second time point (231 days after the confirmed infection on average). In particular, the social risk factor of the stressors such as 'financial difficulties, concerns about returning to work, negative reactions around, and privacy issues' was significantly associated with the aggravation of PTSD symptoms' severity. On the other hand, no impact from the perceived infection risk factor was observed.

#### CONCLUSIONS

These findings revealed the specific type of COVID-19 stressors that were linked to changes in post-traumatic psychiatric responses. Policymakers are strongly recommended to reconcile the policies that could manage the social risks related to COVID-19 in order to prevent aggravation of people's psychological pain. (Keywords) COVID-19, PTSD, Social Risk, Panel Data, Infection Disease

### **The Association Between Childhood Adversities and Cluster C Personality Disorders: A Meta-Analysis**

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#### INTRODUCTION

Studies suggest that adverse childhood experiences (ACEs) may contribute to the onset and development of cluster C personality disorders. However, the association between ACEs and these disorders remains unclear in terms consistency across studies and effect magnitude, as well as generalizability within cluster C. The current meta-analysis aimed to examine the associations between ACEs and cluster C personality disorders based on the available literature. Methods. Systematic searches were conducted in Pubmed, Scopus, Web of Science and PsychInfo databases. Forty eight eligible studies were included in the analyses, and pooled effect sizes were estimated both at the level of cluster C, and at the level of each corresponding disorder. Moderation and meta-regression analyses were also conducted.

#### RESULTS

ACEs were consistently associated with overall cluster C, as well as each of the corresponding disorders in this cluster. Sources of heterogeneity included type of instrument used to assess childhood adversities (interviews < questionnaires), and type of instrument used to assess the personality disorders (clinical interviews > questionnaires, as well as their combination with interview). Questionnaires used to assess ACEs and clinical interviews used to assess cluster C increased the investigated associations. The associations between ACEs and all investigated personality disorders decreased with age. Conclusions. ACEs are consistently associated with cluster C personality disorders. Future work could clarify whether this association is causal, using longitudinal designs which are currently scarce and considering the potential sources of effect variability identified in the present study.

Keywords: cluster C; personality disorders; childhood adversities; psychopathology

### **Association Between Invalidation and Borderline Personality Disorder (BPD) Symptoms Among Malaysian Sexual Minority Adults**

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Sexual minority individuals have been found to be at a higher risk of developing borderline personality disorder (BPD) and its associated symptoms. However, less research has investigated the role of parental invalidation and stressors unique to the sexual minority community as risk factors predicting BPD symptoms in this community. Linehan's biosocial theory of BPD posits that emotion dysregulation, a core BPD characteristic, arises from ongoing transactions between predisposing emotional vulnerability and an environment that consistently rejects, stigmatises or punishes a person for expressing their needs and feelings (also known as an invalidating environment). The theory is congruent with minority stress theory, which suggests that external, objective stressful events and conditions (distal stressors, e.g., parental invalidation and microaggression) as well as internal stressors involving negative self-perceptions (proximal stressors, e.g., internalised homophobia) contribute to worsened health-related conditions and stunt the development of protective factors among sexual minority individuals. The present study aimed at several constructs identified as risk factors in the biosocial theory and minority stress theory as predictors of BPD symptoms in a sample of sexual minority adults (particularly lesbian, gay, and bisexual adults) in Malaysia. Additionally, the study explored the role of self-compassion (defined as the tendency to adopt a kind and compassionate attitude in relating to oneself) as a moderator of the association between BPD symptoms and the hypothesized risk factors. A total of 130 sexual minority adults (mean age = 25.05 years) were recruited from the community and various social media platforms, and completed an anonymous online survey assessing parental invalidation, sexual orientation microaggression, internalised homophobia, self-compassion and BPD symptoms using validated measures. Measures used for the aforementioned variables were the Invalidating Childhood Environment Scale (Mountford et al., 2007), Sexual Orientation Microaggression Inventory - Short Form (Swann et al., 2022), Internalised Homophobia Scale (Herek et al., 1998), Self-compassion Scale (Neff, 2003) and the Personality Assessment Inventory - Borderline Features Scale (Morey, 1991). Analyses using hierarchical regression showed that parental invalidation and sexual orientation microaggression significantly and positively predicted BPD symptoms. Internalised homophobia did not predict BPD symptoms. Moderation analyses showed that the associations between parental invalidation, sexual orientation microaggression and BPD symptoms did not vary as a function of self-compassion; instead, self-compassion negatively predicted BPD symptoms independent of levels of parental invalidation or sexual orientation microaggression. The findings provide evidence in support of Linehan's biosocial model of BPD and the minority stress model in an Asian context. The study demonstrated the possibility of model integration in developing a more comprehensive conceptualisation of BPD and its associated symptoms in sexual minorities. The findings also highlight the need for effective interventions targeting parental invalidation and sexual orientation microaggression in addressing symptoms of BPD among sexual minority individuals.



### **Accuracy and Bias in Facial Trustworthiness Appraisals in Borderline Personality Disorder**

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#### INTRODUCTION

Individuals with borderline personality disorder (BPD) have shown a negativity bias in their trustworthiness appraisal of others, a potentially sustaining factor for interpersonal difficulties seen in BPD. For the general population, a trustworthy bias was observed. We tested if individuals with BPD are more negative but also more realistic in discriminating between on average more trustworthy and untrustworthy targets.

#### METHOD

Trustworthiness was objectified on an external criterion. Black and white facial photographs of 20 peace price laureates and 20 sentenced murderers were presented. N = 34 participants with BPD and n = 34 healthy controls (HC) rated the trustworthiness of the targets. The influence of childhood trauma was investigated. Childhood trauma was assessed by a questionnaire. Bias and sensitivity were measured using signal detection theory.

#### RESULTS

The BPD group was more negatively biased compared to HC, but not more sensitive in discriminating between the two groups. When correcting for experienced childhood abuse and neglect, group differences in bias disappeared.

#### DISCUSSION

Individuals with BPD might not be more sensitive in discriminating between on average more or less trustworthy targets. Individuals with BPD might have developed a negativity bias, to ensure the detection of untrustworthiness. Childhood trauma might play an important role in the development of this bias

## The Role of Maladaptive Aspects of Five-Factor Personality Traits and Personality Pathology Index in the Assessment of Personality Pathology

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### INTRODUCTION

Personality disorder (PD) is defined as a maladaptive and inflexible personality that results in significant distress or impairment in social, occupational, or other important areas of functioning (APA, 2013). Traditionally, PD was diagnosed according to a categorical classification that dichotomized normal and abnormal personality. However, categorical classification has shortcomings (e.g., arbitrary diagnostic thresholds, extensive comorbidity between personality disorder categories, and insufficient construct validity). For this reason, the DSM-5's Alternative Model for Personality Disorders (AMPD) and ICD-11 applied a dimensional model for PD as a substitute categorical model. In the DSM-5 AMPD and the ICD-11 classification of personality disorder, five pathological personality traits are used as specifiers that contribute to the individual expression of personality disturbance and the overall classification of severity. The Bright and Dark Personality Inventory (BDPI; Choi, Park, & Seo, 2018) measures general and maladaptive personality traits in self-reporting. Also, BDPI includes the Personality Pathology Index (PPI), which can be helpful in the diagnostic evaluation of personality disorders as a measure to identify the overall level of personality functioning or maladaptively modified personality traits. In the present study, we explored the usefulness of five maladaptive personality traits and PPI in evaluating personality pathologies based on a dimensional model for personality disorders.

### METHOD

This study used data from a preliminary study on developing and validating a Korean multidimensional personality test tool (Lee et al., 2019). BDPI and the Korean version of the Self-report Standardized Assessment of Personality Abbreviated Scale (SAPAS-SR, Choi et al., 2015) and demographic questionnaire were administered to 1307 respondents. We excluded 248 people who have yet to respond or complete their responses. As a result, we used a total of 1017 data for analysis. The maladaptive personality trait of BDPI consists of five dimensions (Detachment, Egocentrism, Attention Difficulty, Psychoticism, Negative Affectivity), and the PPI of BDPI has seven sub-indices (Pathological Personality Traits Index (PTI), Schizotypal, Antisocial, Borderline, Narcissistic, Avoidant, and Obsessive-Compulsive Personality Trait). The SAPAS-SR score, an evaluation tool designed for screening personality disorders, was above the cut-off point (4 points). Therefore, using SAPAS-SR, we classified respondents as nonclinical (345 men and 310 women with a mean age  $\pm$  SD of  $34.42 \pm 8.1$ ) and PD tendency group (167 men and 195 women with a mean age  $\pm$  SD of  $33.41 \pm 7.97$ ).

### RESULTS

We performed a Pearson correlation analysis between the five maladaptive personality traits of BDPI, the seven indices of PPI, and the SAPAS-SR score. All variables showed a significant positive correlation at  $p < .01$  level. The factors with the highest correlation with the SAPAS-SR score were Negative Affectivity and PTI of PPI ( $r = .52, p < .01$ ;  $r = .48, p < .01$ ). Five maladaptive personality traits showed moderate – very strong positive correlations with PPI in general. An independent sample t-test showed that the PD tendency group had significantly higher scores for five maladaptive personality traits and seven sub-indices of PPI than the non-clinical group ( $ps < .001$ ).

### CONCLUSIONS

First, the PD tendency group showed higher levels of maladaptive personality traits, a lower level of personality functioning, and higher level of pathological personality traits than the non-clinical group. The findings indicated that the usefulness of maladaptive personality traits and PPI for pathological personality assessment. Second, negative affectivity was associated with ineffective emotion regulation strategies when overwhelmed by negative emotions, and showed the strongest correlation with the SAPAS-SR. Thus, the results suggest that negative affectivity is an essential target for the evaluation and intervention for people with pathological personality traits.

## Language Use According to Levels of Antagonism

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### INTRODUCTION

Agreeableness is a dimension of the Big Five personality traits. Its pathological dimension is called antagonism, which means a tendency to prioritize one's own goals and perspectives, disregarding the interests of others and failing to consider the perspective of others (Park, et al., 2019). Antagonism is a fundamental aspect of comprehending the functional deficits and suffering associated with externalizing disorders (Donald & Joshua, 2019). It is important to understand antagonism as it exhibits a robust correlation with personality disorders related to antisocial behavior, psychosis/APD, and narcissism (Vize, Collison, Miller, & Lynam, 2019; Decuyper et al., 2009; Samuel & Widiger, 2008). In this study, natural language processing (NLP) was employed to predict individuals with high levels of antagonism and identify salient linguistic features of those individuals. Unlike other studies that relied solely on social media data corpus to predict personality, the present study ensured content validity and construct validity by utilizing 18 open-ended questions developed by Jang et al. (2022). Therefore, data with personality-specific context were analyzed.

### METHODS

425 Korean adults (155 male, 270 female; mean age = 30.74 years, SD = 8.67) participated in a survey. The Bright and Dark Personality Inventory (BDPI; Kim et al., 2020) scale and 18 open-ended questions designed by Jang et al. (2022) were used. BDPI was developed based on the Five Factor Model of personality (McCrae and Costa, 1996). To identify the items with high predictive power for antagonism, accuracy, and F1-score analyses were conducted among the 18 items. Text frequency analysis and content analysis were used to investigate the prominent characteristics of language use in highly egocentric individuals using Python KoNLPy.

### RESULTS

Among the 18 semi-structured questions, the question "How do you feel about someone who may be unintentionally hurt or harmed by you?" was found to be a good predictor of antagonism. In general, individuals with low antagonism tended to use language such as 'mind', 'effort', 'do my best', 'other person', 'others', 'for the sake of', 'misunderstanding', 'problem', 'difficult', 'dislike', 'self-blame', 'forgiveness', 'caution', 'sadness', 'fear', 'perception', 'regret', 'fear', 'worry'. They expressed feelings of guilt regarding the negative impact on others. On the contrary, individuals with high antagonism tended to use language that prioritizes their own perspective, such as 'there's nothing I can do', 'in fact', 'honestly', 'can't care', 'wrong', 'remember', 'don't know', 'accountability', '(I would apologize/explain/feel sorry)~but'. The results demonstrate that individuals with high egocentrism exhibit characteristics that fit the definition of "antagonism," such as a lack of interest in the feelings or problems of others, a lack of guilt or regret over negative or harmful effects of their own actions on others, and a focus on their own interests and satisfaction while being insensitive to the desires and emotions of others. These findings also reveal the characteristic of "egocentrism," which prioritizes one's own interests and satisfaction over those of others.

### CONCLUSIONS

The study identified the open-ended questions that predict high levels of antagonism and examined language use based on the level of antagonism. The selected questions can be utilized in the future to complement the limitations of self-report personality assessments.

## Do Behaviours and Feared Consequences Predict Misophonia Severity?

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Misophonia, a disorder of decreased tolerance to sounds, can cause distress and impairment (Swedo et al., 2022) and is associated with anxiety and depression (Siepsiak et al., 2022). CBT can improve symptoms and cognitive and behavioural processes seem to be part of the clinical picture of misophonia (Siepsiak et al., 2022). Mechanism research is an important part of developing and refining complex interventions, but for misophonia this has been restricted by the absence of psychometric tools to measure potentially relevant mechanisms.

The S-Five is a multidimensional psychometric tool developed using a latent variable approach, measuring five factors of misophonia (Vitoratou et al., 2021), but does not include beliefs about feared consequences nor potential safety seeking behaviours that may maintain distress.

The aims of this study were to provide preliminary evidence of validity and reliability for measures of misophonic behaviours and feared consequences, to test whether these new scales predict overall misophonia severity after accounting for current symptoms of depression and anxiety, and to test whether misophonic behaviours predict change in misophonia severity over time.

A UK representative sample of 619 adults was recruited from sampling service Prolific. Psychometric testing was completed for the two new scales. Hierarchical multiple regression analysis was conducted, with the S-Five total as outcome variable, and the new scales were entered as predictor variables, after controlling for age, gender, and symptoms of depression and anxiety. Participants were followed up at 18 months.

A three-factor solution was found for the misophonic behaviours scale: avoidance/blocking behaviours, rumination and anticipatory behaviours, and signalling (e.g. glaring or mimicking) behaviours. A two-factor solution was found for the feared consequences scale: personal consequences (e.g. having a heart attack or going mad) and social consequences (e.g. being judged). All factors from the two scales significantly independently predicted S-Five total scores. We will present this data along with the results of the 18-month follow up and discuss the implications for experimental studies.

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### **An Examination of the Predictors of Daily Functions Through Social Cognition, Neurocognition, and Negative Symptoms: The Results From a Three-Month Follow-Up Study**

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#### INTRODUCTION

negative symptoms of schizophrenia could interfere with the rehabilitation of chronic schizophrenia in daily functions. Although neurocognitive deficits largely account for negative symptoms, social cognition, and defeatist beliefs also play important roles in negative symptoms (Grant and Beck, 2009). One purpose of CBT for psychosis is to modify self-defeatist beliefs, and improving negative symptoms is the consequence of adaptive self-schema. However, the extent of daily function and the changes in negative symptoms were less of a concern in the literature. Hence, this study hypothesized that social cognition (baseline) and neurocognition (baseline) could separately have a direct impact on the change in negative symptoms, and the changes in negative symptoms could have a direct effect on daily function.

#### METHOD

Eighty-eight outpatients with chronic schizophrenia (female= 28, 31.8%) were recruited from psychiatric clinics, and all of them were assessed by neurocognition, social cognition, and life functions in baseline and three-month follow-up. Descriptive analysis was to present the distributions of demographic data and measured variables at the baseline and follow-up. The hierarchical regressions were applied to examine the effects of neurocognition (baseline), social cognition(baseline), the changes in negative symptoms, and daily functions (follow-up).

#### RESULTS

our results showed daily function at the baseline was significantly related to daily function (follow-up) and the changes in negative symptoms, but no significant associations with social cognition and neurocognition were found. Besides, the results of hierarchical regression showed only the changes in negative symptoms ( $t=-2.159, p=0.039$ ) and daily function (baseline) ( $t=5.847, p=0.000$ ) could have impacts on the daily function of follow-up.

#### DISCUSSION

the fluctuation of negative symptoms should be considered as assessing the improvement of daily function after completing CBT for psychosis, besides, the roles of the changes of negative symptoms between self-defeatist beliefs and daily function could be examined in the future.

Keywords: Neurocognition, Social Cognition, Negative Symptoms, Daily Function, Schizophrenia,

### **How the Validity of Transdiagnostic Factors in Predicting the Homotypic and Heterotypic Continuity of Psychopathology Can Inform Cognitive Behavioural Therapy**

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#### INTRODUCTION

Contemporary psychotherapy (e.g., cognitive behavioural therapy, CBT) typically conceptualizes mental disorders as putatively distinct entities based on categorical nosologies (e.g., DSM, ICD). However, the issues of poor reliability, high comorbidity, and marked within-diagnosis heterogeneity pose barriers to understanding the clinical course and prognosis of patients' symptoms over time. This highlights the need to understand continuity of mental disorder symptoms from an alternative framework of a transdiagnostic approach to enhance the effectiveness and optimal outcomes of psychotherapy. Early studies of the transdiagnostic approach proposed a two-factor internalizing-externalizing model to delineate the comorbidity structure of common mental disorders (Achenbach et al. 1978; Kruger et al. 1998), and these factors predicted the stability of mental disorder symptoms over time (Shevlin et al. 2017). These findings imply that transdiagnostic factors might account for the pattern of homotypic and heterotypic continuity of psychopathology over time. Therefore, the first aim of our study was to examine the validity of transdiagnostic factors in predicting homotypic and heterotypic continuity of comorbidity classes across two waves (Wave 1 and Wave 2) in a nationally representative sample. Next, we discussed how these findings can inform the delivery of cognitive behavioural therapy (CBT) in the clinical setting.

#### METHOD

This study analyzed data from 34,653 participants who responded to both waves of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a nationally-representative sample of the United States. In modelling transdiagnostic internalizing and externalizing factors (i.e., predictors of homotypic and heterotypic continuity), lifetime diagnoses were used as indicators to measure one's liability to internalizing and externalizing disorders. We modelled comorbidity classes at each wave using latent class analysis (LCA), including past-year diagnoses as indicators. Next, we conducted a latent transition analysis (LTA) to investigate how transdiagnostic factors differentially affect the transition probabilities of these comorbidity classes across time.

#### RESULTS AND DISCUSSION

Results showed notable predictive validity of transdiagnostic factors. Specifically, internalizing strongly predicted the stability of the internalizing class and the transition from the externalizing class to the internalizing class, while externalizing predicted the transition from the internalizing class to the externalizing class. These findings underscore the importance of incorporating the transdiagnostic approach into the assessment and treatment using CBT. Given the significant prognostic power of transdiagnostic factors, transdiagnostic assessments related to internalizing and externalizing spectra can be more valid and reliable than traditional DSM-based categorical diagnosis. Clinicians could use tools that measure broadband symptoms (e.g., Inventory of Depression and Anxiety Symptoms) to assess transdiagnostic internalizing symptomatology, which could lead to a comprehensive understanding of individuals' cognitive and behavioural patterns and inform the delivery of CBT. Moreover, CBT interventions that target shared mechanisms underlying elevated levels of a given transdiagnostic factor may be effective for preventing remission or progression of related disorders over time. For instance, patients with elevated levels of internalizing may benefit from a transdiagnostic treatment protocol targeting internalizing (e.g., The Unified Protocol; Barlow et al., 2017), which is utilized to reduce common dimensions of emotional disorders rather than using multiple and overlapping treatment manuals for each emotional disorder diagnosis.

### **Rautes in Nepal: A Socioecological Analysis**

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This study explores the practices of human rights and justice used in a nomadic community (Raute) caste of Nepal. The process of emerging powerful countries, system of imperialistic practice, population growth and its effect in natural resources, are key issues of human rights perspectives (Rautes). Raute caste is one of them, historically found in mid and far- western regions Terai of Nepal, Known as wandering caste in Asia. Researchers have described their experiences of hunting as an ideological phenomenon. The sample population consisted of twenty members of the Raute community who have been dealing with many social, religious integrities. Researchers used purposive non random sampling technique to select the sample population of the study. Researchers employed pre and post interview and non-participatory field observation techniques to elicit our data. When researchers analyzed the data qualitatively using the thematic analysis approach was adopted. The findings gained from the data interpretation showed that Rautes used different practices of human justice, especially language, culture, traditions to make democratic society. Translation, code switching and sometimes paraphrasing were used. It was realized that the policy makers, human rights activists had less efforts for making such community adjusted in the present contexts. The paper explores the impact of Rautes in order to maintain the equal ecology of sustainable society.

## You Say You're Inclusive, but Can You Show Us? Providing Culturally Competent Therapy to LGB People

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Lesbian, gay and bisexual (LGB) people are 2-3 times more likely to experience mental distress than their heterosexual counterparts (Plöderl & Tremblay, 2015). Being LGB does not cause mental distress, it is the stressors specific to being a minority in a potentially hostile society that explain this increased risk (Meyer, 2003). Hearteningly, LGB people are equally or more likely to access mental health service than their heterosexual counterparts to manage distress, though LGB people are twice as likely to report dissatisfaction with mental health services (Baams et al., 2018). Evidence suggests this dissatisfaction with mental health services is the result of poor service provider cultural competence (Patterson et al., 2019). The cultural competence framework highlights three important components to providing culturally competent care: positive attitudes, adequate cultural knowledge and skilful practice (Sue et al., 1982). While recommendations of what constitutes cultural competence have been proposed, limited studies have evaluated whether these cultural competence practices are being implemented by psychologists in clinical practice. We conducted two studies interviewing LGB service users (n=21) and psychologists and counsellors (n=10) to determine whether psychologists were implementing cultural competence practices and what practices were most valued. Creating a safe space through visually affirming cues and demonstrating inclusive practice during the therapeutic process were two consistent themes across both studies (Bishop et al., 2021, 2022).

While LGB participants overwhelmingly suggested that visual cues of affirmation signalled a service was inclusive, service providers perspectives were mixed. Some service providers implemented cultural competence practices to demonstrate inclusivity, while others were concerned implementing these practices may be pathologising. The difference in service provider perspectives adds nuance to the cultural competence literature through helping to explain why some service providers choose not to utilise visual cues of affirmation despite the benefits described by the LGB community. LGB participants and service providers in our studies highlighted the negative impact on the therapeutic alliance of providers using heteronormative language, failing to demonstrate inclusive language or lacking knowledge about the LGB community. Both studies highlight the importance of service providers attaining adequate cultural competence to provide therapy which is inclusive and respectful of LGB people. The findings of these studies are contextualised within the cultural competence literature with recommendations provided on how service providers can utilise visual cues of affirmation and skilful practice to enhance their service provision to LGB service users.

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### **LGBT-Affirmative Dialectical Behavior Therapy (DBT) Skills Training for Malaysian LGBT Adults: Findings from a Pilot Trial**

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Much research has shown that LGBT populations are at greater risk of mental health problems (e.g., depression) compared to the general population. However, less work has examined interventions that are effective for promoting mental health in this community. In the Malaysian context, LGBT individuals are particularly vulnerable to societal discrimination, which manifests in the form of prejudice, family rejection, anti-LGBT policies, physical violence, among others. Dialectical behavior therapy (DBT) is an intervention that holds promise to be adapted for the LGBT population due to the treatment's emphasis on skills training and targeting of self- and environmental invalidation. This pilot study developed a six-session, LGBT-affirmative online DBT skills group based on Linehan (2014)'s DBT skills training manual and Cohen et al. (2021)'s work on adapting LGBT skills training for LGBT veteran adults in the United States. The intervention was designed to address depressive symptoms and emotion dysregulation among Malaysian LGBT adults and adapted to be culturally relevant in Malaysia. The skills group incorporated content related to LGBT-specific stressors based on Minority Stress Theory, and taught selected DBT skills such as mindfulness, emotion regulation, and distress tolerance. A total of seventeen Malaysian LGBT adults ( $M_{\text{age}} = 26.9$  years) with elevated depressive symptoms were recruited via social media platforms and local LGBT advocacy and non-governmental organizations. Participants completed several validated self-report measures assessing psychological symptoms, emotion regulation, and well-being at pre- and post-intervention. Results using paired-sample *t* tests indicated that participants reported statistically significant decreases in depressive symptoms, stress, borderline personality disorder (BPD) symptoms, emotion dysregulation, and distress due to heterosexist experiences from before to after DBT skills training. There were also significant increases in self-compassion and subjective well-being following the intervention. Overall, participants reported a high level of satisfaction with the skills group (average rating = 5 on a 1-7 scale), and a high level of perceived usefulness of the skills learned (average rating = 5.14 on a 1-7 scale). While the results should be interpreted with caution due to a small sample size and a non-randomized design, the study is the first to demonstrate potential benefits of LGBT-affirmative DBT skills training in improving psychological health among LGBT individuals in Malaysia, a culturally conservative society where LGBT individuals continue to be persecuted against and discriminated at commonly, at both community and legal levels.

### **A Network Analytic Perspective on Trans\*-Specific Minority Stress and the Role of Protective Factors in Trans\* Individuals**

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Trans\* individuals show higher prevalence of mental disorders than cisgender individuals. The minority stress model offers explanations for increased psychopathological distress in trans\* individuals. Yet, findings on mechanisms and buffering factors are sparse. In the present study, an integrative model of Gender Minority Stress (GMSM; Hendricks and Testa, 2012; Testa et al., 2015) and Psychological Mediation Framework (PMF; Hatzenbuehler, 2009) was used to investigate the extent to which trans\*-specific minority stress has negative effects on the mental health of trans\* persons living in Germany and whether certain protective factors can mitigate the negative effects. A total of 300 trans\* individuals participated in the study. The hypotheses were tested with regression analyses as well as mediation and moderated mediation analyses. To detect processes for potential trans\* specific therapeutic interventions, network analyses were conducted. Internalized trans\* phobia mediated the association between gender identity non-affirmation and psychological distress independent of protective factors,  $b = 0.10$ , 95% CI [0.03, 0.21]. At medium and high levels of self compassion, this negative association was increased,  $b = 0.09$ , 95% CI [0.01, 0.23], whereas perceived social support weakened the indirect effect,  $b = -0.06$ , 95% CI [-0.15, -0.01], with a significant indirect effect at low levels of perceived social support. Preoccupation with others' perception (Gender identity reflection and rumination scale) mediated the association between gender identity non-affirmation and psychological distress only as a function of self compassion,  $b = -0.28$ , 95% CI [-0.54, -0.04], and self-esteem,  $b = -0.03$ , 95% CI [-0.06, -0.01]. As hypothesized, both moderators reduced indirect effect. Internalized trans\*phobia also mediated the association between gender identity non-affirmation and well-being as a function of self compassion, which increased the indirect effect,  $b = -0.06$ , 95% CI [-0.16, -0.00]. The network analysis revealed direct links within and between non-affirmation of Gender identity and internalized transphobia. Minority stress and self-compassion were negatively interrelated and associated with psychopathological distress. Items of the internalized transphobia scale showed the highest centrality. An integrative model of GMSM and PMF can be partially validated for trans\* individuals Germany. Network analyses revealed Trans\* individuals in Germany face minority stress, which may have a negative impact on their mental health and can be mitigated by protective factors. The findings from the network analysis reveal factors that should be implemented in the development of trans\*-specific and trans\*-sensitive interventions to reduce minority stress.

### **Sleep Quality Mediated the Effect of Victimisation on Self-Harm Among Sexual Minority Adolescents; A Prospective Cohort Study**

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#### INTRODUCTION

Peer victimisation is highly prevalence among sexual minority adolescent and it is a known risk factor for self-harm though the underlying mechanistic factors remained unclear. We object to assess the prospective association among peer victimisation and self-harm, with individual's sleep problems, including sleep initiation and maintenance difficulty, as possible mediators.

#### METHODS

We conducted a secondary data analysis using the Millennium Cohort Study, which is a nationally representative prospective cohort. We included adolescents participants who self-identified as sexual minority (N=1922, aged 11-13, 32.9% male). The participants and their parents completed measurements at age 11, 14 and 17, regarding their experience of peer victimisation, sleep problems and self-harm.

#### RESULTS

Results from logistic regression indicated that age-11 peer victimisation prospectively predicted self-harm at age 17 (OR=1.40,  $p < .01$ ) and the effects are further mediated by sleep maintenance problem at age 14 (indirect effect  $B = .008$ ,  $SE = .004$ ,  $95\%CI = .001-.017$ ), after adjusting for demographic factors and self-harm measured at baseline.

#### DISCUSSIONS

Our results suggested that sleep problem could potentially represent a mechanistic factor explaining peer victimisation's influence over self-injury behaviours. Sleep problem, particularly sleep maintenance difficulty could represent maladjustment with peer victimisation, which further increased the risk of developing poor mental health outcome. Sleep problems could be potential target to guide the identification of sexual minority adolescent who are at risk of developing self-injury behaviours.

### **The Effect of Culturally Adapted Cognitive Behavioral Therapy Based Guided Self-Help in Patients With Myocardial Infarction Having Depression**

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#### BACKGROUND

Patients with cardiovascular disease commonly have comorbid depression which is often ignored and this becomes the major contributor to the poor quality of life in these patients.

#### OBJECTIVE

To determine the efficacy of Culturally Adapted Cognitive Behaviour Therapy based Guided Self Help (CaCBT-GSH) for depression in patients with Myocardial Infarction (MI) when added to Treatment As Usual (TAU), compared with TAU alone.

#### METHODOLOGY

This was an assessor-blinded, randomized controlled clinical trial. Participants with a diagnosis of Depression post MI, coming to Punjab Institute of Cardiology in Lahore - Pakistan, were included in the study. A total of 140 patients were screened out and were randomly allocated 70 to CaCBT based guided self-help [Treatment group] and 70 to TAU alone [Control group]. Assessments were completed at baseline and the end of therapy (after 8 weeks from baseline). Reduction in depression score (Depression Subscale of Hospital Anxiety and Depression Scale) at eight weeks was the primary outcome measure. The secondary outcome measures included anxiety score (Anxiety Subscale of Hospital Anxiety and Depression Scale) somatic symptoms (Bradford Somatic Inventory), disability (World Health Organization Disability Assessment Schedule) and treatment satisfaction.

#### RESULTS

Participants in the Treatment group (n=70) showed statistically significant improvement in depression, somatic symptoms, and disability (p=0.000). Participants in the Treatment group also reported higher satisfaction with treatment compared to those in the Control group (p<0.01).

#### DISCUSSION

Guided Self-help based on CaCBT can be useful in improving depressive symptoms when compared with Treatment as Usual alone. This is the first report of a trial of culturally adapted CBT based Guided self-help (CaCBT-GSH) using a manual, in secondary care regarding patients with MI, from South Asia. Further studies are needed to generalize these findings.

#### CONCLUSION

Culturally adapted CBT-based guided self-help can be effective in improving depressive symptoms in patients with myocardial infarction when compared with treatment as usual.

Key Words: Culturally adapted Cognitive Behaviour Therapy (CaCBT), Guided Self-Help (GSH), Myocardial Infarction (MI), Depression.  
Learning objective(s)

1. To find out the efficacy of a culturally adapted Cognitive Behaviour Therapy-based Guided Self Help (CaCBT-GSH) for depression in patients with MI.
2. To find the improvement in Somatic symptoms and Disability in patients who received CBT post MI.
3. To find out the satisfaction with treatment in patients with depression who received CBT post MI.

### **Effect of Value Orientation Brief Therapy Combined With Trazodone on Clinical Symptoms, Social Function, Coping Style and Self-Acceptance Level of Patients With Anxiety Depression**

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Cohen's depression and anxiety are extremely common clinically. Based on the close relationship between anxiety and depression, the concept of anxiety and depression has been proposed by the academic community, which belongs to severe clinical depression (Zhao et al. 2021). Studies have shown that people with anxiety and depression have severe cognitive impairment, high risk of suicide, poor work and social skills, and heavy psychological and economic burdens on families and society (Qiao et al. 2022). Studies have pointed out that after two years of foot therapy with adequate antidepressant treatment, the remission rate of patients with anxiety and depression is only 56.80%, and the remission rate of patients with anxiety symptoms and depression is 79.79%. The quality of life of patients can easily lead to disease recurrence (Ionescu et al., 2014). Compared with medication, psychotherapy can enable patients to learn more practical techniques and integrate them into daily life to improve symptoms and relieve bad mood. It has more potential long-term benefits. In particular, psychotherapy is offered to patients with depression in children and adolescents, and psychotherapy can be used as a first-line treatment for patients with depression (Zhou et al., 2015). Therefore, in order to meet the changes in the needs of modern social development and the actual clinical situation, on the basis of cognitive therapy, the concept of stress-response concept is adopted, some humanistic schools of thought are absorbed, the value orientation brief therapy is established (Wang et al., 2020). It is a comprehensive, comprehensive, and balanced psychotherapy technique that creatively focuses on the value orientation of the individual's core cognition. It is designed to help them establish constructive values and appropriate coping methods to alleviate the symptoms of anxiety and depression, and to combine individualized therapy with family conversation to compensate for the lack of most short-distance psychotherapy that ignores the patient's family environment and upbringing (Fu,2020). We conducted antidepressant treatment or value orientation brief therapy of 91 patients with anxiety depression. The results of the two treatment methods will be discussed, and the influence of value orientation brief therapy on clinical symptoms, social function, coping style and self-acceptance level of patients with anxiety depression will be demonstrated. It is expected to provide new ideas for the treatment of anxiety depression and bring new hope to patients.

### **Pilot Study About the Effects of the Soma Experiencing Motion (Soma E-Motion) Program on Interoceptive Awareness and Self-Compassion**

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#### BACKGROUNDS

Somatics is defined as a field of bodywork and movement studies with an emphasis on internal physical experience and perception. Recently, somatics is drawing attention as an intervention with meditative characteristics based on movement. The purpose of this study was to examine the effects of the soma experiencing motion (Soma e-motion) program, a program based on somatics on interoceptive awareness and self-compassion.

#### METHODS

A total of 19 adults (clinical group=9, non-clinical group=10) participated in the intervention. Psychological and physical changes after program were qualitatively analyzed using in-depth interviews. The Korean Multidimensional Assessment of Interoceptive Awareness (K-MAIA) and the Korean version of the Self-Compassion Scale (K-SCS) were used as quantitative measures.

#### RESULTS

The non-clinical group showed statistically significant differences in the K-MAIA scores ( $z=-2.805$ ,  $p<.01$ ) and K-SCS scores ( $z=-2.191$ ,  $p<.05$ ), however, the clinical group showed no significant differences (K-MAIA,  $z=-.652$ ,  $p>.05$ ; K-SCS,  $z=-.178$ ,  $p>.05$ ). According to the in-depth interviews, the results of the qualitative analysis were categorized into five dimensions (psychological and emotional, physical, cognitive, behavioral, and aspects participants found challenging and needs improvement).

#### CONCLUSIONS

The Soma e-motion program was feasible for improving interoceptive awareness and self-compassion in the non-clinical group. However, further research is needed to investigate the clinical efficacy of the Soma e-motion program for clinical group.

### **Preliminary Evaluation of the Usefulness of Integrated Yoga Based Stress Reduction Intervention (IYBSR) for Health Care Professionals**

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#### INTRODUCTION

Stress experienced by the healthcare professionals (HCP) is universal. The demand to provide constant care and support, working longer hours with fewer rest periods, taking critical decisions, especially in health emergency situations can have significant consequences on mental health. There is an undeniable need for mental health intervention for Health care professionals that provides sufficient resources in situations where external help is not feasible. This study aimed to address this issue.

#### METHOD

The purpose of the study was to investigate the effectiveness of IYBSR intervention on healthcare professionals. A 6-module intervention was developed and the modules were carried out in the form of intervention over 6 sessions. The contents in the module were developed from the data obtained from the in-depth interview with the HCPs, interviews with the mental health and other health care professionals and the review of literature. Each module had a number of practice activities and self-assessment, self-reflection task. Yoga sessions were incorporated in the module after finalizing the contents from the yoga experts. Tele yoga sessions were conducted by the yoga experts and the videos of the same were provided to the participants for practice during the week. The Tele-Yoga sessions adhered to the guidelines of Ministry of AYUSH. Ten HCPs working in the health emergency situation enrolled for the intervention, of which 7 attended. The intervention was carried out over 6 weeks during health emergency situation. Newly developed HCP stress scale, Perceived Stress Scale and Ryff's psychological well-being scales were administered before and after the intervention. The intervention participants were also assessed on the yoga performance assessment scale. Data was analyzed to establish the effectiveness of the intervention.

#### RESULT

Results reveal that there was a decrease in the scores of the stress on the HCP stress scale and an increase in Ryff's psychological well-being score indicating improvement in the well-being post intervention. According to qualitative feedback, 71.5% of respondents expressed satisfaction with the intervention.

#### DISCUSSION

The study has showed the utility of brief yoga-based intervention in HCP. It is critical that such SOP on brief intervention should be made freely available for HCP in all private and public sectors. Larger controlled studies have to be planned to establish the effectiveness of the intervention.

Key Words: Yoga integrated, Stress Reduction, Intervention, Health care professionals

### **The Effect of Culturally Adapted Cognitive Behavioral Therapy Based Guided Self-Help in Patients With Postnatal Depression**

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#### BACKGROUND

Postnatal depression is a very common occurrence but often ignored and this becomes the major contributor to the poor quality of life in these women.

#### OBJECTIVE

To determine the efficacy of Culturally Adapted Cognitive Behaviour Therapy based Guided Self Help (CaCBT-GSH) for depression in patients with Post Natal Depression (PND) when added to Treatment As Usual (TAU), compared with TAU alone.

Methodology: This was an assessor-blinded, randomized controlled clinical trial. Participants with a diagnosis of Post Natal Depression, coming to a teaching hospital of Karachi - Pakistan, were included in the study. A total of 140 patients were screened out and were randomly allocated 70 to CaCBT based guided self-help [Treatment group] and 70 to TAU alone [Control group]. Assessments were completed at baseline and the end of therapy (after 8 weeks from baseline). Reduction in depression score (Edinburgh Postnatal Depression Scale) at eight weeks was the primary outcome measure. The secondary outcome measures included somatic symptoms (Bradford Somatic Inventory), disability (World Health Organization Disability Assessment Schedule) and satisfaction with the treatment.

#### RESULTS

A total of 70 participants were randomized to the Treatment group and the other 70 to the Control group. Participants in the Treatment group showed statistically significant improvement in depression ( $p=0.000$ ), somatic symptoms ( $p=0.000$ ), and disability ( $p=0.000$ ).

#### DISCUSSION

Guided Self-help based on CaCBT can be useful in improving depressive symptoms when compared with Treatment as Usual alone. This is the first report of a trial of culturally adapted CBT based Guided self-help (CaCBT-GSH) using a manual, in secondary care for patients with postnatal depression, from South Asia. Further studies are needed to generalize these findings.

#### CONCLUSION

Culturally adapted CBT based guided self-help can be effective in improving depressive symptoms in patients with Post Natal Depression when compared with treatment as usual.

Key Words: Culturally adapted Cognitive Behaviour Therapy (CaCBT), Guided Self-Help, Postnatal Depression.

Learning objective(s)

1. To find out the efficacy of a culturally adapted Cognitive Behaviour Therapy-based Guided Self Help (CaCBT-GSH) for postnatal depression.
2. To find the improvement in Somatic symptoms and Disability in women with postnatal depression who received CBT.
3. To find out the satisfaction with treatment in women with postnatal depression who received CBT.



### **Mental Health Services Needs of University Students With Anxiety and Depression; a Challenge to CBT Therapists**

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#### BACKGROUND

Anxiety and depression is common among university students worldwide and has been associated with lower academic achievement and drop-out. However, only a limited number of university students receive mental health services. Therefore, concerns about the well-being of students at the university level have increased and student representatives have called for measures due to this development. The purpose of this study was to 1. Assess students' perceived need for professional mental health care. 2. Assess the level of depression and anxiety among students who feel they need mental health services compared to those who do not feel this need. 3. Identify the main barriers of Icelandic university students in seeking professional mental health care.

#### METHODS

This was an online descriptive cross-sectional study. The questionnaire was sent to 3000 students enrolled at the University of Iceland in 2018. The questionnaire consisted of the SCL-90, Derogatis Depression and Anxiety sub-scales and questions regarding services needs. Females were 58% of the sample and males were 43%. The response rate was 53% representing students from all faculties. The mean age was 28 years, and most were undergraduate students (66%). Single students were almost 40% and about one third of students were parents. Seventy percent worked alongside with their studies. Results showed that 45% of the sample felt they needed professional mental health care and those who felt this need had significantly higher levels of anxiety and depression than did the others. When students were asked what hindered them in seeking professional mental health services, by far the most common reason was cost (81%), second was limited time (46%) and third was not knowing where to seek help (36%).

#### CONCLUSION

The results indicate that anxiety and depression among university students is an important public health issue, and challenge to mental health professionals. The finding that cost and lack of time is a major hindrance for students to seek mental health services suggests the importance of developing interventions that are accessible, for instance internet-based, and preferably free of charge for students.

### **The Feasibility, Acceptability and Utility of a CBT Based Single Session Online Intervention, the Common Elements Toolbox (COMET) for UK University Students**

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#### INTRODUCTION

Rates of mental health problems among university students globally are high. Mental health issues are associated with negative outcomes such as a decline in academic performance and further mental health issues. Unfortunately, due to the high demand for mental health services, there is a sizeable gap between need and timely access to evidence-based help. A possible solution to this problem is single-session interventions (SSIs) as they are scalable, accessible, and designed to deliver core evidence-based intervention components within a one-off encounter. This would therefore provide the best possible opportunity for a student experiencing mental health issues to receive some form of evidence-based support. COMET (Common Elements Toolbox) is an online self-help SSI, including cognitive restructuring, gratitude, and behavioural activation. COMET has previously been tested in India and the US with promising results.

#### METHOD

We are conducting a randomised controlled trial (RCT) of COMET versus a waiting list control, with 2- and 4-week follow-ups. Any UK university student can take part and recruitment is via social media, mailing lists, adverts and research participation schemes. Feasibility outcomes as well as change in symptoms and self-report of how much participants have been practising skills learned are measured. This presentation will focus on describing recruitment and retention (feasibility outcomes) as well as acceptability of the intervention based on quotes from students regarding the usefulness of the intervention and how it can be improved.

#### RESULTS

As of October 2022, 405 students were recruited (335 females, 60 males, 8 non-binary and 2 that preferred not to answer; mean age 25.75 years, SD = 13.5, range 18-67). 198 have been allocated to COMET and 207 to waitlist control. 132 students have completed the 2-week follow up and 119 students the 4-week follow up surveys. Participants have generally found COMET to be a useful intervention that has positively impacted their mental wellbeing. Students identified challenging negative thoughts, the reminder to take care of personal mental health and practicing gratitude to be particularly valuable. Students also found COMET to be highly engaging but commented that the intervention duration may be slightly too long.

#### DISCUSSION

This presentation reports on the feasibility and acceptability of this innovative, cognitive-behavioural based online SSI and thus informs the potential to offer SSIs like COMET as a low cost, timely and scalable addition to the available UK university student service provision.

### **Pilot Trial of a Culturally Attuned Internet-Delivered Mindfulness Intervention for Indonesian University Student's Distress**

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University students experience elevated levels of psychological distress. Mindfulness-based treatments that can effectively reduce distress have been growing in popularity and are increasingly being delivered through the Internet. However, further research is needed to develop and evaluate this kind of intervention in people from Low- and Middle-income countries (LMICs) and non-western cultural backgrounds, such as Indonesia. The present study investigated the acceptability, feasibility and preliminary outcomes of a novel culturally-adapted internet-delivered mindfulness program for treating Indonesian university student's distress. An open pilot trial was conducted in a sample of 40 university students in Indonesia with elevated distress level. Participants were enrolled into the 4-lesson online clinician-guided program for 4 weeks and completed the Depression Anxiety and Stress Scale [DASS-21], Indonesian Well-being Scale [IWBS], and Five Facet Mindfulness Questionnaires (FFMQ) at baseline and post-treatment. Twenty-eight participants (70%) completed the program, and all participants reported the program was satisfactory. Large, significant reductions in distress (Hedges'  $g= 1.45$ ) and significant improvement in well-being ( $g=0.85$ ) and mindfulness ( $g=1.35$ ) were found at post-treatment. Moreover, the program was found to be acceptable to participants with positive evaluation about the content and support that was provided. A guided, culturally attuned, online mindfulness program is feasible to reduce psychological distress among Indonesian university students. A randomized controlled trial is currently ongoing to examine the efficacy of the program compared to wait-list control group.

## Investigating the Effectiveness of Self-Compassion Intervention on Self-Compassion, Internalized Shame, and Internalizing Symptoms Amongst University Students Through a Mobile App Learning Program: A Randomized Controlled Trial

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Shame is a complex emotion that involves pervasive negative evaluation of oneself as incompetent and inferior (Rosario, 2006), and characterised by self-devaluation and a hostile and critical sense of self (Gilbert & Procter, 2006). Past research has found that shame is positively associated with symptoms of various mental health conditions (Vizin & Unoka, 2015). Self-compassion interventions have been theorised to be effective in reducing shame and associated mental health problems (Luoma & Platt, 2015, Gilbert & Irons, 2009). However, only a few studies have examined the efficacy of self-compassion interventions on these outcomes (Gilbert & Procter, 2006, Kelly, 2016). In this randomized-controlled trial (RCT) we investigated whether shame mediates the relationship between self-compassion, and internalizing symptoms, and if a self-compassion intervention, delivered through a mobile app learning program, increases self-compassion and reduces shame and internalizing symptoms.

We recruited 133 students from universities in Singapore (98 women, 34 men, 1 non-binary,  $M_{age} = 20.93$   $SD_{age} = 2.21$ ). Two 1-week self-guided programs were developed: a self-compassion intervention (SC) and an active control involving psychoeducation on cooperation (C). Both programs were administered via the Intellect App.

All participants were invited to join a two-week intervention, with 129 participants completing the study. Participants were randomized into three conditions. The SC-first condition did the SC program for the first week before doing the active control on the other week, while the opposite was true for SC-delay condition. The AC group did the active control for both weeks. The Internalized Shame Scale (ISS; Cook & Coccimiglio, 2001), Self-Compassion Scale Short Form (SCS; Neff, 2003), and the Depression and Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995) were administered at three timepoints: baseline (T1), after the first learning program (T2), and after both learning programs (T3).

Mediation analysis using baseline scores found that shame mediated the association between self-compassion and internalizing symptoms ( $p < .001$ ). We conducted three mixed ANOVA analyses to examine the effect of the interventions on levels of self-compassion, shame, and internalizing symptoms across time. For self-compassion, we observed a significant interaction between condition and time ( $\eta^2 = 0.11$ ,  $p < .001$ ). Test of simple main effects revealed that self-compassion scores increased from T1 to T3 for participants in the SC-first condition ( $p = .036$ ), as well as from T1 to T3 ( $p < .001$ ) and from T2 to T3 ( $p = .021$ ) for participants in the SC-delay condition. There was a significant increase for AC condition from T1 to T2 ( $p < .001$ ), but also a significant decrease from T2 to T3 ( $p < .001$ ). For shame ( $\eta^2 = 0.027$ ,  $p = .141$ ) and internalizing symptoms ( $\eta^2 = 0.013$ ,  $p = .720$ ), there were no significant interactions between condition and time. However, test of simple main effects showed shame levels reduced from T1 to T3 ( $p = .010$ ) and T2 to T3 ( $p = .038$ ) for the SC-first condition, and similarly from T1 to T3 ( $p = .002$ ) and T2 to T3 ( $p < .001$ ) for the SC-delay condition. There were no significant effects for the AC condition ( $ps > .05$ ). For internalizing symptoms, there was a reduction from T1 to T3 for SC-delay condition ( $p = .029$ ), however there were no significant changes for SC-first condition or for AC condition ( $ps > .05$ ).

Our findings demonstrated that shame mediated the relationship between self-compassion and internalizing symptoms. In addition, a one-week self-compassion intervention was effective in increasing self-compassion and decreasing shame. However, we did not observe changes in internalizing symptoms over time. While changes to self-compassion and shame were observed, the study's time frame may have been insufficient to include the time delay needed to capture subsequent effects on internalizing symptoms.

### **A Novel Internet-Based Cognitive-Behavioral Stress-Management Program for Working Adults With ADHD**

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*Dismantling Cognitive-Behavioral Therapy*

#### INTRODUCTION

In the last few decades, the proportion of sickness absence due to psychiatric diagnoses has increased drastically. This can be attributed to several factors, including a transition from physical to psychosocial strain at work, and difficulties balancing full-time employment alongside family obligations. A population that may have certain difficulties balancing work, leisure, and family, is adults with attention deficit hyperactivity disorder (ADHD). Adults with ADHD are more stressed, more often on sick leave, and receive sickness absence recommendations to a greater extent than adults without ADHD. Thus, it is urgent to manage and prevent stress and other work-related mental illnesses in this population. This project evaluates the feasibility, acceptability, and effects of an internet-based cognitive-behavioral stress-management program, developed specifically for this at-risk population.

#### METHOD

The novel stress-management program is based on existing support and interventions for ADHD adults. It is also inspired by existing support and interventions for relevant psychological disorders based on cognitive behavioral therapy (CBT) principles. This includes both tailored and transdiagnostic CBT applications. The development includes thoroughly assessing previous research, including quantitative and qualitative studies, meta-analyses, and literature reviews. The most relevant and effective material is adapted to the internet format and the ADHD-adult population. Modules include information and exercises on: how ADHD symptoms affect work, leisure, and relationships; planning and prioritizing on and off the job; communication, assertiveness, and setting boundaries; sleep and recovery; and more. The program will be evaluated in a pilot study during the spring of 2023, revised, and later tested in a randomized controlled trial.

#### RESULTS

At the time of writing, recruitment to the pilot study is about to begin. Preliminary results are expected to be presented at the 10th World Congress of Cognitive and Behavioral Therapies in Seoul.

#### DISCUSSION

Despite the fact that many adults with ADHD are more stressed, more often on sick leave, and receive sickness absence recommendations to a greater extent than adults without ADHD, few studies have explored the possibility to manage and prevent these negative outcomes. This project will further the knowledge of possible ways to manage and prevent stress and other work-related mental illness among ADHD adults. If the internet-based CBT stress-management program shows promising results, it could quickly be made available to caregivers and/or the public, conceivably conserving considerable resources for individuals, employers, and society.

### **Dismantling Cognitive-Behavioral Therapy Components for Attention-Deficit Hyperactivity Disorder in Adolescents and Adults: Component Network Meta-Analysis**

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#### INTRODUCTION

Cognitive-behavioral therapy (CBT) consists of multiple treatment techniques for each treatment model and is tailored to the patient's characteristics. Randomized controlled trials (RCTs) have reported that CBT is effective for attention-deficit hyperactivity disorder (ADHD); however, which CBT components are effective is unknown. In order to provide the best treatment technique, it is important to know which therapeutic element or combination thereof is more effective and what the specific effect size is.

#### METHODS

We performed component network meta-analysis (cnMA). The search included studies published from database inception through March 31, 2022, in English. The electronic databases of MEDLINE (via PubMed), EMBASE, PsychoINFO, ClinicalTrials.gov, and Cochrane Library were searched. We systematically identified all RCTs in the treatment of ADHD between the ages of 10 and 60, comparing interventions composed of various CBT components with controlled interventions. We performed pairwise and network meta-analysis with random effects to estimate summary odds ratios (ORs) and standardized mean differences (SMDs). We assessed the risk of bias in selected studies using the Cochran risk of bias tool.

#### RESULTS

After screening, we identified 43 RCTs including individual participant data (3873 participants). We will report the results including the analysis at this conference.

### **From Disability to Ability: A Specialized Vocational Program for Persons With Down Syndrome in Davao City**

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The business environment is not prepared for employees with limitations in logical thinking, memory and communication. Persons with Down syndrome require more time and effort to train and must be monitored more closely than employees with other, non-intellectual disabilities. Even though it may be strenuous work, it is the society's responsibility to create equal opportunities for all its members including those individuals with Down Syndrome. This has motivated this research to develop a specialized vocational program for persons with Down Syndrome. The program was developed through discerning the existing practices of the internship program through key informant interviews and observing the behavioral patterns among persons with Down Syndrome and environmental patterns such as human supports and physical supports available in the workplace. Participants were a total of thirteen participants comprised of six persons with Down Syndrome, with ages ranging from 17-35, three males and three females. Supplemental information were gathered from seven key informants which comprise of managers, supervisors and direct support staff of the various institutions included in this study. Themes that emerge include employer profile which describe the preferences and perceptions of employers, the good practices and challenges of the program namely the screening, entry, training and exit procedures, the behavioral patterns which include the work behaviors observed and the environmental patterns which include the current supports provided in the workplace.

## Effectiveness of Multidisciplinary Structured Training Program on Mental Well-Being, Stress Management and Mindfulness for Officers and Instructors in the Indian Air Force

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Military environment is characterized by unpredictable situations, intensive training, demanding workload and job associated stressors that make it highly stressful (Sharma & Sharma, 2012; Sharma, 2015). Simultaneously military personnel experience family separation caused by deployment which contributes to family related military stressors such as balancing family and military responsibilities (Briggs et al. 2019). These factors are likely contribute to the experience of stress among service personnel. Persistent stigma and lack of knowledge about mental health are among the barriers to military service members seeking behavioral health care (Pawar et al.2014). With growing concerns about mental health distress, studies reveal that mental health related training interventions amongst armed forces can be effective and report a positive growth in mental health knowledge and attitudes related to help-seeking behavior (Mohatt et al. 2017). Armed Forces intervention studies have primarily studied single domain interventions such as mental health crisis, suicide prevention or yoga (Pawar et al. 2014; Harmon et al. 2015; Hurst et al. 2018). Therefore, emphasizing the need for multi-domain focused mental well-being interventions for armed forces personnel. Thus, this study aimed at evaluating the effectiveness of a multidisciplinary structured training program on mental well-being, stress management and mindfulness for officers and instructors in the Indian Air Force (IAF). Based on a needs assessment, the structured training intervention was developed by a multidisciplinary team comprising of professionals from Clinical Psychology, Psychiatry, Psychiatric Social Work, Mental Health Education, Psychiatric Nursing, and Integrative Medicine. A manual consisting of the topics covered during the training intervention was also designed for the participants to use as reference in the future.

70 IAF officers underwent a week-long multidisciplinary structured training program at a tertiary care neuro-psychiatric hospital in South India. The multidisciplinary training intervention included topics such as handling mental health crisis, burn out, stress management, seeking therapy, mindfulness, effective communication, understanding human behavior, yoga for health, mentorship and suicide prevention. All sessions were conducted within a skill-based experiential learning framework, with didactic and interactive elements including interactive case scenarios, role- plays and brain-storming group activities. The study adopted a quasi-experimental design with a single group pre and post-test. The questionnaire measured a) mental health knowledge b) unfavorable attitude towards mental health c) self-perceived competence in addressing mental health distress. Post-training, there was a statistically significant improvement in mental health knowledge and self-perceived competence in addressing mental distress. The findings also indicated a change in attitude towards mental health concerns and help seeking. The multidisciplinary structured training intervention was found to be effective and beneficial for officers and instructors in the IAF. Such comprehensive multidisciplinary training interventions can act as stepping stones for mental health awareness, enabling individuals to improve their overall mental health and well-being. Administration of regular and in-depth training interventions could aid in both professional career and personal growth. Multidisciplinary mental well-being training interventions thus play a pivotal role especially in high stake environments like that of the military, as they empower individuals with the skills and knowledge to combat the stressors they face on a daily basis.



### **Institutional Approaches for Addressing Mental Health and Wellness Needs for Employees, Learners, and Dependents: Lessons Learned During the COVID-19 Pandemic**

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#### INTRODUCTION

Escalating rates of stress, insomnia, anxiety, trauma, and depression among healthcare workers during the COVID-19 pandemic increased the institutional responsibility to care for the mental health needs of the staff. Organizations face multiple challenges in forming a cohesive response to the emergent crisis, including the geographic spread of the population, organizing existing mental health and wellness resources, identifying additional support service needs, investing in change management, and evaluating intervention outcomes. The aim of the current paper is to describe Mayo Clinic's efforts to assume an institutional approach to address the mental health and wellness needs for its staff at the outset of the COVID-19 pandemic.

#### METHOD

Mayo Clinic's People and Culture Committee recognized the need to rapidly build an infrastructure to provide guidance on developing, implementing, and evaluating mental health and wellness needs for the enterprise-wide staff, including employees, learners, and their dependents. A multidisciplinary team representing the various geographic regions of Mayo Clinic was formed, using an employee well-being framework (Berkland et al., 2020) as a foundation to organize and build intervention solutions. A population-based model of "building within, building up, and building out" was also utilized for mental health and wellness resources. A staff survey was conducted to identify population needs and barriers to accessing resources and services.

#### RESULTS

The staff survey (N = 5,114) identified cost, lack of appointment availability, and confusion over insurance coverage as the top three barriers to obtaining mental health care. Well-being resources were identified and organized at the individual, interpersonal, supervisor, and work-unit levels. An institution-wide internet site was rapidly developed and implemented to centralize resources, and multimodal awareness campaigns were conducted to help increase employee knowledge of how to access content and services. In 2022, a 14-26% increase in awareness and utilization of mental health resources was reported by our staff. Strategic investments were made in mental health and wellness resources both internal and external to Mayo Clinic, especially those that leveraged technological solutions.

#### DISCUSSION

A large-scale, systematic approach along with an agile methodology are necessary to address the evolving mental health and wellness needs of employees, learners, and dependents across the course of the pandemic (Wieneke et al., 2022). Navigating resources easily, educating and training staff, enhancing interpersonal support, reducing stigma, utilizing awareness campaigns, changing features of the medical plan, and improving access to professional supports are key factors in a multi-level, population-based approach. Although some gaps in care have been bridged and new resources have been developed, additional innovative work is needed to examine the impact of resource dissemination and continue to enhance health and resilience outcomes for our staff. Ongoing efforts by the multidisciplinary team will be reviewed and discussed.

## Stress and Coping Strategies in Medical Students: Enhancing Stress Resistance

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Medical students are more susceptible to depression, burnout and suicidal ideation in comparison with peers (Schwenk et al., 2010). Mental health risks for them have increased even more with negative factors associated with the COVID-19 pandemic (Lyons et al., 2020). The study participants were 555 medical students (177 men and 378 women) of Sechenov University and Volgograd State medical university (407 Russian and 148 international students). We used the forms including questions about demographic data, lifestyle, behavioral strategies and the inventories: PSS-10 (Cohen & Williamson, 1988), Fear of COVID-19 Scale (Ahorsu et al., 2020), COPE (Carver et al., 1989), General Self-Efficacy Scale (Schwarzer et al., 1996), Spielberger State-Trait Anxiety Inventory (STAI) (1983) and PHQ-9 (Kroenke, 2002).

The sample mean PSS score was 18,41 (SD = 7,59). The distribution differed from normal (KS test,  $p < 0.001$ ). Correlation analysis (Spearman's coefficient) demonstrated strong positive correlation between stress level (PSS-10) and STAI situational (0.671,  $p < 0.001$ ), trait anxiety (0.647,  $p < 0.001$ ), PHQ-9 depression symptoms (0.633,  $p < 0.001$ ). PSS score was also positively correlated with Fear of COVID (0.257,  $p < 0.001$ ) and using the coping strategies (COPE): Mental disengagement (0.331,  $p < 0.001$ ), Focus on and venting of emotions (0.469,  $p < 0.001$ ), Behavioral disengagement (0.371,  $p < 0.001$ ), Substance use (0.256,  $p < 0.001$ ). Higher PSS score was associated with lower self-efficacy (-0.340,  $p < 0.001$ ) and self-reported health (-0.355,  $p < 0.001$ ), lower satisfaction with family relationships (-0.298,  $p < 0.001$ ) and communication with friends (-0.375,  $p < 0.001$ ).

There are no diagnostic norms for PSS, so we used the 25th and 75th percentiles to divide the sample into 3 groups with low (scores 0-14), medium (scores 15-23) and high (scores 24-40) stress. ANOVA test showed significant differences between groups in the university year, physical activity, self-reported health, smoking ( $p \leq 0.01$ ), alcohol consumption ( $p < 0.05$ ), family relationship satisfaction, communication with friends, fear of COVID, situational and trait anxiety, PHQ-9, self-efficacy and all coping strategies ( $p \leq 0.001$ ) except F4. Pairwise comparison conducted with post-hoc Tukey test demonstrated that the high stress group in comparison with other groups had lower physical activity ( $p < 0.05$ ), self-reported health, less satisfying relationships with family and friends, higher anxiety and depression ( $p \leq 0.001$ ). Students with high stress were more prone to use denial, mental and behavioral disengagement as coping strategies ( $p \leq 0.001$ ). Based on the data obtained we developed the online CBT Stress Management training program for medical students and conducted the pilot study to evaluate its efficacy. The program consisted of 5 weekly online group trainings and home assignments to practice the skills. The components of the training included psychoeducation, relaxation, emotion regulation, cognitive restructuring, problem-solving, positive activities planning and mindfulness. From the high stress sample 18 students were included in the experimental group, 19 students were taken in the control group. Six weeks later (one week after the training) PSS-10 was repeatedly conducted in both groups. Wilcoxon Signed Rank Test showed statistically significant change in PSS stress level ( $Z = -3.444$ ,  $p = 0.001$ ) in the experimental group. Using Mann-Whitney U test we compared post-training PSS scores between the experimental and control groups and found significantly lower stress level ( $p = 0.003$ ) in the experimental group.

The study results showed the factors and conditions, maladaptive coping associated with higher stress in medical students. We conducted the pilot study to test the stress management program, and we need to obtain the data on a larger sample. However, the most optimal forms, content and duration of training for medical students should be found in further research.

### **The Study on the Effectiveness of Online Group Cognitive Behavioral Therapy for Social Workers Who Experienced Client Death**

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#### INTRODUCTION

Social workers often experience their clients die of old age, disease, accident, and suicide. It causes them prolonged grief, PTSD, depression, anxiety, etc. However, they often do not get the opportunity to take good care of their mental health or the mourning process. This study is to develop and evaluate effectiveness of group cognitive behavioral therapy, using William Worden's Four Tasks of Mourning. The goal is to alleviate psychological pain and to recover mental health of social workers who experienced client death.

#### METHOD

This study used Quasi-experiment to confirm the effectiveness of group cognitive behavioral therapy for social workers who experienced client death. A total of 11 social workers who experienced client death during work were recruited and 5 experimental groups and 4 comparison groups were assigned. The group cognitive behavioral therapy was performed in the experimental group, and the comparison group waited in the waiting group without intervention. Changes in social workers' prolonged grief, PTSD, anxiety, and depression levels were compared. In addition, the experimental group was asked to fill out a discomfort score scale before and after each session. This group cognitive behavioral therapy was conducted through Zoom, online program due to concerns about infection of COVID-19.

#### RESULT

First, to find out the homogeneity of the experimental and the comparison group, Chi-Square test was conducted for general characteristics, and Mann-Whitney U-test was conducted for prolonged grief, PTSD, anxiety, and depression levels. Second, Wilcoxon Matched-Pairs Signed-Rank Test analysis was conducted to find out changes in prolonged grief, PTSD, anxiety, and depression levels before and after group cognitive behavioral therapy. As a result of the analysis, the experimental group was found that the prolonged grief score was significantly lower, and the PTSD, anxiety, and depression levels were also lower than the pre-score, but were not statistically significant. The discomfort score of participants in the experimental group conducted before and after each session was also found to have decreased. In case of the comparison group, there was no significant change in the pre- and post-test results, and the level of the prolonged grief, anxiety, and depression was higher in the post-test than pre-test.

#### DISCUSSION

The group cognitive behavioral therapy programs should be operated regularly to alleviate psychological pain and to help recover mental health of social workers who experienced client death. The institutional supports should provide appropriate treatment, including cognitive behavioral therapy, to help them recover and grow after trauma. It was also meaningful to test the effectiveness of online group cognitive behavioral therapy in the COVID-19 crisis.

### **Mind Booster Project: Strategies for Independent and Sustainable Use of Mobile-Based Cognitive Behavioral Therapy for Depression**

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Mobile application-based cognitive behavioral therapy (mCBT) has emerged as an accessible and cost-effective alternative to traditional face-to-face CBT for delivering psychotherapy or psychological care. Over the past decade, studies have shown that mCBT is as effective as traditional CBT in alleviating symptoms of depression and anxiety. However, low usage rates and high drop-out rates highlight the need for strategies to facilitate independent and continuous use of mCBT.

The Mind Booster Project was launched to address these issues by adopting two strategies. The first strategy is an “All-in-One” approach, which involves developing different versions of apps for each subgroup (e.g., age, gender, occupation, comorbid diagnosis, etc.) of the target population with a specific problem (e.g., depressed mood, aggression, etc.). The different versions are provided under one umbrella platform, unlike the typical mCBT, which takes a “One for All” approach. In the Mind Booster Project, occupation is considered the primary factor for dividing subgroups. The second strategy is the use of case stories, which depict characters who encounter real-life challenges commonly faced by the target populations and show how to effectively address and manage these challenges.

Several versions of the Mind Booster Applications were developed following these strategies, including Mind Booster Green for undergraduate and graduate students and Mind Booster Blue for employees. Mind Booster Green has three language versions: Korean, English, and Chinese. The app-based CBT program utilizes an e-learning format to teach skills to deal with emotional issues using five CBT strategies: psycho-education, cognitive restructuring, behavioral activation, problem-solving, and relaxation. Like other typical mCBT programs, it provides a few options to use in daily living settings, such as a mood diary, and incorporates gamification strategies, such as points reward and level-up for completing tasks.

The first randomized controlled trial (RCT) was conducted to test the effectiveness of the Mind Booster Green Korean version. One hundred fifty-six undergraduate and graduate students with mild to above mild depressive symptoms on PHQ-9 were randomly assigned to either an intervention or waitlist control group. Changes in symptoms were assessed through self-report assessments before and after intervention, as well as at a follow-up two months later. The results showed a significant reduction in depressive symptoms and an improvement in college adaptation in the intervention group compared to the control group. In addition, a decrease in negative automatic thoughts and an increase in positive automatic thoughts related to depression were observed. These effects were sustained two months after completing the 28 training sessions provided by the app. Participants rated the app as moderate to high in terms of entertainment, functionality, aesthetics, and information quality.

## Investigating the Effects of a Self-Guided Behavioral Activation (With a Focus on Physical Activities) Mobile Application Program on Physical and Mental Wellbeing – A Randomized Controlled Trial (RCT)

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Behavioral Activation (BA) is a well-established treatment for depression and anxiety. Targets of this approach include increasing engagement in pleasurable, meaningful, and adaptive activities, and decreasing engagement in activities that maintain low moods, i.e., avoidance. A possible feature of BA is increasing levels of physical activity (PA), which has been shown to reduce depressive symptoms (Cooney et al., 2013) and induce anti-inflammatory effects (Petersen & Pedersen, 2005). While previous research has found BA to be effective in improving mental wellbeing outcomes (Hopko et al., 2004), few studies have examined the effects of BA with a focus on PA, on both the mental and physical wellbeing outcomes. Furthermore, there is limited research exploring the effectiveness of disseminating BA through a mobile application (app) such that the intervention is cost-effective and scalable. The present study hence aimed to examine the effects of a self-guided BA (with focus on PA) mobile app program on the physical and mental wellbeing of college students.

We recruited 157 college students (34 males, 123 females,  $M_{age} = 21.0$ ,  $SD_{age} = 2.16$ ). Participants were randomly assigned to either the BA (focus on PA) program or an active control group (conflict management program). Both groups required similar amounts of time to complete the in-app activities (15 minutes at the start of each week). Over 2 weeks, participants engaged with the curated programs on the mobile application Intellect.co. Six participants dropped out of the study at the end of week 1. The following measures were administered at baseline, at the end of week 1 and at the end of week 2: The Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995), the General Health Perception subscale (5 items) of the Short Form 36 (SF-36) Health survey questionnaire (Medical Outcomes Trust, Boston, MA), and the physical activity and health responsibility subscale from the Health-Promoting Lifestyle Profile II (HPLP II) (Walker, Sechrist, & Pender, 1995).

We conducted three mixed ANOVAs to examine the effect of the interventions on levels of physical activity, general health perception, and mental well-being across time. We found a significant interaction effect between condition and time for HPLP II PA subscale ( $p = .039$ ). Test of simple main effects revealed that the control group had engaged in significantly lower levels of physical activity at the end of week 2 ( $p = .012$ ) compared to baseline, while the physical activity levels of the BA group were maintained throughout the two weeks. A significant interaction effect was also found between condition and time for SF-36 General Health Perception subscale ( $p = .037$ ). Compared to baseline, individuals' perception of general health in the BA group improved from baseline to the end of week 2 ( $p = .041$ ) as well as from the end of week 1 to the end of week 2 ( $p = .038$ ). We did not find any changes in DASS scores across time for all participants ( $p > .05$ ). There are several implications for our findings. First, we found that students in the control group had engaged in significantly lower amounts of physical activities at week 2, compared to baseline, while students in the BA group maintained the levels of physical activities throughout the study duration. Our findings suggest that the app-based BA may protect college students against circumstances that may lower their propensity to engage in physical activities, such as preparation for exams. Second, we found that app-based BA could improve an individual's subjective evaluation of general health over a short span of 2 weeks, thereby contributing to better perceived physical wellbeing. Third, the DASS scores for all participants did not change across time. The data collection timeframe for the current study coincided with the end of the semester for the students. Therefore, the DASS scores reported by our participants may be as a result of the demands relating to exams and assignment submissions. Nonetheless, overall, our findings point to the potential of app-based BA (with a focus on PA) intervention in improving an individual's subjective sense of physical wellbeing.

### **Patient and Clinician Acceptability for Using a Mobile Health Device To Manage Serious Mental Illness in the Community**

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#### INTRODUCTION

There is growing interest in using mobile health (mHealth) devices to monitor physiological signs of stress associated with mental deterioration. Research is currently examining whether physiological information returned to patients and their clinicians enhances early intervention. The aim of this study was to explore patient and clinician-related acceptability of an mHealth device to monitor stress for serious mental illness. This presentation describes a paper published in *Psychiatric Rehabilitation Journal* in 20221.

#### METHODS

Patients and clinicians at a community youth mental health service were shown how an mHealth device could be used to monitor stress. Focus groups and interviews regarding the acceptability of the device were conducted with patients and clinicians (N = 22). Content was transcribed and analysed using an inductive thematic analysis focussing on perceptions of potential benefit, barriers and facilitators of uptake.

#### RESULTS

Patients and clinicians identified two themes related to benefits of the mHealth device: 1) self-monitoring improves patient insight, and 2) clinician monitoring as a benefit to treatment. They identified one barrier theme: 3) privacy and data misuse concerns. They also identified three facilitators of uptake: 4) ease of use, 5) engaging design and 6) procedural guidelines.

#### CONCLUSIONS

The perceived benefits of passive physiological monitoring afforded by an mHealth device also come with concerns regarding its privacy and the potential for ambiguity in the patient-clinician relationship. Results underscore the importance of co-design to ensure the approach is secure, easy to use and engaging.

1Byrne, S., et al. (2022). Using a mobile health device to monitor physiological stress for serious mental illness: A qualitative analysis of patient and clinician-related acceptability. *Psychiatric Rehabilitation Journal*, 45, 219–225.

### **Comparing the Effectiveness and Cost-Effectiveness of Reinforcement Schedules on mHealth for Physical Activity**

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#### INTRODUCTION

Physical activity (PA) is one of the most frequently targeted behaviors in mobile health (mHealth). However, promoting PA through mHealth can be challenging due to the difficulty in encouraging continuous and independent use of these technologies. As a result, tangible rewards such as points, vouchers, and monetary incentives have been commonly used in mHealth for PA. Nevertheless, the effectiveness and cost-effectiveness of the methods for providing these rewards have not been sufficiently examined.

A reinforcement schedule, which is a core strategy in behavioral therapy (BT), refers to a set of rules that set goals and provide rewards. Previous research has shown that variable goals and gradually escalating rewards are more effective for behavioral change than fixed goals and constant rewards. However, most of these studies have been limited to laboratory experiments and few have been applied to mHealth targeting PA promotion. The present study aimed to identify the optimal reinforcement schedule for mHealth targeting PA promotion by comparing the effectiveness and cost-effectiveness of various reinforcement schedules.

#### METHODS

A total of 88 college students participated in the study for 3 months, randomly assigned to four conditions, based on the type of goal and reward: fixed goal-constant reward ( $n = 22$ ), fixed goal-escalating reward ( $n = 23$ ), variable goal-constant reward ( $n = 23$ ), and variable goal-escalating reward ( $n = 20$ ). The target PA was walking, which was monitored with the mobile app "PACER", and points were delivered using the mobile app "KAKAO Talk" as a reward for achieving the goal.

In the fixed goal condition, the number of goal steps remained the same throughout the study, while in the variable goal condition, the number of goal steps changed each time. Under the constant reward condition, participants received the same number of points each time they achieved their goal. In the escalating reward condition, the number of points awarded gradually increased with each successive achievement, and if the goal was not met, the number of points awarded for the next achievement was reset to the lowest level.

For analysis of effectiveness, step counts were measured as objective index and levels of walking, sitting, and walking habituation were measured as subjective index before and after the experiment. Additionally, for analysis of the cost-effectiveness, the amount of points used in each condition was calculated.

#### RESULTS

The results on effectiveness showed that there were no significant interaction effects among goal type (fixed, variable), reward type (constant, escalating), and time (pre, post). However, a significant main effect of time was observed. Specifically, regardless of goal type and reward type, the number of steps, walking level, and walking habituation level were increased significantly after the 3 months, while the sedentary level was decreased. In terms of cost-effectiveness, only the main effect of reward type was significant. The point offering amount of the escalating reward condition was 50.98% less than the point offering amount of the constant reward condition.

#### DISCUSSION

These findings show that reinforcement schedules are effective for promoting PA through mHealth, regardless of whether the goal type is fixed or variable, and whether the reward type is constant or escalating. Additionally, this study indicates that escalating rewards are more cost-effective than constant rewards. However, this study had a limited sample size of college students and focused only on walking as the target PA. Future research is needed to generalize these findings to a broader range of populations and PA types in mHealth. Nevertheless, these results provide valuable insights into the potential effectiveness and cost-effectiveness of reinforcement schedules as a BT technique for promoting PA through mHealth.

### **The Randomized Controlled Trials of Behavioral Activation-Based Application Using Personalized Curation for Adults With Mild to Moderate Depressive Symptoms: A Pilot Study**

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*Intrusive Thoughts and Images in Health Anxiety*

#### OBJECTIVES

The study aimed to evaluating the effectiveness of smart-phone-delivered behavioral activation (BA) based intervention. Much attention is currently paid on using cutting-edge technologies to convey cognitive and behavioral interventions. Although a lot of studies targeted to alleviated depressive symptoms, existing studies focused on delivering the contents of face-to-face cognitive behavioral therapy and behavioral activation through mobile application. However, these studies faced a limitation of low conformity. In this study, We developed an application to improve on user's usability and convenience. The smart-phone based application is consisted of personalized behavior curation, which is \*\*\*\*processes for gathering information relevant to a particular area of interest. Behaviors are curated based on age, occupation status, specific topic the participant wish to be resolved and behavioral patterns including frequency and time slot of depressive feeling.

Our Main Hypothesis is that curation-based BA intervention that recommend behaviors fit for each person and help people acting could reduce depression level. Second hypothesis were that curation-based BA intervention could help people improve the satisfaction of life and behavioral activation tendency. In addition, it is hypothesized that curation-based BA intervention will hep people improve self-efficacy of handling depressive symptoms and ease the procedure of starting behavior activation.

#### METHOD

In Randomized controlled trial, a total of 63 people participated in the screening test. A total of 41 participants were assigned to the BA group(Age Mean=24.48, SD=2.89) and the waitlist group(Age Mean=25.10, SD=3.43). Participants in BA group had a 10-days long use of behavioral activation based smartphone application administrating personalized behavioral curation. In addition, they got alarms to use the application everyday to promote BA intervention. Participants in Waitlist had 10-days maintaining everyday life as usual. Main outcome measures were the Patient Health Questionnaire-9(PHQ-9) and Satisfaciton With Life Scale(SWLS). Secondary outcomes were the Behavior Activation Scale for Depression Scale(BADS) used to confirm that the app increased their tendency to activate their behavior. As an additional analysis, In order to confirm that participants learned how to improve depression through the app, It is counted the number of participants who responded positively to the behavior they performed and activate the same behavior more than twice among BA group. A 2(group: BA, waitlist) \* 2 (time: pre, post) repeated ANOVA was examined using SPSS 27.

#### RESULTS

the percentage of participants who responded positively to the behavior they performed and activate the same behavior more than twice among BA group was 0.741. Results showed that there was a significant group \* time interaction effect( $p < 0.05$ ). PHQ scores of BA group were lower compared to those of waitlist group at post-intervention. The work/school impairment score of BADS were significantly higher in BA group compared to waitlist goup at post-intervention. However, Activation, Avoidance/rumination, social impairment score of BADS had no significant effect. The participants in BA group evaluated carrying out an action much easier compared to participants in waitlist group. There was no significant effect of time and group on SWLS scores.



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## CONCLUSION

For participants with mild to moderate severity of depression, digital BA intervention integrated with personalized curation was effective in lowering the level of depression, improving work and academic difficulty, easing process of activation. As continuity of intervention are important for relieving and controlling depression, future studies need to check the effectiveness of much more personalized BA intervention compared to existing BA intervention. In addition, accepting more sophisticated technology such as user clustering, the digital people BA intervention can be more useful and economical to people.

### **Intrusive Thoughts and Images in Health Anxiety**

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Health anxiety (HA) is characterised by a persistent preoccupation with having or developing a serious illness. Cognitive behavioural therapy (CBT) for HA has been shown to be highly effective, however, response to treatment varies widely (Alexsson and Hedman-Largalof, 2019). Improved understanding of the mechanisms underlying the development and maintenance of HA may inform treatment optimisation. One such mechanism that has largely been neglected is intrusive thoughts and images. Intrusive thoughts and images in HA are negative thoughts or images about being or becoming severely ill that are spontaneous, unwanted, and cause distress and anxiety for those experiencing them (Clark & Rhyno, 2005; Wells and Hackman, 1993).

This study aimed to compare those with HA (i.e., meeting criteria for DSM 5 Illness Anxiety Disorder (IAD), Somatic Symptom Disorder (SSD), or both) and those without HA in regard to: a) prevalence of intrusive thoughts and images b) the nature and characteristics of intrusive thoughts and images, such as content, associated distress, appraisals and metacognitions.

To this end, we recruited individuals with (N=38) and without HA (N=45) and used the Imagery in Health Anxiety Interview Schedule (Muse et al., 2010) to assess the prevalence, nature and characteristics of intrusive thoughts and images. Self-report measures such as the Interpretation of Intrusion Inventory (Obsessive-Compulsive Cognitions Working Group, 2003), assessed cognitive variables considered to be associated with intrusive thoughts and images.

Results found intrusive thoughts were equally common in those with and without HA, however intrusive images were more common for those with SSD or comorbid IAD/SSD within the HA group relative to those without HA. Results also found differences in the way intrusive thoughts were experienced between those with HA and without HA (e.g., intrusiveness, vividness, levels of distress, negative emotional responses), but this was not seen between groups for intrusive images. Despite no differences in intrusion content, those with HA were more likely to experience dysfunctional appraisals about their intrusive thoughts and images, and dysfunctional health related metacognitions. For behaviours related to intrusive thoughts and images, individuals with SSD were more likely to engage in checking and those with IAD were more likely to engage in reassurance seeking behaviour, relative to other groups.

These findings highlight that assessment of HA should include health related intrusive thoughts and/or images, as these were directly associated with heightened emotional responses and dysfunctional behaviours, which likely perpetuate the HA cycle. Findings also indicated that appraisals about the specific intrusive thoughts and images, as well as metacognitions about health and illness could be impacting emotional and behavioural responses to intrusive thoughts and images. As such, treatment for HA should consider addressing appraisals of specific intrusive thoughts and/or images as well as health related metacognitions.

### **A Brief Imagery Rescripting Intervention Is Equivalent to Imaginal Exposure in Improving Response To Worry Images Among High Trait Worry Individuals**

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#### INTRODUCTION

Generalised anxiety disorder (GAD) is characterised by aversive and intrusive mental images of feared future events. Imagery rescripting involves integration of positive or neutral imagery and corrective information into a mental image to reduce its aversiveness, facilitate emotional processing, and reduce imagery intrusions. Yet only one known study has applied the technique to treatment of worry in a written format with mixed results. The present study aimed to investigate whether a short single session of imagery rescripting would produce greater reductions in worry, anxiety, threat appraisals, and intrusive images regarding a feared future event compared to active control (imaginal exposure) among individuals high in trait worry.

#### METHOD

We recruited undergraduate participants (N=90) if they scored above 45 on the Penn State Worry Questionnaire (PSWQ) to indicate high trait worry, and they indicated on the Vividness of Visual Imagery Questionnaire (VVIQ) that they were able to produce mental images. Participants attended a 45-minute video-call session with a provisional psychologist in which they completed questionnaires, took part in downward-arrow style questioning to identify a major worry with an associated mental image, and completed Likert-type scale items assessing their anxious response and cognitive appraisal of threat regarding this worry. Participants then practised developing a neutral mental image. We then randomised participants to a 15-minute psychologist-guided exercise of either imagery rescripting or imaginal exposure to their worry image. Imagery rescripting involved collaboratively rewriting the events of the image to achieve an image that had a positive outcome and meaning for the individual. The experimenter recorded the exercise and asked participants to relisten to the recording daily for three days. Participants provided outcome ratings again one week post-intervention.

#### RESULTS

A total of 87% of participants identified a pre-existing, future-oriented worry image that had previously bothered them, and remaining participants generated a new mental image of their worry for the exercise. On average, the experimenters rated participants 10.24 out of 15 on a composite of three variables assessing level of engagement with the exercise, and participants completed an average of 2.37 of the 3 home relisting tasks. There were no differences between conditions on these variables, and dose of relisting did not moderate results. Linear mixed effect modelling revealed that participants in both conditions reported decreases in worry, anxiety, threat appraisals, and frequency and distress associated with worry images between baseline and post-intervention. Results were comparable between imagery rescripting and imaginal exposure conditions. No adverse events were reported.

#### DISCUSSION

Results indicate that a short, novel, future-oriented imagery rescripting intervention using idiosyncratic worry images was as effective but not superior to an established imaginal exposure technique in improving participants' worry, anxiety, threat appraisal, and intrusive images regarding their worries. The high proportion of participants who were able to identify an existing problematic worry image highlights the relevance of negative mental imagery as a treatment target among individuals high in trait worry. Participants in both conditions engaged and complied well with the imagery exercises and home relisting components. Overall, results suggest imagery rescripting is as acceptable and effective as an established technique. Future studies may investigate whether involving patient preference in the choice of imagery technique improves outcomes.

### **Imagining Letting Go: Rescripting Mental Imagery Connected to Discarding Difficulties in a High Hoarding Sample**

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#### IMAGINING LETTING GO: RESCRIPTING MENTAL IMAGERY CONNECTED TO BACKGROUND AND AIMS

Difficulty discarding is the cardinal feature of hoarding disorder (APA, 2022). Emerging evidence suggests individuals who hoard experience intrusive mental images when discarding (e.g., resurfacing memories, images of waste and scarcity) that can inhibit them from parting with objects (Stewart et al., 2020). Clinical strategies targeting this imagery, such as imagery rescripting, may therefore facilitate discarding in individuals with hoarding difficulties. Imagery rescripting is a technique where the content, meaning and valence of problematic mental images is reshaped into a more desirable alternative (Arntz, 2012). We evaluated whether imagery rescripting increased discarding ease and frequency in a sample of high hoarding individuals compared to other cognitive behavioural strategies. We also examined whether the success of imagery rescripting depended on participants' imagining ability.

#### METHOD

We recruited MTurk workers pre-screened for high levels of hoarding symptoms (N=176). Participants first described their mental images related to a possession that they were having difficulty discarding. We then randomised them into one of four 15-minute written tasks: an imagery rescripting condition, in which participants reshaped their mental image into a positive imagined outcome of discarding; an imaginal exposure condition, in which participants fixated on a negative imagined outcome of discarding; a cognitive restructuring condition, in which participants considered the evidence for their negative imagined outcome; or a positive/distraction imagery control, in which participants imagined unrelated positive scenes. Participants' responses for each condition were assessed before and after the exercises on the following outcomes: motivation and readiness to discard, object attachment, state anxiety, sadness, anger, happiness, and relaxation. We then presented participants with an opportunity to discard their selected possession.

#### RESULTS

Over 94% of participants reported frequent, interfering mental images during recent attempts at discarding. These images mostly took the form of important autobiographical memories linked to their objects as well as visions of impending catastrophe, scarcity, waste, betrayal, interpersonal rejection and missed opportunity predicted to take place if discarding occurred. Rescripting these images was associated with increased readiness and motivation to discard and higher discarding frequency relative to all other conditions. Rescripting also reduced state negative emotions and increased state positive emotions relative to exposure and restructuring. We found reductions in object attachment in rescripting, restructuring and positive imagery conditions. The effect of rescripting on readiness and motivation to discard was significantly moderated by imagining ability, such that higher imagining ability was associated with greater readiness and motivation after rescripting.

#### CONCLUSIONS

Discarding may be challenging for individuals who hoard due to interfering mental images. Pending replication and extension in a clinical sample, rescripting these images may have promise as a clinical strategy to facilitate discarding in those with hoarding difficulties.

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### Online Imagery Rescripting for Trait Anxiety With Two Conditions of Agent Type

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#### INTRODUCTION

Imagery rescripting (IR) is a therapeutic technique that has been found effective across psychopathologies. Yet procedures are ambiguous, and the mechanisms of action require clarification. IR modifies and updates negative schema-based representations by targeting autobiographical memories of past events and by addressing the past unfulfilled needs of the self. During IR, the patient is requested first to relive a negative past event and then to reimagine the event with an agent (self or other) intervening. The classic procedure involves an invitation of the current self into the imagery of the negative event. However, implications of difficulties with the implementation of protection and compassion towards oneself (for instance, because of limited resources of the self) led to a suggestion to implement other as an agent. Yet, no research had been systematically examined in which terms the utilization of the other would lead to better outcomes. This study aimed to develop a transdiagnostic, internet-based intervention (IBI) of (IR), and to compare two conditions of agent type. We predicted an interaction between agent (self vs. other) and attachment styles that affects outcomes: participants with more anxious attachment styles will demonstrate more difficulties in addressing their needs by themselves and therefore will benefit more from the 'other' condition. In contrast, participants with higher avoidant attachment styles will demonstrate more difficulties in relying on a trusted other and therefore will benefit more from imagining themselves as the agent.

#### METHOD

300 clinical analogs of high-trait anxious individuals were randomly assigned to one of the two experimental conditions of agent type. In the 'self' condition, 140 participants rescripted their memory with the help of their current selves. In the 'other' condition 160 participants were asked to elicit an image of a close and trusted other who intervened in their painful memory. In addition, 20% of participants were assigned to a waiting list control group. Clinical symptoms, as well as attachment styles and putative mechanisms, were measured at three-time points: pre-intervention, post-intervention, and one-week follow-up.

#### RESULTS

The interaction between time and condition was significant. Improvement in trait anxiety was registered both for self and other conditions. None of the effects was significant for the control group. Contrary to our hypothesis, attachment styles did not moderate the efficacy of the intervention by agent type. However, memory vividness and emotional intensity decreased similarly in both conditions. Positive state emotion increased during the three phases of the intervention, whereas Negative state emotion decreased with higher discrepancy for the 'self' condition,

#### DISCUSSION

Online imagery rescripting improves trait anxiety symptoms, state emotion, and memory characteristics. Our results demonstrated that both self and other conditions are equally effective. Although attachment styles did not moderate the effect of agent type, further research is needed to determine under which conditions patients would benefit from 'self' and 'other' as agent type. Imagery rescripting intervention can and should be tailored to the patient's characteristics and needs.

### Testing the Impact of Imagined Social Support on Fear Extinction

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#### INTRODUCTION

Safety signals during exposure therapy are widely considered detrimental for fear extinction. Recent work suggests that social support may form an exception to this rule, showing that social support stimuli or imagined social support can enhance fear extinction measured using physiological markers of fear. However, it is unclear whether social support enhances fear extinction at the level of subjective metrics at the core of clinical practice, i.e., subjective distress.

#### METHOD

This study examined the impact of social support on fear extinction and return of fear through asking healthy participants ( $n = 25$ ) to vividly imagine a self-chosen support figure after fear acquisition, and right before extinction, in a differential fear conditioning paradigm. Participants in a passive control condition ( $n = 24$ ) took a short break before undergoing extinction.

#### RESULTS

Imagined social support instantly reduced distress, which persisted throughout extinction. Crucially, while participants in the control condition reported a return of fear for the conditioned stimulus after a 15-minute break, those who had imagined a support figure showed no evidence of return of fear.

#### DISCUSSION

Taken together, these results provide further evidence that social support may have favorable effects on fear extinction and may protect against relapse of fear, generalizing to subjective measures relevant to clinical practice such as subjective distress. Future studies in patients with anxiety disorders can determine whether these promising results prove to be clinically useful.

### Identifying Trajectories of Symptom Change in Adults With Obsessive Compulsive Disorder Receiving Exposure and Response Prevention Therapy

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#### INTRODUCTION

Exposure and response prevention (EX/RP) is a recommended cognitive behavioral therapy (CBT) for obsessive-compulsive disorder (OCD). Given that not all patients benefit equally from EX/RP, understanding the heterogeneity in response to EX/RP is crucial to refining the treatment. One approach to studying change in symptom severity across treatment is growth mixture modeling (GMM). This approach utilizes data-driven detection of heterogeneous subgroups of participants with similar response patterns to account for the fact that distinct groups of individuals may respond differently to the same treatment. In sum, we sought to conduct the first GMM of OCD symptom change in outpatients receiving manualized EX/RP. We further examined whether certain baseline patient characteristics might predict membership in different change trajectory classes.

#### METHOD

We pooled data from four NIMH-funded clinical trials, yielding a large clinical sample (N=334). All participants received a standard course of manualized EX/RP in the same format and structure: a total of 17 twice-weekly 90-minute sessions over an 8-week period. Independent evaluators rated OCD severity using the Yale-Brown Obsessive-Compulsive Scale (YBOCS). Data were analyzed using GMM to detect subgroups of participants with similar trajectories of symptom change followed by multinomial logistic regression to identify baseline variables capable of predicting class membership.

#### RESULTS

GMM revealed three distinct trajectory classes: 22.5% of the sample showed dramatic improvement (dramatic progress class), 52.1% showed moderate improvement (moderate progress class), and 25.4% showed little change (little to no progress class). Membership in the little to no progress class was predicted by baseline avoidance and transdiagnostic internalizing factor levels.

#### DISCUSSION

Our overall findings suggest that OCD symptom improvement with outpatient EX/RP occurs via distinct trajectories in that the rate and speed of progress differ depending on individuals. This highlights the importance of identifying treatment non-responders and conducting research to test individualized modifications to improve EX/RP outcomes. This finding is also relevant for clinicians in practice, as it might help them personalize treatment. We also detected baseline characteristics capable of predicting membership in the limited progress class. The finding that patients with more extensive OCD-related behavioral avoidance were more likely to belong to the non-response class suggest that assessing avoidance behaviors before treatment may be important to helping clinicians determine which patients are less likely to succeed with a standard course of EX/RP. These patients might require additional interventions (e.g., motivational interviewing) or specific treatment tailoring to help reverse avoidance patterns to be able to complete exposures. Notably, the transdiagnostic internalizing factor, which represents one's general tendency to experience symptoms of internalizing psychopathology, was found to be a significant predictor of non-response to EX/RP. This suggests that individuals with high levels of transdiagnostic internalizing are more likely to be less responsive to the treatment. This highlights the importance of assessing one's transdiagnostic



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internalizing factor levels, in addition to OCD symptoms, when interviewing patients before treatment. Further, clinicians may want to consider augmenting EX/RP with interventions from transdiagnostic treatments (e.g., The Unified Protocol). In sum, our findings have implication regarding identifying treatment non-responders and personalizing treatment depending one's baseline characteristics in order to optimize EX/RP treatment effectiveness.

### **Excessive Reassurance Seeking Versus Compulsive Checking In OCD: Comparing Implicit Motivators and Mechanisms**

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Excessive reassurance seeking (ERS) in obsessive-compulsive disorder (OCD) negatively impacts interpersonal relationships and interferes with exposure and response prevention outcomes during cognitive behavioural therapy (CBT; Albert et al., 2010; Gillihan et al., 2012). ERS increases following scenarios with high threat and personal responsibility (Leonhart & Radomsky, 2019; Parrish & Radomsky, 2010), but the mechanism via which ERS addresses these concerns is unclear. We investigated whether reassurance following OCD-related threats facilitated temporary threat re-appraisal and/or transferred responsibility to others. We also examined the 'checking by proxy' theory of OCD ERS (Rachman, 2002) by comparing the functional mechanisms of reassurance and checking behaviour. Finally, we explored whether OCD symptoms moderated the efficacy of ambiguous and unambiguous reassurance in addressing threat and responsibility appraisals. To address these aims, non-clinical community participants (N = 398) were recruited through MTurk and randomised to one of four conditions: ambiguous object-derived (checking) information, ambiguous person-derived (reassurance) information, unambiguous object-derived information and unambiguous person-derived information. Participants read scenarios that conveyed a risk of harm or contamination before reading scenarios wherein they received reassurance or "post-check" information as per their condition. Ratings of personal and external responsibility, threat likelihood and uncertainty were made before and after receiving the information. In support of a checking by proxy hypothesis of ERS, participants in the unambiguous information conditions reported decreased uncertainty, decreased estimated threat likelihood and increased responsibility of others, regardless of whether they imagined checking or receiving reassurance. Those in the ambiguous conditions reported no changes in threat estimation or responsibility beliefs. OCD symptom level moderated responses to ambiguity: unlike participants with lower OCD symptoms, participants with higher OCD symptoms did not respond differentially to ambiguous versus unambiguous reassurance. Our findings suggest that, like checking, reassurance facilitates short-term threat re-appraisal and diffuses responsibility following obsessive threats. Individuals higher in OC symptoms appear to make similar threat and responsibility reappraisals regardless of whether reassurance is ambiguous or unambiguous. These findings point to the importance of addressing ERS in OCD during CBT as a compulsion akin to checking with equivalent functional importance for the maintenance of OCD symptoms.

This open paper covers content which has been published as per the reference below:

Champion, S. M., & Grisham, J. R. (2022). Excessive reassurance seeking versus compulsive checking in OCD: Comparing implicit motivators and mechanisms. *Journal of Behavior Therapy and Experimental Psychiatry*, 75, Article e101720. <https://doi.org/10.1016/j.jbtep.2021.101720>

## Does Mental Contamination Mediate the Relationship Between Perceived Teasing Experiences and Body Dysmorphic Disorder-Related Symptoms?

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Appearance concerns are very common in the general population (Harris & Carr, 2001). These concerns are thought to be on a continuum with normal appearance concerns at one end, and distressing preoccupations, characteristic of Body Dysmorphic Disorder (BDD) at the other. BDD is a common mental health problem (Veale et al., 2016) characterized by a distressing preoccupation with a perceived defect or flaw in one's physical appearance that is slight or not observable to others (DSM-5, American Psychiatric Association, 2013). Cognitive-behavioral models of BDD propose that several factors, including maladaptive appearance-related beliefs about the self, and life experiences, including a history of being teased, may contribute to the development and/or maintenance of BDD concerns (Buhlmann et al., 2006). Mental contamination (MC), a symptom primarily studied in relation to obsessive compulsive disorder, and to some extent to posttraumatic stress disorder, refers to an internal feeling of dirtiness or pollution that arise in the absence of physical contact (Rachman, 2004). MC tends to elicit feelings of disgust, shame, and humiliation, and it is proposed that negative past experiences (e.g., betrayal, humiliation, or sexual, physical or emotional harm) are at the root of these feelings (Shafran et al., 2018). The purpose of the current study was to explore the relationship between appearance concerns and mental contamination. Specifically, we wanted to explore if negative life experiences, such as teasing episodes, evoke feelings of MC, and in turn, if these feelings are associated with BDD symptoms and its severity. A total of 427 undergraduate students provided ratings on the Body Dysmorphic Disorder Symptom Scale (BDDSS), the Vancouver Obsessive Compulsive Inventory- Mental Contamination Scale (VOCI-MC), and the Perception of Appearance- and Competency Related Teasing Scale (PTS). The average age of the sample was 23.2 years ( $SD = 5.01$ ; range: 18-44), and 83.6% were female. Mediation pathways between perceived teasing experiences and BDD-related symptoms and severity via mental contamination were examined using the PROCESS macro for SPSS. Preliminary correlation analyses showed strong and significant associations between BDDSS number of symptoms and severity and the PTS frequency and distress subscales ( $r = .325-.477$ ;  $p \leq .001$ ), and VOCI-MC (.339-.445  $p \leq .001$ ), and between PTS subscales and VOCI-MC ( $r = .332-.393$ ;  $p \leq .001$ ). Mediation analyses revealed a significant indirect effect of frequency of teasing experiences on BDD-related symptoms,  $b = 0.117$ , 95% BCa CI [0.071, 0.168], and on BDD-related symptoms severity,  $b = 0.069$ , 95% BCa CI [0.007, 0.148] through mental contamination. Despite the interest that has gained in recent years, BDD is still understudied (Fang and Wilhelm, 2015), and expanding our understanding of its etiology and maintaining factors would help us to target them in therapy, and improve the available treatments for this disorder. We will discuss the implications of these results in the understanding of relevant cognitive processes involved in BDD.

### **A Multicenter Study of Bodily Distress Syndrome in Chinese Outpatient Hospital Care: Prevalence and Associations With Psychosocial Variables**

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#### BACKGROUND

Bodily distress syndrome (BDS) is a new, empirical-based diagnosis of functional somatic symptoms. This study aimed to explore the prevalence of BDS and its association with psychosocial variables in a Chinese clinical population.

#### METHODS

A multicenter cross-sectional study of 1269 patients was conducted in 9 different Chinese tertiary outpatient hospitals. The BDS was identified by trained interviewers face-to-face, based on a brief version of the Schedules for Assessment in Neuropsychiatry (RIFD) and the BDS Checklist-25. Sociodemographic data and further information were characterized from psychometric questionnaires (The Patient Health Questionnaire-15, the Patient Health Questionnaire-9, the General Anxiety Disorder-7, the Whiteley scale-8).

#### RESULTS

Complete data were available for 697 patients. The prevalence of BDS was 26.8% (95% confidence interval (CI): 23.5–30.1). Among the participants, 5.8% (95% CI: 4.1–7.6) fulfilled the criteria for single-organ BDS, while 20.9% (95%CI: 17.9–24.0) had multi-organ BDS. Comparison of the PHQ-15, PHQ-9, GAD-7, and WI-8 scores revealed higher scores on all dimensions for patients with BDS. In a binary logistic regression analysis, BDS was significantly associated with increased health-related anxiety (WI-8) and depression (PHQ-9). The explained variance was Nagelkerke's  $R^2=0.42$ .

#### DISCUSSION

This is the first multicenter study with a large sample size conducted to investigate the prevalence and characteristics of the BDS in Chinese population. Our study revealed that the multi-organ subtype of the BDS reported more frequent than the single-organ subtype which reported opposite situation to prior studies. Sample source and cultural diversity might contributed to the difference. The multiple regression results shown that for every point increase in the WI-8, PHQ-9, and PHQ-15 scores, the risk of being diagnosed with BDS increases, which is consistent with previous studies. In China, the BDS is a common clinical condition in tertiary outpatient hospital settings with high prevalence, and is associated with health anxiety and depressive symptoms. In this clinical population, the severe multi-organ subtype of BDS was the most frequent.

### How Does Mindfulness Improve Body Image: Cognitive Reappraisal Mediation Model

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#### BACKGROUND

When the individual holds a negative evaluation of his own body and experiences a high sense of dissatisfaction, it is easy to develop into a negative body image, and cause psychological reactions such as dissatisfaction and anxiety about your own body. There is an important relationship between an individual's weight loss behavior and his own body image (Liu Shirui, 2009). Besides, mindfulness has proved to be effective in negative body images (Stewart, 2003). However, only a few studies in China explore the mechanism of the relationship between mindfulness and body images. The theoretical of our research were Cognitive behavioral theory. Gross believes that cognitive review can understand through a positive way of understanding things in a positive way (Gross, 2003). In the current study, we tried to examine the effects of mindfulness on the body image, and mainly focused on the cognitive reappraisal mediating effects of Chinese college students in order to identify the probable mediating processes and mechanisms that may explain the mindfulness and body images.

#### METHOD

A total of 603 college students (240 men and 363 women) from the university of Guangdong Province with an age of 20.2 completed Five Facet Mindfulness Questionnaire (FFMQ), Multidimensional Body-Self Relations Questionnaire (MBSRQ-BASS, AE), Emotion Regulation Questionnaire (ERQ). The data was analyzed with SPSS 26.0.

#### RESULTS

(1) Regression analysis revealed that there were significantly positive correlations between mindfulness, cognitive reappraisal, and body images. FFMQ has positive correlations with MBSRQ ( $r=0.950, p<0.01$ ); FFMQ has positive correlations with ERQ ( $r=0.967, p<0.01$ ); ERQ positive correlations with MBSRQ ( $r=0.939, p<0.01$ ). (2) Preacher and Hayes (2004) Bootstrap method is used to test the mediation effect. Mediation analysis indicated that cognitive reappraisal partially mediated the relationship between mindfulness and body images beside direct influence ( $\beta=0.308, SE=0.023, t=13.61, p<0.001$ ). The mediation effect accounted for 30.6% of the total effect.

#### CONCLUSIONS

On the basis of these findings, we concluded that mindfulness had an important positive influence on body images. On the one hand, mindfulness acted as a protective factor of body image have a beneficial effect on negative body image. On the other hand, mindfulness promoted the use of cognitive reappraisal resulted in the decrease of negative body images. The present study extended prior reports and highlighted a precisely unidentified mechanism to explain how mindfulness promoted body images.

# PANEL DISCUSSION

## Supervision and Training Issues and Their Impact on the Global Dissemination of CBT

Yongsuk Kim<sup>1\*</sup>, Kee-Hong Choi<sup>2</sup>, Nimisha Kumar<sup>3</sup>, Ken Laidlaw<sup>4</sup>, Allen Miller<sup>5</sup>, Alvin Lai Oon Ng<sup>6</sup>

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Despite the impressive scientific rigor applied to develop and evaluate cognitive behavior therapy (CBT), the same scientific rigor has not been extended to developing our knowledge and skills in CBT training and supervision. With the essential requirement to be highly trained to deliver CBT, mental health professionals of this caliber are limited even in resource-rich countries. This international panel from Korea, Malaysia, India, the UK and the USA aims to bring forth a discussion on how the countries with varying levels of provisions for psychological therapies train and supervise those delivering CBT. The panel will explore the unique challenges that may influence CBT training, supervision, and dissemination in different countries. Furthermore, learning about the barriers to applying scientific rigor to evaluate training and supervision will be discussed with the aim of increasing collaboration and accessibility of CBT across countries.

Questions to prompt panel members may include:

What is the current status of the practice of CBT training and supervision in your country?

How are the CBT therapists trained? How are the trainers being trained and supervised to provide the CBT training/supervision?

What methods are used to evaluate the CBT supervisors and trainers?

What are the current limitations in supervising CBT supervisors, and what are some of the ways to address the limitations?

Which is better? One CBT certification to rule them all vs. nationally certified CBT practitioners?

What are the cultural considerations that impact creating a balanced relationship within supervision?

What are the barriers to the global dissemination of CBT with respect to the issues of supervision and training?





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II.

# Applied Issues



Korea experiences spring with cherry blossoms, summer with warmth, autumn with colorful foliage, and winter with snow-covered landscapes.

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 01

### **ACT as a Form of Process-based Therapy: Expanding the Psychological Flexibility Model**

Steven Hayes, University of Nevada, Reno, USA

#### RELEVANT BACKGROUND

Process-Based Therapy is not a new form of therapy but a new way of thinking about what practitioners and the public should expect of evidence-based interventions. Acceptance and Commitment Therapy is a good test case for a PBT approach because its underlying model has been examined not just in over 1,000 randomized trials but in thousands of basic and applied studies of psychological flexibility and its component processes of change, and intervention kernels that move them. In this workshop I will show how a focus on processes of change PBT can vitalize your clinical work when applied in an idiographic way and how ACT and its psychological flexibility model can be used to accomplish that end. Attendees will learn how to personalize their treatments to fit a modern form of functional analysis applied person by person. While ACT will be used as a foil, I will show how any CBT methods can fit within this approach and thus attendees need not be interested in learning ACT as much as learning how to fit what we know about evidence-based change to the persons we are serving.

#### KEY LEARNING OBJECTIVES

- Describe the elements of the Extended Evolutionary Meta-Model (EEMM) of PBT
- Show how the psychological flexibility model maps on to the EEMM
- Describe at least one known process of change in each of these psychological dimensions: affect, cognition, self, attention, motivation, and overt behavior
- List the key components of all evolving systems as they apply to processes of change
- Describe how to pick an intervention target when that target is an idiographic process of change

#### TRAINING MODALITIES

Lecture

Self-exploration exercises

Interactive exercises and small group practice

Real play demonstrations

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Steven C. Hayes is Nevada Foundation Professor of Psychology at the University of Nevada. His career has focused on an analysis of the nature of human language and cognition and the application of this to the understanding and alleviation of human suffering. He is the developer of Relational Frame Theory, an account of human higher cognition, and has guided its extension to Acceptance and Commitment Therapy or Training (ACT in either case), a popular evidence-based form of intervention that uses mindfulness, acceptance, and values-based methods to foster psychological flexibility. He is currently working to develop a process-based approach to evidence-based intervention more generally. Google Scholar ([www.webometrics.info/en/node/58](http://www.webometrics.info/en/node/58)) and Research.com data rank him among the most cited psychologists in the world. His work has been recognized by several awards including the Lifetime Achievement Award from the Association for Behavioral and Cognitive Therapy.

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# PRE-CONGRESS WORKSHOPS

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 02

### **Cognitive Therapy for Social Anxiety Disorders in Adults and Adolescents**

David Clark, University of Oxford, UK

#### RELEVANT BACKGROUND

Social Anxiety Disorder is common and remarkably persistent in the absence of treatment. It typically starts in childhood or adolescence and frequently leads to occupational and education underachievement. Interpersonal relationships are impaired. Dissatisfaction with the way that life is progressing often triggers depressive episodes and there is a heightened risk of alcohol and drug abuse.

Clinical guidelines recommend individual cognitive therapy based on the Clark & Wells model as a first line intervention for social anxiety disorder. This workshop provides a comprehensive practical guide to the treatment with both adults and adolescents. It starts with an overview of the cognitive model, focusing on its treatment implications. Each of the steps in treatment is then described and illustrated with case material and videos of treatment sessions. The key procedures include: deriving with patients an individualized cognitive model; demonstrating the adverse effects of self-focused attention and safety behaviours through experiential exercises; video feedback and other procedures to correct excessively negative self-imagery; training in externally focused, non-evaluation attention; behavioural experiments to test negative beliefs; and ways of dealing with socially relevant traumatic memories (discrimination training & memory re-scripting). Guidance on the use of the most appropriate measures for identifying therapy targets and monitoring progress is also provided.

#### KEY LEARNING OBJECTIVES

By the end of the workshop, participants should be able to:

- Identify the key psychological processes in maintaining social anxiety disorder
- Develop an individual version of the cognitive model with their clients and
- Be able to identify appropriate therapeutic strategies and be familiar with how to apply them

#### TRAINING MODALITIES

Case illustrations, video demonstrations

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

David M Clark is Emeritus Professor of Experimental Psychology at University of Oxford and NHS England's National Clinical and Informatics Advisor for the Improving Access to Psychological Therapies (IAPT) programme. He is well known for his research on the understanding and treatment of anxiety disorders. With colleagues, he has developed new and highly effective cognitive therapies for panic disorder, post-traumatic stress disorder, and social anxiety disorder. In all three instances, the treatments are recommended as first choice interventions in the relevant NICE Clinical Guidelines. Recognition of his work includes major awards from British Psychological Society, Canadian Psychological Association, American Psychological Association, the Association for Psychological Science, and the British, USA, Swedish and Dutch CBT Associations.

#### Key references

1. Clark, D.M. (2001) A cognitive perspective on social phobia. In R. Crozier and L.E. Alden (eds) International Handbook of Social Anxiety Wiley; Chichester, UK
2. Social Anxiety sections of the Oxford Centre for Anxiety Disorders and Trauma's free therapist resources website: [www.oxcadatresources.com](http://www.oxcadatresources.com)
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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 03

### Cognitive Behaviour Therapy for Eating Disorders

Tracey Wade, Flinders University, Australia

#### RELEVANT BACKGROUND

Eating disorders have increased in prevalence post-pandemic and there is an associated increased demand on services. Eating disorders are highly prevalent with other psychological disorders and have become “everybody’s business”. This workshop will examine evidence-based briefer cognitive behavioural therapies for non-underweight eating disorders that distil the active ingredients of effective treatment into shorter times.

#### KEY LEARNING OBJECTIVES

- understand the key principles informing treatment of all eating disorders
- learn about evidence-based techniques and their sequencing in effect cognitive behavioural therapy

#### TRAINING MODALITIES

- didactic
- video clips
- guided small group discussion
- role plays

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Matthew Flinders Distinguished Professor Tracey Wade has worked as a clinician and researcher in eating disorders for over 30 years. In 2015 she was elected a Fellow of the Academy of the Social Sciences in Australia. In 2016 she was made an Inaugural Honorary Fellow of the Australian Association for Cognitive and Behaviour Therapy. In 2017-18 she was the president of the Eating Disorder Research Society. In 2019 she was appointed Fellow of the APS and was a recipient of the Australia and New Zealand Academy of Eating Disorders Distinguished Achievement Award, and in 2020 she was the recipient of the Academy of Eating Disorders Outstanding Clinician Award. She is the director of the Flinders Institute for Mental Health and Wellbeing, the Blackbird Initiative, and the Flinders University Services for Eating Disorders (FUSED). She has cowritten 3 books and has over 250 publications in peer reviewed journals.

#### Key references

Waller G, Turner H, Tatham M, Mountford VA, Wade TD. (2019). Brief Cognitive Behavioural Therapy for Non-Underweight Patients: CBT-T for Eating Disorders. Abingdon: Routledge, Taylor & Francis Group.

Keegan E, Waller G, Wade TD. (2022). A Systematic Review and Meta-Analysis of a 10-Session Cognitive Behaviour Therapy for Non-Underweight Eating Disorders. *Clinical Psychologist*, 26, 241-254. doi: 10.1080/13284207.2022.2075257

Wade TD, Ghan C, Waller G. (2021). A randomized controlled trial of two 10-session cognitive behaviour therapies for eating disorders: an exploratory investigation of which approach works best for whom. *Behaviour Research and Therapy*, 146, 103962. doi: 10.1016/j.brat.2021.103962

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 04

### **The Nature and Treatment of Anxiety Disorders in Children and Adolescents**

Ronald Rapee, Centre for Emotional Health, Macquarie University, Australia

#### RELEVANT BACKGROUND

For some years we have been conducting the Cool Kids treatment programs for anxious children and adolescents at Macquarie University. Treatment is conducted over approximately 10 sessions and both parents and children attend all sessions for children. A similar but slightly different program, involving some parental input is run for adolescents. The treatment components include education, cognitive restructuring, parent management strategies, approach to feared situations, and rewards. Data from these and similar programs indicate a high degree of success with most children showing moderate to marked change and results maintaining for several years.

#### KEY LEARNING OBJECTIVES

In this workshop we will discuss the identification, nature, and treatment of child and adolescent anxiety disorders. Discussion will cover diagnostic criteria, demographic information, interview and psychometric assessment, psychopathology, treatment, and treatment difficulties. We will go over each component of the Cool Kids treatment program and discuss difficulties in application. At the conclusion of the workshop, participants should be able to:

1. Have a broad appreciation for the recognition and psychopathology of child anxiety disorders
2. Have a detailed understanding of treatment programs for the management of child and adolescent anxiety (eg Cool Kids).
3. Handle nonresponsive cases and difficulties in treatment responsiveness.

#### TRAINING MODALITIES

The workshop mostly makes use of the experience of the presenter. When time allows some videos of treatment sessions and case material are included. Questions and discussion from the participants is strongly encouraged.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Ron Rapee is Distinguished Professor of Psychology at Macquarie University and Director of the Centre for Emotional Health. Professor Rapee specializes in mental health, especially in anxiety and related disorders across the lifespan. He has developed a number of empirically supported treatment programs that are used across the world. Professor Rapee has been honoured by awards from both scientific and consumer groups, including the Distinguished Career Award from the Australian Association for CBT and the Distinguished Contribution to Science Award from the Australian Psychological Society; and he was awarded a Member of the Order of Australia in 2012 for his contributions to clinical psychology, especially among young people.

#### Key references

Rapee, R. M., Wignall, A., Spence, S. H., Cobham, V. E., & Lyneham, H. (2008). *Helping your anxious child: A step-by-step guide for parents* (2nd ed.). New Harbinger

Rapee, R. M., Schniering, C. A., & Hudson, J. L. (2009). Anxiety disorders during childhood and adolescence: Origins and treatment. *Annual Review of Clinical Psychology*, 5, 311-341. <https://doi.org/10.1146/annurev.clinpsy.032408.153628>

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 05

### Understanding and Treating Body Dysmorphic Disorder

Sabine Wilhelm, Harvard Medical School, USA

#### RELEVANT BACKGROUND

This workshop is suitable for those interested in working with patients suffering from Body Dysmorphic Disorder.

Body dysmorphic disorder (BDD) is a common and severe obsessive-compulsive spectrum disorder characterized by a preoccupation with a perceived flaw in appearance. Appearance preoccupations may involve the face or head (e.g., skin, hair), but any body part can be the focus of concern. BDD is often disabling and associated with high suicide rates. Clinicians often do not recognize BDD, and very few are familiar with its treatment. This workshop aims to provide information on empirically validated cognitive-behavioral treatment strategies designed to help individuals with BDD. The presenter will first describe how to recognize, diagnose, and conceptualize individuals with BDD correctly. Participants will then learn a range of therapeutic techniques, including strategies for delusional and non-delusional BDD, metaphors and mindfulness exercises, tools to address low self-esteem and over-importance of appearance, and skills to reduce common BDD behaviors (e.g., body checking, comparing themselves with others, avoidance behaviors), mirror retraining, and strategies for involving patients' families. In addition, this workshop will cover motivational interventions to help patients overcome resistance to treatment.

Finally, techniques for overcoming specific BDD symptoms, such as cosmetic surgery seeking, skin picking, and relapse prevention strategies, will be discussed.

#### KEY LEARNING OBJECTIVES

1. How to recognize, diagnose, assess, and conceptualize BDD.
2. How to engage a patient in CBT for BDD.
3. How to design various cognitive and behavioral treatment strategies that will allow the patient to develop new ways of thinking and behaving.

#### TRAINING MODALITIES

The workshop will provide instruction on the assessment and treatment of BDD, interactive discussion of specific cases, modeling, and practice (role-plays).

1. Wilhelm S, Weingarden H, Greenberg JL, Hoepfner SS, Snorrason I, Bernstein EE, McCoy TH, & Harrison O. Efficacy of App-based Cognitive Behavioral Therapy for Body Dysmorphic Disorder with Coach Support: Initial Randomized Controlled Clinical Trial. *Psychother Psychosom.* 2022;91(4):277-285. PMID: 35588706 PMCID: PMC9394457
2. Wilhelm S, Phillips KA, Greenberg JL, O'Keefe SM, Hoepfner SS, Keshaviah A, Sarvode-Mothi S, Schoenfeld DA. Efficacy and Posttreatment Effects of Therapist-Delivered Cognitive Behavioral Therapy vs Supportive Psychotherapy for Adults with Body Dysmorphic Disorder: A Randomized Clinical Trial. *JAMA Psychiatry.* 2019 Apr 1;76(4):363-373. PMID: 30785624 PMCID: PMC6450292.
3. Wilhelm S, Phillips KA, Steketee G. A cognitive behavioral treatment manual for body dysmorphic disorder. New York, Guilford Press (2013).
4. Wilhelm. S. (2006). *Feeling good about the way you look: A program for overcoming body image problems.* New York, NY: Guilford Press.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Sabine Wilhelm, Ph.D., is a Professor at Harvard Medical School (HMS) and Chief of Psychology as well as Director of the Center for OCD and Related Disorders (CORD) at Massachusetts General Hospital (MGH). She is also the Director of the Center for Digital Mental Health in Psychiatry at MGH.

# PRE-CONGRESS WORKSHOPS

Dr. Wilhelm is a leading researcher in obsessive-compulsive disorder and body dysmorphic disorder. Her recent research focuses on using cutting-edge technology to improve and personalize mental health care for various mental health concerns. Dr. Wilhelm has published 318 papers, including seven books, and has given more than 290 talks on these subjects. She has been a mentor to 50 junior investigators in the field. She is currently working on smartphone-based treatments for OCD, depression, and body dysmorphic disorder. Her ultimate goal is to use technology-based interventions to enhance global access to high-quality mental health interventions.

Dr. Wilhelm is the Vice-Chair of the Scientific Advisory Board of the International OCD Foundation. She serves on the Scientific Council for the Anxiety and Depression Association of America. Dr. Wilhelm is the past president of the Association for Behavioral and Cognitive Therapies (ABCT) and was an Associate Editor for the journals *Depression and Anxiety* and *Behavior Therapy*. She currently serves on eight editorial boards. She was the Scientific Program Chair of the World Congress of Behavioral and Cognitive Therapies held in Boston in June 2010. Additionally, Dr. Wilhelm is a fellow of the Association for Psychological Science. Dr. Wilhelm received many awards, including the Peter K. Ranney Innovation Award from the World Medical Innovation Forum for her presentation “Bridging the Mental Health Treatment Gap” and the Claflin Distinguished Scholar in Medicine Award.

Dr. Wilhelm has been the principal investigator of many NIMH-funded research grants and privately funded clinical research studies investigating medication, cognitive-behavioral therapy, digital services, and other treatments for various psychiatric disorders in children and adults.

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 06

### **A Transdiagnostic CBT-based Intervention for Anxiety and Depression in Young People: Super Skills for Life Programme**

Cecilia Essau, University of Roehampton, London, UK

#### RELEVANT BACKGROUND

Cognitive-behavioural therapy (CBT) has a strong evidence base for preventing anxiety and depression in adolescents, with up to 65% of adolescents showed significant improvement in anxiety- and depression-related outcomes to CBT. However, despite strong evidence that lifestyle factors, such as exercise, diet and sleep, benefit mental health, intervention programmes that integrate healthy lifestyle habits within CBT-based interventions to address anxiety and depression and physical health problems are currently lacking.

This workshop will focus on “Super Skills for Life” programme (SSL), a manualized CBT-based programme for preventing anxiety and depression and for promoting healthy lifestyles. SSL focuses on: (1) teaching about healthy lifestyles; (2) building emotional resilience through stress management; (3) encouraging peer learning and building peer networks; and (4) promoting self-confidence and social skills.

By using a “train-the-trainer approach”, SSL training has built capacity and shaped the practice of 25,000 practitioners and has produced positive mental health outcomes in approximately 600,000 young people in 21 countries.

#### KEY LEARNING OBJECTIVES

At the conclusion of the workshop, participants should have a good knowledge of:

- The prevalence, comorbidity, course, and cultural manifestations of anxiety and depression in children and adolescents.
- The core components of the “Super Skills for Life” programme.
- Skills in delivering the core components of the “Super Skills for Life”.
- Barriers and challenges in adapting evidence-based CBT-based intervention across cultures.

#### TRAINING MODALITIES

Techniques used in the Super Skills for Life programme will be described and illustrated through lecture, role play, clinical material and video clips.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Cecilia A. Essau is a Professor of Developmental Psychopathology at the University of Roehampton, UK. She obtained her Bachelor of Arts Degree, her Honours Bachelor of Arts Degree and her Master of Arts degree from Lakehead University (Canada), her PhD from the University of Konstanz (Germany), and her “Habilitation” in Psychology (qualification for tenure-track professorships in Germany) from the University of Bremen (Germany).

Professor Essau has Visiting Chairs at numerous universities, including the Norman Munn Distinguished Visiting Scholar from Flinders University, and the Florey Medical Research Foundation Mental Health Visiting Professor from the University of Adelaide, Australia. In 2011, she was made Fellow of the British Psychological Society in recognition of her contribution to the field of Psychology. She is also Fellow of the Japan Society for the Promotion of Science.

She is the author of 274 articles and is the author/editor of 21 books in youth mental health.

#### Key references

- Essau, C.A. & Ollendick, T.H. (Ed.) (2013). *The Wiley-Blackwell Handbook of the treatment of childhood anxiety*. Oxford: Wiley-Blackwell.
- Essau, C.A. (Ed.) (2009). *Treatment of adolescent depression: Theory and practice*. Oxford: Oxford University Press.
- Ramdhoney-Dowlot, K., Balloo, K., & Essau, C.A. (2021). Effectiveness of the Super Skills for Life programme in enhancing children's emotional wellbeing in residential care institutions in low- and middle-income country: A randomised waitlist-controlled trial. *Journal of*

# PRE-CONGRESS WORKSHOPS

Affective Disorders, 278 (1), 2021, 327-338.

Allan, S., Uzun, B., & Essau, C.A. (2021). Impact of a transdiagnostic prevention protocol for targeting adolescent anxiety and depression. *Psychologica*, 63, 53-68.

Fernández-Martínez, I., Orgiles, M., Morales, A., Espada, J.P., & Essau, C.A. (2020). One-year follow-up effects of a cognitive behavior therapy-based transdiagnostic program for emotional problems in young children: A school-based cluster-randomized controlled trial. *Journal of Affective Disorders*, 262, 258-266.

de la Torre-Luque, A., Fiol-Veny, A., Essau, C.A., Maria Balle, M., & Bornas, X. (2020). Effects of a transdiagnostic cognitive behaviour therapy-based programme on the natural course of anxiety symptoms in adolescence. *Journal of Affective Disorders*, 264, 474-482.



# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 07

### Decision Making and Regret

Robert Leahy, American Institute for Cognitive Therapy, NYC, USA

#### RELEVANT BACKGROUND

Many clinical issues involve clients making decisions about change. Regret is a potential part of any decision—either anticipating regret about future outcomes or feeling overwhelmed with regret about past decisions. In this workshop we will review how decision making styles and assumptions can contribute to vulnerability to regret later. Specifically, we will examine how maximization strategies, existential and emotional perfectionism, depressive assumptions, emotional predictions, and intolerance of ambivalence and uncertainty add to problems in making decisions and in coping with regret. Specific CBT techniques will be examined, drawing on decision making models, cognitive therapy, emotional schema therapy, metacognitive theory and ACT to assist clients in avoiding unnecessary regret.

#### KEY LEARNING OBJECTIVES

1. Identify productive and unproductive regret
2. Help clients modify assumptions underlying emotional and existential perfectionism and maximization beliefs.
3. Help clients modify their depressive decision making beliefs.
4. Assist clients in coping with disappointing outcomes and reverse unnecessary regret.

#### TRAINING MODALITIES

Lecture, role-plays

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Robert L. Leahy was educated at Yale University (BA,MS,MPHIL, PHD) and is the Founder and Director of the American Institute for Cognitive Therapy in NYC, Clinical Professor of Psychology in Psychiatry at Weill Cornell Medical College, and Past-President of the Association of Behavioral and Cognitive Therapies, The Academy of Cognitive Therapy, and The International Association of Cognitive Therapy. He is the recipient of the Aaron T. Beck Award for outstanding contributions in CBT. Leahy is the author of 29 books and is a frequent keynote speaker and presenter of workshops worldwide. His new book is *If Only..Finding Freedom from Regret*, published by Guilford Books.

#### Key references

Bell, D.E. (1982). Regret in decision making under uncertainty. *Operations Research*, 30, 961-981.

Leahy, R.L. (2022) *If Only...Finding Freedom From Regret*. New York: Guilford

Leahy, R.L. (2015). *Emotional Schema Therapy: A practitioner's guide*. New York: Guilford.

Leahy, R.L. (2017). *Cognitive therapy techniques* (2nd ed.). New York: Guilford.

Roese, N. J., & Summerville, A. (2005). What we regret most ... and why. *Personality and Social Psychology Bulletin*, 31, 1273–1285. doi:10.1177/0146167205274693.

Zeelenberg, M., & Pieters, R. (2007). A Theory of Regret Regulation. *Journal of Consumer Psychology*, 17(1), 3–18.

Zeelenberg, M., van den Bos, K., van Dijk, E., & Pieters, R. (2002). The Inaction Effect in the Psychology of Regret. *Journal of Personality and Social Psychology*, 82(3), 314–327.

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 08

### CBT for Challenging Problems

Judith Beck, The Beck Institute for Cognitive Behavior Therapy, USA

#### RELEVANT BACKGROUND

This workshop helps the clinician to identify, specify, and conceptualize challenges that arise in treatment. Clients may, for example, fail to engage in treatment, miss sessions, feel hopeless and stuck, become angry in session, engage in self-harm, use substances, blame others, avoid homework, and so on. Special attention will be paid to how to help clients get out of the "maladaptive mode" and into the "adaptive mode." We'll discuss identifying clients' values and aspirations, creating positive experiences and helping clients draw positive conclusions about them, repairing ruptures in the therapeutic relationship, and strengthening clients' adaptive beliefs about themselves, other people, their worlds, and the future. Videos of roleplays will demonstrate key strategies.

#### KEY LEARNING OBJECTIVES

1. Identify key maladaptive assumptions that interfere with treatment.
2. Describe how to repair therapeutic ruptures.
3. Strengthen adaptive beliefs.

#### TRAINING MODALITIES

Didactics with roleplays

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Judith S. Beck, PhD, is President of the Beck Institute for Cognitive Behavior Therapy ([beckinstitute.org](http://beckinstitute.org)), a nonprofit organization that provides state-of-the-art training in Cognitive Behavior Therapy (CBT) and Recovery-Oriented Cognitive Therapy (CT-R), certification in CBT, and online courses on a variety of topics—as well as conducting research and offering CBT resources around the world. Dr. Beck is also Clinical Professor of Psychology in Psychiatry at the University of Pennsylvania Perelman School of Medicine. She has written over 100 articles and chapters, workbooks, pamphlets for professionals and nonprofessionals, and 7 books, including *Cognitive Behavior Therapy: Basics and Beyond*, 3rd Edition (2020) and *Cognitive Therapy for Challenging Problems: What to Do When the Basics Don't Work*. She has made hundreds of presentations nationally and internationally on various applications of CBT and is the primary developer of the Beck Institute's on demand CBT training courses, which have been taken by more than 28,000 health and mental health professionals in over 130 countries. Dr. Beck provides supervision and maintains a clinical caseload at the Beck Institute's in-house clinic in suburban Philadelphia, treating clients who experience a range of challenges.

#### Key references

- Beck, J.S. (2020). *Cognitive behavior therapy: Basics and beyond* (3rd ed.). New York, NY: Guilford Press.
- Beck, J.S. (2005). *Cognitive therapy for challenging problems: What to do when the basics don't work*. New York, NY: Guilford Press.
- Beck, A.T., Davis, D.D., & Freeman, A. (2016). *Cognitive therapy for personality disorders* (3rd ed.). Guilford Press

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 09

### **Empowering Parents to Help their Children Overcome Anxiety Problems**

Cathy Creswell, University of Oxford, UK

Gemma Halliday, University of Oxford, UK

#### RELEVANT BACKGROUND

Anxiety problems are extremely common in children, can interfere with life at home, at school, and with friends and, if untreated, can run a chronic course. Parent-led CBT approaches provide a means to deliver treatment efficiently, bringing potential to increase access to evidence-based treatment. However, therapists can face a range of challenges in implementing the approach, including:

- challenges with engaging parents (e.g. empowering parents where they lack parenting efficacy, where the problem is located outside of the home, where parents/carers have competing priorities due to challenging life circumstances or co-occurring difficulties such as elevated parental anxiety);
- empowering parents of children across the age range (5-12 years) and with different needs
- managing parents' differences of opinion about the nature of the problem and how to manage it;
- challenges in empowering parents to apply specific techniques, including working with parents to collaboratively identify maintenance cycles and supporting parents to design exposures that effectively test children's fears.

We will focus on how to address these common challenges in ways that adhere to a CBT treatment model.

This workshop is aimed at practitioners, trainers, and supervisors who would ideally have some experience and/or knowledge of working with parents to deliver CBT for anxiety problems in pre-adolescent children.

#### KEY LEARNING OBJECTIVES

For attendees to develop an understanding of the common challenges that may be encountered whilst empowering parents to help their children overcome child anxiety problems.

For attendees to develop skills in how to overcome these challenges whilst adhering to the treatment model.

For attendees to have an opportunity to share their experiences of delivering the approach and to learn from each other.

#### TRAINING MODALITIES:

Presentation, case discussions, role-plays

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Cathy Creswell is a Professor of Developmental Clinical Psychology who leads The Oxford Psychological Interventions in Children and adolescents (TOPIC) research group at the University of Oxford. Cathy's research focuses on the development, maintenance and treatment of anxiety disorders. With Lucy Willetts, she developed the parent-led CBT programme 'Helping Your Child with Fears and Worries'.

Gemma Halliday is a Clinical Psychologist in the TOPIC research group (University of Oxford). She is working on two child anxiety prevention/early intervention studies which involve online delivery of parent-led CBT. Gemma has extensive experience of delivering and supervising psychological practitioners to deliver Parent-led CBT. She has previously worked with children, young people and their families in child and adolescent mental health services, paediatrics, and in the care system.

Key references:

Creswell, C., Waite, P., & Hudson, J. (2020). Practitioner Review: Anxiety disorders in children and young people—assessment and treatment. *Journal of Child Psychology and Psychiatry*, 61(6), 628-643.

# PRE-CONGRESS WORKSHOPS

Creswell, C. & Willetts, L. (2019). Helping your child with fears and worries. Robinson, UK.

Creswell, C., Parkinson, M., Thirlwall, K., & Willetts, L. (2019). Parent-led CBT for child anxiety: helping parents help their kids. Guilford, US.

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 10

### A-Z when Delivering CBT via the Internet

Gerhard Andersson, Linköping University, Sweden

#### RELEVANT BACKGROUND

Guided Internet-delivered CBT (ICBT) has been tested in well over 300 randomized controlled trials and comparisons with face-to-face CBT indicate that the two treatment formats can perform equally well. It is clear from the literature that pure self-help treatments without guidance are less effective, but on the other hand these treatments may serve as a first step in a stepped care process. However, guided Internet-delivered CBT can be suitable not only as a first step but as an alternative to individual or group-based CBT. It can also be blended with face-to-face meetings. Among the advantages of guided Internet-delivered CBT are cost-effectiveness, convenience, and that it saves therapist time. In this workshop I will describe how ICBT is conducted and will also give examples of programs for a range of conditions and target groups. I will also explain how we develop new internet treatments for condition like loneliness and low self-esteem. Further, the role of ICBT in an era of pandemics will be covered.

#### KEY LEARNING OBJECTIVES

Understanding the varieties of Internet treatments and their differential effects

Getting to know what is needed to set up a service using the Internet (the basics)

Learning what is required to obtain good outcomes with guided Internet treatment

Knowing what is required in terms of therapist training and skills.

Learning about the pros and cons of Internet treatment including tailoring treatment according to patient symptom profile.

#### TRAINING MODALITIES

Making decisions regarding the structure of a self-help treatment presented via the Internet (based on own practice/experience).

Practice on handling therapist contact online, e.g., how to provide feedback to foster adherence.

Problem solving exercise on how to handle difficult cases (e.g., suicidal ideation, poor adherence).

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Gerhard Andersson is professor in clinical psychology and has developed evidence-based Internet treatments for various conditions such as depression and anxiety disorders for more than 22 years ([www.gerhardandersson.se](http://www.gerhardandersson.se)). He is also trained as CBT-therapist and supervisor.

#### Key references

Andersson, G., Titov, N., Dear, B. F., Rozental, A., & Carlbring, P. (2019). Internet-delivered psychological treatments: from innovation to implementation. *World Psychiatry*, 18, 20-28.

Andersson, G. (2018). Internet interventions: past, present and future. *Internet Interventions*, 12, 181-188.

Andersson, G., & Berger, T. (2021). Internet approaches to psychotherapy: Empirical findings and future directions. In M. Barkham, W. Lutz, & L. G. Castonguay (Eds.), *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change* (50th anniversary edition ed., pp. 749-772): Wiley.

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 11

### **Imagery Rescripting: A Transdiagnostic Technique to Process Adverse Experiences**

Arnoud Arntz, University of Amsterdam, Netherlands

#### RELEVANT BACKGROUND

Imagery Rescripting (ImRs) is getting increasingly popular among CBT therapists. For some problems it can be provided as a standalone treatment, for example for PTSD and for nightmares. For other problems, it can be easily integrated in C(B)T, and it is actually a standard ingredient of some CT protocols as well as of Schema Therapy. Imagery Rescripting has many attractive aspects, such as flexibility to adapt it to specific issues a patient is struggling with, its experiential nature that promotes change processes, and its suitability to focus on early adverse experiences that led to the development of the problems – a domain that has usually been neglected in CBT. Moreover, research indicates that patients tend to further improve after ImRs treatment, which is an attractive feature both for patients and for therapists.

#### KEY LEARNING OBJECTIVES

- To understand the basic mechanism underlying Imagery Rescripting
- To learn the basic application to (complex) childhood trauma including the skills to actually use it in clinical practice
- To know how to deal with the major challenges in treatment
- To understand how variations can be applied to treat recent adverse (traumatic) events

#### TRAINING MODALITIES

Instruction, modelling by roleplaying by the trainer, practicing in roleplays by participants, central discussion. A treatment protocol will be available for participants.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Arnoud Arntz is a professor of Clinical Psychology at the University of Amsterdam, the Netherlands. He contributed to the development and empirical testing of Imagery Rescripting and Schema Therapy. He treats patients with severe (childhood) trauma and personality disorders,

#### Key references

Arntz, A., & Weertman, A. (1999). Treatment of childhood memories; theory and practice.

*Behaviour Research and Therapy*, 37(8), 715-740.

Boterhoven de Haan, K., Lee, C., Fassbinder, E., Van Es, S., Menninga, S., Meewisse, M., . . . Arntz, A. (2020). Imagery rescripting and eye movement desensitisation and reprocessing as treatment for adults with post-traumatic stress disorder from childhood trauma: Randomised clinical trial. *British Journal of Psychiatry*, 217(5), 609-615. doi:10.1192/bjp.2020.158

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 12

### Mindful Parenting in Challenging Times

Susan Bögels, University of Amsterdam, Netherlands

#### RELEVANT BACKGROUND

Despite its inherent joys, the challenges of parenting can produce considerable stress. These challenges multiply- and the quality of parenting may suffer- when a parent or child has mental or chronic somatic health issues, when there are partner-, co-parenting- or family conflicts, and environmental stressors such as climate change and the Covid-19 pandemic also may add parental stress. Even under optimal circumstances, the constant changes as children develop can tax parents' inner resources.

Mindful Parenting (Bögels & Restifo, 2014; Bögels, 2020) is a structured mindfulness training program, based on MBSR and MBCT. It is designed for face to face group use in mental health care contexts, for parents who have mental health problems that interfere with parenting, or whose children have mental health problems. The program's eight sessions focus primarily on stress(co)regulation, and address themes such as parenting with beginner's mind, awareness and acceptance of strong emotions in parent and child, mindfully responding to (as opposed to reacting to) parenting stress, fostering compassion, and taking care of one's inner child. The program is now also adapted for other settings such as prevention, parents of children with chronic somatic problems, and for online use.

In this one-day workshop the rationale, and the build-up of the program, are outlined, and the research on the effectiveness presented. Most of the workshop however will be practice, so that participants can have a direct experience of mindful parenting. First experiences with providing mindful parenting online are reviewed, the advantages, challenges and adaptations to the program.

#### KEY LEARNING OBJECTIVES

1. Insight in theories, working mechanisms and effects of mindful parenting
2. Insight in the causes and consequences of parenting stress
3. Overview of the 8-week mindful parenting program
4. Experiencing the key practices of mindful parenting

#### TRAINING MODALITIES

Lecture, experiential practices, inquiry and Q&A, video-examples.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Susan Bögels is a psychotherapist and mindfulness trainer, specialized in the treatment of children and parents. She works as a professor in Family Mental Health and Mindfulness at the University of Amsterdam. Her main research themes are the intergenerational transmission of psychopathology and mindfulness for families. She provides teacher training in mindfulness for parents and children around the world.

[www.susanbogels.com](http://www.susanbogels.com)

[www.mindful2work.nl](http://www.mindful2work.nl)

[uva.nl/s.m.bogels](http://uva.nl/s.m.bogels)

[linkedin.com/susanbogels](https://linkedin.com/susanbogels)

[twitter.com/susanbogels](https://twitter.com/susanbogels)

#### Key references

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 13

### **The Power of Parenting in Transforming the Mental Health and Wellbeing of Children and Parents, through a Population Based System of Evidence-based Parenting Support**

Matthew Sanders, University of Queensland, Australia

#### RELEVANT BACKGROUND

This workshop provides an overview of the Triple P multilevel system of parenting interventions and their application to a broad range of child social and emotional problems. A self-regulation framework in actively teaching parenting skills is discussed and demonstrated. A population-based model of evidence base parenting support is described with specific case exemplars to highlight how parenting interventions can achieve population level change, benefiting children, parents, and communities. Strategies for dealing with vulnerable and high-risk parents are discussed including parents with mental health problems, relationship problems, and parents affected by substance abuse. Procedures for promoting fidelity of intervention are discussed. A series of case scenarios are used to develop participant clinical problem solving and formulation skills. The workshop will cover the full spectrum of evidence-based parenting interventions from media and communication strategies, seminars, discussion groups, intensive group and online programs and enhanced individual programs for complex cases. Organisational and implementation factors related to sustainability and fidelity will be discussed.

#### KEY LEARNING OBJECTIVES

1. Participants will become familiar with the theoretical and empirical basis Triple P multiple level system of intervention as an intervention to reduce child maltreatment and social and emotional problems in children.
2. Participants will be familiar with specific strategies and procedures that enhance parental self-regulation and parenting capacity
3. Participant will be familiar with new innovations that improve engagement and treatment outcomes with vulnerable and socially disadvantaged families with multiple sources of adversity in their lives, children who are peer victimised and children who are anxious.
4. Participants will be familiar with strategies to prevent and manage resistance within consultation sessions
5. Participants will see demonstrations of adaptations and innovations developed in party as a response to COVID 19 including flexible delivery modalities and four new Triple P online interactive programs.

#### TRAINING MODALITIES

This workshop will introduce participants to specific consultation skills Triple P as an effective, multi-level system of parenting intervention that includes variants for both prevention and treatment of child and adolescent social, emotional and behavioural problems

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Dr Matthew Sanders is a Professor of Clinical Psychology and Director of the Parenting and Family Support Centre at The University of Queensland. He is the founder of the internationally recognized Triple P-Positive Parenting Program, which is now run in 58 countries around the world in 22 languages. 100,000 + practitioners have been trained to deliver Triple P. He has published extensively in the area of parenting, family psychology and the prevention and treatment of behavioural and emotional problems in children. He is a fellow of the Academy of Social Sciences in Australia, Australian Psychological Society, New Zealand Psychological Society, Australian Association of Cognitive Behaviour Therapy and the Academy of Experimental Criminology. He has been a consultant to the Council of Europe on Positive Parenting and is a former Queenslander of the Year. He is the Chair of the Parenting and Family Research Alliance (PAFRA) and is leading the Steering Committee for the Inaugural International Congress of Evidence based Parenting Support in 2023.



# PRE-CONGRESS WORKSHOPS

## Key references

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 14

### **Adaptation of Cognitive Behavior Therapy Across Cultures**

Farooq Naeem, University of Toronto, Canada

#### RELEVANT BACKGROUND

Cognitive Behaviour Therapy (CBT) has a strong evidence base and is recommended by many treatment guidelines for a variety of psychological problems. However, it has been suggested that CBT is underpinned by specific cultural values and it needs cultural adaptation. Cultures differ in core values, for example; Individualism-Collectivism, Cognitivism-Emotionalism, Free will-Determinism, and Materialism-Spiritualism. Few CBT adaptation guidelines were developed by therapists working with ethnic minority clients in the US. These guidelines mostly were not the direct outcome of research to address cultural issues, rather they were based on theoretical grounds or personal experiences (Naeem et al, 2019). The literature describing guidance for CBT cultural adaptation is limited. Our international group have used various methods to adapt CBT for clients from various backgrounds including African, Caribbean, Chinese, Bangladeshi, Middle Eastern and Pakistanis. This interactive workshop will focus on adaptation of CBT to various cultures.

#### KEY LEARNING OBJECTIVES

1. At the conclusion of this workshop participants will be able to recognize social origins of psychiatric illnesses and its relevance in developing psychological interventions.
2. At the conclusion of this session participants will be able to recognize and understand themes related to CBT and the need to culturally adapt CBT especially in ethnic minority communities
3. At the conclusion of this session participants will be able to identify necessary steps to culturally adapt CBT

#### TRAINING MODALITIES

In person, interactive, power point, role plays and videos

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Farooq Naeem is a full Professor of Psychiatry at the University of Toronto and a psychiatrist at the Centre for Addiction & Mental Health. He has published nearly 200 peer-reviewed articles, 6 books and numerous therapy manuals and chapters. Farooq pioneered techniques for culturally adapting CBT. These techniques have been used to adapt CBT in South Asia, North Africa, the Middle East, Kenya and China. Currently, this methodology is being used to adapt and test CBT in Canada in a multicenter study. More than 30 RCTs have been conducted on adapted CBT using Farooq's adaption model (Southampton Adaptation Framework for Culturally adapting CBT). His significant contribution to implementation science is establishing a national organization to train and accredit CBT therapists, deliver therapy, promote research and educate the general public- the Pakistan Association of Cognitive Therapists (<https://pact.com.pk/>). This remains the only example of national implementation of CBT in a low-income country.

#### Key references

Farooq Naeem, Peter Phiri, Shanaya Rathod, Muhammad Ayub: Cultural adaptation of cognitive-behavioural therapy. 04/2019;; DOI:10.1192/BJPsych Advances.2019.15

Naeem, F., Tuck, A., Mutta, B. et al. Protocol for a multi-phase, mixed methods study to develop and evaluate culturally adapted CBT to improve community mental health services for Canadians of south Asian origin. *Trials* 22, 600 (2021). <https://doi.org/10.1186/s13063-021-05547-4>

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 15

### **Delivering Cognitive Behavioural Interventions for People with Psychosis: Working with Suicide, Self Harm and Risk**

Gillian Haddock, University of Manchester, UK

#### RELEVANT BACKGROUND

Suicidal ideas and acts are prevalent in people with psychosis and can result in huge impacts and costs for the individual, services and society. Although cognitive behaviour therapy has been widely evaluated in people with psychosis, there is little evidence about their effectiveness when delivered with people experiencing additional complexity, such as suicidal ideas, problems of substance misuse and problems with anger and aggression.

#### KEY LEARNING OBJECTIVES

This workshop will show how CBT has been adapted to work with complex populations to address suicidal ideation, harm to others and substance misuse. The workshop will present some of the evidence, describe interventions and make conclusions about best practice.

#### TRAINING MODALITIES

The workshop will be a combination of workshop leader presentation, together with video and case examples. Attendees will have some opportunity for some experiential work.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Gillian Haddock is Professor of Clinical Psychology at the University of Manchester, UK. She has over 30 years' experience of developing new treatments for people with psychosis and has carried out many clinical trials in the area. She has over 150 relevant publications and has edited three text books. She is a former president of the British Association of Behavioural and Cognitive Psychotherapies, an Associate Fellow of the British Psychological Society and Senior Investigator of the National Institute of Health Research, UK.

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 16

### Cognitive Therapy for PTSD

Anke Ehlers, University of Oxford, UK

#### RELEVANT BACKGROUND

International treatment guidelines recommend of Cognitive Therapy for PTSD as a first-line treatment for posttraumatic stress disorder (PTSD). The treatment has been shown to be highly effective and acceptable to adults and young people. Ehlers and Clark's (2000) cognitive model of PTSD guides treatment. This model suggests that people with PTSD perceive a serious current internal or external threat that has two sources, excessively negative appraisals (personal meanings) of the trauma and / or its sequelae and characteristics of trauma memories that lead to reexperiencing symptoms. The problem is maintained by cognitive strategies (such as thought suppression, rumination, safety-seeking behaviours) that are intended to reduce the sense of current threat but maintain the problem by preventing change in the appraisals and trauma memory, and/or lead to increases in symptoms.

Cognitive Therapy for PTSD has three goals. First, the idiosyncratic personal meanings are identified and changed. Therapeutic techniques include identification of hot spots during the trauma and associated meanings, Socratic questioning, and behavioural experiments. Second, the trauma memory is elaborated. Idiosyncratic personal meanings of the trauma are linked with information that makes them less threatening, using a range of techniques. In stimulus discrimination training, the patient learns to discriminate triggers of reexperiencing symptoms from the stimuli that were present during the trauma. Third, the patient experiments with dropping maintaining behaviours.

#### KEY LEARNING OBJECTIVES

Participants will learn how to

- develop a personalised version of the treatment model with patients
- update trauma memories
- help clients trigger discrimination
- work with different cognitive themes

#### TRAINING MODALITIES

Presentation with video illustrations

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Anke Ehlers is a Wellcome Trust Principal Research Fellow and Professor of Experimental Psychopathology at the Department of Experimental Psychology, University of Oxford, UK. She has received several international awards for her work on posttraumatic stress disorder, including the Award for Distinguished Scientific Contributions to Clinical Psychology, American Psychological Association and the Wilhelm Wundt-William James Award, awarded jointly by the European Federation of Psychology Associations and the American Psychological Foundation.

#### Key references

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- Ehlers, A. & Murray, H. L. (2020). Cognitive therapy for complex traumatic stress disorders. In C.A. Courtois & J.D. Ford (Eds.), *Treating complex traumatic stress disorders (adults): Scientific foundations and therapeutic models*, 2nd ed. (pp. 226-248). New York: Guilford Press.
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# PRE-CONGRESS WORKSHOPS

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 17

### **OCD is an Unnecessary Illness: How to Use CBT to Make This True**

Paul Salkovskis, University of Oxford, UK

#### RELEVANT BACKGROUND

Obsessive compulsive disorder (OCD) is particularly damaging to the quality of life of those who suffer from it, and for their loved ones. It is however entirely treatable, but requires highly skilled treatment which needs to go beyond the therapy room. Formulation based CBT, which includes but is not confined to Exposure and Response Prevention is the most inclusive approach and which is likely to achieve the best results. This includes the use of intensive treatments where treatment is delivered over a period of a few days to a week, as well as more usual regular sessions over a period of weeks. The effective delivery of effective treatment in those with particularly severe requires high levels of skill, as described in this workshop. Some of the important difficulties experienced in the treatment will be identified, illustrated and where possible solved.

#### KEY LEARNING OBJECTIVES

To understand the cognitive-behavioural theory of OCD

To apply that theory to the understanding and treatment of OCD

To learn practical skills in developing an formulation and applying it as a shared understanding (shared with the OCD sufferer)

To apply the principles of "theory A/theory B" to helping the person with OCD to develop and try out more flexible ways of reacting

To be able to design and implement exposure and response prevention strategies in the context of their use as behavioural experiments

To be able to design and implement a range of behavioural experiments.

To understand and apply the range of ways of helping the OCD sufferer and their families to "reclaim their lives"

To be able to apply relapse prevention strategies to ensure better long-term outcomes.

#### TRAINING MODALITIES

Lecturing, video demonstrations with sufferers, role play.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Paul Salkovskis: Professor of Clinical Psychology, University of Oxford

Director, Oxford Centre for Psychological Health

Director, Oxford Institute of Clinical Psychology Training and Research

Director, Oxford Cognitive Therapy Centre

Director, Oxford Health Specialist Psychological Interventions Clinic

Consultant Clinical Psychologist, Oxford Health NHS Foundation Trust

Paul Salkovskis qualified as a clinical psychologist in 1979 at the Institute of Psychiatry and the Maudsley Hospital. He worked for six years in Yorkshire (in Huddersfield then Leeds) as a full time NHS clinical psychologist before moving to Oxford as a Research Clinical Psychologist. While working in Oxford he was promoted to Professor. He subsequently worked at King's College London Institute of Psychiatry as Professor of Clinical Psychology and Applied Science and Clinical Director in the Centre for Anxiety Disorders and Trauma in SLaM NHS Trust. From 2010 until 2018 he was Programme and Research Director for the Clinical Psychology Doctorate Programme at Bath, which he created as a new programme.

From April 2018 he has been Director of the Oxford Centre for Psychological Health, the Oxford Institute for Clinical Psychology Training and Research and The Oxford Cognitive Therapy Centre (University of Oxford and Oxford Health NHS Foundation Trust). He is visiting professor at the University of Reykjavik and has a number of other research and academic collaborations worldwide.

He has continued clinical work in the NHS throughout his entire career specialising in OCD and related problems specifically and anxiety disorders in general.

# PRE-CONGRESS WORKSHOPS

Paul is currently Editor of the BABCP Journal, Behavioural and Cognitive Psychotherapy, and is on the editorial board of many other journals. He has led CBT skills training both nationally and throughout the world, and has been keynote speaker at many national and international conferences. He is past president of the British Association for Behavioural and Cognitive Psychotherapies. He has published over 400 research articles, books and book chapters.

## Key references

Challacombe, F., Oldfield, V. & Salkovskis, P.M. (2011) *Break Free from OCD* Vermillion Press

Bream, V, Challacombe, F, Palmer, A & Salkovskis, P.M. (2017) *Cognitive Behaviour Therapy for OCD* Oxford University Press: Oxford

# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 18

### **Negative Thinking in Depression: Critical Concepts and Interventions**

Keith Dobson, University of Calgary, Canada

One of the most challenging aspects of CBT is the ability to recognize, name and work effectively to modify dysfunctional thoughts and underlying core beliefs that lead to problems for the client. In this workshop several key strategies to identify negative thoughts and core beliefs that commonly occur in depression will be reviewed and demonstrated. The three main methods of evidence-based, alternative-based and meaning-based strategies will be distinguished and presented. The key strategy of assessing the client's desire for belief change will be discussed, and the ethics of belief modification will be also reviewed, before several effective strategies for belief modification are described and presented.

#### RELEVANT BACKGROUND

CBT for depression has had a major focus on the assessment and modification of dysfunctional thinking. This workshop presents a conceptual framework to think about these forms of thinking, and the most commonly deployed ways to assess and intervene. The workshop is best suited for people with some background in CBT, and ideally practice with depressed clients.

#### KEY LEARNING OBJECTIVES

1. Identify negative cognitive patterns associated with Major Depression
2. Use cognitive case conceptualization to identify cognitive targets for change
3. Understand the three major types of interventions for negative cognitions in depression.
4. Recognize the major strategies for core belief work in depression.

#### TRAINING MODALITIES

The workshop will use a combination of didactic information, video demonstrations and live exercises to have attendees learn about several strategies to work with negative thinking and core beliefs in the context of CBT.

#### Workshop Leaders (Brief Description)

Dr. Dobson is a Professor Emeritus of Clinical Psychology at the University of Calgary. His research has focused on both models and the treatment of depression, particularly using cognitive-behavioural therapies. Dr. Dobson's research has resulted in over 400 published articles and chapters, 17 books, and conference and workshop presentations in many countries. His recent books include the Handbook of Cognitive-behavioral Therapies, 4th Edition (2019) and The Stigma of Mental Illness (2021). In recognition of his work he has received numerous awards, including Fellow status in the Academy of Cognitive-behavioral Therapy, the Canadian Academy of Health Sciences and the Royal Society of Canada.

#### Key References

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 19

### Process-based Therapy

Stefan Hofmann, University of Marburg, Germany

#### RELEVANT BACKGROUND

Process-based therapy (PBT) is a radical departure from the latent disease model of the DSM and ICD with its absurd proliferation of the protocols-for-syndrome approach. Instead, PBT focuses on how to best target and change core biopsychosocial processes in a specific situation for given goals with a given client. This approach recognizes that psychotherapy typically involves non-linear (rather than linear), bidirectional (rather than unidirectional), and dynamic changes of many (rather than only a few) interconnected variables. Effective therapy changes the entire system toward a stable and adaptive state by enhancing context-specific variability, selection and retention of biopsychosocial processes. PBT is, therefore, grounded in evolutionary science. For therapy to be most effective, we, therefore, need to embrace a systematic, assessment-guided, and theory-based approach to understand the relationships of the various problems of a given client. Functional analysis, the foundation of behavior therapy, provides the basis to understand these relationships. PBT acknowledges the complexity, inter-relatedness, and multidimensional levels of the problems in a given client. This workshop will illustrate how PBT is used to target key treatment processes by combining functional analysis with a dynamic and person-specific network approach.

#### KEY LEARNING OBJECTIVES

You will learn:

- (1) Appreciating the limitations and weaknesses of the contemporary medical model.
- (2) Gaining an up-to-date understanding of the core processes of CBT.
- (3) Developing an idiographic, functional diagnostic system based on evolutionary science.
- (4) Establishing more progressive models and theories in clinical practice.
- (5) Using functional analysis in conjunction with complex network approach in a given client

#### TRAINING MODALITIES

Didactic content, experiential components, polls, Q&A.

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Stefan G. Hofmann is the Alexander von Humboldt Professor at Philipps University of Marburg (Germany). In addition, he received the LOEWE Spitzenprofessur for Translational Clinical Psychology (Germany) and holds a position as Professor for Psychology at the Department of Psychological and Brain Sciences at Boston University (USA). Prof. Hofmann is a leading expert in researching and treating anxiety disorders, with a focus in Cognitive Behavioral Therapy. Since 2012, he is editor in chief of the journal *Cognitive Therapy and Research*. Prof. Hofmann has published more than 400 peer-reviewed scientific articles and 20 books.

#### Key references

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# PRE-CONGRESS WORKSHOPS

## Pre-Congress Full Day Workshop 20

### **Treating Transdiagnostic Sleep and Circadian Problems in Clinical Practice: Basics & Beyond**

Allison Harvey, University of California, Berkeley, USA

#### RELEVANT BACKGROUND

Sleep and circadian problems are among the most prevalent problems. They undermine our emotional functioning, our health, our cognitive functioning, and they contribute to behavioral problems such as risk taking and substance use. Much research on sleep and circadian problems has been disorder-focused—treating a specific sleep problem (e.g., insomnia) in a specific diagnostic group (e.g., depression). However, real life sleep and circadian problems are not so neatly categorized. Insomnia often overlaps with hypersomnia, delayed sleep phase and irregular sleep-wake schedules. This core observation was one of the factors that motivated the development of the Transdiagnostic Sleep and Circadian Intervention (TranS-C). The goal of TranS-C is to provide a treatment approach for a variety of sleep problems comorbid with a variety of psychological and physical disorders, and that can be used confidently by a variety of mental health professionals.

TranS-C draws from and combines CBT-I (e.g., Morin et al., 2006) with elements from three existing evidence-based treatments: Interpersonal and Social Rhythm Therapy (Frank et al., 2005), chronotherapy (Wirz-Justice et al. 2009) and Motivational Enhancement (Miller & Rollnick, 2012).

TranS-C is a modular approach to reversing and maintaining psychosocial, behavioral and cognitive processes via 4 cross-cutting modules, 4 core modules and 7 optional modules. The four Cross Cutting Modules are: case formulation; education; behavior change and motivation; goal setting. The four Core Modules are: establishing regular sleep-wake times including learning a wind-down and wake-up routine; improving daytime functioning; correcting unhelpful sleep-related beliefs; and maintenance of behavior change. The Optional Modules are: improving sleep efficiency; reducing time in bed; dealing with delayed or advanced phase; reducing sleep-related worry/vigilance; promoting compliance with CPAP/exposure therapy for claustrophobic reactions to CPAP; negotiating sleep in a complicated environment and reducing nightmares.

#### KEY LEARNING OBJECTIVES

At the end of this session, the learner will be able to:

1. describe key aspects of the biology, psychology and social context of the sleeper.
2. describe how to assess sleep in their patients.
3. describe how to complete a case conceptualization for a patient suffering from a sleep problem
4. describe several of the cross-cutting and core modules of TranS-C

#### TRAINING MODALITIES

Demonstrations, role plays, didactics

#### WORKSHOP LEADERS (BRIEF DESCRIPTION)

Allison G. Harvey, PhD, is a Professor and Clinical Psychologist in the Department of Psychology, University of California, Berkeley. Her clinical training and Ph.D. were completed in Sydney, Australia. Dr. Harvey has practiced as a cognitive-behavior therapist for more than 20 years, specializing in sleep problems. She has published over 250 peer reviewed papers and chapters. Her research is funded by the National Institute of Mental Health and National Institute of Child Health and Human Development. Dr. Harvey is a recipient of numerous awards including the Distinguished Scientist Award from the Sleep Research Society and the Peter Hauri Lifetime Distinguished Scientific Achievement Award from the Society for Behavioral Sleep Medicine. Dr. Harvey has also been awarded an Honorary Doctorate from the University of Orebro, Sweden and is a Fellow of the Association for Psychological Science.

Key references

# PRE-CONGRESS WORKSHOPS

Harvey, A. G., & Buysse, D. J. (2017). *Treating sleep problems: A transdiagnostic approach*. Guilford Publications.

Harvey, A. G., Hein, K., Dolsen, M. R., Dong, L., Rabe-Hesketh, S., Gumpert, N. B., et al. (2018). Modifying the impact of eveningness chronotype ("night-owls") in youth: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(10), 742-754.

Harvey, A. G., Dong, L., Hein, K., Yu, S. H., Martinez, A. J., Gumpert, N. B., ... & Buysse, D. J. (2021). A randomized controlled trial of the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (TranS-C) to improve serious mental illness outcomes in a community setting. *Journal of Consulting and Clinical Psychology*, 89(6), 537.

Morin, C. M. (1993). *Insomnia: Psychological assessment and management*. Guilford press

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 1

### **Socratic Questioning 2.0: Using the Head and the Heart for Lasting Change**

Scott Waltman<sup>1\*</sup>, Lynn McFarr<sup>2</sup>

<sup>1</sup> Center for Dialectical and Cognitive Behavior Therapy, USA

<sup>2</sup> CBT California, USA

Who the workshop is aimed at: Clinicians with basic to intermediate skill in Cognitive Behavioural Therapy

#### BACKGROUND

This workshop focuses on presenting a modern and integrative model for Socratic Questioning that extends beyond purely rational discourse. Socratic Questioning is a critical skill across several evidence-based practices, serving as an element of an effective and empathically attuned rapport. Effective Socratic discourse is much more than reading a list of questions or challenging cognitive distortions. Presenters discuss Socratic processes in a flexible manner that can be applied to a variety of treatment approaches. Themes and strategies from modern cognitive therapies such as dialectical behaviour therapy, acceptance and commitment therapy, schema therapy, and emotion focused therapy are integrated into a robust model. The workshop will focus on applied case examples and live demonstrations. Presenters will discuss troubleshooting and working with difficult cases such as individuals with persistent emotion dysregulation problems. Throughout this workshop, participants will learn direct strategies and tools that allow mindfulness, acceptance, and compassion-oriented therapists to build their competency and fluency in Socratic dialogue, opening new possibilities for recovery.

#### LEARNING OBJECTIVES

Participants will acquire the following skills:

Conducting Socratic Dialogue in an integrative 4 step model

Collaboratively identifying how schematic filters and behaviour patterns reinforce a core belief

Applying this Socratic Model to mindfulness- and acceptance-based cognitive behavioural therapies

Integrating and balancing Socratic strategies with emotion regulation strategies

#### TEACHING METHODS

This workshop focuses on experiential methods of learning. There will be some didactics, but the bulk of the training will be applied case presentation and demonstration (role-plays).

#### WORKSHOP LEADERS

Lynn McFarr (clinical psychologist/psychotherapist) is the president of the International Association of Cognitive Behavioral Therapy (IACBT; a founding member of the WCCBT). She is the past president of the Academy of Cognitive & Behavioral Therapies (A-CBT). She was also a past conference chair of the International Society for the Improvement and Teaching of Dialectical Behavior Therapy. Scott Waltman (clinical psychologist/psychotherapist) is an international CBT trainer and board member for both IACBT and A-CBT. Together, Drs McFarr and Waltman co-authored a book *Socratic Questioning for Therapists and Counselors: Learn How to Think and Intervene like a Cognitive Behavior Therapist*.

Background Readings:

1. Waltman, S. H., Codd III, R. T., McFarr, L. M., & Moore, B. A. (2020). *Socratic questioning for therapists and counselors: Learn how to think and intervene like a cognitive behavior therapist*. Routledge. <https://www.routledge.com/9780367335199>
2. Kazantzis, N., Fairburn, C. G., Padesky, C. A., Reinecke, M., & Teesson, M. (2014). Unresolved issues regarding the research and practice of cognitive behavior therapy: The case of guided discovery using Socratic questioning. *Behaviour Change*, 31(1), 1-17. <https://doi.org/10.1017/bec.2013.29>
3. Clark, G. I., & Egan, S. J. (2015). The Socratic method in cognitive behavioural therapy: A narrative review. *Cognitive Therapy and*

# IN-CONGRESS WORKSHOPS

Research, 39, 863-879. <https://doi.org/10.1007/s10608-015-9707-3>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 2

### Working With Complexity in PTSD

Sharif El-Leithy<sup>1\*</sup>, Hannah Murray<sup>2</sup>

<sup>1</sup> SW London & St. Georges Mental Health NHS Trust, UK

<sup>2</sup> Oxford Centre for Anxiety Disorders and Trauma, UK

Who the workshop is aimed at: Therapists working clinically with complicated and complex PTSD. Prior training and experience in delivering CBT for PTSD is needed to follow this workshop.

#### SCIENTIFIC BACKGROUND

Cognitive-behavioural therapies for PTSD are highly effective, but aspects of clinical complexity can complicate the treatment and limit its effectiveness in everyday practice. Working clinically with complicated PTSD can also be daunting for therapists. We may struggle to know where to start, spending many sessions on assessment or stabilisation. We may find ourselves veering between different problems and interventions, and drifting from evidence-based models and techniques. Yet recent evidence suggests that even the most complicated PTSD presentations can be treated in a relatively short timeframe, as long as our interventions are well-targeted, and we hold fast to key principles.

#### LEARNING OBJECTIVES

The workshop will cover how to:

- Conceptualise complexity in PTSD presentations
- Generate treatment targets and priorities based on mapping the underlying processes
- Develop and deliver modularised treatment plans
- Address issues such as comorbidity, multiple trauma memories, and risky behaviours
- Navigate complications, avoid drift and stay on course with treatment.

#### TEACHING METHODS

Using detailed clinical vignettes, we will discuss how to plan and deliver treatment efficiently with complicated PTSD presentations. Participants will have the opportunity to watch clips of key skills, practice developing treatment plans and reflect on their own cases. Implications for practice: The workshop will give you an overview of the most up-to-date evidence for treating PTSD using CBT, and what it tells us about navigating complexity.

#### WORKSHOP LEADERS

Dr Sharif El-Leithy is a Consultant Clinical Psychologist at the Traumatic Stress Service in South-West London. Dr Hannah Murray is a Research Clinical Psychologist based at the Oxford Centre for Anxiety Disorders and Trauma, University of Oxford.

Between them they have 30 years of experience in working with PTSD using Cognitive Therapy and both supervise, teach and research widely in the field. They have authored several practice papers in aspects of treating PTSD. Their clinical handbook, 'Working with complexity in PTSD: A cognitive therapy approach', was published in July 2022.

Background Reading:

Barton, S., Armstrong, P., Wicks, L., Freeman, E., & Meyer, T. D. (2017). Treating complex depression with cognitive behavioural therapy. *The Cognitive Behaviour Therapist*, 10.

Hoeboer, C. M., de Kleine, R. A., Oprel, D. A., Schoorl, M., van der Does, W., & van Minnen, A. (2021). Does complex PTSD predict or moderate treatment outcomes of three variants of exposure therapy?. *Journal of Anxiety Disorders*, 80, 102388.

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Van Vliet, N. I., Huntjens, R. J., Van Dijk, M. K., Bachrach, N., Meewisse, M. L., & De Jongh, A. (2021). Phase-based treatment versus immediate trauma-focused treatment for post-traumatic stress disorder due to childhood abuse: randomised clinical trial. *BJPsych Open*, 7(6).



# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 3

### **Rumination-Focused Cognitive Behavioural Therapy: A Transdiagnostic Intervention**

Edward Watkins\*

*University of Exeter, UK*

Who the workshop is aimed at: Experience in cognitive-behavioural treatment (in adults and/or children) is needed.

#### BACKGROUND

Rumination has been identified as a core process in the maintenance and onset of depression (Nolen-Hoeksema, 1991; 2000) and as a transdiagnostic mechanism contributing to other disorders including anxiety, insomnia, psychosis, eating disorders and substance/alcohol abuse, and thus partially accounts for co-morbidity between psychiatric conditions (Harvey et al., 2004; Nolen-Hoeksema & Watkins, 2011). Furthermore, rumination seems to be a difficult-to-treat symptom, which is associated with poorer outcomes for psychological therapy. This webinar will illustrate how the CBT approach can be modified to reduce rumination in depression and anxiety, using new approaches derived from clinical experience and experimental research. Research suggests that the thinking style adopted during rumination can determine whether it has helpful or unhelpful consequences on social problem solving (Watkins & Moulds, 2005) and emotional processing (Watkins, 2004, 2008). This experimental work has inspired a novel approach to treating depression, called Rumination-focused CBT, which focuses on changing the process of thinking, rather than simply changing the content of thinking, to be more effective in successfully reducing rumination and treating depression (Watkins, 2016). There is now empirical backing for the efficacy of this approach for difficult-to-treat patients in terms of a randomised controlled trial funded by NARSAD (Watkins et al., 2011; Watkins, 2015; Spinhoven et al., 2018). A recent trial of group RFCBT has found that it outperformed standard group CBT for outpatient depression (Hvennegard et al., 2019). Group and internet versions of RFCBT were effective at halving the rates of depression and anxiety in a vulnerable high-risk group over 1 year (Topper et al., 2017; Cook et al., 2019). The webinar will review the theoretical background and core techniques of the therapy, including functional analysis of thinking style, behavioural activation, use of imagery, concreteness, experiential exercises, and behavioural experiments to coach patients to shift to more adaptive styles of thinking.

#### LEARNING OBJECTIVES:

1. To gain knowledge of the rumination-focused CBT approach, including behavioural activation, functional analysis, modifying thought-form-process, training in shifting thinking style, experiential exercises that counter rumination including relaxation, mental absorption and compassion
2. Attendees will be able to describe the nature and consequences of rumination in depression.
3. Participants will have insight into CBT approaches for rumination and worry in depression and anxiety

#### TEACHING METHODS

The principles and elements of the treatment will be taught through instruction, experiential exercises, modelling, and practice (role-plays), subject to time.

#### WORKSHOP LEADERS

Ed Watkins is Professor of Experimental and Applied Clinical Psychology at the School of Psychology, University of Exeter and co-founder of the Mood Disorders Centre, University of Exeter, and Director of the Study of Maladaptive to Adaptive Repetitive Thought (SMART) Lab. He is a pre-eminent expert in the experimental psychopathology and psychological treatments for depression, in particular understanding and treating rumination and worry. He has specialist clinical training and expertise in cognitive therapy for depression, with over 25 years clinical experience. His research has been funded by the Wellcome Trust, UK Medical Research Council, European

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Commission, US NIMH and a NARSAD Young Investigators Award. In 2004, he was awarded the British Psychological Society's May Davidson Award for outstanding early-career contributions to the development of clinical psychology. He was a member of the recent UK NICE Guidelines Committee for Treatment of Adult Depression.

## Background Readings:

Watkins, E.R. (2016). *Rumination focused cognitive behavioral therapy for depression*. Guilford Press

Watkins, E.R., Mullan, E.G., Wingrove, J., Rimes, K., Steiner, H., Bathurst, N., Eastman, E., & Scott, J. (2011). Rumination-focused cognitive behaviour therapy for residual depression: phase II randomized controlled trial. *British Journal of Psychiatry*, 199, 317- 322. Doi:10.1192/bjp.bp.110.090282.

Watkins, E.R. & Roberts, H. (2020). Reflecting on rumination: consequences, causes, mechanisms, and treatments of rumination. *Behaviour Research and Therapy*, 127, 103573, <https://doi.org/10.1016/j.brat.2020.103573>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 4

### **Comprehensive Treatment for Obsessive Compulsive Disorder**

Lata McGinn\*

*Yeshiva University, USA*

Based on multiple randomized trials, CBT for OCD, with exposure and response prevention (ERP) as the key ingredient, is a first-line treatment for OCD with a very strong evidence base in the treatment of children, adolescents, and adults. This workshop will offer clinicians with the knowledge and skills to effectively treat obsessive-compulsive disorder across the lifespan using a comprehensive approach to enhance gains.

The workshop will cover how to functionally assess symptoms to set goals and use and refine different strategies, including psychoeducation, cognitive restructuring, cognitive defusion, exposure, and response prevention. Emphasis will be placed on (1) cognitive and meta-cognitive strategies to maximize gains, reduce suffering, and increase client willingness to engage in ERP; (2) creation of overall and operational exposure hierarchies; (3) selection of type of exposure based on symptom presentation (4) design, implementation, and motivation and commitment for response prevention to block rituals (5) Use of different treatment formats to enhance and maintain gains (6) Incorporation of families to reduce accommodation and enhance gains. A case vignette will be used to illustrate techniques. Clinicians are encouraged to ask questions and bring in treatment cases to ensure maximal learning.

#### **LEARNING OBJECTIVES**

Participants will learn how to use cognitive and meta-cognitive strategies specific to OCD and learn to conduct effective behavioral experiments.

Participants will learn how to effectively incorporate cognitive and meta-cognitive strategies to help reduce obsessional anxiety, decrease rituals, reduce suffering and increase willingness for EXRP.

Participants will learn when how to use different types of exposure and learn how to effectively implement exposure and response prevention.

Clients will learn how to maximize gains in exposure and response prevention by incorporating principles of inhibitory learning.

Participants will learn strategies to facilitate compliance with response prevention.

Recommended readings:

Leahy, R.L., Holland, S., & McGinn, L.K. (2011). *Treatment Plans and Interventions for Depression and Anxiety Disorders*. NY: Guilford Press.

McGinn, L.K. (2015). Understanding and Treating Obsessive-Compulsive Disorder. *The Independent Practitioner*. 35, 50-57

McGinn, L.K. & Sanderson, W. C. (1999). *Treatment of Obsessive Compulsive Disorder*. New Jersey: Jason Aronson, Inc.

Spencer et al., (2023). CBT for Obsessive Compulsive Disorder. *Psychiatr Clin N Am* 46 (2023) 167–180

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 5

### CBT in Practice

Allen Miller\*

*Beck Institute for Cognitive Behavior Therapy, USA*

Who the workshop is aimed at: Clinicians and supervisors of all experience levels may benefit from this workshop.

#### BACKGROUND

From its inception, the Beck Model of CBT has placed a strong emphasis on the structure of therapy sessions. Structure promotes efficiency and efficacy for treatment provided. Years of research and practice have provided refinements to individual elements and application for therapy sessions. Despite near universal agreement on the value of session structure, there has been little agreement on what constitutes structure and how elements of structure should be evaluated.

Over a three-year period, Beck Institute undertook an in-depth study of the structure of CBT sessions. The process sought to answer questions about what constitutes structure, what does a therapist say and do to provide structure, and how can therapy sessions be reliably rated. One result of the project has been development of the Cognitive Therapy Rating Scale-Revised (CTRS-R). The revised tool retains the eleven items from the original scale developed by J. Young and A. Beck in 1980 and includes prescriptive directions to therapists to guide them through the process of structuring therapy sessions. Rating scale items are described in the form of specific behaviors that may be observed and quantified by supervisors when rating sessions and preparing feedback for therapists.

#### DESCRIPTION OF WORKSHOP

In this interactive workshop, participants will learn how to conduct therapy sessions in accord with the Beck Model of CBT as described in the CTRS-R. Each item on the scale will be reviewed and directions will be provided to instruct participants how to execute each item with moderate and expert levels of skill. Participants will be given the opportunity to participate in activities throughout the workshop. They will learn to monitor their own skill development, and provide feedback to others.

#### TEACHING METHODS

In this workshop, structuring CBT therapy sessions will be taught through instruction, video demonstrations, and interactive activities.

#### LEARNING OBJECTIVES

After attending this workshop, participants will be able to:

- Explain the importance of structure for CBT sessions
- Describe items on the CTRS-R
- Improve their own skill level in structuring sessions
- Monitor and evaluate their own progress
- Evaluate and provide feedback to other therapists

References:

Beck, A. et al. (1979). Cognitive Therapy of Depression. Guilford. New York

Beck, J. (2021). Cognitive Behavior Therapy: Basics and Beyond 3rd Edition. Guilford. New York

Miller, A. (2022) Cognitive Therapy Rating Scale-Revised. Beck Institute. <https://beckinstitute.org/cbt-resources/resources-for-professionals-and-students/cognitive-therapy-rating-scale-revised-ctrs-r/>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 6

### **Mindfulness Intervention for Emotional Distress (MIED)**

Xinghua Liu\*

*Peking University, China*

Who the workshop is aimed at: Interest in mindfulness-based intervention for emotional distress in population with anxiety and depression disorders or at sub-health state.

#### BACKGROUND

Emotional disorders (e.g., anxiety and depression disorders), is the most common psychological disorders across different countries. In order to develop effective mindfulness based intervention for these disorders and sub-health state, Xinghua Liu developed the Mindfulness Intervention for Emotional Distress (MIED) program, based on mindfulness-based stress reduction (MBSR) and unified protocol for transdiagnostic treatment of emotional disorders (UP). Compared to other mindfulness-based interventions, the MIED program directly addresses the psychopathological mechanisms underlying emotional disorders, which includes four strategies. The first strategy is putting more time and effort into the present moment, resuming a normal life and work. The second strategy is increasing tolerance of uncomfortable bodily and mental phenomena. The third strategy is recognizing and reducing excessive use of emotion-driven behaviors and avoidance behaviors. The fourth strategy is improving cognitive flexibility. All of these strategies are blended into the practices and tasks of the MIED program in a stepwise approach. The MIED program can be delivered in a group (8 weeks group-based MIED program) with guidance from a qualified teacher or delivered over the internet in a self-help version (49 days iMIED program), which has helped more than 10,000 Chinese people from 2020.

#### LEARNING OBJECTIVES

Participants will acquire the following skills or knowledge:

Understanding theoretical bases of the MIED program: foundations, and the psychopathological mechanisms underlying emotional distress.

Having a knowledge of the four strategies of the MIED program: definition and related practices and tasks.

Having a knowledge of Outline of the Group-based MIED program: theme and procedure of eight sessions.

#### TEACHING METHODS

In this workshop, skill or knowledge will be taught through instruction, modeling, and practice.

#### WORKSHOP LEADERS

Xinghua Liu, the founder of MIED, tenured associate professor in Peking University, works as a researcher and practitioner in the area of mindfulness intervention for emotional distress. He is a qualified teacher of MBSR and certified trainer of UP. He is the associate editor of the Mindfulness journal. He has published 24 SSCI articles and 36 CSSCI articles as a corresponding or first author since 2007. Currently, his major theme of interest is studying the effects and mechanisms of the mindfulness intervention.

Background Readings:

Barlow, D. H., Farchione, T. J., Sauer-Zavala, A., Latin, H. M., Ellard, K. K., Bullis, J. R., Bentley, K. H., Boettcher, T. H., & Cassiello-Robbins, C. (2018). Unified protocol for transdiagnostic treatment of emotional disorders (2nd edition). Oxford University Press.

Ju, R., Chiu, W., Zang, Y., Hofmann, S.G., & Liu, X.\* (2022). Effectiveness and mechanism of a 4-week online self-help mindfulness intervention among individuals with emotional distress during COVID-19 in China. *BMC Psychology*, 10, 149. <https://doi.org/10.1186/s40359-022-00831-7>

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Kabat-Zinn, J., (2013). Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain and Illness (Revised Edition). Bantam.

Li, Y., Zhang, J. A., Meng, Y., Hofmann, G. S., Zhou, A. Y., & Liu, X. \* (2023). A Randomized Trial of the Online Self-help Mindfulness Intervention for Emotional Distress: Serial Mediating Effects of Mindfulness and Experiential Avoidance. *Mindfulness*. <https://doi.org/10.1007/s12671-023-02083-x>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 7

### **A Cognitive Behavioural Systems Approach to Couple Problems**

Mehmet Sungur\*

*Istanbul Kent University, Türkiye*

One of every two to three marriages end up in divorce and many other negative consequences emerge following an unsuccessful marriage. This presentation will start by discussing the reasons why people insist to marry despite the high (45-50%) divorce rate and some catastrophic outcomes following unhappy marriages and divorce. Surprisingly, despite the trauma of divorce, the majority will choose to repeat the experience as the breakdown is seen as the other partner's fault. The presentation will carry on by discussing whether the problem in a failing relationship is really the problematic partner and what makes the distinction between happy (successful) and unhappy marriages.

In cognitive behavioural systems approach the therapist attempts to reframe the problem as a result of interaction between the partners rather than arising from one of the partners. This is to shift the couple's thinking from the illness model to the interactional model. In this approach, the focus of therapist attention is the relationship rather than the individual and thus communication training, reciprocal negotiation and mutual problem solving become very important components of treatment. The workshop will progress by explaining how the therapist may at one moment be working behaviourally trying to help the couple communicate better and solve their problem directly or working at a cognitive level to teach couple to identify automatic thoughts, distorted thinking and how to modify the cognitive processes that lead partners to exhibit certain repetitive patterns of behaviour. It will also discuss the advantages of working on a systems level to explain their lack of co-operation and progress and provide meaning to what seems meaningless to couples and therapists. Different types of couple problems demand different therapeutic skills and responses. Whatever treatment approach is used, a good assessment and formulation is of great importance for a successful intervention, particularly in those couples presenting with relationship and sexual problems. Making conceptualizations, setting targets and homework assignments with the couple will also be discussed.

Some therapy failures with relationship problems may result from a mismatch between the intervention applied and the specific needs of the couple. This presentation will try to help simplify the process of making choices about which intervention may be most effective with which couple and how therapists may select interventions which are appropriate to the different levels of complexity and rigidity in a couples interaction by using an innovative system.

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## In-Congress Half Day Workshop 8

### Understanding and Treating Death Anxiety

David Veale<sup>1</sup>, Rachel Menzies<sup>2\*</sup>

<sup>1</sup> King's College London, UK

<sup>2</sup> University of Sydney, Australia

The workshop is aimed at practitioners with experience in working with health anxiety, OCD, and specific phobias.

#### SCIENTIFIC BACKGROUND

Death anxiety is a term used to describe people's fear or negative feelings towards death or dying. Some people may focus on their own death, such as ruminating on all the things they will miss out on after they die, or what it will be like to not exist anymore. Some people may experience doubts about the nature of existence itself, such as questioning what will happen to them after death. Others may worry about the process of dying, such as whether their death will be painful, or what their final moments will be like. Some may be distressed at the idea of losing a loved one. They may worry about how they will cope with their loved ones' death or that they will somehow cause the death of their loved one without meaning to. For some there is a phobic avoidance and fear of anything related to death (e.g., going near cemeteries or funeral parlours). All the experiences above are in many ways part of being human, but death anxiety is a problem when it is either sufficiently time-consuming, distressing or interfering in one's life. The concept cuts across different diagnoses including some types of Health Anxiety, OCD, specific phobias, and panic disorder. Unfortunately, death anxiety may not be adequately targeted in standard protocols for these disorders and this workshop will try to remedy this with a specific focus on the fears of death and dying. Treatment components will be discussed, centring on CBT that includes exposure and response prevention, which is the most evidence-based treatment for death anxiety.

#### KEY LEARNING OBJECTIVES

By the end of workshop, participants will Understand the phenomenology of death anxiety, and its relationship with relevant diagnoses Be knowledgeable about a cognitive behavioral model and have an understanding of the cognitive processes and behaviours that maintain death anxiety. This includes the intolerance of uncertainty, magical thinking, the awfulness of dying, as well as avoidance, safety seeking and checking behaviours related to death.

Develop alternative ways of thinking about common beliefs in death; for example, thoughts about the awfulness of not existing or the intolerance of not knowing what will happen.

Use appropriate exposure/ behavioural experiments for death and dying and consider what expectations are being tested. Fifteen different tasks will be discussed from writing out one's funeral wishes and obituary, painting one's coffin or collecting "memento mori".

Focus on living life to the full now as an alternative to focussing on death and dying

#### TEACHING METHODS

Experiential learning; didactic teaching; videos

#### WORKSHOP LEADER(S)

Rachel Menzies is a Clinical Psychologist and Postdoctoral Research Fellow at The University of Sydney, Australia. She won the Dick Thompson Thesis Prize for her work on death anxiety and its relationship with OCD. Her article on death anxiety was featured in The Conversation Yearbook 2016, a collection of the top 1% of 'standout articles from Australia's top thinkers'. In 2021, Rachel's PhD thesis exploring death anxiety and its treatment was awarded the Australian Psychological Society (APS) Award for Excellent PhD Thesis. Rachel has published five books on the topic of death anxiety and existential issues.

David Veale is a Consultant Psychiatrist and leads a national outpatient and residential unit service for people with severe OCD and related



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disorders at the South London and Maudsley Trust and the Nightingale Hospital London. He was a member of the group that wrote the NICE guidelines on OCD and BDD in 2006. He is an Honorary Fellow of the BABCP, a Fellow of the British Psychological Society and Fellow of the Royal College of Psychiatrists. He is a Trustee of the national charities, OCD Action and the BDD Foundation.

## Key references:

Menzies, R.E., & Menzies, R.G. (2021). *Mortals: How the Fear of Death Shaped Human Society*. Sydney: Allen & Unwin. <https://www.allenandunwin.com/browse/books/general-books/self-help-practical/Mortals-Rachel-E-Menzies-and-Ross-G-Menzies-9781760879167>

Menzies, R.E., & Veale, D. (2021). *Free Yourself from Death Anxiety: A CBT Self-Help Guide for a Fear of Dying*. Jessica Kingsley Publishers London and Philadelphia

Menzies, R.E., & Veale, D. (2021) Creative approaches to treating the dread of death and death anxiety. In: *Existential Concerns and Cognitive-Behavioral Procedures: An Integrative Approach to Mental Health*. Menzies, R.G, Menzies, R,E, Dingle, G. (Eds). Springer: New York.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 10

### Can PTSD Be Treated in 2-Weeks? A Massed Approach to Recovery of Trauma

Soyeong Kim<sup>1\*</sup>

<sup>1</sup> *Harvard Medical School/Mass General Hospital, USA*

Who the workshop is aimed at: Those who would like to learn how to deliver trauma-focused, cognitive behavioral therapy (CBT) for Posttraumatic Stress Disorder (PTSD) in a short period of time (within 1-3 weeks). Foundational knowledge on evidence-based PTSD treatment protocol such as Cognitive Processing Therapy (CPT) and/or Prolonged Exposure Therapy (PE) will enhance the learning experience.

#### BACKGROUND

Traditional CBT was built on the premise that psychotherapy sessions are delivered weekly or bi-weekly over the course of several months. While this approach continues to be the most accepted and widely used, growing evidence suggests that massed delivery of psychotherapy that is carefully designed to provide therapy sessions multiple times a week can be an innovative approach to treat specific symptomatology such as PTSD. Over the past decades, a number of variations of trauma focused massed treatment have been developed. Particularly, CBT based PTSD treatment such as Cognitive Processing Therapy (CPT) and Prolonged Exposure Therapy (PE) have been highly recommended and thus incorporated into new programs serving a wide range of populations including military personnel, adolescents, and adults with specific types of traumas (i.e. childhood abuse, domestic violence).

Home Base 2-week Intensive Clinical Program (ICP) is an excellent example of such programs specifically designed for military populations. ICP incorporates multiple evidence-based treatment such as CPT, PE, DBT, mindfulness, and art therapy. The ICP participants attend up to 70 individual and group sessions combined over the course of 2 weeks. Outcome studies demonstrated promising results when it comes to the short-term efficacy of massed treatment for PTSD; yet questions still remain whether the treatment gain can be maintained over a long period of time.

In this workshop, the audience will learn how a short-term, intensive trauma-focused treatment can be delivered, who can benefit from participating in massed treatment, and what types of clinical considerations should be made in order to maximize long-term treatment outcomes.

#### LEARNING OBJECTIVES

Participants will acquire the following skills:

- 1) Identify target populations for massed treatment
- 2) Understand feasibility and acceptability of short-term (1-3 weeks) trauma focused treatment
- 3) Examine the long-term outcomes of intensive program focusing on PTSD treatment
- 4) Describe challenges and opportunities of providing massed treatment using Home Base ICP as an example
- 5) Discuss future directions for short-term oriented PTSD treatment (e.g., treatment outcome attrition, transdiagnostic considerations)

#### TEACHING METHODS

This workshop will be taught through didactic, instruction, and modelling.

#### WORKSHOP LEADERS

Soyeong Kim, PhD is a licensed psychologist working as a clinician and researcher specializes in PTSD and stress-related disorder treatment. Dr. Kim primarily provides clinical care to veterans who have been exposed to traumatic events, combat related or otherwise

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within intensive clinical program at Home Base, a specialty clinic at Mass General Hospital (MGH). She is also part of Harvard/MGH asylum clinic at the center for Global health providing psychiatric evaluation for asylum seekers in the US. She has variety experiences working with survivors of trauma

## Background Readings:

1. Edward C. Wright, Jennifer Schuster Wachen, Cynthia Yamokoski, Tara Galovski, Kris Morris, Elizabeth M. Goetter, Brian Klassen, Vanessa Jacoby, Liza Zwiebach, Jo Sornborger, Katherine A. Dondanville, Brooke A. Fina, Sheila A.M. Rauch, Clinical and Administrative Insights From Delivering Massed Trauma-Focused Therapy to Service Members and Veterans, *Cognitive and Behavioral Practice*, 2022, in press
2. Ehlers A, Hackmann A, Grey N, Wild J, Liness S, Albert I, Deale A, Stott R, Clark DM. A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *American Journal of Psychiatry*. 2014 Mar;171(3):294-304. doi: 10.1176/appi.ajp.2013.13040552.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 11

### **Inhibitory Retrieval Model of Exposure Therapy**

Michelle Craske\*

*University of California, USA*

The therapeutic strategy of repeated exposure is effective for fears and anxiety disorders, but a substantial number of individuals fail to respond or show a return of fear. Translation from the basic science of extinction learning offers strategies for increasing response rates and reducing return of fear after exposure therapy. This workshop will present an approach to exposure therapy that emphasizes inhibitory learning and retrieval as its primary mechanism for long-term reduction in fear, anxiety, and avoidance (i.e., inhibitory retrieval model). The workshop will begin with a review of fear extinction and its application to exposure therapy. Then, each therapeutic strategy will be described, starting with the OptEx Nexus, a comprehensive map of associations that is needed to generate exposures that maximally violate expectancies (i.e., prediction error). The OptEx Nexus determines all factors that affect the expectancy for a given CS-US association: aversive outcome (the US), predictors (CSs), occasion setters, and inhibitors (safety signals) and replaces the traditional fear hierarchy which ranks situations in terms of fear levels. Exposure strategies are categorized into two main domains. First are fundamental strategies for how to design exposures in order to optimize prediction error/expectancy violation (also called inhibitory learning), maintain attention to feared stimuli/situations that is essential for inhibitory learning, remove safety signals that may undermine inhibitory learning, and mental rehearsal after exposure to consolidate the inhibitory learning. Second are advanced strategies called deepened extinction, involving exposure to more than one CS in order to optimize prediction error, occasional reinforced extinction, involving occasional experiences of the negative outcome, and strategies for promoting generalization of learning and thereby reducing return of fear, including mental reinstatement, retrieval cues, multiple contexts, stimulus variability, and positive affect.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 12

### **Brief Psychological Interventions (BPIs) for Moderate to Severe Mental Health Problems: Anxiety Management and Behavioural Activation**

Youngsuk Kim<sup>1,3\*</sup>, Katherine Parkin<sup>2</sup>

<sup>1</sup> *Massachusetts General Hospital/Harvard Medical School, USA*

<sup>2</sup> *University of Cambridge, UK*

<sup>3</sup> *Cambridgeshire and Peterborough NHS Foundation Trust, UK*

Brief Psychological Interventions (BPIs) for moderate to severe mental health problems: Anxiety Management and Behavioural Activation. Who the workshop is aimed at: It is recommended that attendees have a theoretical knowledge/understanding of the cognitive behavioural treatment of anxiety and depression in adults in order to participate in this workshop.

#### BACKGROUND

In order to meet an ever-increasing demand for mental health care with limited psychological therapy resources, CBT-based manualised brief interventions for anxiety (anxiety management) and depression (behavioural activation) were developed. Cognitive behavioural therapy (CBT)-based Brief Psychological Interventions (BPIs) for anxiety and depression have previously been found to be helpful for clients with mild to moderate mental health problems. Building on this evidence-base, we offered BPIs to clients with moderate to severe mental health problems in a community-based mental health service for adults of working age. The BPIs were delivered by mental health workers without core therapeutic training, but with ongoing training and group supervision by clinical psychologists in the team. The data reported from a 2-year period suggest that BPIs are associated with reductions in symptoms of anxiety and low mood, and improvements in wellbeing and functioning (Roberts et al., 2021). Given these promising results, the goal of offering BPIs is to improve access to low-intensity psychological interventions for those with moderate to severe mental health problems in a cost-effective and timely manner.

The goal of the present workshop consists of three components:

- (i) Using individualised case formulation to engage clients in BPIs and addressing barriers to treatment;
- (ii) Learning the BPI content for Anxiety Management, including introduction to anxiety, learning to feel calm, overcoming avoidance, behavioural experiments, working with worry, problem solving, and sleep;
- (iii) Learning the BPI content for Behavioural Activation, including impact of low mood, values dartboard, behavioural activation, getting unstuck, lifting the fog (attention and memory), overcoming dampening, planning ahead.

#### LEARNING OBJECTIVES

Participants will acquire the following skills:

- 1) Introducing BPIs to clients using individualised case formulation;
- 2) Working with manualised treatment, including pacing, order of information provided, usage of other relevant handouts/techniques;
- 3) Addressing barriers to treatment.

#### TEACHING METHODS

In this workshop, the three components of the treatment will be taught through instruction, modelling, and practice (role-plays).

#### WORKSHOP LEADERS

Youngsuk Kim, PhD (clinical psychologist/instructor) works as a clinician specialising in treating mood disorders. Her focus includes addressing and improving inter-service issues, increasing the quality of clinical care, developing/implementing service innovations, and

# IN-CONGRESS WORKSHOPS

assisting managers with team cohesion, productivity, and meeting service targets. Over the years, she has accrued extensive experience treating mood and anxiety disorders using time-limited interventions, particularly CBT, behavioural interventions and DBT-informed approaches.

## Background Readings:

Maciag, R., Travers-Hill, E., Morrison, N. R., & Kim, Y. (2023). Paraprofessionals delivering brief psychological interventions: Qualitative accounts of training and supervision. *Counselling and Psychotherapy Research*, 23(1), 64-73. <https://doi.org/10.1002/capr.12566>

Roberts, K., Travers-Hill, E., Coker, S., Troup, J., Casey, S., Parkin, K., & Kim, Y. (2021). Brief psychological interventions for anxiety and depression in a secondary care adult mental health service: An evaluation. *The Cognitive Behaviour Therapist*, 14, E29. doi:10.1017/S1754470X21000258

Wright, I., Travers-Hill, E., Gracey, F., Troup, J., Parkin, K., Casey, S. & Kim, Y. (2020). Brief Psychological Intervention for Distress Tolerance in an Adult Secondary Care Community Mental Health Service: An Evaluation. *The Cognitive Behaviour Therapist*. <https://doi.org/10.1017/S1754470X20000513>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 13

### **CBT for Dysexecutive Syndrome – Intro to Applying CBT in Various Neurological Conditions Beyond ADHD**

Joseph Kim\*

*University of Utah, USA*

Who the workshop is aimed at: clinicians interested in providing evidence-based therapy for adult ADHD. Foundational understanding of the basic Cognitive Behavioural Therapy approach is helpful, but not required.

#### BACKGROUND

Cognitive Behavioural Therapy for adults with ADHD (Safren, 2006; Solanto, 2011) is an effective evidence-based treatment. Even though stimulant medications are considered first-line treatment, many stimulant-treated patients continue to experience functional impairments associated with ADHD such as procrastination, distractibility, and disorganization. Multiple randomized controlled clinical trials have shown that CBT provides meaningful and enduring ADHD symptom improvements across the adult life span (Huang et al., 2019; Safren et al., 2010; Solanto et al., 2018; Young et al., 2020). It also secondarily helps alleviate symptoms of depression, anxiety, and improve quality of life (Young et al., 2015). Moreover, recent findings show additive benefits of combining CBT for ADHD with medications (Cherkasova et al., 2020). The goal of individual and group CBT for adult ADHD is to help clients learn and regularly use the organizational and problem-solving skills to tackle their day-to-day problems associated with procrastination, distractibility, and difficulty with time management. This approach emphasizes the importance of addressing the maladaptive thinking patterns that perpetuate ADHD symptoms that are difficult to treat with medications alone.

The goal of the CBT for adult ADHD that is outlined in the present workshop consists of six components:

1. Introducing adult ADHD and goal setting with clients
2. Introducing and teaching clients the core skills to address: i) prioritization and time management; ii) coping with distractibility and sustaining attention; and iii) reducing procrastination
3. Problem-solving and troubleshooting clients' challenges to using the core skills; Introducing the classic CBT skills to identify and modify dysfunctional beliefs associated with ADHD symptoms
4. Identification of personal values, goal and activity planning, and monitoring progress
5. Teaching clients how to plan, implement, and maintain organizational systems for the purpose of pursuing longer-term goals; Checking in on previously learned core skills and personalizing
6. Incorporating mindfulness approaches and looking beyond therapy termination by helping clients set up a system of continued engagement, growth, and self-accountability

#### LEARNING OBJECTIVES

Participants will acquire the following:

1. Introductory skills to conduct individual CBT for adult ADHD that help clients make gains toward treatment goals
2. Know-how to identify and problem-solve challenges frequently encountered by clients
3. Working knowledge of running group CBT for adult ADHD; Common pit falls and challenges

#### TEACHING METHODS

In this workshop, the six components of the treatment will be taught through instruction, modelling, and practice (role-plays).

# IN-CONGRESS WORKSHOPS

## WORKSHOP LEADERS

Joseph Kim, Ph.D. (neuropsychologist/psychotherapist) is a researcher and practitioner in neuropsychological assessment and treatment of adults with executive dysfunction (including but not limited to ADHD). He is currently conducting a pilot Transcranial Magnetic Stimulation (TMS)-fMRI in the US, to examine and compare the effects of TMS on emotion regulation skills of older and younger adults.



# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 14

### **How To Work with CBT and Dual Diagnosis Based on 20 Years of Experience in a CBT Specialized Milieutherapeutic Inpatient Ward**

Irene Henriette Oestrich\*

*Psychiatric Center Sankt Hans, Denmark*

The workshop is aimed at: clinicians with interest in treating complex inpatient groups within the area of dual diagnosis and addiction as well as building competencies for multidisciplinary teams working with the most challenging patients.

#### BACKGROUND

Treating people with co-occurring severe mental illness and addiction poses several challenges from a diagnostic, psychotherapeutic and organizational perspective and the goal of the workshop is to share several decades of experience in securing sufficient knowledge and therapeutic skills in order to meet the challenge.

The present workshop consists of the following components:

- Understanding the complex reaction pattern in dual diagnosis and problem maintaining strategies.
- Education of the staff, building, maintaining and measuring competencies
- Working with a CBT tailored program in the milieu
- Motivation – how to increase healthy coping strategies
- How to deal with the notion of failure and defeatism helping the patient navigate in life with severe psychopathology
- Emotional forces and regulation
- Resilience and strategies to enhance strength and prevent relapse

#### LEARNING OBJECTIVES

Participants will acquire the following skills

1. How to work with a CBT program tailored for complex inpatients
2. How to educate the multidisciplinary staff and measure therapeutic competencies using a tailored multiple choice questionnaire
3. How to conduct inclusion and stabilization working with emotional regulation in a population with multiple relapses
4. How to add resilience and strength building transdiagnostic methods

#### TEACHING METHODS

Instruction, examples of practice and rehearsing, dialogue and discussion

#### WORKSHOP LEADER

Irene Henriette Oestrich, Ph.D. clinical psychologist, teacher and associate professor em, works in psychiatry and is specialized in implementation of CBT in inpatient treatment as well as education of specialists in CBT through many years. Former president of the Danish Association of Cognitive and Behavioural Therapy and former president of EABCT as well as Chair of WCBCT95 in Copenhagen. Author of a number of CBT books with focus at how to use effective strategies for personal development, especially enhancing self-esteem and resilience.

Key references:

Irene Oestrich. Grundbog I Kognitive metoder. (Textbook in cognitive milieu therapy methods). Dansk Psykologisk Forlag. 2019.

Irene H. Oestrich, Stephen F. Austin and Jørn Lykke St Hans University Hospital, Roskilde 4000, Denmark Nicholas Tarrier University of

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Manchester, Wythenshawe Hospital, Manchester, UK. The Feasibility of a Cognitive Behavioural Intervention for Low Self-Esteem within a Dual Diagnosis Inpatient Population. *Behavioural and Cognitive Psychotherapy*, 2007, 35, 403-408. Printed in the United Kingdom First published online 29 March 2007 doi:10.1017/S1352465807003633

I. H. OESTRICH P h D, S. F. AUSTIN M S c & N. TARRIER 3 P h D Head Psychologist, Research Psychologist, Centre for Cognitive Therapy, St. Hans University Hospital, Roskilde, Denmark, and Professor of Clinical Psychology, University of Manchester, Academic Division of Clinical Psychology, Education and Research Building, Wythenshawe Hospital, Manchester Conducting research in everyday psychiatric settings: identifying the challenges to meaningful evaluation. *Journal of Psychiatric and Mental Health Nursing*, 2007, 14, 55-63

Jørn Lykke, Morten Hesse, Stephen Fitzgerald Austin, Irene Oestrich. Validity of the BPRS, the BDI and the BAI in dual diagnosis patients. St. Hans' Hospital, Boserupvej 2, 4000 Roskilde, Denmark Center for Alcohol and Drug Research, Aarhus University, Købmagergade 26E, 1150 Copenhagen C, Denmark. *Addictive Behaviours* 33 (2008) 292-300.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 15

### **Cognitive-Behavior Therapy for Adult ADHD**

Russell Ramsay\*

*University of Pennsylvania School of Medicine, USA*

Who the workshop is aimed at: Experience in the psychosocial treatment/CBT for adult ADHD is helpful, but CBT therapists unfamiliar with ADHD will still benefit.

#### **BACKGROUND**

Adult ADHD is one of the more impairing syndromes encountered in outpatient psychology and psychiatry clinical practices. The worldwide prevalence of adult ADHD is estimated at around 6%. CBT for adult ADHD is an evidence-based psychosocial treatment, but its clinical implementation is made difficult because clients with adult ADHD struggle with follow-through on their intentions and goals despite knowing what to do – that is, ADHD is a performance problem, not a knowledge problem. Consequently, the current session offers an implementation-focused approach to delivering CBT for adults with ADHD.

The framework for the CBT approach for adult ADHD goal outlined in the proposed workshop consists of its six facets adapted to adults with ADHD:

Cognitive modification

Behavioral strategies, coping skills

Emotion regulation strategies

Specific implementation intention strategies

Managing different relationships and roles with other using specific strategies, using the idea of wielding one's "social capital"

Therapeutic alliance

The workshop will start with a brief description of the contemporary understand of ADHD as a developmental syndrome of self-dysregulation/executive dysfunction and the common impairments. The CBT approach for adult ADHD outlined and illustrated with a focus on addressing procrastination. Coping strategies for time management and managing social and interpersonal roles will also be illustrated.

#### **LEARNING OBJECTIVES**

Participants will be able to:

- 1) Summarize the contemporary understanding of the nature of ADHD that provides the targets and outcome goals in CBT for adults with ADHD.
- 2) Cite the presenter's proposal for the chief cognitive theme observed in clinic-referred adults with ADHD as well as the primary behavioral coping response seen in adults with ADHD.
- 3) Identify at least one coping strategy from each of the component parts of this CBT approach for adult ADHD to use in their clinical practice.
- 4) Identify at least one coping strategy for each of the presenting problems of procrastination, poor time management, and adult role fulfillment to use in their clinical practice.

#### **METHODS**

In this workshop, the teaching method includes instruction, modelling with clinical examples, including "what to say" suggestions, and a focus on implementation strategies to increase the likelihood clients will use the skills in their daily lives more often.

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## WORKSHOP LEADERS

Russell Ramsay, PhD is a psychologist and is board-certified in CBT. He specializes in the assessment and psychosocial treatment of adult ADHD. He is co-founder and clinical director of the University of Pennsylvania's Adult ADHD Treatment & Research Program where he is professor of clinical psychology in psychiatry. Dr. Ramsay has supervised many trainee clinicians in CBT for adult ADHD. He is widely published, including five books on adult ADHD. His "Adult ADHD Tool Kit" is an ABCT recommended self-help book and has been translated into Spanish, French, and Korean. Dr. Ramsay is a CHADD Hall of Fame inductee.

### Background Readings:

Ramsay, J. R. (2020). Rethinking adult ADHD: Helping clients turn intentions into actions. American Psychological Association. <https://doi.org/10.1037/0000158-000>

Ramsay, J. R. (2021). Adult attention-deficit/hyperactivity disorder. In A. Wenzel (Ed.), *Handbook of cognitive behavioral therapies: Vol. 2* (pp. 389-421). Applications. American Psychological Association. <https://doi.org/10.1037/0000219-012>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 16

### Schema Therapy for Children and Adolescents (ST-CA)

Christof Loose\*

*Centre for Schema Therapy Dusseldorf - Praxis for Psychotherapy, Germany*

Who the workshop is aimed at: Psychotherapists and Counsellors with experience in CBT for Children and Adolescents – no prior knowledge about Schema Therapy is required for participation in the workshop

#### BACKGROUND

Schema Therapy (ST) is an integrative, evolving model for psychotherapy that combines aspects of cognitive, behavioural, psychodynamic, and gestalt models, drawing on attachment and developmental theory. ST places emphasis on the childhood origins of many psychological problems, with 'Early Maladaptive Schemas' defined as self-defeating emotional and cognitive patterns that develop in early childhood.

ST-CA has become a hot topic within CBT and the world of psychotherapy in general. The approach has quickly gained popularity among clinicians and mental health services for its high success rates for difficult to treat children and adolescents with more severe, chronic, entrenched difficulties who do not respond to first line approaches. This includes the significant proportion of children and adolescents who do not engage in CBT, or don't respond to CBT (or showed an initial response and then relapse).

Preliminary clinical trials have explored outcomes of ST-CA with complex adolescent populations, including the reduction of externalizing aggressive behaviours with antisocial personality traits/disorders. Some multiple or single case studies point out not only the feasibility of ST-CA but also the positive results on reducing clinical symptoms, underlining the potential of ST-CA for inpatient as well as outpatient settings. Recent publications have also confirmed validity of ST-CA questionnaires, including an illustrated inventory in ST-CA.

#### LEARNING OBJECTIVES

In this workshop, first the schema therapeutic conceptual model, the underlying theory, and requirements in the therapeutic attitude are briefly outlined. Participants will learn how to ...

- use schema therapy techniques to enhance the therapeutic relationship, and facilitate greater openness and trust in order to explore and better understand the roots of problems/symptoms
- develop a ST-CA case conceptualization, by integrating ABC model, needs, schemas, modes, symptoms.
- build and strengthen an elaborated therapeutic relationship, including a deeper understanding of the problems, and leading to improved motivation of behavioural modifications.

The aim of the workshop is to establish and/or to improve a better and profound understanding of ST-CA.

#### TEACHING METHODS

In the centre of the workshop are training and practice units, encompassing schema therapeutic strategies that have proven successful in schema- and mode-driven CBT of childhood and adolescence: Working with drawings, finger puppets, mode cards, chair work, and imagery.

#### WORKSHOP LEADERS

Christof Loose, PhD., Clinical Psychologist, Psychotherapist for Children and Adolescents (CBT), Schema Therapist for Children & Adolescents, Adults, Advanced Certification, Trainer, Supervisor, according to International Society for Schema Therapy (ISST e.V.), works in his own Private Practice, is affiliated with the Heinrich-Heine-University, Department Clinical Psychology, Germany 2012-2017, research activity in ST-CA (e.g. Schema-Questionnaire for Children, DISC), Chair of the subcommittee Working Group in ST-CA 2013-2017, editor/

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author of ST-CA books and Video-Learning (DVD), conducts workshops and seminars in ST-CA, worldwide. More info about ST-CA: [www.schematherapy-for-children.de](http://www.schematherapy-for-children.de).

## Background Readings:

Loose, C. Graaf, P. Zarbock, G., & Holt, R.A.(Editors)(2020). Schema Therapy with Children and Adolescents: A Practitioner's Guide. UK: Pavilion Publishing and Media Ltd.

Loose, C., Meyer, F. & Pietrowsky, R. (2018). The Dusseldorf Illustrated Schema Questionnaire for Children (DISC). *Psicologia: Reflexão e Crítica*, 31, 7.

Van Wijk-Herbrink, M. F. (2018) Schema Therapy in adolescents with externalizing behavior problems: Bridging theory and practice. Dissertation. Universiteit Maastricht.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 17

### **Culturally Adapting CBT for Chinese Americans: An Evidence-Based Approach**

Wei-Chin Hwang\*

*Claremont McKenna College, USA*

Who the workshop is aimed at: Those interested in improving the effectiveness of CBT with minority and diverse populations.

#### BACKGROUND

What are cultural adaptations? How do we culturally adapt psychotherapy in a clinically sound and evidence-based manner for those from diverse backgrounds? This workshop discusses how culture influences mental health processes and identify areas for cultural adaptation. Top-down and bottom-up frameworks to culturally adapt therapy will be introduced. Concrete examples from a culturally adapted treatment manual that I developed for use with Chinese Americans and tested on in a randomized controlled trial will be presented. The goal of this workshop is to gain both breadth and depth of understanding, as well develop practical clinical tools to use with diverse populations. Culturally adapting therapy is important because research demonstrates that ethnic minorities and non-White populations are less likely to receive quality health services and evidence worse treatment outcomes when compared with White populations. Although considerable progress has been made in establishing and defining efficacious and possibly efficacious treatments for the general population, relatively little is known about the efficacy of evidence-based psychological practices (EBPPs) for people from diverse backgrounds. Addressing this issue is critically important because non-White populations evidence barriers in access, delay and utilize mental health treatments at lower rates, and evidence worse outcomes. The information that will be presented in this workshop will be based off of a U.S. National Institutes of Mental Health (NIMH) funded clinical trial focused on creating a culturally adapted intervention for Chinese Americans and testing its effectiveness against nonadapted CBT. This study was the first NIMH funded outcome study on an Asian American group. Moreover, it is the first study that tests adapted versus unadapted psychotherapy.

#### LEARNING OBJECTIVES

By the end of this workshop, participants should be able to . . .

Understand the rationale and need for culturally adapting psychotherapy.

Utilize theoretical and community participatory frameworks for developing evidence-based psychotherapy

Utilize conceptual frameworks to develop culturally adapted evidenced-based clinical interventions.

Enhance one's ability to culturally adapt psychotherapy and improve clinical effectiveness when working with specific ethnocultural groups.

#### TEACHING METHODS

This workshop will be presented through didactic instruction, discussion, clinical case presentations, and concrete illustrations of different parts of the culturally adapted treatment manual.

What are the implications for everyday practice of CBT?: This workshop has implications for those who want to more effectively utilize CBT when working with ethnic minority and diverse populations.

#### WORKSHOP LEADER

Wei-Chin Hwang, Ph.D., is a Professor of Clinical Psychology at Claremont McKenna College. He received his Ph.D. from the clinical psychology program at UCLA and completed a postdoctoral fellowship at Harbor UCLA Medical Center. His research focuses on mental health disparities, treatment outcomes, cultural competency, and developing frameworks for culturally adapting treatments. He is a fellow and has received career awards from the Asian American Psychological Association, American Psychological Association Minority

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Fellowship Program, and the Western Psychological Association. Dr. Hwang is a licensed clinical psychologist and has an independent clinical and consulting practice in Pasadena and Claremont, California. He has extensive experience supervising and training mental health professionals on culturally adapting psychotherapy.

## Key references:

Hwang, W. (2016). *Culturally adapting psychotherapy for Asian heritage populations: An evidence-based approach*. San Diego, CA: Academic Press (an imprint of Elsevier press).

Hwang, W., Myers, H. F., Chiu, E., Mak, E., Butner, J., Fujimoto, K. A., Wood, J. J., & Miranda, J. (2015). Culturally adapted Cognitive-Behavioral Therapy for Chinese Americans with depression: A randomized controlled trial. *Psychiatric Services*, 66(10), 1035-1042.

Hwang, W. (2009). The Formative Method for Adapting Psychotherapy (FMAP): A community-based developmental approach to culturally adapting therapy. *Professional Psychology: Research and Practice*, 40(4), 369-377.

Hwang, W. (2006). The Psychotherapy Adaptation and Modification Framework (PAMF): Application to Asian Americans. *American Psychologist*, 61(7), 702-715.



# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 18

### **Addiction: A Motivational Problem With a Cognitive Solution**

Frank Ryan\*

*Imperial College, London, UK*

Who the workshop is aimed at: Participants should have experience of delivering cognitive behavioural interventions with adults, but not necessarily in the addiction arena.

#### BACKGROUND

The workshop draws on recent research findings, notably those stemming from the Research Domains Criteria (RDoC) framework, indicating that addiction is maintained by changes in reward processing and cognitive control. In combination, these core processes contribute to the persistence of addictive behaviour in the face of negative impacts on health, wellbeing, and social harms. Conversely, these processes can provide a therapeutic focus enabling those seeking help with addictive disorders to identify, pursue and savour novel rewarding experiences. This remediation is essentially a cognitive process as it entails goal formation, decision making, goal pursuit and the anticipation and amplification of deferred hedonic experience.

Examples of cognitive strategies that enable and sustain goal pursuit and experience of novel, harm free rewards are:

Episodic future thinking, the construction of vivid multi-sensory prospective memories of positively valenced future outcomes.

The "Now vs Later" technique which guides the person to acknowledge the immediate ("now") rewarding or hedonic experience of choosing to use a substance or gamble in parallel with considering the delayed ("later") consequences.

The "If... then" anticipatory plan coaches the client to identify simple actions when encountering hedonic triggers e.g. If I am offered a cigarette then I will say "no thanks, I've quit".

#### LEARNING OBJECTIVES:

Participants will require the following skills

Understand that reward processing is pivotal in the development of and recovery from addictive disorders. non-addictive, rewards.

Conducting a motivational conversation with a potential client to identify alternative, non-addictive, rewards.

The use of three cognitive strategies (as above) in a therapeutic context.

Identifying and addressing unhelpful thoughts, beliefs or assumptions about positive affective experience typically associated with the attainment or consumption of rewards.

#### TEACHING METHODS

Participants will have an opportunity to learn by instruction, experiential exercises and role-play.

#### WORKSHOP LEADERS

Frank Ryan is a clinical psychologist and cognitive therapist. His primary goal is to promote evidence-based practice, with a focus on cognitive neuroscience findings. He is an Honorary Research Fellow at London South Bank University and an Honorary Senior Lecturer at Imperial College, London. He is the author of Cognitive Therapy for Addiction: Motivation and Change and Willpower for Dummies.

Background Readings:

Insel, T., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., ... & Wang, P. (2010). Research domain criteria (RDoC): toward a new classification framework for research on mental disorders. *American Journal of psychiatry*, 167(7), 748-751.

Ryan, F. (2022). Psychotherapeutic Strategies to Enhance Motivation and Cognitive Control. In *Evaluating the Brain Disease Model of*

# IN-CONGRESS WORKSHOPS

Addiction (pp. 444-458). Routledge.

Ryan F and Skandali N (2016) Reward Processing in Motivational and Affective Disorders. *Frontiers in Psychology*. 7:1288. doi: 10.3389/fpsyg.2016.01288

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 19

### **Prolonged Exposure Therapy for PTSD Beginner Workshop**

Edward Wright<sup>1,2</sup>, Brooke Fina<sup>3\*</sup>

<sup>1</sup> Massachusetts General Hospital, USA

<sup>2</sup> Harvard Medical School, USA

<sup>3</sup> University of Texas Health Science Center at San Antonio, USA

This workshop is aimed at providers who are interested in learning the theory underpinning prolonged exposure therapy (PE) and familiarizing themselves with the protocol and its core interventions.

#### **BACKGROUND**

Exposure therapies for PTSD have an extensive evidence base demonstrating medium to large effect sizes (McLean et al., 2022). PE is an exposure-based treatment grounded in emotional processing theory and a first-line treatment for PTSD by key professional guidelines (Hamblen et al., 2019).

#### **LEARNING OBJECTIVES**

Participants will learn how PE works, how to explain it to patients, and how to implement the core interventions of the treatment: In vivo exposure is a method in which patients gradually face cues and situations/places that cause anxiety due to their association with the trauma. Imaginal exposure involves revisiting and discussing the most distressing trauma memory in a structured and repetitive manner. Emotional processing following imaginal exposure allows for open-ended dialogue to explore the meanings or associations that the patient has assigned to the trauma, and to start to revise those based on their reflections from the exposure. Common challenges to delivering these interventions and methods of troubleshooting will be discussed.

Teaching methods will consist of didactics, brief videos, and instructive roleplays. Participants will have opportunities to ask questions throughout and discussion will be encouraged.

#### **WORKSHOP LEADERS**

Edward C. Wright, PhD, ABPP, is a psychologist at Massachusetts General Hospital and Instructor at Harvard Medical School. Brooke Fina, LCSW, BCD, is a social worker and Associate Professor - Research at the University of Texas Health Science Center at San Antonio. Both presenters are certified PE therapists, supervisors, and master clinicians who have been delivering PE to patients and providing PE consultation/supervision and training to providers for over 13 years each.

#### **References:**

Hamblen, J. L., Norman, S. B., Sonis, J. H., Phelps, A. J., Bisson, J. I., Nunes, V. D., Megnin-Viggars, O., Forbes, D., Riggs, D. S., & Schnurr, P. P. (2019). A guide to guidelines for the treatment of posttraumatic stress disorder in adults: An update. *Psychotherapy, 56*, 359–373. McLean, C. P., Levy, H. C., Miller, M. L., & Tolin, D. F. (2022). Exposure therapy for PTSD: A meta-analysis. *Clinical Psychology Review, 91*, 102115.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 20

### Working With Transdiagnostic Dissociative Experiences

Emma Cernis\*

*Institute of Mental Health, University of Birmingham, UK*

Who the workshop is aimed at: Experience of delivering cognitive-behavioural therapy (in any field) is needed in order to follow this workshop.

#### BACKGROUND

Dissociative experiences, such as depersonalisation and derealisation, are present at high rates across the spectrum of mental health disorders. As well as causing significant distress in their own right, evidence suggests that clinical presentations featuring co-morbid dissociation may be more severe, more 'risky', and less responsive to standard treatments. However, despite increasing awareness among clinicians and calls from service users, dissociative phenomena are rarely addressed in routine psychotherapist training.

The goal of this workshop is to increase your skills and confidence in working with common dissociative symptoms, no matter your field or area of clinical focus. Specifically, we will focus on dissociation that is not obviously trauma-based, such as depersonalisation and similar experiences.

The agenda for the workshop will cover:

- (i) Understanding dissociation and its transdiagnostic relevance.
- (ii) Identifying and assessing a common subtype of dissociation: 'felt sense of anomaly dissociation'.
- (iii) Intervention content and process: the current evidence base, and guidance from practice-based evidence.

#### LEARNING OBJECTIVES

Participants will leave with:

- 1) Improved transdiagnostic understanding of dissociative experiences.
- 2) Confidence in identifying, assessing, and formulating a common subgroup of dissociative experiences (Felt Sense of Anomaly dissociation).
- 3) Confidence identifying relevant cognitive-behavioural intervention strategies for this subtype of dissociation.
- 4) Awareness of possible therapy process issues that may arise in this work.

#### TEACHING METHODS

In this workshop, the learning objectives will be taught through instruction, modelling, and small group discussion/reflection.

#### WORKSHOP LEADERS

Dr Emma Černis is a clinical psychologist and Assistant Professor at the University of Birmingham, UK. Her work as a clinical academic focuses on complex mental health. She works primarily in the field of dissociation, but also has expertise in psychosis, youth mental health, and child and adolescent complex trauma. One of the major themes of her work is the call for greater precision in defining dissociation, and the importance of taking a person-centred, phenomenological approach to achieve this. Her current research programme focuses on using the interventionist-causal paradigm to build an evidence-based cognitive model of felt sense of anomaly dissociation as a transdiagnostic phenomenon, which will inform the future development of a translational psychological intervention.

Background Readings:

Lyssenko, L., Schmahl, C., Bockhacker, L., Vonderlin, R., Bohus, M., & Kleindienst, N. (2018). Dissociation in Psychiatric Disorders: A Meta-

# IN-CONGRESS WORKSHOPS

Analysis of Studies Using the Dissociative Experiences Scale. *American Journal of Psychiatry*, 175(1), 37–46. <https://doi.org/10.1176/appi.ajp.2017.170100253>.

Černis, E., Freeman, D., & Ehlers, A. (2020). Describing the indescribable: A qualitative study of dissociative experiences in psychosis. *PLOS ONE*, 15(2), e0229091. <https://doi.org/10.1371/journal.pone.0229091>

Černis, E., Beierl, E., Molodynski, A., Ehlers, A., & Freeman, D. (2021). A new perspective and assessment measure for common dissociative experiences: 'Felt Sense of Anomaly'. *PLOS ONE*, 16(2), e0247037. <https://doi.org/10.1371/journal.pone.0247037>

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 21

### **Doing CBTs With the Help of Neuroscience: A Mechanism-Based Treatment Approach**

Freedom Leung\*

*Shaw College, Chinese University of Hong Kong, Hong Kong*

Advances in neuroscience research in the past few decades have enabled clinicians to develop a much better understanding of how human mind works in different psychological disorders. In clinical psychiatry, Insel (2014), the ex-director of NIMH in the US, advocated a paradigm shift toward “precision medicine for psychiatry”. He argued that clinical interventions for psychiatric disorders should be based on the precise understanding of the underlying pathophysiological mechanisms of the disorder and how different interventions may correct the condition. Following Insel’s argument, I’ll integrate recent findings from neuroscience on how human mind works in different emotional disorders, and propose a neuroscience-based treatment model for CBT. Treatment of adjustment stress-related disorders will be used to illustrate how this neuroscience-based model of CBT works in clinical practice.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 22

### **Transdiagnostic Approaches in the Cognitive-Behavioural Treatment of Anxiety and Related Emotional Disorders**

Peter Norton

*Cairnmillar Institute, Australia*

This workshop is an evidence-based CBT training for clinical psychologists and other mental health professionals and students in transdiagnostic CBT for anxiety and related emotional disorders. The “transdiagnostic” approach is gaining widespread acceptance because it enables therapists to treat a variety of emotional disorders, including anxiety, OCD, PTSD, and depressive disorders, using a single treatment approach that targets the common processes underlying and maintaining the disorders. Transdiagnostic CBT has also shown to be particularly effective in treating complex comorbid presentations, by focusing on common underlying factors rather than diagnosis-specific features. Training will focus specifically on transdiagnostic case conceptualisation and the delivery of Transdiagnostic CBT, with an emphasis on Cognitive Restructuring (Thought Challenging) and Emotional Exposure.

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 23

### Cognitive Behaviour Therapy for Body Dysmorphic Disorder

David Veale\*

*King's College London and South London and Maudsley NHS Foundation Trust, UK*

Who the workshop is aimed at: Some experience in cognitive-behaviour therapy of anxiety disorder is needed in order to follow this workshop.

#### BACKGROUND

Body Dysmorphic Disorder (BDD) is defined as a preoccupation with a perceived defect in one's appearance, which is not noticeable to others. The preoccupation is associated with a distorted "felt" impression with many "safety seeking" behaviours such as mirror gazing, skin-picking, ruminating or constant comparing of one's perceived defect to others. People with BDD often use strategies to camouflage and avoid situations and activities. They may have a poor quality of life, are socially isolated and are at high risk of committing suicide. CBT targets the various processes that maintain the preoccupation and distress, namely the self as aesthetic object, the self-focussed attention, the ruminating and comparing, safety seeking and avoidance behaviours.

#### KEY LEARNING OBJECTIVES

By the end of the workshop participants will

1. Recognize and diagnose the presentation of BDD in different settings.
2. Understand a cognitive behavioural model of BDD of self as an aesthetic object and the factors that maintain the symptoms including comparing self with others; being excessive self-focused; camouflaging one's appearance; monitoring and avoiding social threats such as shame, rejection and ridicule from others.
3. Use various assessment scales and conduct a functional analysis of cognitive processes and behaviours that are used as safety seeking.
4. Assess and help clients wanting cosmetic procedures
5. Devise strategies for engagement and change with a focus on ceasing ruminating and comparing, developing an external focus of attention, dropping of avoidance and safety seeking behaviours; and imagery rescripting for aversive memories.
6. Treat co-morbid depression in BDD

#### TEACHING METHODS

Didactic and interactive teaching; Video materials; Case formulation

David Veale is a Consultant Psychiatrist in CBT and leads a national outpatient and residential unit service for people with severe treatment refractory Obsessive Compulsive Disorder (OCD) and Body Dysmorphic Disorder (BDD) at the South London and Maudsley NHS Foundation Trust and at the Nightingale Hospital North London. He was a member of the group revising the diagnostic guidelines for ICD11 for OCD and Related Disorders for the World Health Organisation. He was a member of the group that wrote the NICE guidelines on OCD and BDD in 2006 and chaired the NICE Evidence Update on OCD and BDD in 2013. He has authored or co-authored 130 empirically based articles, 6 books, 16 book chapters and 30 teaching articles or reviews. He is an Honorary Fellow of the British Association of Behavioural and Cognitive Psychotherapies, a Fellow of the British Psychological Society and Fellow of the Royal College of Psychiatrists. He is a Trustee of the UK national charities, OCD Action and the BDD Foundation.

References:

- 1) Phillips, K (2017) Body Dysmorphic Disorder: Advances in Research and Clinical Practice. Oxford.
- 2) Veale, D. & Neziroglu (2010) Body dysmorphic disorder: a treatment manual Wiley: Chichester.



# IN-CONGRESS WORKSHOPS

3) Veale, D., Willson, R, Clarke, A. (2009) Overcoming Body Image Problems (including BDD). Robinson

# IN-CONGRESS WORKSHOPS

## In-Congress Half Day Workshop 24

### Learn Key Elements in “SIBS”, an Evidence-Based Intervention for Siblings and Parents of Children With Chronic Disorders

Krister Fjermestad<sup>1\*</sup>, Torun M Vatne<sup>2</sup>

<sup>1</sup> University of Oslo, Norway

<sup>2</sup> Frambu resource center for rare disorders, Norway

Who the workshop is aimed at: Clinicians and researchers working with children with chronic somatic, intellectual, and/or psychological disorders and their siblings and parents.

#### SCIENTIFIC BACKGROUND

Siblings of children with chronic disorders are at increased risk of mental health problems compared to controls. The mechanisms behind the risk relate to features of the chronic illness (e.g., behavior problems), lack of illness knowledge (e.g., misunderstandings), and poor family communication (e.g., less open communication). Reviews show the need to establish evidence-based interventions for siblings. In this workshop, participants will learn key elements in the SIBS intervention, a manual-based group intervention for siblings and parents. SIBS has a growing evidence-base from two published open trials in Norway and Cambodia with 150 participants, an ongoing randomized controlled trial with 291 families in Norway, an ongoing implementation trial with 300 families in Denmark, and three planned multiple baseline trials in Norway, USA, and Australia. The SIBS manual has been developed based on studies showing that siblings have limited disorder knowledge, conflictual emotions, and passive coping strategies. SIBS has been piloted and adapted based on user feedback. SIBS is a 5-session program with parallel sibling and parent groups. A unique feature of SIBS is integrated sibling-parent dialogues. The main aim of SIBS is to enhance family communication, and thereby sibling mental health and adaptation. SIBS is based on cognitive behavioral, attachment-based, and family systems theory perspectives.

#### KEY LEARNING OBJECTIVES

Knowledge about 1) assessment measures tailored for siblings; 2) the risks facing siblings and parents of children with chronic disorders; 3) how to engage parents in interventions targeting siblings; 4) key elements in the SIBS intervention including how to explore disorder knowledge and identify family challenges in a cognitive behavioral framework, and how to train parents in better communication techniques; 5) cross-cultural perspectives on working with families of children with chronic disorders; 6) key implementation strategies for enhanced intervention success.

#### TEACHING METHODS

The measures, risk data, and key intervention elements is presented as brief lectures intertwined with interactive audience dialogues. The practice elements are presented with video and live demonstrations followed by group roleplays with instructor feedback and discussion.

#### WORKSHOP LEADER

Krister Fjermestad, clinical psychology professor, University of Oslo, Norway. Fjermestad is co-author of the SIBS manual and PI for the SIBS randomized controlled trial. He has trained >200 SIBS group leaders in Europe, Asia, and North America. He has published >70 scientific papers and is an experienced teacher and workshop organizer. The workshop includes video examples with Torun M. Vatne, child psychologist (PhD), conducting key elements of the sibling and parent groups with child and adult actors. Vatne is the main author of the SIBS manual. She has developed the SIBS training material including e-learning, psychoeducation videos, parent-child example dialogue videos and other teaching materials. She is an experienced teacher, clinician, and researcher.

# IN-CONGRESS WORKSHOPS

## References:

Fjermestad et al. (2020). Manual-based group intervention for siblings and parents of children with neurodevelopmental disorders in Cambodia. *J Dev Phys Dis*. <https://link.springer.com/article/10.1007/s10882-020-09777-3>

Fjermestad et al. (2020). Group intervention for siblings and parents of children with chronic disorders (SIBS-RCT): Study protocol for a randomized controlled trial. *Trials*. <https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-020-04781-6>

Haukeland et al. (2020). Evaluation of SIBS, an intervention for siblings and parents of children with chronic disorders. *J Child Fam Stud*. <https://link.springer.com/article/10.1007/s10826-020-01737-x>

# SKILLS CLASSES

## Skills Class 01

### **Increasing Access to Care and Implementation of Evidence-Based Practices through Teacher Consultation**

Julie Worley\*, Courtney Benjamin Wolk

*University of Pennsylvania, USA*

#### TARGET AUDIENCE

Clinicians treating youth mental and behavioral health needs

#### SCIENTIFIC BACKGROUND

The World Health Organization has identified schools as having an integral role in identifying and supporting student mental health (2021). While schools have become a major provider of children's mental health services in many parts of the world, many schools are ill-equipped to provide quality mental health supports to students. Evidence-based classroom interventions can help students with unmet mental health needs (Evans et al., 2014; Kaminski & Claussen, 2017; Pfiffner & Haack, 2014,) but teachers often lack the training and support to deliver them effectively (Reinke et al., 2011). Clinician consultation to teachers is one mechanism to increase access to effective mental health interventions for youth and to help generalize skills and interventions across settings. This indirect service delivery model gives educators the tools needed to utilize CBT-informed strategies to address students' mental and behavioral health needs in the classroom setting where they spend a large proportion of their time. However, most clinicians and counselors have not received formal training on evidence-based consultation practices. The goal of this skills class is for participants to enhance their ability to consult with teachers, and ultimately increase access to high quality care for students with mental and behavioral health needs.

#### KEY LEARNING OBJECTIVES

By the end of the class, participants will be able to:

Describe best practices for collaboration with teachers.

Develop a CBT informed consultation plan.

Evaluate classroom situations and collaborate with teachers to determine intervention strategies.

Observe implementation of CBT informed interventions in the classroom setting.

Provide ongoing consultation support and feedback on teacher implementation of CBT informed strategies.

#### TEACHING METHODS

Didactic instruction, discussion, modeling and role-play.

#### SKILLS CLASS LEADER

Courtney Benjamin Wolk and Julie Worley are clinical psychologists and faculty at the University of Pennsylvania. Dr. Wolk's clinical expertise is in cognitive-behavioral treatments for anxiety; her research develops and tests strategies to promote the uptake of evidence-based practices (EBPs) into routine care. Dr. Worley's expertise is in student mental and behavior health services and increasing community access to EBPs. Both have independently obtained contracts and grants (totaling > 1 million US dollars/year) to provide school mental and behavioral health training and consultation to clinicians and educators. Together, they have over 120 publications.

Key References:

Cappella, E., Hamre, B. K., Kim, H. Y., . . . Schoenwald, S. K. (2012). Teacher consultation and coaching within mental health practice: Classroom and child effects in urban elementary schools. *J Consult Clin Psycho*, 180(4), 597-610.

Sanchez, A. L., Cornacchio, D., Poznanski, B., . . . Comer, J. S. (2018). The Effectiveness of School-Based Mental Health Services for Elementary-Aged Children: A Meta-Analysis. *J Am Acad Child Adolesc Psychiatry*, 57(3), 153–165.

# SKILLS CLASSES

## Skills Class 02

### **Treating Child and Adolescent Tic's – A Cutting Edge-Approach to Tourette's Syndrome (CBIT)**

Paul Depompo\*

*Cognitive Behavioral Institute of Southern California, Newport Beach, CA, USA*

"Treating child and adolescent Tic's – a cutting edge-approach to Tourette's Syndrome (CBIT) – Paul DePompo, PsyD, ABPP, Newport Beach, CA U.S.A.

Who the workshop is aimed at: Any provider interested in treating Tourette's Syndrome.

#### BACKGROUND

A new CDC study shows 1/50 children experience motor or verbal tics. There are a limited number of trained clinicians and access to CBIT. Most individuals are treated with medication when CBIT has a 50% effectiveness to eliminate or dramatically decrease tics. Where a typical course of CBIT is 5 to 10 sessions, CBT therapist are known to have excellent results in their CBIT work. The goal of the CBIT treatment is as follows:

Understand what their tics are and where they come from

Exploring what dials their tics up and down

Awareness of the urge that comes before their tic

Breaking down the steps of their tics

Developing a Competing Response that can influence their CTSC brain circuitry

#### LEARNING OBJECTIVES

Participants will learn to:

- 1) Identify 3 ways tics can develop
- 2) Teach their client and caregiver how to adjust the environment to dial tics down
- 3) Spot the urge the precedes their client's tics
- 4) Break the client's tic down into steps
- 5) Develop a competing response to a tic

#### TEACHING METHODS

In this workshop, the objectives will be taught through, role playing, modelling, lectures, and short video clips.

#### WORKSHOP LEADERS

Paul DePompo, PsyD, ABPP is the director of the Cognitive Behavioral Therapy Institute in Newport Beach, CA. He is a clinical psychologist, researcher, and a bestselling author. He has taught workshops the USA and Europe. He works closely with the Tourette's Association of America bringing support and awareness to those impacted by Tourette's Syndrome. He has frequently appeared on American News Outlets and has been quoted in the Wallstreet Journal, Huffington Post, NBC, amongst others. Dr. DePompo also consults for Hollywood studios on manner related to mental health.

Background Readings:

Essoe, J. K. Y., Grados, M. A., Singer, H. S., Myers, N. S., & McGuire, J. F. (2019). Evidence-based treatment of Tourette's disorder and chronic tic disorders. Expert review of neurotherapeutics, 19(11), 1103-1115.

# SKILLS CLASSES

Link: Citations: Evidence-based treatment of Tourette's disorder and chronic tic disorders (tandfonline.com)

Rowe, J., Yuen, H. K., & Dure, L. S. (2013). Comprehensive behavioral intervention to improve occupational performance in children with Tourette disorder. *The American Journal of Occupational Therapy*, 67(2), 194-200.

Link: Comprehensive Behavioral Intervention to Improve Occupational Performance in Children With Tourette Disorder | The American Journal of Occupational Therapy | American Occupational Therapy Association (aota.org)

Wilhelm, S., Peterson, A. L., Piacentini, J., Woods, D. W., Deckersbach, T., Sukhodolsky, D. G., ... & Scahill, L. (2012). Randomized trial of behavior therapy for adults with Tourette syndrome. *Archives of general psychiatry*, 69(8), 795-803.

Link: Randomized Trial of Behavior Therapy for Adults With Tourette Syndrome | Adolescent Medicine | JAMA Psychiatry | JAMA Network"

# SKILLS CLASSES

## Skills Class 03

### **CBT Strategies and Interventions among Healthcare Professionals Exposed to Repeated Trauma**

Stephanie Okolo\*

*U.S Army, USA*

#### BACKGROUND

Cognitive-behavioural therapy (CBT) is a well-established evidence-based approach that is widely used to treat mental health problems, such as anxiety, depression, and post-traumatic stress disorder (PTSD). However, individuals who work in the mental health field, such as social workers, psychologists, and clinicians, can be exposed to repeated Trauma due to the nature of their work. This repeated exposure can lead to secondary traumatic stress (STS), a condition characterized by symptoms similar to PTSD (Jenkins & Baird). In this skill class, we will discuss the use of CBT strategies and interventions to help healthcare professionals who are experiencing STS due to repeated exposure to Trauma in their work. STS is a form of vicarious Trauma that occurs when an individual is exposed to the traumatic experiences of others (Lerias & Byrne, 2003). Healthcare professionals are at particular risk for developing STS due to their exposure to the Trauma of their clients. Symptoms of STS can include intrusive thoughts, avoidance behaviors, and emotional numbing, which can interfere with their ability to perform their job and provide quality care to their clients.

Research has shown that CBT can effectively treat STS in healthcare professionals. CBT was found to reduce symptoms of STS in a sample of healthcare professionals who were working with survivors of sexual abuse. Participants in the study reported reduced symptoms of depression, anxiety, and stress after receiving CBT. CBT strategies that can help healthcare professionals experiencing STS include exposure therapy, cognitive restructuring, and relaxation techniques. Exposure therapy is a key component of CBT for treating anxiety and PTSD (Kar, 2011). It involves gradually exposing an individual to the traumatic memory or experience in a controlled and safe environment, allowing them to process and overcome their Trauma. Cognitive restructuring involves challenging and changing negative thought patterns and beliefs related to the Trauma. Relaxation techniques, such as deep breathing, mindfulness, and progressive muscle relaxation, can help reduce symptoms of anxiety and stress. To effectively address STS in healthcare professionals, it is important to consider their unique stressors and challenges. For example, healthcare professionals may benefit from CBT interventions that specifically address their work-related stressors and help them manage the impact of repeated exposure to Trauma. This may involve education and training on STS and support from supervisors, colleagues, and mental health professionals.

In conclusion, CBT is an effective approach for treating STS in healthcare professionals who are experiencing repeated exposure to Trauma in their work. Exposure therapy, cognitive restructuring, and relaxation techniques are among the strategies that can be used to help healthcare professionals overcome the impact of STS and continue to provide quality care to their clients. In addition, by addressing STS in healthcare professionals, organizations can support their employees and ensure the long-term sustainability of the mental health system.

#### GOAL

- Identify the unique stressors healthcare professionals face and the need for CBT strategies and interventions.
- Providing skills and techniques to better support healthcare professionals who are repeatedly exposed to Trauma.

#### LEARNING OBJECTIVE

- Participants will be able to identify symptoms of secondary traumatic stress (STS) and its impact on healthcare professionals.
- Participants will be able to apply techniques such as Exposure therapy, Cognitive restructuring, and Relation technique to better take care of themselves.

# SKILLS CLASSES

## Skills Class 04

### **Culturally Sensitive Implementation of Cognitive Restructuring and Behavioural Exposure Interventions in Complex Psychosis in Asian Contexts**

Pawel D. Mankiewicz\*

*Clinical Psychology Programme, National University of Singapore, Singapore*

#### AUDIENCE

The workshop is aimed at mental health practitioners working with clients experiencing psychosis using cognitive behavioural approach. It is suitable for both junior and senior clinicians who wish to broaden the repertoire of client-centred interventions strategies, while considering their cultural sensitivity.

#### BACKGROUND

The prevalence of diagnostic comorbidity between psychosis and anxiety disorders has been shown to be considerable (Buckley et al., 2009). Likewise, coexisting experiences of post-traumatic stress have been often identified in complex presentations of psychoses (Hardy et al., 2016), while integrated models for cognitive conceptualisation and treatment of psychosis with comorbid PTSD have been developed (Keen, et al., 2017). The literature indicates a considerable reduction in psychosis-related experiences and comorbidities, and an overall improvement in the clients' interpersonal functioning, following a course of CBTp, while highlighting the importance of direct intellectual engagement with the content of delusional beliefs, alongside methodically facilitated graded behavioural exposure, in the treatment of complex and socially debilitating psychoses (Mankiewicz & Turner, 2014; Mankiewicz, 2019). However, treatment provision often remains limited, predominantly among individuals with more severe presentations, which is often associated with insufficient training of clinicians (Mankiewicz & Turner, 2012). Development and implementation of culturally contextualised adaptation of such intervention appears important in the context of Asian cultures, given excessive societal stigmatisation of individuals with experiences of psychosis (Pang et al., 2017; Subramaniam et al., 2017; Tan et al., 2020; Yang et al., 2013).

#### KEY LEARNING OBJECTIVES

Participants will be exposed to key conceptualisation models, with particular focus on the maintenance processes of emotional distress. Selected intervention strategies will then be considered and illustrated. Cultural sensitivity of such interventions will be reflected on, with specific focus on adaptation to Asian contexts.

#### TEACHING METHOD

Participant-centred teaching methods will be employed to stimulate divergent thinking among workshop attendees.

#### SKILLS CLASS LEADER

Dr Pawel D. Mankiewicz is a Senior Clinical Lecturer and Deputy Director of Clinical Psychology Programme at the National University of Singapore. He is also an External Examiner for post-graduate severe mental health programmes at the University of Exeter. He holds a Chartered status and Associate Fellowship with the British Psychological Society, and is an Accredited Cognitive Behavioural Psychotherapist with the British Association for Behavioural and Cognitive Psychotherapies with expertise in evidence-based treatments of complex psychoses. During his extensive clinical career, he has worked for Cambridge University Health Partners (University of Cambridge Teaching Trust), acute psychiatric wards and assertive outreach teams in East of England, and early intervention services in Greater London. Dr Mankiewicz has codeveloped a strengths-based framework for CBT for psychosis, and CT intervention model for paranoid, schizotypal and schizoid personalities. He currently propagates compassionate implementation of cognitive restructuring and behavioural exposure interventions for psychosis internationally, with particular focus on South East Asia, and oversees research trials



# SKILLS CLASSES

investigating effectiveness of digitalised cognitive strategies targeting stigma associated with complex mental ill-health in Asian contexts.

## Key references:

- Mankiewicz, P.D. (2019). Cognitive restructuring and graded behavioural exposure for persecutory paranoia and agoraphobic anxiety in complex psychosis. *Clinical Case Studies*, 18(2), 143-158.
- Mankiewicz, P.D., O'Leary, J., & Collier, O. (2018). 'That hour served me better than any hour I have ever had before': Service users' experiences of CBTp in first episode psychosis. *Counselling Psychology Review*, 33(2), 4-16.
- Mankiewicz, P.D., Reid, J., & Hughes, E.A. (2021). Demographic equality of access to cognitive behavioural treatment for early psychosis in community mental healthcare in Greater London. *Athens Journal of Health and Medical Sciences*, 8(3), 149-170.
- Mankiewicz, P.D., & Turner, C. (2014). Cognitive restructuring and graded behavioural exposure for delusional appraisals of auditory hallucinations and comorbid anxiety in paranoid schizophrenia. *Case Reports in Psychiatry*, 14, 1-8.

# SKILLS CLASSES

## Skills Class 05

### **Addressing Relapse Prevention, Through the TEAM CBT Model for Psychotherapy**

Dipti Joshi\*

*Dipti Joshi's Team, India*

Target participants: Prior knowledge and experience in the fundamentals of Cognitive-Behavioural Therapy is a prerequisite for fully comprehending and participating in this workshop.

#### ABOUT

TEAM-CBT: TEAM CBT is a structured therapy model developed by Dr. David Burns. The acronym "TEAM" stands for its key components. This model offers a systematic approach to accurate assessments, providing structured methods for empathy and addressing resistance in clients. Additionally, Dr. Burns has incorporated new elements into traditional cognitive restructuring techniques, resulting in a more effective therapy experience that clients can continue to apply long after therapy has ended. The systematic nature of TEAM CBT also benefits therapists, allowing them to evaluate their own work through client feedback and self-evaluation.

#### BACKGROUND

Relapse prevention is a crucial component in achieving lasting results in therapy, regardless of the presenting issue, whether it be an individual mood disorder, relationship problem, or habit/addiction problem.

The goal of addressing relapse prevention in this skill-based class is composed of six key components:

Reframing relapse in a positive light.

Addressing and assessing the motivation/ resistance to prepare for relapse prevention training before concluding therapy, in a respectful and empathetic manner.

Providing the clients a safe place to discuss their worst fears, and thoughts regarding a relapse.

Teaching clients the use of a recovery circle, comprehending treatment plans, and empowering them to handle a relapse independently and confidently.

Implementing the role-play technique "Externalization of Voices" for cognitive restructuring for a futuristic triggering moment."

Assessing their confidence in being able to handle a relapse.

#### LEARNING OBJECTIVES

The participants will develop the following abilities:

Engage in conversation with clients to effectively introduce them to the relapse prevention training.

Therapists will feel enabled in assisting their clients to identify their worst fears regarding relapse and will be able to reinforce the techniques learned during treatment.

Address any resistance to undergoing relapse prevention training and empower clients to take responsibility and ownership in the relapse prevention process.

Implement the role play technique "Externalisation of voices" to enable clients to effectively challenge negative thoughts, thus increasing their confidence in managing future triggers and preventing relapse.

Enable therapists to get accurate feedback from clients and assess their confidence in managing a relapse, before concluding therapy.

#### TEACHING METHODS

In this workshop, participants will learn the five components of this section of the treatment process, called relapse prevention training, through a combination of instruction, hands-on role-plays, demonstrations, and practical application.

# SKILLS CLASSES

## Background Readings :

Burns, D. D. (2005). *Tools, Not Schools, of Therapy. Strategies for Therapeutic Success.* (also called the Psychotherapy eBook). Los Altos Hills, CA: author.

Hollon, S. D., DeRubeis, R. J., Shelton, R. C., Amsterdam, J. D., Salomon, R. M., O'Reardon, J. P., Lovett, Young, P. R., Haman, K. L., Freeman, B. B., & Gallop, R. (2005). Prevention of Relapse Following Cognitive Therapy vs. Medications in Moderate to Severe Depression. *Archives of General Psychiatry*, 62: 417-422.

# SKILLS CLASSES

## Skills Class 06

### **Integrating a Recovery Orientation into CBT**

Judith Beck

*University of Pennsylvania, The Beck Institute for Cognitive Behavior Therapy, USA*

In Recovery-Oriented CBT, therapists develop strength-based and traditional problem-based conceptualizations and use both to plan treatment. Several activities are added to the beginning of treatment, including exploring clients' best life periods, and identifying their aspirations and values. Therapists help clients identify specific goals for each session and steps they want to take in the coming week that are in line with their aspirations and values. Then standard CBT strategies are used to help resolve potential obstacles to taking these steps. Therapists encourage clients to engage in highly meaningful experiences during the week that lead to a sense of purpose, hope, control, well-being, connection, competence, and empowerment. Therapists also help clients draw positive conclusions about their current experiences and feel positive emotions in and out of sessions. I will demonstrate and then we will practice eliciting descriptions of clients' best periods in their lives, drawing conclusions about their positive experiences, identifying values, and using imagery to strengthen aspirations.

Learning Objectives:

1. Identify clients' lifetime strengths, positive qualities, and resources
2. Strengthen adaptive beliefs through drawing conclusions about positive experiences
3. Identifying and strengthening values and aspirations.

# SKILLS CLASSES

## Skills Class 07

### **Cognitive Behavioural Therapy for Patients With Vaginismus (Genito-Pelvic Pain/Penetration Disorder)**

Firdaus Mukhtar\*

*Universiti Putra Malaysia, Malaysia*

Who the workshop is aimed at: Open for those who want to know how cognitive-behavioral therapy is used in treating vaginismus to follow this workshop.

#### BACKGROUND

Cognitive Behavior Therapy is an evidence-based interventions for various psychiatry disorders, including vaginismus. Most vaginismus cases were seen by medical professional and physiotherapist. Lack of clinical psychologists who able to conduct issues related to psychosexual may be one of the reason that patients are not getting holistic treatment in managing vaginismus. In this presentation, there will be an explanation on how Cognitive Behavior Therapy is important in managing vaginismus, demonstration on relaxation and Kegel exercise, discussion on clinical cases to guide participants on how to run an effective session for patients with psychosexual issues.

The goal of the CBT for vaginismus that is outlined in the present workshop consists of three components:

- (i) Teaching the importance of CBT skills (breathing technique; progressive muscle relaxation; Kegel exercise) in treating vaginismus to patient and spouse.
- (ii) Modifying dysfunctional beliefs between patient and spouse that block the process of change, that is, common beliefs about sex, penetration, ability to do sexual intercourse –often based on their own upbringing, stigma, and spouse's dysfunctional beliefs about the patient commonly complicate with personal assumption and history, comparison, and distraction/addiction.
- (iii) Improving communication and problem solving, between patient and spouse about patient's general anxiety, fear of penetration and overall marital commitment.

#### LEARNING OBJECTIVES

Participants will acquire the following skills:

- 1) Conducting effective exploration session regarding vaginismus issues towards the treatment goals
- 2) Coaching patient in guiding behavioural strategies such as relaxation skills and Kegel exercise
- 3) Identifying and challenging dysfunctional patient and spouse cognitions about the anxiety of future penetration and ability to commit in the process of treating vaginismus
- 4) Conducting hands-on session on drafting erotic script to facilitate mind control during pre-mid-post penetration process.

#### TEACHING METHODS

In this workshop, the three components of the treatment will be taught through instruction, modeling, case discussion and role-plays.

#### WORKSHOP LEADERS

Professor Dr Firdaus Mukhtar is a Professor in Clinical Psychology and currently the President of the Asian Cognitive Behavior Therapies Association (ACBTA) and the Training and Accreditation Taskforce (TAC) of World Confederation of Cognitive Behavioral Therapies (WCCBT). She was the advisor for 7th Asian CBT Conference 2021 and in 2012 she won L'oreal Young Scientist Award to recognise her contribution in research. She was the first secretary of the Malaysian Society of Clinical Psychology and had served as CBT Consultant in Malaysia as recognised by the World Health Organization. She has trained Cognitive Behavior Therapy and Dialectical Behavior Therapy to psychiatrists, clinical psychologists, medical specialists, and allied health professionals especially related to depression, anxiety, weight

# SKILLS CLASSES

management and vaginismus.

## Background Readings:

1. van Lankveld, J. J. D. M., ter Kuile, M. M., de Groot, H. E., Melles, R., Nefs, J., & Zandbergen, M. (2006). Cognitive-behavioral therapy for women with lifelong vaginismus: A randomized waiting-list controlled trial of efficacy. *Journal of Consulting and Clinical Psychology*, 74(1), 168–178.
2. Kadir, Z.S., Sidi, H., Kumar, J., Das, S., Midin, M., & Baharuddin, N (2017). The Neurobiology and Psychiatric Perspective of Vaginismus: Linking the Pharmacological and Psycho-Social Interventions, *Current Drug Targets*, 18
3. Lahaie, M-A., Boyer, S.C., Amsel, R., Khalife, S., Binik, Y.M (2010) Vaginismus: a review of the literature on the classification/diagnosis, etiology and treatment, *Women's Health*, 6(5)706-719

# SKILLS CLASSES

## Skills Class 08

### Working With Moral Injury in PTSD

Hannah Murray<sup>2</sup>, Sharif El-Leithy<sup>1\*</sup>

<sup>1</sup> Traumatic Stress Service, SW London & St. Georges Mental Health NHS Trust, UK

<sup>2</sup> Oxford Centre for Anxiety Disorders and Trauma &, UK

Who the workshop is aimed at: Experience in cognitive-behavioural treatment of PTSD (in adults and/or children) is needed for this workshop.

#### SCIENTIFIC BACKGROUND

Moral injury is the profound psychological distress that can arise after perpetrating, failing to prevent, or witnessing events that transgress an individual's moral or ethical code. Moral injury is not a mental disorder, but it can arise alongside, or contribute to developing PTSD as well as other mental health problems (Williamson et al., 2018).

Moral injury has been primarily studied in military populations, but is increasingly recognised amongst other professional groups including healthcare workers affected by the pandemic, as well as survivors of accidents, crime, state-sponsored violence and terrorist attacks. It can arise from experiences as diverse as killing someone in a car accident, betraying a friend under torture, journalists reporting on mass-casualty disasters, doctors who missed a serious illness, sexual assault survivors who did not report a serial perpetrator and emergency workers who felt let down or betrayed by their leaders during a major incident.

In this skills class, we will describe how to address moral injury when it arises alongside PTSD. Based on existing evidence-based models, we discuss how to apply the cognitive model of PTSD (Ehlers, & Clark, 2000) to formulate moral injury reactions and how to adapt key cognitive, experiential and memory-focused techniques derived from cognitive therapy for PTSD, as well as treatments for moral injury such as adaptive disclosure (Gray et al., 2012) to effectively treat the problem.

#### KEY LEARNING OBJECTIVES

Following the skills class, participants will be able to:

Understand the concept of moral injury and who might be affected

Apply the cognitive model of PTSD to clients presenting with moral injury and PTSD

Adapt cognitive, experiential and memory-focused techniques to address moral injury presentations

#### SKILLS CLASS LEADERS

Dr Hannah Murray is a Research Clinical Psychologist based at the Oxford Centre for Anxiety Disorders and Trauma, University of Oxford.

Dr Sharif El-Leithy is a Consultant Clinical Psychologist at the Traumatic Stress Service in South-West London.

Between them they have 30 years of experience in working with PTSD using cognitive therapy and supervise, teach and publish widely in the field. Their forthcoming clinical handbook, 'Working with complexity in PTSD: A cognitive therapy approach', will be published in July 2022.

#### IMPLICATIONS FOR EVERYDAY PRACTICE:

therapists sometimes struggle with moral injury presentations and may feel their usual approaches are unsuitable. This skills class aims to equip them with a framework and rationale for adapting existing CBT interventions to address moral injury.

Reading:

Gray, M. J., Binion, K., Amaya, S., & Litz, B. T. (2021). Adaptive disclosure: A novel evidence-based treatment for moral injury.

Murray, H., & Ehlers, A. (2021). Cognitive therapy for moral injury in post-traumatic stress disorder. *The Cognitive Behaviour Therapist*, 14.

Williamson, V., Murphy, D., Phelps, A., Forbes, D., & Greenberg, N. (2021). Moral injury: the effect on mental health and implications for treatment. *The Lancet Psychiatry*, 8(6), 453-455.

# SKILLS CLASSES

## Skills Class 09

### Integrating Interpersonal Process and CBT

Houyuan Luo\*

*Private Practice, Canada*

Who the workshop is aimed at: Experience in cognitive-behavioural therapy with adults is needed to follow this workshop.

#### BACKGROUND

Interpersonal Process (IP) refers to how therapists and clients interact, which is different from the content of the treatment manual. In most CBT treatment manuals, IP is almost invisible, and it risks causing premature termination of therapy. IP suggested that clients' dysfunctional core beliefs about themselves, others, and the world outside of the therapy room will manifest in their relationship with the therapists. Therefore, IP requires therapists to pay attention to how they interact with clients, use their interactional information to formulate hypotheses of clients' dysfunctional core belief system, and help clients test them in the therapeutic relationship. As a result, clients can modify their dysfunctional cognitive and behavioural patterns not only with traditional CBT techniques but also with corrective interpersonal/emotional experiences in the context of the therapeutic relationship. With this approach, there is no "resistance" in CBT, as it signals potential interpersonal process information, and therapists can use it to create corrective interpersonal/emotional experiences for the clients and turn "resistance" to therapeutic opportunity. This approach is an effective addition to skills-driven manualized CBT. By the end of the class, participants will be able to apply what they have learnt in the class to their everyday practice, even if they don't use manualized CBT.

#### LEARNING OBJECTIVES

By the end of the class, participants will be able to:

1. Understand the basic concepts and mechanism of the interpersonal process and connect it with the CBT framework.
2. Develop awareness and ability to notice interpersonal process in CBT.
3. Formulate a hypothesis of clients' possible dysfunctional core belief system and cognitive and behavioural pattern with interpersonal process information, including so-called "resistance".
4. Use interpersonal process to provide corrective interpersonal/emotional experiences.
5. Integrate interpersonal process with CBT and make the two of them complimentary to each other.

#### TEACHING METHODS

In this workshop, the integration will be taught through instruction, modelling, and case analysis.

#### SKILLS CLASS LEADER

Dr. Houyuan Luo holds a Ph.D. in Counselling Psychology from the University of Alberta (Canada) and is currently practicing in Toronto, Canada as a Registered Counselling/Clinical Psychologist. In addition, he is a Certified Therapist in CBT by the Canadian Association of CBT (CACBT). He served on the Board of the Association of Contextual Behavioral Science (ACBS) and is currently the Chair of the Counselling Psychology Section of the Canadian Psychological Association (CPA) from 2022-2023, the President-elect of the Association of Chinese Helping Professionals and Psychologists–International (ACHPPI) from 2022-2024.

Background readings:

Safran, J., & Segal, Z. V. (1996). *Interpersonal process in cognitive therapy*. Jason Aronson, Incorporated.

Leahy, R. L. (2012). *Overcoming resistance in cognitive therapy*. Guilford Press.

Teyber, E., & Teyber, F. (2016). *Interpersonal process in therapy: An integrative model*. Cengage Learning.



## Skills Class 10

### **Rumination in Obsessive-Compulsive Disorder: Catching the Sneakiest of Compulsions**

Jean-Philippe Gagné<sup>1\*</sup>, Shiu Fung Wong<sup>2</sup>

<sup>1</sup> McGill University, Canada

<sup>2</sup> La Trobe University, Australia

**Targeted Audience:** This class targets clinicians and trainees who assess and treat obsessive-compulsive disorder (OCD) using cognitive-behavioural therapy (CBT) or exposure therapy, who wish to refine their case formulations and interventions.

#### BACKGROUND

Rumination is a mental process during which one repetitively analyzes their concerns without taking concrete or helpful action (Watkins, 2008). Rumination has been shown to be transdiagnostic (Ehring & Watkins, 2008) and to be involved in the maintenance and worsening of symptoms across various mental disorders (Watkins & Roberts, 2020), including OCD (Wahl et al., 2021). In the context of OCD, rumination has historically been conceptualized as part of the obsessional domain, mainly because of overlapping characteristics, such as being repetitive and difficult to control (Salkovskis & Westbrook, 1989). However, rumination is now better understood as one of the many covert compulsions reinforcing the overimportance given to normal yet unwanted intrusive thoughts, particularly repugnant obsessions (Raines et al., 2017). It is therefore critical for clinicians to now frame rumination as a mental habit or behaviour (Watkins & Nolen-Hoeksema, 2014), wherein an individual with OCD unproductively attempts to identify the causes, meaning, and consequences of their intrusive thoughts (Wahl et al., 2021). This time-consuming process not only leads to more intrusive doubts but also to worsened mood, making individuals with OCD at high risk for comorbid depression (Wahl et al., 2021). This class will teach and demonstrate evidence-based strategies from CBT for OCD and related disorders (e.g., behavioural experiment, habit reversal, exposure to uncertainty), as well as principles of behavioural activation and grounding to equip clinicians with tools to target rumination in OCD. Attendees will also learn to detect, assess, and monitor this covert, habitual compulsion—making it one of the sneakiest to catch and eliminate.

#### LEARNING OBJECTIVES

By the end of this class, attendees will be able to:

1. Understand the concept of rumination as a compulsion and its role in the maintenance of OCD (particularly repugnant obsessions) and other symptoms (e.g., depressed mood)
2. Integrate rumination in cognitive-behavioural formulations of OCD as a way to further refine their conceptualization of their patients' difficulties
3. Assess rumination in patients with OCD to better understand its manifestation and monitor its frequency and intensity throughout CBT
4. Use CBT strategies (e.g., psychoeducation, behavioural experiments, exposure to uncertainty, habit reversal, grounding, behavioural activation) to target rumination in OCD and help symptom reduction
5. Recognize rumination in a session and encourage its discontinuation

#### TEACHING METHODS

A mixed-method approach to teaching will be used. First, attendees will be provided with theoretical information. Second, experiential activities will be emphasized, consisting of roleplays between the leaders and practice of the skills within small groups of attendees based on a case vignette.

# SKILLS CLASSES

## SKILLS CLASS LEADERS

Jean-Philippe Gagné is an Assistant Professor in the Department of Psychiatry at McGill University and a Clinical Psychologist in the CBT Unit of the McGill University Health Centre (Montreal, Canada). His peer-reviewed publications have mainly focused on cognitive mechanisms involved in OCD and his current research examines the effectiveness and acceptability of CBT and exposure therapy.

Shiu F. Wong is a Clinical Psychologist and Lecturer in the Department of Psychology, Counselling, & Therapy at La Trobe University (Melbourne, Australia). His peer-reviewed publications have focused on causal and maintaining factors of OCD. His laboratory currently conducts research aiming to identify these factors as well as new prevention and treatment strategies for OCD.

## Key References

Raines, A. M., Vidaurri, D. N., Portero, A. K., & Schmidt, N. B. (2017). Associations between rumination and obsessive-compulsive symptom dimensions. *Personality and Individual Differences*, 113, 63-67. <https://doi.org/10.1016/j.paid.2017.03.001>

Wahl, K., van den Hout, M., Heinzl, C. V., Kollárik, M., Meyer, A., Benoy, C., ... & Lieb, R. (2021). Rumination about obsessive symptoms and mood maintains obsessive-compulsive symptoms and depressed mood: An experimental study. *Journal of Abnormal Psychology*, 130, 435-442. <https://doi.org/10.1037/abn0000677>

# SKILLS CLASSES

## Skills Class 11

### **Positive Affect Treatment for Affective Disorders**

Alicia E. Meuret<sup>1\*</sup>

<sup>1</sup> SMU, USA

Individuals with depression or anxiety often experience a loss of pleasure, interest, or joy in usual activities. Low positive affect (a core feature of anhedonia) is a risk factor for poor prognosis and suicidality, and yet treatments to date have been relatively ineffective in targeting it. Based on advances in behavioral and neuroscience, Positive Affect Treatment (PAT) was developed to specifically target areas of reward sensitivity that are believed to contribute to anhedonia. These include the anticipation and motivation for reward, the response to reward attainment, and the learning of associations between actions and reward outcomes. PAT is a 15-session intervention composed of three modules targeting behaviors (Actions Toward Feeling Better), cognitions (Attending to the Positive), and Building Positivity. Each module has a set of skills that focuses on building the capacity to look forward to, attend to, enjoy and savor, and learn about positive and rewarding experiences. The premise is that by building capacity for reward, not only will rewarding experiences be felt more strongly (rather than being dismissed), but negative experiences (internal or external) will also become less predominant. Randomized controlled trials comparing PAT to cognitive behavior therapy for individuals with moderate to severe depression or anxiety resulted in higher positive affect, lower negative affect, and superior reduction in symptoms of depression, anxiety, and suicidality.

# SKILLS CLASSES

## Skills Class 12

### CBT for Misophonia: Experiments for Engaging With Trigger Sounds

Jane Gregory<sup>1\*</sup>

<sup>1</sup> University of Oxford, UK

Who is this for? This workshop is for clinicians wanting to help clients tackle their misophonia with creative behavioural experiments, even if they have no prior experience with misophonia.

#### BACKGROUND

Misophonia is a decreased tolerance to specific sounds that have a particular pattern, or certain meaning to the individual, that affects nearly one in five people in the UK, with some individuals experiencing extreme distress and impairment (Vitoratou et al., 2023). Most people don't like the sound of loud chewing, but in some people, chewing and other everyday sounds can cause an extreme reaction of anger or panic, leaving the person feeling trapped and helpless if they can't get away from the sounds (Vitoratou et al., 2023). CBT can help reduce the symptom severity and impact of misophonia and an inhibitory learning approach can help with designing experiments to create new associations with trigger sounds (Frank & McKay, 2019; Gregory & Foster, 2023). While there are no manualized treatments for misophonia, a formulation-driven approach can help clients to develop theories about possible mechanisms maintaining the severity of the problem. Experiments can be designed together with the client to test out these theories, target the potential mechanisms and to explore whether novel experiences of engaging with sounds can help create new, less threatening associations.

#### LEARNING OBJECTIVES

By the end of this interactive skills class, participants will:

Be able to build an individualized cognitive-behavioural formulation (case conceptualisation) of misophonia

Adapt their existing CBT tools to related mechanisms in misophonia

Put the principles of inhibitory learning into practice with misophonic trigger reactions and take home a "menu" of possible experiments

Have observed a live experiment using a possible misophonia trigger sound

#### TEACHING METHODS

Working with examples brought by the class participants, we will develop an individualised formulation and discuss ideas for adapting known CBT strategies. The skills class leader will provide examples of experiments for engaging with sounds and demonstrate a live experiment.

#### WORKSHOP LEADER

Jane Gregory is a clinical psychologist at the University of Oxford, researching cognitive and behavioural mechanisms of misophonia.

She sees clients with misophonia and provides specialist misophonia supervision at a national service in Oxford Health NHS Foundation Trust. She is co-author of the S-Five, a multidimensional questionnaire measuring symptoms of misophonia, and created two new scales for capturing feared consequences and potential safety seeking behaviours in misophonia. Her self-help book, *Sounds Like Misophonia: how to stop small noises causing extreme reactions*, is forthcoming with Bloomsbury in September 2023.

Key reading

Frank, B., & McKay, D. (2019). The Suitability of an Inhibitory Learning Approach in Exposure When Habituation Fails: A Clinical Application to Misophonia. *Cognitive and Behavioral Practice*, 26(1), 130–142.

Gregory, J., & Foster, C. (2023). Session-by-session change in misophonia: A descriptive case study using intensive CBT [in submission]. *The Cognitive Behaviour Therapist*.

Vitoratou, S., Hayes, C., et al (2023). Misophonia in the UK: Prevalence and norms from the S-Five in a UK representative sample. *PLoS ONE*.

# TECHNICAL DEMONSTRATIONS

## Technical Demonstration 01

### Introducing ChatGPT: A Valuable Assistant for Programming Behavioural Tasks

Diana Mejia, [Laurent Avila Chauvet\\*](#)

*Sonora Institute of Technology, Mexico*

#### INTRODUCTION

ChatGPT is a chatbot that can perform various tasks and generate text responses that simulate human responses in a conversational context. One of its most exciting features is its ability to generate programming code blocks. This model has been trained through reinforcement learning with human feedback. To train the model, trainers first generated a database of conversations in which they assumed both roles (AI and users). Afterward, samples from this set of conversations were randomly chosen, and trainers were required to classify the quality of the autocomplete responses by the model. This process was repeated multiple times to optimise and fine-tune the model. (ChatGPT, 2023).

#### BACKGROUND

Online behavioural tasks have recently gained increased importance due to the COVID-19 pandemic and restrictions on in-person research (Lourenco & Tasimi, 2020). The ability to collect data through online platforms has allowed researchers to effectively continue their work despite the restrictions imposed by the pandemic. However, few psychology programs have integrated programming languages into their curricula. Our aim is to describe and demonstrate an example of using ChatGPT as an assistant to program an online behavioural task using HTML, CSS, and JavaScript code

#### KEY FEATURES

We will use Notepad++ for this demonstration, a free, open-source code editor known for its speed, lightweight design, and valuable features such as syntax highlighting and compatibility. To program the task, we will use: HTML (Hypertext Markup Language), the general standard language used to create the structure and content of web pages, CSS (Cascading Style Sheets) for the visual appearance and JavaScript is an interpreted programming language mainly used to create dynamic content on web pages. To ensure accurate results in ChatGPT chatbot, clear and concise questions with relevant details and context should be asked. ChatGPT can guide us through the initial steps of programming tasks if given the proper instructions.

#### DISCUSSION/CONCLUSION

We believe that utilising OpenAI's ChatGPT can streamline the time involved in programming or learning programming languages. However, it should be noted that ChatGPT has some limitations. For example, it only has access to updated information after its last training on January 9th, 2022 and cannot perform internet searches. Additionally, if the user's instructions are lengthy, unclear, or lack context, ChatGPT may not provide an appropriate response.

#### IMPLICATIONS FOR EVERYDAY CLINICAL PRACTICE OF CBT

This artificial intelligence, OpenAI's ChatGPT, can be a valuable tool to assist therapists in becoming familiar with the world of programming. From generating specific behavioural tasks to creating their own record or control systems

# TECHNICAL DEMONSTRATIONS

## Technical Demonstration 02

### **Use of eLearning to Increase Accessibility to Trainings on Evidence-Based Practices: Reaching Clinicians and Educators in Under-Resourced and Under-Served Settings**

Julie Worley\*, Courtney Benjamin Wolk

*University of Pennsylvania, USA*

#### TECHNICAL /SCIENTIFIC BACKGROUND

Over the last decade, researchers have used eLearning to teach foundational and applied skills (Nosik & Williams, 2011; Pollard et al., 2014) with similar outcomes to in-person, expert-led training (German et al., 2018). The benefits of using eLearning include efficiency, cost effectiveness, and flexibility. Additionally, eLearning has the potential to address disparities in training by reaching professionals in areas expert trainers are not readily available.

In order for eLearning to be most effective, courses must be designed with the target audience, user experience, and learner motivation in mind. The ADDIE (analysis, design, development, implementation, and evaluation) model is an Instructional Design Framework commonly used to guide development of courses (Branson et al., 1975). However, the original ADDIE model is complex (Allen, 2006) and has undergone multiple revisions. Our team developed a practical template, based on the ADDIE model, to guide the development of courses.

#### KEY FEATURES

We will showcase a library of eLearning courses developed following the ADDIE model. The courses include focused content highlighting implementation of evidence-based practices, demonstration of strategies, and incorporate interactive content with opportunities to practice skills. Embedded knowledge checks assess learning and ensure active engagement. Knowledge checks are conducted using errorless learning, meaning that learners receive immediate feedback about the correctness of their response. To promote sustainability, courses embed resources including infographics with examples of featured strategies and downloadable resources.

Courses are hosted in a Learning Management System. During the technical demonstration, participants will be granted access to sample course content to view key features. We will also present an overview of the course development template developed by our team, which can be used by organizations developing asynchronous trainings for clinicians.

#### Relevant References

Branson, R. K., Rayner, G. T., Cox, J. L., Furman, J. P., King, F. J., & Hannum, W. H. (1975). Interservice procedures for instructional systems development (Phases I, II, III, IV, V, and Executive Summary). US Army Training and Doctrine Command Pamphlet, 350. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a019486.pdf>

German, R.E., Adler, A., Frankel, S.A., Stirman, S.W., Pinedo, P., Evans, A., Beck, A., & Creed, T. (2018). Testing a web-based, trained-peer model to build capacity for evidence-based practices in community mental health systems, *Psychiatric Services*, 69 (3), 286-292.

Spatioti, A.G., Kazanidis, I., & Pange, J. (2022). A comparative study of the ADDIE instructional design model in distance education. *Information*, 13(9), <https://doi.org/10.3390/info13090402>

#### BRIEF DESCRIPTION OF THE TD PRESENTER(S)

Courtney Benjamin Wolk and Julie Worley are clinical psychologists and assistant professors at the Center for Mental Health at the University of Pennsylvania. Dr. Wolk's clinical expertise is in the cognitive-behavioral treatment of anxiety disorders; her research focuses on developing and evaluating strategies to promote the uptake of evidence-based care into routine practice. Dr. Worley's expertise is in supporting the behavioral and mental health of students, and increasing community access to evidence based interventions. Both have independently obtained large contracts and grants (totaling > 1 million US dollars/year) with school districts to provide training and

# TECHNICAL DEMONSTRATIONS

consultation to clinicians and educators on supporting student mental and behavioral health. Together, they have over 120 publications.

## IMPLICATIONS FOR EVERYDAY CLINICAL PRACTICE OF CBT

While asynchronous trainings are widely available, many take the form of a traditional webinar with passive learning. Trainings developed following the ADDIE model have the potential to disseminate evidence-based-practices to a wider audience through a more strategically developed interactive format, increasing clinicians and other professionals' access to effective training that may otherwise be difficult to obtain.





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III.

# Local Programs



Hanbok is the traditional Korean clothing characterized by vibrant colors, graceful silhouettes, and intricate craftsmanship, reflecting the country's rich cultural heritage.



# LOCAL PROGRAMS

## Local Session I: CBT in the Korean Context

### Local Session I-1

#### CBT in the Korean Context

## **Advanced Behavioral Activation: Integration of Motivation and Emotion**

Kee-Hong Choi, Korea University, Korea

Behavioral activation is an evidence-based treatment for depressive disorders and has been reported and used to treat a variety of psychiatric disorders with depressive co-morbidities. This behavioral activation workshop will present ways to enhance the application and effectiveness of behavioral activation in light of the emotional difficulties and decreased motivation experienced by a wide range of clients with depressive or anxiety symptoms. This workshop will introduce the Behavioral Activation Plus program, which integrates emotion and motivation, present the theoretical background and empirical evidence behind it, and discuss examples of behavioral activation in practice.

## **Building a Life Worth Living - Standard Dialectical Behavior Therapy for Trauma Survivors: Case Examples and Effectiveness**

Simyang Heo, The Psychotherapy and Research Institute: Person to Person, Korea

Dialectical Behavior Therapy (DBT) is a new approach to cognitive behavioral therapy, developed by Marsha Linehan to help people with recurrent suicidal and self-harming behaviors. It is an evidence-based treatment that is effective in reducing difficulties with emotional, cognitive, and behavioral regulation.

Standard DBT refers to a comprehensive DBT system with four components: 1) individual therapy, 2) group skills training (mindfulness skills, distress tolerance skills, emotion regulation skills, and interpersonal effectiveness skills), 3) coaching between sessions, and 4) consultation team.

In the session, case studies of standard DBT on clients with suicidal and self-harm behaviors, emotional regulation difficulties, self-regulation difficulties, and interpersonal difficulties after experiencing traumatic events are presented. And it will be discussed whether standard DBT is effective in reducing target behaviors and posttraumatic symptoms, and presented how clients apply strategies of acceptance and change in real life to build a life worth living.

## **Cognitive Behavioral Therapy for Social Anxiety Disorder in South Korea**

Jung-Kwang Ahn, Chungbuk National University, Korea

This study aims to explore the current state of cognitive behavioral therapy (CBT) for social anxiety disorder (SAD) in South Korea and its future directions. We will review the research on CBT for SAD conducted in South Korea since the 2000s, including its effectiveness and the key treatment components. Additionally, we will examine recent trends in CBT for SAD and discuss important considerations for its implementation to Korean clients.

## **Psychological Intervention for Patients with Chronic Pain: Acceptance and**

# LOCAL PROGRAMS

## Commitment Therapy

Sungkun Cho, Chungnam National University, Korea

The prevalence of chronic pain is increasing due to an aging population and lifestyle changes. In developed countries, multidisciplinary approaches, including psychology, are actively used for assessment and management of chronic pain, but the situation in Korea is far from this. Acceptance and Commitment Therapy (ACT) has been widely used in clinical settings as psychological intervention for patients with chronic pain, and a workbook for ACT for patients with chronic pain has been developed and used in Korea. This symposium aims to explore 1) why ACT is of particular interest to many professionals in Korea, 2) why ACT is suitable for chronic pain management, and 3) what should be considered when applying ACT to patients with chronic pain in Korea.

### Local Session 1-2

#### CBT in the Korean Context (Workshop)

## The Unified, Transdiagnostic Treatment of Emotional Disorders: Foundations, Modules, and Application

Yongrae Cho, Hallym University, Korea

The Unified Transdiagnostic Treatment of Emotional Disorders is an emotion-focused cognitive behavioral treatment designed to be commonly applicable to various kinds of anxiety and depressive disorders (Barlow et al., 2011). This treatment consists of a total of eight modules, including five core modules targeting emotion processing and regulation (nonjudgmental emotion awareness, cognitive appraisal and reappraisal, preventing emotion avoidance and modifying maladaptive emotion-driven behaviors, awareness and tolerance of physical sensations, and interoceptive and situation-based emotion exposure). Evidence for the efficacy of this treatment has been steadily reported over the past decade. In this workshop, I will present the empirical and theoretical foundations of the treatment, each treatment module with case materials, several treatment outcome studies, and results of the treatment for Korean clients with emotional disorders. This workshop is expected to be a valuable opportunity to learn key know-how to effectively deal with clients with various emotional disorders you meet in clinical settings or counseling centers.

### Local Session 1-3

#### Current Status and Cases of Digital Psychotherapy in Korea

## Two Cases of Posttraumatic Stress Disorder Caused by a Motor Vehicle Accident Treated with Virtual Reality Exposure Therapy

Ju-Wan Kim, Chonnam Medical Hospital, Korea

Exposure-response prevention is an effective approach to treat anxiety disorders. Virtual reality exposure therapy (VRET) is a promising treatment for patients with posttraumatic stress disorder (PTSD). New research has helped refine and update VRET. In this study, we introduce a form of VRET developed for patients suffering from PTSD after a traffic accident, and present two cases treated using this protocol. After 6 weeks of VRET treatment, the two participants not only improved their PTSD symptoms, but also improved their

# LOCAL PROGRAMS

depressed mood, anxiety, and insomnia symptoms. Future studies of VRET for car accident-related PTSD should utilize a controlled design with randomization in order to account for numerous possible confounds.

## **Digital Therapeutic Devices for Depression and Suicide Prevention – A Journey through Virtual Reality**

Sooah Jang, Research Institute of MINDSAI Co. Ltd., Korea

In depression, cognitive behavioral therapy (CBT) is a diverse but consistent set of treatment techniques that aim to promote changes in behavior and cognition and have been shown to reduce depressive symptoms. CBT has traditionally been delivered in an office setting with a therapist, but has also been shown to be effective in recent years as a self-directed intervention using the internet and smartphones. A recent development is the use of virtual reality (VR) to deliver CBT for depression. VR can make psychoeducation more immersive, focusing on experiences rather than mere perceptions. Behavioral therapy that encourages physical and social activity can be more realistic with VR. In terms of cognitive restructuring, VR can also be used for immersive visualization support, image reframing, and positive imagery training. The unique nature of VR also allows Avatar therapy or program for promoting positive psychology as well. We developed and validated the efficacy and safety of 'CHEEU.Forest', a comprehensive VR depression treatment program based on mental health education, mindfulness training, dialectical behavior therapy, and mindfulness training. Compared with 6 weeks of medication, 6 weeks of using 'CHEEU.Forest' reduced depression and anxiety to the same extent at baseline, post-treatment, and 4 weeks after the end of treatment. Suicide risk was reduced only in the 'CHEEU.Forest' group from pre-treatment to post-treatment and 4 weeks after the end of treatment.

These results suggest that a depression treatment program using virtual reality is effective and has the potential to be used to treat depression in clinical practice. Future research could further explore which elements of virtual reality are associated with improvements in which aspects of depression, so that more effective programs can be developed.

## **An Introduction to the Development of a Digital Therapeutic for Depression**

Ji-Won Hur, Korea University, Korea

This presentation will introduce the development of a digital therapeutic for depression. This session will discuss the basic structure, working mechanisms, and expected outcomes of an evidence-based digital therapeutic that can reduce dysfunctional thinking and alleviate depression and anxiety in individuals with depression.

# LOCAL PROGRAMS

## Local Session 2

### Cognitive Behavioral Therapist Training, Competency Building, and Dissemination

## **Cognitive Behavioral Therapist Training, Competency Building, and Dissemination: Lessons Learned**

Allen Miller, Beck Institute, USA

This presentation for the symposium covers the lessons learned from a career of practicing, teaching, and supervising the Beck model of cognitive behavior therapy (CBT). The learning experiences have been garnered from practice within the United States and throughout the world. Initially, the essential components of the Beck model will be covered. It is noteworthy to recognize that the Beck model was influenced by humanistic, psychoanalytic, and behavioral theories from its inception. Accordingly, trainees are encouraged to develop skill in establishing strong therapeutic alliances, conducting cognitive conceptualizations, identifying, evaluating, and modifying beliefs, and effectively applying evidence-based cognitive and behavioral treatment techniques. Additionally, trainees are instructed to elicit values, aspirations, and personal goals while providing structure in their therapy sessions. Dissemination of information on how to practice CBT is provided in multiple learning environments including graduate school training, post graduate, life in-person and virtual training, and on-demand, recorded training.

The essence of this presentation will be on the challenges, the successes, and the lessons learned from a career of practicing and teaching CBT. Despite extensive research that has accompanied the application of CBT with multiple populations in various settings, there remain myths about CBT that are perpetuated in social media. There misinformation about the delivery methods of CBT and the individuals who may benefit from it. Even when motivated individuals pursue learning of CBT, common barriers arise affecting access due to cost, technology, inconsistent quality, and geography. Others who have received good training in CBT, deviate from the model for a variety of reasons. The impact of therapeutic drift will be discussed. The best CBT training is sensitive to individual differences among trainees as well as the individuals they treat. Good instruction should include adaptations to accommodate individual diversity. In spite of many challenges in providing and receiving good quality CBT training, impressive results continue to be obtained from training individuals around the world.

Based upon the experiences of training individuals, around the world, recommendations will be made for new and seasoned individual therapists to consider regarding what is necessary to know, and what to do.

## **Cognitive Behavioral Therapy in Korean Mental Health System**

Jeanjung Chey, Seoul National University, Korea

Mental health system in Korea began its reimbursement of medical costs for cognitive behavioral therapy (CBT) in 2018. It was the first recognition of the need for evidence-based psychotherapy in the national mental health system and was initially welcomed by many mental health professionals. With the highest suicide rate among the OECD countries for almost two decades, it was expected to significantly improve the mental health to many Koreans and reduce the morbidity due to suicide. Its impact, however, has been limited due to the exclusion of non-medical mental health workers including clinical psychologists as the main provider of the CBT within the national medical insurance. As the country is beginning to recognize the importance of evidence-based treatment in all national treatment and care, this presentation will discuss significant agendas that could increase the role of CBT in the Korean health system and improve access to evidence-based psychotherapy to at-risk and general population.

# LOCAL PROGRAMS

## Local Session 3: Program for Young Clinical Psychologists

### Local Session 3-1

#### Wise Supervisor Life (Tips for Supervision)

### Wise Supervisor Life

Seok-Woong Kim, Psychologist Group, Korea

This presentation presented the role and concept of clinical psychologists, relationships with trainees, and problems and countermeasures experienced in the process of training guidance to supervisors who have just begun teaching clinical psychologists based on actual experiences and examples. And I would like to discuss how to become a wise supervisor.

### Raising Trainees in Public Institutions for “General Citizens”

Youngyoung Hahn, Seoul Psychological Support Northeast Center, Korea

The Seoul Psychological Support Center is a public psychological support service provider operated by the Seoul Metropolitan Government as an official project since 2018 after about two years of pilot projects from the end of 2015. It is the first institution in Korea to be established under the leadership of the city, advocating “providing psychological services by psychological professionals” as its main business, and has become a professional psychological counseling and psychological educational provider for Seoul citizens, known to many of them during its six-year operation.

Unlike existing public mental health service institutions represented by the Mental Health Welfare Center, the Seoul Psychological Support Center is not limited to psychiatric diagnosis or specific psychological disorders, and targets a variety of unspecified people who complain of various adaptation difficulties in daily life. As a result, it deals with objects different from hospitals, which are traditional training scenes, and the width and type of problems are also different. There are also limitations due to this.

Among the characteristics of these institutions, we would like to look at what should be considered as supervisors in order to help trainees develop their capabilities as clinical psychologists.

### Clinical Supervision - At the Hospital

Eun-Jeong Min, Pusan National University Yangsan Hospital, Korea

For young supervisors who start clinical supervision, I would like to help young supervisors with difficulties by sharing various experiences and providing know-how as supervisors at university hospitals for more than a decade.

### Flaked Villain of Hospital – Really?

Daiseq Bai, Yeungnam University Medical Center, Korea

# LOCAL PROGRAMS

## Local Session 3-2

### Stories of Young Psychologists' Business Startups and Employment

#### **ACT toward Values, ACT Institute**

Seunghoon Song, Liberty ON Counseling Center / ACTCBT institute, Korea

This presentation introduces the establishment process of a psychological counseling center and the ACT/CBT research institute, alongside the career development process. Career development was initiated by applying the ACT theory not only to clients but also to the therapist's life. Both accidental and intentional factors influence career development, and for pursuing a career change, it is important to clarify values, prepare systematically, and ultimately take committed action. In the 20 years of being a psychotherapist, there was a need to actively restructure the work environment and make changes to maintain the therapist's identity, and align it to values. While exploring the context of choosing the therapist career model and life's important values, I introduce a case of career development while practicing ACT theory, including mindfulness, acceptance, defusion, and value-commitment actions. As psychological flexibility is important in solving the psychological problems of clients, the ACT Hexaflex model (Hayse et al, 1999) and its wisdom can also assist therapists in navigating life challenges at the choice point. The work of a therapist can be challenging, as it involves ambiguous and uncertain factors that can make the person vulnerable to exhaustion and experience avoidance. The science of ACT provides practical tips, which are applicable during life's unexpected circumstances. It also offers a comprehensive and instructive guide, not only for psychotherapy but also for career development. The presenter has changed their career path from a psychologist and supervisor in a university hospital psychiatry setting to an EAP(employee assistance program) counselor, and currently operates a therapy institute as a CBT/ACT trainer and educator, who is closer to values. Finally, the presenter shares obstacles, realistic problems, trial and errors, problem-solving methods, and wisdom that arose while changing careers and during the establishment processes of a counseling center and the ACT/CBT research institute.

Keywords: ACT, CBT, ACT Hexaflex model, career development, institute establishment, values, psychotherapist

#### **The Role and Qualities of a Clinical Psychologist in Private Practice**

Juri Jeon, Jieum Psychotherapy Center, Korea

The clinical psychologist in private practice plays a pivotal role in psychotherapy to both clinical and sub-clinical groups in the community. The role of private practice psychologists is crucial not only to alleviate clients' symptoms but also to prevent recurrence and help social readaptation. Moreover, they can take charge of various educational tasks such as supervision, college education, and public lectures, as well as psychotherapy and psychological evaluation. When considering the private practice as a business, there are significant differences from those who work for hospitals or companies, and various qualities are essential as an entrepreneur. Above all, as a clinician, you should have a clear therapeutic perspective, expertise, and abundant experience, and you should strive for self-development through continuous conservative education. In addition, the entrepreneur must have the aspect of being a business professional. Therefore, in providing professional services, practical strategies will be needed to be linked to profits. As the demand for mental health and psychotherapy services continues to rise, there are more cases of starting a business as a beginner expert. Using my own experiences, I would like to introduce the reality of private practice.

#### **Nowadays, Psychological Centers are in the Age of Branding**

# LOCAL PROGRAMS

## Ahra Kim, Mindnpeople, Korea

Perceptions of mental health services have changed. People now have more access to psychological services than ever before. At the same time, as public expectations for psychological services increase, the desire to receive higher quality services is growing. Nowadays, not only professionalism, but also marketing ability to promote the brand is required to survive in the market. Good quality psychological assessment and counseling are essential, but they alone become insufficient to satisfy the public when there is an oversupply of psychologists. 'Branding' is the marketing to show the identity of a brand that wants to be recognized by people. In the past, when people chose a center, they used to consider visible elements such as its size, location, and the academic qualifications of psychologists. But now they focus on the quality of service, the perspectives psychologists have, and what they seek, to find the right fit for them. 'Mindnpeople', located in a small neighborhood, shares its experience of how it was able to eliminate barriers to people's perception regarding psychological services and make this service accessible to the public. I would like to talk about how to become a center with a clear identity that the public wants to go to and how to connect with the public through conversations. I am looking forward to seeing what other kinds of centers can be developed in the future.

# LOCAL PROGRAMS

## Local Session 3-3

### Machine Learning and Artificial Intelligence for Clinical Psychology

#### **Data Analysis Using Machine Learning**

Woo-Young Ahn, Seoul National University, Korea

Recently, machine learning has been increasingly utilized in many clinical and basic research studies. However, many clinical researchers still find it difficult to understand the concept of machine learning and use it for their research. Through this workshop, participants will learn the concept of machine learning and learn how to do simple machine learning analysis using R codes provided by the instructor. Prerequisites for the workshop: Basic graduate-level statistics course, basic R coding skills.

#### **Natural Language Understanding and Generation for Computational Psychotherapy Applications**

Sungjoon Park, SoftlyAI, Korea

In this thesis, I tackle the problems in recently emerging technology-mediated psychotherapy through computational methods. Among them, I focus on developing natural language understanding techniques since verbal interaction is most important factor to understand the interaction. Specifically, I develop models and resources to understand languages of clients in counseling, languages of people in suicidal risk, languages of people in various emotional state.

For language understanding of clients in text-based counseling, I develop a categorization method as a labeling scheme for client utterances. I also propose a new model, Conversation Model Fine-Tuning to classify the utterances with small size of labeled data. This allows us to understand client's language and automatically extract meaningful information from them.

For language understanding of people in suicidal risk, I build a dataset of social media posts written by military personnel with corresponding expert annotations of suicidal risk levels. Various pretrained language models are further fine-tuned by using the dataset to classify the risks for developing simple yet effective baselines, achieving high classification performance. This could be applied to help them in time.

For language understanding of people in various emotional states, I propose a framework which enables a model to learn to predict dimensional emotions as well as categorical emotions, only trained from corpus annotated with categorical emotion labels, to give better emotional feedback in self-help psychotherapy without labeled data. Dimensional emotion predicted by a model trained using our framework shows significant positive correlations to corresponding ground truth without direct supervision.

Through these contributions, our knowledge could advance in understanding dynamics in technology-mediated psychotherapy and relevant information seeking behaviors of people in need. Clients and therapists could be supported in practice by automatized computational models as well.



# LOCAL PROGRAMS

## Local Session 4

### **Overview of the Meditation Program by Korean Institute of Education & Research for Meditation in Medicine**

Kyungchul Shin, Simwoo Psychiatric Clinic, Korea

In 2013, the Korean Institute of Research for Meditation in Medicine was established, and after four years of active participation, the Korean Academy of Meditation in Medicine (KAMM) was founded in 2017. KAMM is dedicated to scientific research and application of meditation in psychiatric and psychological clinical settings, aiming to establish appropriate meditation practices and rational theories. Korean Institute of Education & Research for Meditation in Medicine (KIERMM), as a separate subsidiary and collaborative organization of KAMM, seeks to contribute to the improvement of public health through medical research, education and expert training of meditation. The prominent executives of KIERMM developed and refined three major meditation techniques, leading to the creation of the "Integration of Meditation Practice and Psychiatric Therapy" program. Workshops on the practical application of meditation for psychiatric interventions, under the theme of "Integration of Meditation Practice and Psychiatric Therapy" have been initiated in 2022. Many healthcare professionals with an interest in meditation have participated in and successfully completed the meditation programs offered by KIERMM.

Among the three programs, the first one is the MindMaster Program (MMP), a mindfulness-based meditation program consisting of four sessions designed for individuals new to meditation. Through MindMaster Program, participants can recharge the power and energy of their minds to become masters of their own minds. The program strengthens three core mental muscles: conscious attention, awareness, and acceptance.

The second program, the Sati Enhancement Program (SEP), aims to enhance the power of Sati, which is the core element of meditation. Sati, derived from ancient Indian Pali language, refers to directing attention to phenomena occurring in the present moment. By strengthening and utilizing the inherent human function of Sati through specialized training, individuals can develop and maintain non-judgmental and neutral pure awareness of observed objects.

The third program, the Contemplative Practices based Sequential Transdiagnostic Eclectic Practical Psychotherapy (STEP-CP), is a program composed of various evidence-based intervention methods, designed to be used in environments with limited clinical resources. STEP-CP is the practical program implemented sequentially based on the situation and needs, applied to any patient regardless of diagnostic systems (transdiagnostic), and employed eclectically a combination of established evidence-based techniques. KAMM and KIERMM is actively carrying out plans to study the healing effects of the three meditation programs and to promote and disseminate them in clinical healthcare for the health of patients and the public.

### **Development and Application of Mindful School Program for Youth**

Seunghee Won, Kyungpook National University Hospital, Korea

Older children and adolescents are in a critical period fraught with numerous developmental changes and may be vulnerable to psychological distress. The average age of onset for mental illness is 12–24 years, with 50% of all mental illnesses having commenced before the age of 14 (World Health Organization; WHO). Anxiety disorders and mood disorders reflect the most prevalent psychiatric issues in adolescents, with depression being strongly related to suicide completion (WHO 2012). Mental illness in adolescents is linked to more serious psychiatric problems in adulthood as well as academic underachievement, delinquency, criminogenic behavior, impaired employment prospects, financial problems, and participating in risk-taking behavior. The suicide rate in Korea has been the highest of those among the Organization for Economic Cooperation and Development (OECD) countries since 2003. The suicide rate of adolescents in 2020 is also the fourth highest among OECD countries. Through the COVID-19 pandemic, which began in 2020, the mental health of children and adolescents has worsened, increasing the number of students with moderate or higher degrees of anxiety and

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depression. To improve the mental health of children and adolescents, advanced Western countries focus on social-emotional education for all grades from the lower grades of elementary school to high school, and provide various types of social-emotional promotion education. Recently, there is promising evidence that mindfulness and self-compassion training has been shown to enhance attention control, emotional regulation, resilience, and positive emotional resources. This is consistent with the beneficial impact of mindfulness and self-compassion on self-regulation, prosocial behavior, stress, anxiety, and depression. There is also a study that positively affects brain development in children and adolescents. Mindfulness interventions have been administered to adolescent populations in both resilience-building and treatment contexts, including as part of large-scale health promotion initiatives. Therefore, many Western countries, including the United Kingdom and the United States, have already implemented various Mindful School Projects for students' healthy emotional development and mental health for years. In Korea, the necessity of promoting mindfulness programs in schools has begun to be discussed by various expert groups and is being conducted individually. The Korean Academy of Meditation in Medicine and the KAIST Meditation Science Research Institute have jointly developed Mindful School Projects for elementary and middle and high school students since 2019. This program aims to be a scientific evidence-based program to improve mental health by reviewing cases in practice and considering the development characteristics of children and adolescents and the special situation of Korean children and adolescents. I would like to introduce the development process, contents, and future application plans of the school mindfulness programs we developed.

## **Meditation Program for North Korean Refugees in Korea**

Jin Yong Jun, Ulsan University Hospital, Korea

North Korean refugees in Korea suffer from traumatic stress and depression. There are numerous programs aimed at relieving their symptoms, but cultural barriers and stigma surrounding psychiatric treatment present obstacles to accessing psychological support. Hanawon, the settlement support center for North Korean refugees, assists them in settling down in Korea. While Hanawon offers various programs, its resources related to mental health are limited.

To address this gap, members of the Korean Academy of Meditation in Medicine provide a one-day community-based meditation program for these refugees. This program effectively helps North Korean refugees in relieving their stress. We aim to share our experiences with the community-based meditation program, as it can contribute to the development of similar initiatives.

Keywords : Meditation, Refugees, North Korean, Community

# LOCAL PROGRAMS

## Local Session 5

### Clinical Application of ACT Matrix

## How the ACT MATRIX Works: Four Therapeutic Leverage Points on the ACT Matrix

Bonghee Jeon, Mind with Mind Neuropsychiatric Clinic, Korea

Acceptance and Commitment Therapy (ACT) is an evidence-based psychological intervention aimed at enhancing psychological flexibility, empowering individuals to effectively navigate life's challenges. The ACT Matrix, a key tool in ACT, visually organizes the dynamic interactions between inner experiences and behaviors. This paper explores four therapeutic leverage points on the ACT Matrix that facilitate change and promote psychological flexibility: 1) Discrimination between Toward and Away moves (confirming functional consistency), 2) Discrimination between five sensory experiences and internal experiences (improving context sensitivity), 3) Promoting awareness that I am at the center of the quadrant (using hierarchical relational frame), and 4) Improving perspective-taking ability through visual cues (using deictic relational frame).

1) The ACT Matrix discriminates between Toward moves (actions aligned with values) and Away moves (actions aimed at avoiding difficult thoughts or emotions). This discrimination helps clients recognize the functional consistency of their actions. 2) The ACT Matrix visually separates sensory experiences (sights, sounds, and physical sensations) from internal experiences (thoughts and emotions). This distinction aids clients in becoming more context-sensitive, differentiating between immediate sensory experiences and their internal narratives. 3) The ACT Matrix encourages clients to recognize their agency in determining their actions and reactions to sensory and internal experiences. By using the hierarchical relational frame, clients can better understand the dynamic interactions between their experiences and behaviors, cultivating self-awareness and the realization of their power to choose. 4) The visual nature of the ACT Matrix facilitates the development of perspective-taking ability by employing the deictic relational frame. By using visual cues, clients can easily identify patterns of behavior and thought, understand how their actions relate to values and internal experiences, and enhance their ability to take different perspectives.

In conclusion, the ACT Matrix is a valuable tool in Acceptance and Commitment Therapy that helps clients and therapists visualize the dynamic interactions between sensory and internal experiences and chosen behaviors. By focusing on the four therapeutic leverage points therapists can guide clients toward greater psychological flexibility, improved mental health outcomes, and enhanced overall well-being.

Key words: ACT Matrix, psychological flexibility, therapeutic leverage points

## Psychological Flexibility Training Program Practiced Every Day: 100 Days

Kanguk Lee, Kangwon National University Hospital, Korea

The ACT Matrix Program is implemented by the Center for Contemplative Science in KAIST (Korea Advanced Institute of Science and Technology) as one of the All step: Happiness Mind Matrix Contemplation for Happiness and Prosperity of Humanity. The program has been implemented for five sessions since 2020 and a comprehensive debriefing session has been added since 2022 for a total of eight sessions. A project was started for 21 students who completed the ACT Matrix Program to create an ACT Matrix every day for 100 days, and participants uploaded the ACT Matrix created using the BAND program, one of Naver's social networks. A total of eight debriefing sessions were held for 90 minutes once every two weeks during the 100-day period. The Acceptance-action Questionnaire-I(AAQ-I), Korean Version of Valuing Questionnaire (K-VQ), Multidimensional Experiential Avoidance Questionnaire (K-MEQ), Korean Version of Mindful Attention Awareness Scale (K-MMAS), Korean Version of Self-Compassion Scale (K-SCS), and Korean Version of Behavioral Activation (K-BADS) scales were evaluated before and after the project, and 14 people were analyzed except for 7 who had inadequate scale responses. The Wilcoxon code ranking test for pre- and post-score differences showed that it was effective in promoting

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acceptance, mindful attention awareness, valuing, and self-compassion. In particular, valuing and self-compassion showed statistical significance. The total score for experiential avoidance decreased. In addition, the detailed scores Activation and Social increased, and Avoidance and Work decreased. These results suggest that the project helped improve psychological flexibility in university students. It is expected that the 100 Days ACT Matrix Project will be useful as an action strategy to help improve psychological flexibility in daily life.

## **The Flexible Application of the ACT Matrix in Real-world Korean Psychiatric Practice**

Euihyeon Na, Presbyterian Medical Center, Korea

## **ACT Matrix for Children and Adolescents**

Cheolsoon Lee, Gyeongsang National University, Korea

Acceptance and Commitment Therapy (ACT) is a form of psychotherapy that focuses on increasing psychological flexibility. This involves learning to be present in the moment, and to respond effectively to whatever thoughts, emotions, or sensations may arise. Through ACT, individuals can learn to develop a greater sense of self-awareness and to take purposeful action in line with their values, even in the face of difficult or challenging experiences. Research has shown that Acceptance and Commitment Therapy can be an effective approach for addressing a wide range of mental health concerns, including anxiety, depression, and substance abuse. In particular, ACT has been found to be helpful for individuals who have struggled with traditional forms of therapy, or who may be resistant to change. ACT has also been shown to be effective across a wide range of ages and populations, including children, adolescents, and adults.

The ACT Matrix is a tool used to make ACT simple and practical, helping individuals identify and clarify their values, notice their behaviors, and ultimately make more mindful choices. ACT is an evidence-based therapeutic approach that has been increasingly applied to children and adolescents in recent years. The ACT Matrix is a visual diagram that helps children and adolescents identify and work with their psychological experiences in the moment. It is a four-quadrant grid designed to help them organize their psychological experiences into four categories. The matrix is intended to help them identify patterns of avoidance and rigidity and to develop more flexible and adaptive responses to their experiences. This is achieved through a combination of mindfulness, acceptance, and values-based action. The ACT Matrix can be particularly effective for children and adolescents because it offers a visual and interactive way of exploring complex concepts. When working with children and adolescents, it can be especially important to use creative and engaging techniques to help them understand and apply psychological concepts. The ACT Matrix is one such tool, which can be used in a variety of settings, including schools, clinics, and community programs. By incorporating experiential activities, metaphors, and games, the ACT Matrix can help young people develop a greater sense of curiosity and openness, and to approach difficult emotions with acceptance. This presentation about the ACT matrix in children and adolescents would highlight the clinical application and practicality of this approach in helping young people manage difficult emotions, navigate challenging relationships, and live more meaningful lives.

# LOCAL PROGRAMS

## Local Session 6

### Disaster and Mental Health Care

#### **Interventions for Stabilization and Recovery**

Hyu Jung Huh, Incheon St. Mary's Hospital, The Catholic University of Korea, Korea

#### **Interventions for Traumatic Loss**

Min Young Sim, National Center for Disaster and Trauma, National Center for Mental Health, Korea

#### **Interventions for Child/Adolescent**

Eun Ji Kim, Maumtodac Mental Health Clinic, Korea





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# VI. Posters



# POSTER SESSION 01

Abstract No.: 0047

## **The Phenomenological Approach to Psychological Autopsy of Suicide among the Youth**

Shiela Marie Manjares<sup>1,2\*</sup>, Ma. Dolores Correa-Patag<sup>2</sup>

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The study explored the lived experiences of suicide survivors anchored from the framework of Psychological Autopsy. A total of fifteen (15) participants from Bulacan which obtained through purposive sampling, the suicide survivors were composed of family members and closest social network of the suicide victims. This study used qualitative research method specifically the Interpretative Phenomenological Analysis (IPA) research design wherein this approach is committed to the examination of how people make sense of their major life experiences. The researcher utilized Depression-Anxiety-Stress Scale 42 (DASS-42) to know the emotional state of participants, life history interview, and semi-structured interview questions. The results highlight the (1) profile of eight (8) individuals who died by suicide and manifestations of the suicide plans of the victims based on the responses of the participants which anchored from psychological autopsy method (2) the lived experiences of the suicide survivors (3) coping strategies of the suicide survivors, and lastly (4) changes experienced in the relationship of the suicide survivors with their family members, friends and other social networks.

# POSTER SESSION 01

Abstract No.: 0053

## **An Exploration of the Experience of Teachers with the Loneliness Toolkit**

Helena Adam\*, Maria Loades, Vuokko Wallace

*University of Bath, UK*

Rates of loneliness in adolescents worldwide doubled from 2012 to 2018, and loneliness became even more of a problem during the pandemic. Despite adolescents spending most of their time in school, little research has focused on how schools can support adolescents experiencing loneliness. Loades et al (2021) developed a one-page infographic loneliness toolkit regarding adolescent loneliness. The toolkit was based on evidence based principles, and is aimed at adults who support adolescents; these principles include CBT based concepts such as focusing on helpful rather than unhelpful thoughts, for example, helping adolescents to recognize the social connections they do have, rather than those they feel are lacking. Our study aimed to explore teachers' perceptions of the loneliness toolkit in supporting adolescents, and to seek suggestions on how to improve the toolkit.

An online survey was developed using Qualtrics to collect ratings (quantitative) and descriptions of views (qualitative) from teachers. This survey was distributed online to secondary school teachers in the UK between May and July 2022 using email and social media. The survey contained a link to the toolkit which can be accessed from any digital device. Say how many participants?

Findings showed that both self-rated knowledge and experience of students experiencing loneliness were positively correlated with how useful teachers found the loneliness toolkit. Three themes were developed about how useful teachers found the toolkit; clarity, brings attention to loneliness, and communication. Teachers liked how clear and easily conveyable the information in the toolkit was. Teachers also liked that it brought awareness to the topic of adolescent loneliness. Two themes were developed about how the user experience of the toolkit could be improved; education, and interactive student support. Teachers found that adding and placing more emphasis on methods to alleviate adolescent loneliness would enhance the efficacy of the toolkit. Teachers also wished for the toolkit to include methods incorporating interactive student support such as circle groups and support sessions.

This study demonstrates how brief, visual infographic style resources can be potentially of value in sharing evidence-based principles from CBT with the wider community.

Link to the loneliness toolkit: <https://www.bath.ac.uk/publications/loneliness-and-reconnection-guide/attachments/loneliness-reconnection-guide.pdf>



# POSTER SESSION 01

Abstract No.: 0095

## **Cultural Adaptation of Acceptance Commitment Therapy for Depression: A Qualitative Study Exploring Views of Practitioners and Patients from India**

Sayma Jameel\*, M Manjula, Shyam Sundar Arumugham, K Thennarasu

*NIMHANS, India*

Acceptance and mindfulness based treatment have received growing attention in recent years. Acceptance commitment therapy (ACT) is one such intervention and is considered as third waves of behavioural and cognitive therapy (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). ACT has shown empirical evidence in various outcome studies and has been found effective for various psychological disorders (Ruiz, 2010). However, there are very few studies conducted in Indian context showing its applicability and cultural sensitivity. Therefore, the present study is an attempt to increase cultural competence by conducting semi structured interviews with 4 ACT practitioner and 2 patients who have undergone ACT for depression. The present study is part of a larger PhD work where ACT intervention based on the manual by Zettle ('ACT for depression') was used, and insights from these interviews were incorporated to deliver culturally sensitive intervention.

The present study is a qualitative exploration of the views of patients and practitioners in India by following an evidence-based approach that focuses on three areas for adaptation: (1) awareness of relevant cultural issues and preparation for therapy; (2) assessment and engagement; and (3) adjustments in therapy techniques. The data was analysed using a thematic framework analysis by identifying emerging themes and categories. The results highlight therapists' experiences, problems faced, and recommendations in all three areas of adaptation. The findings highlight the importance of acknowledging the culture differences and clinical presentation. Culturally sensitive assessment and formulation with minor adaptation in clinical practice was recommended. The recommendations and modifications suggested will be discussed.

Key Words: Cultural adaptation, Acceptance Commitment therapy, depression, Indian context

# POSTER SESSION 01

Abstract No.: 0100

## Parenting Styles, Attachment and Executive Functioning in Infants

Diana Mejia, Joselinn Murataya-Gutierrez\*, Laurent Avila-Chauvet

*Sonora Institute of Technology, Mexico*

Studies with institutionalised children have found attachment problems in infants and poor parenting practices by caregivers, which impact their socialisation and executive functioning. The objective of this study was to compare attachment, parenting practices, and executive functioning of institutionalised and non-institutionalized children. The sample consisted of 11 institutionalised and 11 non-institutionalized infants aged 4-6 years, evaluated through the Virtual Strange Situation Procedure, the Neuropsychological Battery for Preschoolers, the Parenting Practices Inventory, and the Child Behavior Inventory. The results show differences in distance attachment behaviour with respect to the caregiver, with non-institutionalized infants being the furthest from their primary caregiver and having more problems identifying him ( $U = 23.5, p = .015; \eta^2 = -0.732$ ). Regarding executive functioning, the institutionalised group had a significantly lower performance than the non-institutionalized group in tasks of: orientation ( $U = 3.50, p = .000; \eta^2 = -1.17$ ), attention ( $U = 15.0, p = .001; \eta^2 = -1.003$ ), academic skills ( $U = 13.0, p = .001; \eta^2 = -1.033$ ), memory ( $U = 13.0, p = .001; \eta^2 = -0.961$ ), identification of emotions ( $U = 3.50, p = .000; \eta^2 = -1.170$ ), Inhibition ( $U = 33.0, p = .013; \eta^2 = -0.749$ ), and abstraction ( $U = 15.5, p = .003; \eta^2 = -0.911$ ). Regarding parenting practices, poor positive reinforcement was shown by caregivers of non-institutionalized children ( $U = 10.500, p = .001, \eta^2 = -0.993$ ). These results demonstrate the need to intervene in the attachment problems of institutionalised infants and the rehabilitation of the areas of executive functioning affected, as well as in the improvement of parenting practices of caregivers.

# POSTER SESSION 01

Abstract No.: 0129

## **Improving Men's Willingness to Seek CBT for Depression: The Role of First-Person Depression Storytelling Online Video on Men's Self-Stigma of Seeking Help, Traditional Masculinity Ideology, and Psychological Help-Seeking Attitudes**

Brian TaeHyuk Keum\*

*University of California, USA*

Suicide is a worldwide public health burden and among the leading causes of death in many countries including South Korea and the United States. Research and statistics indicate that, compared to women, men are 3.5 times more likely to complete suicide. In addition to the role of untreated depression, studies suggest that impulsive and aggressive beliefs and behaviors associated with traditional hegemonic masculine ideologies may also contribute to completed suicides among men. There is empirical evidence that cognitive-behavioral therapy (CBT) is effective in reducing suicide ideation which may then help reduce rates of completed suicides among men. However, studies indicate that men are significantly less likely than women to access such services. It has been suggested that men do not seek help out of the belief that doing so would label them as "weak," "vulnerable," and "unmanly". Thus, men are more likely to persist through their depression, without seeking legitimate help such as CBT, even when available, to the point that they may resort to impulsive, extreme actions to alleviate the distress, such as suicide.

One promising strategy for persuading men to seek mental health services such as CBT is the use of online storytelling material. Online media is a promising avenue for disseminating professional and scientific information to impact people's beliefs, attitudes, and behaviors, given the cost-effectiveness of the method and the breadth of the reachable population. Online videos promoting counseling have been found to be effective in increasing psychological help-seeking attitudes in the general population. Storytelling is a powerful medium through which the storyteller connects more personally with the viewers to stimulate their engagement with the intended message of the story. The theoretical mechanism behind storytelling is transportation, which suggests that viewers are absorbed into the narrative flow of the story and are aroused both cognitively and emotionally. For this reason, narrative storytelling is often used in persuasive marketing. Thus, the use of online storytelling holds promise as a cost-effective intervention that may be widely and efficiently disseminated to help facilitate men's consideration and utilization of mental health services for depression and other mental health issues. Thus, we tested whether a first-person storytelling video could buffer men's self-stigma of seeking help associated with traditional masculinity ideology. Adult men (N = 396; Mage = 35.62) were randomly assigned and exposed to one of three conditions: (1) control (nothing), (2) male-sensitive brochure, and (3) male-sensitive first-person storytelling video. Controlling for pre-existing depressive symptoms, multigroup path analyses with bootstrapping revealed that greater traditional masculinity ideology was associated with lower psychological help-seeking attitudes via increased self-stigma of seeking help, but this indirect effect was not significant for the video group. The direct effect was significantly lower in the video group compared to the brochure and control groups. Thus, in line with the framework of narrative storytelling, the intended persuasive and immersive influence of a first-person storytelling nature of the video may have been effective in encouraging men to be transported into the story, identify with the storyteller, and be aroused emotionally and cognitively. The findings suggest that brief male-sensitive storytelling videos may be useful in helping men re-examine their resistance toward seeking psychological help and persuade them to seek effective treatments such as CBT for depression. Findings suggest initial and promising evidence on brief male-sensitive first-person storytelling videos for reducing the self-stigma of seeking help among men who have not previously sought psychological help. Male-sensitive storytelling videos, such as the ones used in the current study, may be useful in clinical and educational tools to help men reconsider their options for seeking psychological help for depression. It may be especially helpful to employ these videos for men who are experiencing depression but are unwilling to consider mental health services due to their belief that doing so would undermine their masculine self-concept. Given that these videos can be watched at their own leisure and privacy, the videos may be a gentle and non-invasive way to get men started on changing their attitude toward seeking psychological help.

# POSTER SESSION 01

Abstract No.: 0161

## Online Cognitive Behavioral Therapy for Understanding Children with Autism Spectrum Tendencies and Dealing with Parenting Stress(CBTPAC): A Single-Arm Feasibility Study

Tomoko Kawasaki<sup>1,2\*</sup>, Fumiyo Oshima<sup>1,2</sup>, Kayoko Taguchi<sup>1</sup>, Yuki Shiko<sup>1</sup>, Eiji Shimizu<sup>1,2</sup>

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### INTRODUCTION

Parents who raise children with autism spectrum disorder (ASD), compared with those without ASD, experience more difficulties in raising children and have higher parenting stress, which leads to developing depressive symptoms. In recent years, the concept of "parenting resilience", which is "parent's ability to adapt well to changes in child-rearing experiences", has been focused on reducing parenting stress in parents of children with neurodevelopmental disorders such as ASD. Cognitive-behavioral therapy (CBT) has been used in many countries to reduce parenting stress among parents of children with ASD. On the other hand, there are no CBT programs in Japan to target stress reduction or promotion of parenting resilience in parents raising children with ASD.

### METHOD

The study design is a single-arm phase-2 trial study. This study aims to examine the effect its feasibility of a video conference health guidance CBT program on the parenting resilience of twenty-six parents with suspected autism spectrum children aged 2 to under 7. Participants were assessed at pre-, post-and one-month follow up Parents were screened with the Parenting Stress Index (Japanese version of PSI). The program consists of a 6-week intervention (6 sessions of online health guidance based on CBT, 50 minutes per session) and one follow-up session. The primary outcome is the amount of change in the Parenting Resilience Element Questionnaire (PREQ) score from week 0 (baseline) to week 6. Secondary outcomes include Parenting Stress Index (PSI), the General Health Questionnaire (GHQ-28), State-Trait Anxiety Inventory-JYZ(STAI), Eyberg Child Behavior Inventory (ECBI). For primary and secondary outcomes, a paired t-test was used to compare the scores before and after treatment. Also, exploratory analyses using ANOVA were conducted to identify predictors of parenting resilience.

### RESULTS

A significant increase in parenting resilience (PREQ total=+15.5 (SD=9.70); Cohen d=1.38, P<.0001) was observed in the post-test compared to the pre-test. In addition to the analysis results for the secondary outcomes, significant increases were seen in all subscales of the PREQ score (Knowledge of the child's characteristics, Perceived social supports, and Positive perception of parenting). Also PSI score, GHQ-28 score, STAI-state, and STAI-trait score were significantly decreased. An exploratory analysis of the age, gender, income, and educational background of the participating parents (mothers) did not find any significant predictors of changes in PREQ total scores.

### DISCUSSION

The sample group in this study is not representative of the Japanese population, as many of them live in urban areas. Since this study has a single-arm design, it is necessary to verify the effect using a randomized controlled trial in the future. In addition, in the CBT program, no factors were found to predict the improvement of resilience, but we consider that further examination of the factors predicting the responsiveness of the program will help us to examine the content of the program.

### CONCLUSIONS

Cognitive behavioral therapy could be an important part of interventions used to increase parenting resilience.

# POSTER SESSION 01

Abstract No.: 0174

## **A Short Version of Self-Practice/Self-Reflection for Case Formulation: A Feasibility and Acceptability Study**

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### INTRODUCTION

Many studies have been conducted to develop trainees' skills in cognitive-behavioral therapy (CBT). Self-practice/self-reflection (SP/SR) has been shown to enhance a deeper understanding of CBT skills and self-reflection. The SP/SR training workbook "Experiencing CBT from the inside out" (Bennett-Levy et al., 2015)" consists of 12 modules, covering a wide range of CBT-related skills. Haarhoff et al. (2015) showed that a lack of time might be a barrier to participation in SP/SR. Therefore, our study aimed (1) to develop a shorter formulation-focused version of SP/SR designed to facilitate the understanding of CBT-related and self-reflection skills in a Japanese setting and (2) to evaluate its feasibility, acceptability, and efficacy.

### METHOD

We developed an eight-week SP/SR program with four modules (each module lasted two weeks). Each module consists of self-practice, self-reflection, reflection on reflection, plus a group meeting. Three groups of graduate students completed the eight-week program. A total of 29 participants answered an online questionnaire to determine the feasibility and acceptability of the program, a preliminary assessment of efficacy, and perceived benefits from participation after completing the program.

### RESULTS

Overall, the results indicated that the program was feasible and acceptable for participants. On average, participants completed 87.1% of the self-reflection tasks and attended 76.0% of the meetings. Further, the results of the survey indicated that 93.1% of the participants were satisfied with the program, 89.7% benefitted from the group meetings, 82.8% felt that their reflection skills improved, 82.8% felt that their self-awareness skills improved, 82.8% felt that their understandings of CBT skills improved, and 79.3% felt a positive impact in clinical practice. Furthermore, participants reported very few aversive events (3.4%). Less participants reported confidence in their CBT skills (31.0%) and actual use of CBT skills (15.0%).

### DISCUSSION

Overall, the short program to develop SP/SR was feasible and acceptable among master graduate students. This program can be used in combination with clinical experience and other training opportunities to facilitate the use of CBT skills in practice.

# POSTER SESSION 01

Abstract No.: 0209

## Practice of Remote Group Stress Management and Its Effectiveness and Limitations

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### INTRODUCTION

During the COVID-19 pandemic, mental health problems among school children has been pointed out. In Japan, it has become possible to provide remote group stress management without visiting schools by utilizing online and video delivery methods, which rapidly developed during the coronavirus pandemic. However, remote stress management is still in its infancy, and its effectiveness and limitations have not yet been fully investigated. In this study, we explore the effectiveness of remote group stress management and examine its limitations. The intervention procedure consisted of a behavioral activation therapy that aimed to attribute pleasant activities associated with a behavior by reviewing conventional adaptive behaviors and seeking behavioral restrictions during the COVID-19 pandemic.

### METHOD

A total of 56 students, 27 (12 boys, 15 girls) in a 5th grade class and 29 (15 boys, 14 girls) in a 6th grade class of a public elementary school in the central part of Japan, were asked to participate in a remote stress management class and complete a questionnaire survey. The questionnaire survey was conducted in the fourth week of August 2021, and the intervention was conducted in the first week of September 2021. A post-intervention survey was conducted in the second week of September 2021; a follow-up questionnaire survey was conducted in the third week of January 2022. The number of infected persons in Tokyo on September 1, 2021, was 3,174, while the number of infected persons in the intervention area remained below 10, indicating a period of strong concern about the spread of infection.

Survey Contents: 1) Anxiety: STAI (Soga, 1983), 2) Behavior activation/behavior inhibition: BIS/BAS (Koseki et al., 2018) Intervention procedures: The intervention was implemented in one 45-minute class slot. The specific procedures were based on Ozeki et al. (2016), and work was conducted to develop a list of pleasant activities and an implementation plan, according to behavioral activation therapy. This study was conducted with the approval of the Ethics Committee of J. F. Oberlin University (Ethics approval number: 20040).

### RESULTS

A total of 27 students (13 boys and 16 girls) were included in the analysis, excluding those who did not answer the questionnaire or were absent from class. Analysis of variance with STAI scores as the dependent variable revealed no significant differences ( $F(2, 28) = 1.64, p = .202, n.s.$ ). Analysis of variance with BAS scores as the dependent variable revealed no significant differences ( $F(2, 28) = 1.91, p = 1.57, n.s.$ ). Similarly, the analysis of variance with the BIS score as the dependent variable revealed no significant differences ( $F(2, 28) = .33, p = .723, n.s.$ ).

### DISCUSSION

The results of this study indicated that the remote stress management with the aid of behavioral activation therapy implemented in this study was not effective in stimulating behavior, changing the tendency to inhibit behavior, and reducing anxiety associated with it. One of the problems in the practice of remote stress management is the lack of procedures to confirm the questions of the target children, to give immediate feedback on their work, or to emphasize the class material, which may have resulted in insufficient communication to the children.

# POSTER SESSION 01

Abstract No.: 0211

## Perceived Contingency Enhancement Trials in Parenting Programs

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### INTRODUCTION

According to a survey on psychological stress among parents in Japan, there is a stressor specific to parents in which children's appropriate responses do not accompany parents' child-rearing behaviors, such as "not listening" (Matsumura et al., 2005). Therefore, requires interventions to transform Perceived Contingency (Hattori and Sakai, 2019), which is the cognition that determines whether one's actions are accompanied by consequences (Udagawa et al., 2016). In Japan, parenting programs have been developed to reduce parenting stress (Asperger Society Japan, 2014), but procedures to increase Perceived Contingency are not in place. Therefore, this study examines the effectiveness of the created program in enhancing Perceived Contingency and reducing parenting stress by comparing it with conventional parent training.

### METHOD

The Parent Program group comprised four 90-minute interventions for two parents of preschool children. The intervention centered on three-term contingency, the triad of parents and children. The Parent Training group comprised six 60 to 90-minute interventions for three parents of elementary school students. The intervention focused on improving nurturing skills when responding to children. Perceived Contingency was measured using the Japanese version of the Parental Locus of Control Short Form Revised scale (Kishino et al., 2021). Parenting stress was measured using the Parental Stress Index Sort Form scale (Asano, 2006). The measurement periods were before and after the intervention.

### RESULTS

The analysis was based on the calculation of the data was analyzed using Cohen's  $d$ , adopting the criterion that a  $d$  value of less than .30 is a small effect, .30 to .79 is a medium effect, and .80 or greater is a large effect (Cohen, 1988). Perceived Contingency in the Parent Program group showed a small effect size,  $d = 0.20$ , for post-intervention (Mean = 3.00, SD = 0.45) based on pre-intervention (Mean = 3.10, SD = 0.54). Parenting stress showed a small effect size,  $d = 0.21$ , after intervention (Mean = 3.05, SD = 0.79) based on pre-intervention (Mean = 3.21, SD = 0.73). Perceived Contingency in the Parent Training group showed no change in effect size,  $d = 0.00$ , for post-intervention (Mean = 3.00, SD = 0.89) based on pre-intervention (Mean = 3.00, SD = 1.03). Parenting stress showed no change in effect size,  $d = 0.00$ , after intervention (Mean = 2.28, SD = 1.03) based on pre-intervention (Mean = 2.28, SD = 0.93).

### DISCUSSION

This study examined the effectiveness of the created program compared with conventional parent training. The program was suggested to improve concomitant cognition and reduce parenting stress more than conventional parent training. Therefore, the organization of the situation by parents and others based on the three-term contingency may have improved Perceived Contingency. However, since Perceived Contingency was not improved for all participants and the effect size was small, further study is warranted. The results of this study may serve as a basis for future support aimed at improving parents' Perceived Contingency and reducing parenting stress.

# POSTER SESSION 01

Abstract No.: 0212

## Relationship between College Students' Sense of School Adjustment and Mental Health

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In recent years, the percentage of students entering college has been on the rise. Accompanying this trend, the number of students who are not attending school is also increasing.

Research has shown that college students' sense of adjustment to school varies according to their level of anxiety. Furthermore, satisfaction with college affects depression and obsessive-compulsive thoughts. Therefore, it is expected that college tends to students' sense of school adjustment and satisfaction are strongly related to their mental health. However, most studies on school adjustment have focused on elementary and middle school students in the compulsory education stage, and there are not enough studies on high school and college students. Therefore, the purpose of this study was to determine the relationship between college students' sense of school adjustment and mental health. By clarifying the results of this study, it will be easier to examine what support can be provided in schools to improve the mental health of students who feel they cannot adjust to college. We hypothesize that there is a strong relationship between school adjustment attitudes and mental health.

Of the 123 students at Nagoya University, 119 (39 males and 80 females), excluding incomplete responses, were included in the analysis. The mean age was 20.22 years ( $SD=1.08$ ). Qualtrics were used, consisting of (1) Face Sheet: gender, age, grade, and department; (2) Adolescent Fitness Scale; and (3) Japanese version of the GHQ-30. Questionnaires were distributed.

3. First, a two-sided t-test with a significance level of 5% was conducted to examine whether there is a gender difference in school adjustment and mental health values. As a result of the analysis, no significant difference was found between men and women in terms of school adjustment and mental health.

Since there was no gender difference, we did not separate the data by gender, but conducted a correlation analysis on school adjustment and mental health. As a result of the analysis, a weak positive correlation was found between school adjustment and mental health. Since a correlation was found, we finally analyzed the correlation by dividing it into sub-factors for school adjustment and mental health. As a result, we obtained the result that many sub-factors are related to each other, but some sub-factors such as "trust and acceptance" of school adaptation in particular are not related to each other.

The analysis indicated a weak positive correlation between college students' attitudes toward school adjustment and mental health ( $r = 0.34, p < .01$ ). Furthermore, analysis showed that many of the subfactors were related to each other, but some were not, notably "trust and acceptance" in school adjustment ( $r=0.15, n.s.$ ). Regarding gender differences, for which previous studies had shown contradictory results, the results indicated that there was no difference between school adjustment ( $t(117)=0.55, n.s.$ ) and mental health ( $t(117)=0.14, n.s.$ ).

The results of this study differ from the hypothesized results regarding the relationship between college students' attitudes toward school adjustment and mental health. One possible reason for this is that we live in an era in which diverse communities tend to emerge, and one of these communities, school adjustment, does not have a significant impact on college students. The fact that study participants were out of school for a period of time due to COVID-19 may also be related to the results. The analysis of each subfactor suggests that college students tend to be influenced more by their own sense of comfort and problems than by their surroundings' evaluations. Future work should examine the school adaptability and mental health of college students in terms of the number and quality of communities they belong to and the impact of infectious diseases. In addition, unlike this study, which is limited to men and women in terms of gender, students who chose other genders should also be considered.



# POSTER SESSION 01

Abstract No.: 0217

## **Reaching the Families Digital Single Session Interventions are Best Positioned to Help: Empowering Parents of Diverse Economic Security to Manage Child Anxiety**

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### INTRODUCTION

Up to 80% of youth who need anxiety treatment never access care or drop out prematurely. This disparity reflects a need for more accessible, scalable interventions—particularly those that may prevent anxiety in high-risk children, mitigating future need for higher-intensity care. Self-guided single-session interventions (SSIs) may offer a promising path toward this goal, given their demonstrated clinical utility, potential for disseminability, and low-cost. However, existing self-guided SSIs have been designed for completion by adolescents already experiencing symptoms, and their potential for preventing anxiety in children—for instance, by mitigating known anxiety risk factors—remains unexplored. Further, existing anxiety trials have historically recruited homogeneous parent samples (e.g. well educated, affluent); the under recognition and lack of attention invested in recruiting parents of diverse economic security reflects an urgent need to develop anxiety interventions that can not only efficiently target mechanisms most critical to child psychopathology, but also designed for accessibility to serve historically underserved populations. Thus, this study evaluated the effects of Project EMPOWER, a novel, a web-based, self-guided SSI designed to help reduce parent accommodation: a parenting behavior identified as a strong risk factor for anxiety in offspring.

### METHOD

The study collects data over two timepoints to recruit parents with diverse economic security backgrounds. In the first trial, 301 parents (98.01% mothers) of children ages 4-10 were recruited online. Parents self-reported levels of family accommodation and distress tolerance at baseline and at 2-week follow-up. The second trial, 100 additional parents of children ages 4-10 who are economically insecure will be recruited online. Parents will self-report levels of family accommodation and perceived ability to validate their children at baseline, at 2-week and 4-week follow-up. In both trials parents are randomized to receive Project EMPOWER immediately or receive an informational control (containing psychoeducational materials and national resources) and access to project EMPOWER after the final follow-up point.

### RESULTS

In the first trial, parents in the Project EMPOWER condition reported significant reductions in their level accommodation of children's anxiety ( $d_s = 0.66$ ,  $p < .001$ ), and significant increases in their distress tolerance ( $d_s = 0.43$ ,  $p < .001$ ) from baseline to 2-week follow-up. Additionally, parents who completed Project EMPOWER rated it as highly acceptable (e.g., easy to use, helpful, and engaging) per pre-registered acceptability rating benchmarks. The data collection for the second study will conclude in May 2023 with a plan to report the primary outcomes as well as descriptive comparisons of the sample.

### DISCUSSION

A simultaneous emphasis on developing and testing child anxiety interventions that are effective and accessible is necessary to adequately serve the economically insecure children and families they are designed to help. While the results of the first trial support the acceptability and short-term utility of an online, self-guided SSI targeting parental accommodation, the results of the second trial will examine whether project EMPOWER can adequately serve families experiencing economic insecurity.

# POSTER SESSION 01

Abstract No.: 0245

## Direct and Moderating Effects of Attributions and Perceptions on Non-suicidal Self-Harm in Sexually Abused Adolescents

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### INTRODUCTION

Sexually abused adolescents are more likely to exhibit non-suicidal self-injury (NSSI), and their PTSD symptoms have been suggested to be significantly contribute to NSSI (Shenk et al., 2010; Zeinab et al., 2022). It is a core assumption of the cognitive approach that cognitive appraisal of events and perception of self and world influence an individual's emotions and behaviors. It is widely known that attributions and perceptions of sexually abused adolescents can aggravate PTSD symptoms (Daigneault et al., 2006; Larsen & Fitzgerald, 2011), but there has been no study to examine the effect on self-harm behaviors or whether they moderate the effects of PTSD symptoms on NSSI. This study aimed to investigate whether maladaptive attributions and perceptions of sexually abused adolescents directly increase the risk of NSSI and have a moderating effect that further strengthens the associations between PTSD symptoms and NSSI.

### METHODS

123 adolescents between the ages of 10-18(108 girls and 14 boys) who were exposed to sexual abuse completed the Child Report of Post-traumatic Symptoms (CROPS; Greenwald & Rubin, 1999), Children's Attribution and Perception Scale (CAPS; Mannarino, Cohen, & Berman, 1994) and Self-Harm Inventory (SHI; Sansone, Wiederman & Sanson, 1998).

### RESULTS

As a result of moderation analysis using PROCESS SPSS macro (Hayes, 2013), there were significant main effects of PTSD symptoms and negative attributions and perceptions on NSSI,  $B = 0.53$ ,  $SE = 0.09$ ,  $t(118) = 5.49$ ,  $p = .000$ ;  $B = 0.22$ ,  $SE = 0.09$ ,  $t(118) = 2.21$ ,  $p = .029$ . The interaction between the two variables was also significant in predicting NSSI,  $B = 0.27$ ,  $SE = 0.06$ ,  $t(118) = 4.05$ ,  $p = .000$ .

### CONCLUSION

The finding of this study indicated that negative and dysfunctional attributions and perceptions of sexually abused adolescents not only directly predict the increased risk of NSSI, but also intensify the effects of PTSD symptoms on the NSSI. Therefore, in order to prevent and improve self-harm behaviors, it was suggested that not only emotional regulation interventions for PTSD symptoms but also cognitive interventions to explore and correct attributions and perceptions of sexually abused adolescents are essential.

# POSTER SESSION 01

Abstract No.: 0255

## Validation of a Korean Version of the Short UPPS-P Impulsive Behavior Scale for Children (UPPS-P-C-short)

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### INTRODUCTION

Impulsivity is a multifaceted construct that plays an important role in various problem behaviors in children and adolescents. Whiteside and Lynam(2001) first developed a scale to assess four different dimensions of impulsivity, the UPPS(negative urgency- lack of premeditation- lack of perseverance- sensation seeking), and later positive urgency was added to the original model(Cyders & Smith, 2008; Cyders et al., 2007). The UPPS-P was widely used in adults and was validated in many different languages. The UPPS-P model is well applied in numerous psychological disorders of children including ADHD. The purpose of this study was to validate a Korean version of the Short UPPS-P Impulsive Behavior Scale for Children (UPPS-P-C-short) which was developed by Geurten et al. (2021).

### METHOD

Participants in the control group were 330 children (164 males, 166 females) enrolled in 2 elementary schools in Korea whose age ranged from 10 to 12 years ( $M=11.02$ ,  $SD=.79$ ). Among this sample, 107 children were retested 6 months later. The Korean UPPS-P-C-short (20 items) and CBCL 6-18 were administered in both waves, and the Barratt Impulsiveness Scale-11 was added in wave 2. The ADHD group consisted of 94 children (71 males, 23 females) recruited from the psychiatry department of two major hospitals in Korea whose age ranged from 7 to 12 years ( $M=8.85$ ,  $SD=1.61$ ). They completed the Korean UPPS-P-C-short during their psychological evaluation.

### RESULTS

Confirmatory factor analysis conducted in the control group supported a 5-factor hierarchical model in which (1) positive and negative urgency factors are loaded on a higher-order factor of general urgency; (2) lack of perseveration and lack of premeditation factors are loaded on a higher-order factor of lack of consciousness; and (3) sensation seeking remained as a separate dimension. Reliability analysis demonstrated that the 5 factors of the Korean UPPS-P-C-short had acceptable internal consistency and test-retest reliability. Lack of premeditation and lack of perseveration subscales showed significant correlations with measures of problem behaviors in CBCL in both waves, and all the subscales of the Korean UPPS-P-C-short were correlated with the subscales of the Barratt Impulsiveness Scale-11. Furthermore, the ADHD group showed significantly higher scores in lack of premeditation, lack of perseveration, positive urgency, and negative urgency subscales. There was no significant difference in the sensation seeking subscale between ADHD and the control group.

### CONCLUSIONS

This study indicates that the Korean version of UPPS-P-C-short has adequate reliability and validity. It may be a valid tool to assess impulsivity of healthy children as well as ADHD. As impulsivity is a common problem in children and adolescents, the Korean UPPS-P-C-short can help identify potential problems early on and provide guidance for timely interventions.

# POSTER SESSION 01

Abstract No.: 0256

## **The Role of Mothers' Responses to Children's Negative Emotion on the Relationship between Children's Temperament and Internalization Problems: Using Short-Term Longitudinal Data**

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Children's psychological problems have been categorized into internalizing and externalizing problems. Internalizing problems mean emotional disabilities such as withdrawal, somatization, anxiety, and depression. These problems during childhood should be considered important because internalizing problems can affect children's overall adjustment even though they are not externally watched. Internalizing problems are considered not to be experienced transiently, and they should be viewed to have a long-term effect on children's adjustment with consistent symptoms and relapses. Therefore, it is important to examine the significant predictors, mediators, and moderators to make more suitable interventions for those children. Among various predictors, specific temperament, such as Harm Avoidance (HA), seems to be related to internalizing problems. Individuals with high HA reports low resilience as well as low level of serotonin so they are vulnerable to internalizing problems. Moreover, children's trajectories to get to the present problems can be various even though they show very similar outcomes. Specifically, in the matter of internalizing problems, various paths to the problems can be expected. One path is when the children show internalizing problems with the vulnerability for internalization. In this path, they tend to show internalizing problems consistently. Another path is when children with internalizing problems have a history of externalization, which can be explained by the Dual Fail Model. As trials to find out the significant moderators within these paths, mothers' responses to children's emotional expression can be examined. Traditionally, caregivers' responses to their children are related to the development, progress, and change of children's psychological problems. In the previous studies, both mothers and fathers show different reactions to their children, and their reactions to children's negative emotions have a different effect on adjustment problems compared to reactions to positive emotions. Therefore, it is necessary to examine each parent's effect separately. In the current study, the moderation effects of mothers' responses on children's negative emotions on the path of the effect of children's HA trait on their internalizing problems were examined using short-term longitudinal data. Data from 207 mothers of school-aged children (101 boys, 106 girls) were collected. Children's HA, their internalizing and externalizing problems, and mothers' supportive and non-supportive responses to children's negative emotions were measured. Also, children's internalizing problems were measured again 6 months later. As the result, mothers' non-supportive responses to children's negative emotions had significant moderating effects with different patterns when children's harm avoidance affected internalizing problems with mediating effects of internalizing problems (model 1) or externalizing problems (model 2) 6 months earlier. Interestingly, mothers' supportive responses do not show a significant moderating effect on the paths. Specifically, mothers' non-supportive responses have a different effect in models 1 and 2. These results support the Dual Fail Model. They imply the importance of emphasizing the effect of non-supportive, rather than supportive, responses mothers have on their children's negative emotions. Moreover, it is suggested that different parenting skills or strategies should be administered depending on the history of the children's problems.

# POSTER SESSION 01

Abstract No.: 0259

## Psychometric Properties of the Self-Compassion Scale for Youth (SCS-Y) - Thai Version

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### INTRODUCTION

Self-compassion or ability to treat oneself with love and care plays an important role in well-being of adolescents given the period of identity and self-concept formation. Self-Compassion Scale for Youth (SCS-Y) consists of 17 items to measure six dimensions of self-compassion; self-kindness, common humanity, mindfulness, self-judgment, isolation, and over-identification. The objective of this study is to evaluate the psychometric properties of the SCS-Y (Thai-version).

### METHOD

A total of 204 adolescents, with a mean age of 12.19 years, participated in this study. The original Self-compassion scale for youth (SCS-Y) was translated into Thai and cross-culturally adapted for use among adolescents in Thailand. The translation process consisted of six steps: 1) forward translation; 2) review and synthesizing of the translation; 3) backward translation; 4) review and consideration by an expert committee; 5) pilot testing of the pre-final version with the children, and 6) final review by an expert committee to adjust a final version. The initial psychometric properties of the SCS-Y Thai version were assessed. Content validity was quantified by the item-objective congruence (IOC) value for each item. Internal consistency was measured with Cronbach's alpha coefficient, and test-retest reliability was calculated from an intraclass correlation coefficient.

### RESULT

The Thai version of the SCS-Y has acceptable internal consistency ( $\alpha=0.77$ ) and good test-retest reliability (intraclass correlation coefficient [ICC] =0.8) and content validity (IOC value >0.7). There was also a statistically significant positive correlation between participants' self-compassion and coping strategies.

### CONCLUSION

Self-Compassion for Youth (SCS-Y) Thai version could be culturally-responsive applied in Thai children and adolescents with a good psychometric properties.

# POSTER SESSION 01

Abstract No.: 0266

## **Interview & Semi-role Playing Observation of University Counseling Center for Introduction of Digital Mental Care Services into the Traditional Counseling Process**

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The demand for mental health services in universities continues to grow, leading to the need for new and innovative solutions to support students. To this end, new mental health services have been developed, and quantitative research has been conducted to investigate their effects (Furukawa T, 2017; Cuijpers P, 2009). However, most of counseling centers still maintain only traditional counseling techniques, showing that there is a gap between actual counseling settings and mental health service research. Even if the technology is proven to be effective in a clinical setting, its successful integration into real-world counseling practices requires a thorough understanding of counselors' needs and the existing counseling system. This study uses a qualitative approach, consisting of interviews and semi-role play observations of university counseling center staff, to gain a deeper understanding of the counseling systems and methods currently in use.

Four professional psychological counselors and one clinical psychologist from the campus counseling center participated in the interviews and observations. Each participant introduced current university counseling system through an interview session of 3 hours. Through an additional 3-hour observation of the participants, the counseling preparation process, the actual counseling process, and the process of organizing data after the counseling were observed and recorded. The data was analyzed through systematic coding and user journey mapping to understand current state of on-campus counseling system.

The study identified three main problems that could potentially be addressed by the **INTRODUCTION** of digital technology: 1) It is difficult to coordinate the schedule for the initial consultation appointment. 2) It takes time to transfer the psychological test for counseling to digital data. 3) It is difficult to monitor how the client's condition will change during the waiting period after applying for counseling. In this study, a new system proposed to address these problems.

The proposed system aims to enhance traditional counseling services and improve students' access to care. The differences of the proposed system can be summarized in three points. 1) Consultation reservation and consultation schedule management through online platform, 2) Psychological examination through digital device when applying for initial counseling, 3) Machine learning model for summarizing psychological test results and providing customized feedback.

The main contribution of this study is to introduce digital technology while maintaining the existing counseling process. By distinguishing the digital technology stage from the analog stage, this study proposes digital technology that can be introduced immediately and an overall system that connects the two stages. In addition, it creates an opportunity for digital technology, which can be further developed later, to be easily introduced or modified.

# POSTER SESSION 01

Abstract No.: 0276

## Effects of 5 Session Version of Parent Training Program on Parenting Behaviors Measured by PNPS and SDQ

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### INTRODUCTION

Parent training (PT) is a program that teaches parenting knowledge and specific parenting skills to caregivers. PT is based on ABC analysis, which considers that "positive attentions from parents" as a reinforcer to increase children's adaptive behaviors.

Haraguchi et al. (2013) reviewed past studies on PT and pointed out that "behavioral changes in both parents and children need to be measured in order to understand effectiveness of PT from the perspective of evidence-based practice." The goal of this study is to measure the effects of PT on behavioral change of both parents and children using "Negative and Positive Parenting Scale (PNPS)," a scale that has been used in a few past studies.

### METHOD

A shortened version of the PT program (90-minute x 5 sessions, every other week) was conducted to 3 groups of parents at a private practice for a fee from 2021 to 2022. The program included the 5 items as proposed by the Japan Association of Parent Training. Two scales were administered before and after PT: Positive and Negative Parenting Behavior Scale (PNPS) to measure parents' behavioral changes, and Child Strengths and Difficulties Questionnaire (SDQ) to measure children's behavioral changes.

### RESULTS

The participants were 9 parents (1 male and 8 females) of 8 children (7 boys and 1 girl). The average age of the children was 8 years and 0 month before PT. Three children (4%) had a diagnosis of developmental disabilities. The average number of participants per group was 3.

Measured by PNPS, positive parenting behaviors increased ( $p < .01$ ) and negative parenting behaviors decreased ( $p < .01$ ) after PT. All 3 subscales of the Positive Parenting Behaviors, "Engagement and Watching Over" ( $p < .05$ ), "Positive Responsiveness" ( $p < .05$ ), and "Respect for Child's Intentions" ( $p < .01$ ), were higher after PT. Two of the 3 subscales of the Negative Parenting Behaviors, "Inconsistency" ( $p < .01$ ) and "Severe Reprimand" ( $p < .01$ ), were lower after PT, but "Over-involvement" showed no difference. Measured by SDQ, the 5 sessions of PT decreased children's "Overall Difficulty" ( $p < .05$ ) and increased "Child Pro-social Behavior" ( $p < .05$ ). The results indicated that PT improved the parents' child-rearing behavior and decreased the children's problem behaviors.

### DISCUSSION

The results from PNPS and SDQ indicate that the shortened version of PT was effective. Compared to the data presented in Yamaguchi et al.'s (2021), which review studies of PT carried out in Japan, the lower percentage of children with developmental disabilities (4%), smaller group size (3 participants per group), and a fee-based program in this study may have increased parental motivation and led to improved parenting behavior. The results also show that PNPS is a useful tool for measuring the effectiveness of PT.

# POSTER SESSION 01

Abstract No.: 0277

## **Incorporating Self-Compassion Interventions in Online Bereavement Support Group for Suicide Loss Survivors in Malaysia**

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Losing someone to suicide can be one of life's most devastating experiences. In view of the pervasive stigma of suicide in Malaysia, interventions to address suicide grief has been inadequate, if not scarce. In addition to the insurmountable grief and pain, individuals bereaved by suicide are also at risk of detrimental mental health outcomes.

### **OBJECTIVES**

This study evaluated the effectiveness of an online bereavement support group with self-compassion interventions on the mindfulness qualities, self-compassion, and grief reactions of suicide loss survivors in Malaysia.

### **METHOD**

A total of four survivors participated in the eight-session online bereavement support group. Their levels of mindfulness qualities, self-compassion, and grief reactions were measured at pre- and post-intervention. Retrospective case analysis was also conducted to obtain anecdotal evidence of their subjective experience during the support group.

### **RESULTS**

A significant increase in overall mindfulness qualities and nonreactivity to inner experience and lower levels of isolation were observed after the intervention. Anecdotal evidence suggests an increased sense of belonging, increased knowledge on suicide bereavement, and increased intention and acceptance to practice self-compassion.

### **DISCUSSION**

The study contributes to the growing body of research on postvention and self-compassion. Practical implications are also highlighted to specific stakeholders, namely mental health clinicians, government agencies, non-government organizations, and the public.

### **CONCLUSION**

Although further research is required, this study showcases the potential benefits of a self-compassion-based support group on the subjective well-being of suicide loss survivors.



# POSTER SESSION 01

Abstract No.: 0313

## Brief Cognitive Therapy for Suicidal Thoughts and Behaviours in the Indian Context

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### INTRODUCTION

Suicide risk and mortality rates in India are higher than other Southeast Asian countries and are associated with high levels of disability and economic costs. Research highlights a strong association between the presence of various mental health conditions and suicidal thoughts and behaviours (STBs; Bachmann, 2018). This suggests that STBs can be considered a transdiagnostic factor, hence it needs to be addressed directly in our therapeutic interventions. The National Mental Health Survey of India done in 2016 reported that the treatment gap for suicidal risk behaviour is greater than 80% and interventional studies on STBs have been minimal in the Indian context (Rappai et al., 2020). Cognitive Therapy for Suicidal Patients (CT-SP; Brown, 2005) is an evidence-based psychological intervention that directly addresses suicidality. It aids in managing affective disturbances and cognitive dysfunctions, improving protective factors and coping with a suicidal crisis. Thus, this study aims at evaluating the feasibility and suitability of CT-SP in addressing STBs in the Indian context.

### METHODS

A single-arm open pilot trial of CT-SP (10 sessions) is designed to assess the feasibility of implementing the protocol in the Indian context. It employs a purposive sampling method to recruit 5 participants with significant STBs. Both quantitative (questionnaires collected at pre- and post-intervention) and qualitative data (semi-structured interview conducted at post-assessment) has been obtained. The feasibility of recruiting participants, retaining them for the study duration and the suitability of the intervention has been examined. The outcome evaluation includes comparison of pre- and post-intervention scores on outcome measures of suicidal ideation, hopelessness, depressive symptoms and anxiety symptoms. The subjective reports of the participants on the usefulness and appropriateness of the intervention have been collected using semi-structured interviews.

### RESULTS

Preliminary data of 5 clients with STBs, who have completed 10 sessions of CT-SP; along with comparison of pre- and post-intervention scores on the quantitative measures will be presented. The qualitative data from the semi-structured interviews would be analyzed to understand the appropriateness and utility of the intervention in managing STBs.

### CONCLUSION

The study explores whether CT-SP is feasible and suitable in the Indian context. Existing research on the effectiveness of the intervention found a significant reduction in the likelihood of preventing future suicide attempts. It is thus necessary to evaluate the possibility of applying such a brief and targeted intervention to meet the current need for suicide prevention. However, certain cultural adaptations and future large-scale studies are required to make it more suitable for this context and ensure that there is sufficient evidence for its effectiveness.

Keywords: Suicidal ideation, Cognitive therapy, suicide prevention, feasibility

# POSTER SESSION 01

Abstract No.: 0315

## **Effect of CBT-based Digital Therapeutics on Stress, Anxiety, Cognitive Control and Cognitive Flexibility**

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Digital Therapeutics is a health discipline and treatment option that utilizes online health digital technologies to treat a medical or psychological condition. This RCT aimed to assess the effects of Mindshift, CBT-based digital therapeutics on stress, anxiety, cognitive control, and flexibility among tertiary students. Twenty one students were randomly assigned to the experimental group and 21 to the control group. Experimental group participants engaged with the CBT-based digital therapeutics, while those in the control group engaged with laughter therapy, for at least 20 minutes, twice every day for 21 days. Pretest and posttest were collected using the Perceived Stress Scale, Coronavirus Pandemic Anxiety Scale, and Cognitive Control and Flexibility Questionnaire. Findings revealed that the CBT-based digital therapeutic has significantly reduced stress ( $t=2.968$ ,  $p<0.05$ ) and anxiety ( $t=2.903$ ,  $p<0.05$ ), but did not increase the cognitive control ( $t=1.515$ ,  $p>0.05$ ) and cognitive flexibility ( $t=0.937$ ,  $p>0.05$ ). Additionally, laughter therapy showed to significantly reduce stress ( $t=2.857$ ,  $p<0.05$ ) and anxiety ( $t=3.210$ ,  $p<0.05$ ), and cognitive flexibility ( $t=0.180$ ,  $p<0.05$ ), but did not increase the cognitive control ( $t=1.141$ ,  $p>0.05$ ). CBT-based digital therapeutics are proved to be practical tools added to existing traditional therapies, thereby extending the delivery of mental health support services provided to students.

# POSTER SESSION 01

Abstract No.: 0318

## **Socially Anxious Adolescents' Views on Virtual Reality Exposure, Feared Situations, and Fearful Expectations: A Mixed-Methods Study Protocol**

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Social anxiety disorder is one of the most common anxiety disorders and it typically emerges during adolescence, with 75 % of the cases being developed by the age of 15 (Kessler et al., 2005). It often has a significant influence on adolescents' social and academic functioning (de Lijster et al., 2017), and if left untreated it tends to persist into adulthood (Beesdo-bauman et al., 2012). Adolescents are not only vulnerable for developing anxiety disorders, but they also show greater opportunities to profit from treatment (Crone, 2009). The most effective treatment for children and adolescents experiencing anxiety disorders is cognitive behavioral therapy (CBT; Creswell et al., 2020; James et al., 2020). When it comes to CBT interventions, research suggests that exposing oneself to anxiety-provoking situations, known as in vivo exposure (IVE), is a crucial factor for successful treatment (Chorpita & Daleiden, 2009; Creswell et al., 2020). Despite its effectiveness, exposure-based therapy tends to be underused by clinicians treating children with anxiety disorders (de Jong et al., 2020; Whiteside et al., 2016). A potentially fruitful approach to increase the use of exposure, particularly in adolescents, is virtual reality exposure (VRE), given its low barriers and playful elements. Connecting with the technological driven environment of adolescents, VRE has a high potential to improve treatment. For adults, VRE appears to be highly effective (Carl et al., 2019; Emmelkamp et al., 2020), but when it comes to adolescents high-quality research is scarce. At the same time, there appears to be a lack of up-to-date research on exactly what situations socially anxious adolescents would benefit the most from in exposure and what type of negative expectancies are most common during these situations. Such information could help clinicians to set up relevant and effective exposure exercises for adolescents. To address these gaps in the literature, in this study we aim (1) to investigate the perceived efficacy and acceptability of VRE vs IVE; (2) to identify relevant social situations that affect socially anxious adolescents the most (e.g., in terms of fear, avoidance, and importance); and (3) to identify the fearful expectations that they have about these situations (e.g., what do they fear will occur). We will recruit 10-15 adolescents with elevated social anxiety (as measured by the Social Phobia Inventory; Connor et al., 2000) from secondary schools in Belgium. With this sample, an (online) semi-structured interview will be conducted, including the administration of the Adolescent Social Cognition Questionnaire (ASCQ; Leigh et al., 2022). The semi-structured interview will cover the following key themes: VRE's perceived acceptability and efficacy, fear-provoking situations, and negative expectancies. All interviews will first be transcribed and then examined using a mixed-methods analysis. Based on the progress of data collection, preliminary results will be presented at the WCCBT conference. The findings of this study will enrich knowledge on the type of exposure exercises which are most relevant and ultimately beneficial for socially anxious adolescents and may also shed light on VRE as a potential therapeutic tool which can increase the accessibility of treatments for adolescents.

# POSTER SESSION 01

Abstract No.: 0335

## **Videoconferencing Based Autobiographical Memory Intervention for Older Adults During COVID-19**

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### INTRODUCTION

The number of older adults has been increasing worldwide, and as a result, research on their mental health has become a topic of significant interest. Autobiographical memory specificity (AMS), which reflects the ability to recall detailed personal episodic memory, is known to be an indicator of depression process and cognitive function in elderly. Since older people are known to have reduced AMS, interventions targeting AMS are important for them. In the previous studies, the AM intervention successfully decreased the depression level and improved cognitive function. However, AM interventions have usually been delivered face-to-face, and few studies have been conducted online. In the present study, we investigated the effectiveness of 4-week AM intervention for Korean older adults through videoconferencing.

### METHOD

Twenty-seven older adults participated in the AM intervention using video calls. To measure effectiveness, Korean version of Autobiographical Memory Test (AMT), the Center for Epidemiologic Studies Depression Scale (CES-D) were used. Moreover, Trail Making Test (TMT), Seoul Verbal Learning Test (SVLT), Digit Symbol Coding (DSC) were administered to measure cognitive function.

### RESULTS

The results showed that participants were satisfied with the program, and they showed low dropout rate. The changes in pre-posttest were analyzed using paired t-test. After the intervention, participants showed increased autobiographical memory specificity ( $t = -2.863$ ,  $p = .008$ , Cohen's  $d = 0.678$ ) and decreased depression level ( $t = 2.385$ ,  $p = .025$ , Cohen's  $d = 0.375$ ). Furthermore, some cognitive function such as verbal memory, executive function was improved.

### CONCLUSION

In the present study, psychological intervention using videoconferencing for older adults seemed to be feasible in Korea. In addition, we verified the effect of AM intervention on both psychological variables and cognitive function in older adults as the previous studies.

# POSTER SESSION 01

Abstract No.: 0353

## App Based Semi-generative CBT Chatbot for Academic Procrastination: Development and Pilot Study

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Procrastination is dysfunctional delay of the tasks which can bring negative outcomes (Steel, 2010; Senécal, 1995). It is associated with maladaptive perfectionism or fear of failure, which significant factors to prevent psychological problems (Kurtovic, 2019). Especially, students with high procrastination show low academic performance and life satisfaction with high stress level (Balkis, 2017). Cognitive Behavioral Therapy (CBT) is a representative treatment for academic procrastination (Toker, 2015; Ugwuanyi, 2020). However, traditional CBT has temporal and spatial constraints, so hardly gives punctual reward. To recover this problem, CBT based chatbot has been developed but there are little studies for procrastination. They provide short comments rather than flexible conversation that there can be lack of time for users to recognize their behavior pattern and make resolution for behavioral change. Therefore, we developed a semi-generative CBT chatbot which can lead responsive and conversation to support recognition of academic procrastination and behavioral change ultimately.

MOA is a semi-generative chatbot, in which the conversation is presented based on the fixed scenario with flexible replies depending on the user's comments. The scenario was designed based on existed CBT counseling process for procrastination (Schouwenburg, 2004) and the concept of life crafting for users to gain more motivations for behavioral change (Schippers, 2019). To encourage conscious thinking, classifiers trained by KoBERT (Lee, 2020) distinguishes whether they understand the question and answer adequately or not. If insufficient or aberrant answer is detected, then chatbot provide additional explanation to assist users to reflect themselves. The chatbot generates new sentences to reply for user's answer with GPT2(SKT-AI, 2020) model to make conversations flexible. The database contains the necessary information from the conversation to be applied for the following conversations. Additionally, procrastination factors are determined by conversational neural network classifier and this was adapted to give personalized advices in the conversation.

MOA has been used for 22 days by 8 university students (M:F=3:5, Age=24.9 ± 2.2) without mental diseases in the pilot study. We conducted pre, post, and follow up surveys for the chatbot usage. The measurements for the behavioral change were pure procrastination, irrational procrastination, time management behavior scale, self-regulation scales. Usability, feasibility, acceptability, and satisfaction were measured with subjective evaluation. All measurements were analyzed with the usage patterns assessed from the app. The quantitative data was interpreted through exploratory data analysis and tested by one tail paired t-test and thematic analysis was applied for subjective responses.

As a result, most of the participants showed decreased pattern in pure procrastination right after the usage ( $p=0.03$ ). Especially, people who have 'low self-regulation' as the main procrastination factor represented relatively higher difference. All participants except one represented increased score in "practice strategy" ( $p=0.03$ ). Qualitatively, the app was evaluated 'effortless and straightforward'. 7 participants assessed it is helpful for 'self-recognition', 'behavioral change' and 'motivation' but some users responded it is not sufficient to modify behavior due to a short duration of the intervention and misuse of the application.

In conclusion, we have developed a chatbot to assist procrastination, which show possibility to be applied for assistant to change maladaptive behavior.

# POSTER SESSION 01

Abstract No.: 0380

## **Personalization and Gamification of an Online Cognitive Restructuring Intervention for Women Who Have Experienced Sexual Assault: A Pilot Study**

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### INTRODUCTION

Women who have experienced sexual assault are at risk of developing posttraumatic stress disorder (PTSD) and negative posttraumatic cognitions such as self-blame. Cognitive-behavioral therapies for PTSD are effective treatments for these symptoms, but this population's access to face-to-face therapies is limited. Online self-treatments are an accessible and effective treatment modality. However, low engagement has been observed in studies examining the efficacy of online self-treatments, which may indicate a lack of acceptability of the assessed interventions.

Personalizing an e-health intervention to the characteristics and needs of a target population is associated with better adherence, but few studies have isolated this strategy's effect on acceptability and effectiveness. Another design strategy is gamification, which involves incorporating game elements into a system to enhance user experience. This strategy is associated with improved engagement and e-health intervention effectiveness, but data on gamification in e-mental health are limited.

The objective of this pilot study was to explore the impact of a gamified online intervention personalized to women who have experienced sexual assault on PTSD, anxiety, and depression symptom severity, posttraumatic cognitions, treatment acceptability and user experience.

### METHOD

Twelve participants were recruited through emails sent to the Laval University community and announcements on Facebook. Inclusion criteria were to (a) identify as female; (b) be at least 18 years old; (c) report having experienced at least one sexual assault since the age of 12; (d) have a score of at least 10 on the Posttraumatic Stress Disorder Symptoms Checklist for DSM-5 (PCL-5); and (e) have a score of at least 3 on the Posttraumatic Maladaptive Beliefs Scale (PMBS). Participants completed a 5-session gamified and personalized online cognitive restructuring intervention. Self-report questionnaires measuring PTSD symptoms (PCL-5), posttraumatic cognitions (PMBS), self-blame (Rape Attribution Questionnaire [RAQ]), anxiety (General Anxiety Disorder-7 [GAD-7]), and depression (Patient Health Questionnaire-9 [PHQ-9]) were completed before, during (after the 3rd session) and after the intervention. Questionnaires assessing acceptability (Acceptability E-Scale) and user experience (Attrakdiff2) were completed after the intervention.

The intervention was developed using the cognitive restructuring component of the online self-treatment RESILIENT ([www.resilient.ulaval.ca](http://www.resilient.ulaval.ca)). The personalized and gamified version included psychoeducation on PTSD, a description of posttraumatic cognitions and cognitive distortions, and exercises to apply cognitive restructuring. The content was adapted for women who have experienced sexual assault with the collaboration of community partners and patient-partners, and gamification principles were incorporated (i.e., interactive feedback, a progress bar and narratives).

### RESULTS

Mixed-models repeated-measure analyses of variance showed statistically significant decreases on the PCL-5, PMBS, PHQ-9 and GAD-7 total scores. A significant decrease was also observed on the RAQ self-blame subscale. A high level of acceptability was observed for the Satisfaction and Usability dimensions of the Acceptability E-Scale, and a good user experience for the Identification and Pragmatic dimensions of the Attrakdiff2.

### DISCUSSION

These results suggested that the personalized and gamified intervention decreases PTSD, depression and anxiety symptoms, posttraumatic cognitions, and self-blame. The results also suggested that the intervention is acceptable and associated with good user experience. These pilot data will lead to the development of a randomized controlled trial to compare the effectiveness, acceptability and user experience of the personalized and gamified intervention compared to its original version.

# POSTER SESSION 01

Abstract No.: 0384

## **It Takes a Village: Responding to Youth Mental Health Crisis in an Urban Context**

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The United States Surgeon General declared a youth mental health crisis in 2021, a crisis that preceded and was exacerbated by the COVID-19 pandemic. Located in the ethnically diverse community of Upper Manhattan, New York Presbyterian Hospital/Columbia University Irving Medical Center piloted a new Adolescent Intensive Outpatient Program (A-IOP) to increase access to much-needed care. The A-IOP provides wraparound multidisciplinary services based in evidence-based treatments and guided by cultural sensitivity to individual and family needs. The two cases presented here focus on the successful implementation of personalized, culturally sensitive, and needs-based treatment planning to enhance access to Dialectical Behavior Therapy for suicidal and/or self-injurious adolescents and their families in a multicultural setting. Treatment begins with a thorough assessment of symptom picture and family psychosocial needs and barriers to care. Patient A presented with MDD, GAD, and Social Anxiety Disorder with additional factors of parental depression and anxiety, financial stressors, and poor living conditions that contributed to medical complications. Patient A participated in A-IOP's 6 week program with individual therapy, skills group, and medication management, while the patient's mother participated in collateral sessions and intensive case management (ICM) provided in Spanish. ICM included support with housing court, housing shelter, government benefits, transportation, and educational advocacy. Patient B stepped down from inpatient hospitalization presenting with PTSD, GAD, MDD, and Social Anxiety Disorder following a traumatic assault. Their clinical presentation was further exacerbated midway through the program after the release of their assailant. A-IOP's clinical team collaborated with Special Victims Clinics, provided educational advocacy, and facilitated a referral to a Partial Hospitalization Program to provide additional temporary support before returning to A-IOP for further stabilization. Additional challenges included securing reliable and quality Cantonese speaking interpreters to aid Patient B's mother in participating in collateral sessions and navigating a variety of systems. The wraparound services for both patients enabled family and school systems to provide stability that enabled patients to utilize skills learned during DBT sessions. Both patients reported notable decreases in mood symptoms in post-treatment measures (PHQ-9, SCARED, DERS). Together, these cases highlight the importance of personalized, multidisciplinary, and culturally sensitive approaches that meet the needs of ethnically diverse communities and enhance access to evidence-based care.

# POSTER SESSION 01

Abstract No.: 0395

## **Enhancing Parenting Skills through Parent-Child Interaction Therapy for Toddlers: A Case Study with a Developmentally Delayed Toddler in Korea**

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Parent-child interaction therapy (PCIT) is an evidence-based treatment for young children with emotional and behavioral disorders (McNeil & Hembree-Kigin, 2010). It is a behavior parent training program which focuses on the parent-child relationship and interaction pattern. PCIT is composed of two phases: relationship enhancement focused child-directed interaction (CDI) phase and compliance training focused parent-directed interaction (PDI) phase. Parents first learn positive relationship building skills during CDI and then discipline skills during PDI. Parent and child dyad participate in treatment together while therapists observe their interaction behind an one-way mirror and coach parents. Parent-child interaction therapy for Toddlers (PCIT-T) is one of numerous adaptation models of PCIT which considers unique developmental characteristics and needs of toddlers (Girard, et al., 2018). In PCIT-T, parents learn skills to help toddlers to regulate their emotion in addition to the positive relationship building skills. Additionally, the discipline phase of PCIT-T emphasizes age-appropriate teaching skills in order to increase toddlers' compliance. In Korea, the first PCIT-T training was offered in 2021 by one of the authors of PCIT-T, and how PCIT-T is applied to Korean families has not received much attention in the literature yet. This single case study of PCIT-T will report in detail how PCIT-T was applied to a developmentally delayed Korean toddler and his mother. For pre-, post-, and 3-month follow-up assessments, the study used Korean version of Child Behavior Checklist for toddler's behavioral problems, Center for Epidemiologic Studies Depression Scale for mother's depression, Korean Parenting Sense of Competence scale for mother's sense of parenting competency, and Korean Parenting Stress Index for mother's level of parenting stress. The Dyadic Parent-child Interaction Coding System-IV was used for mother and toddler's interactions during assessment and treatment sessions. Both mother and toddler participated a total of 9 sessions of CDI-T and 7 sessions of PDI-T of PCIT-T from November 2021 to March 2022 and completed the 3-month follow-up assessment in July 2022. After participating in PCIT-T, positive parenting skills and parenting competency were improved. The mother's depression and parenting stress from parent domain were decreased. The positive changes of the mother were maintained at 3-month follow-up and parenting competency improved even more at the 3-month follow-up. However, the toddler's level of autism spectrum problems and withdrawn syndrome did not change after the treatment. Overall, mother's parenting stress from child domain remained the same. However, mother's parenting stress from not having closeness or feeling reinforced in her relationship with her child decreased after the treatment, and it continued to decrease at 3-month follow-up. In this case study with a developmentally delayed toddler in Korea, PCIT-T had positive effects on mother and the relationship between mother-toddler dyad. As an early intervention for toddlers, PCIT-T's potential to bring significant changes for parents with non-typically developing children and its limitations will be discussed.



# POSTER SESSION 01

Abstract No.: 0437

## Assessing Expectancies and Experiences and Their Relation to Mental Health in Children and Adolescents Engaged in Multidisciplinary Rehabilitation for Chronic Pain

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### INTRODUCTION

Chronic pain is a physical condition that impacts the physical and mental health of a significant number of children worldwide. For these children chronic pain can lead to significant emotional distress and physical impairment, resulting in school absenteeism, sleep disruption, and social isolation, and requiring specialist multidisciplinary intervention. Children living with chronic pain are three to ten times more likely to experience significant depression, anxiety, or other mental health challenges.

Clinical evidence suggests maladaptive pain-related expectancies are a key psychological mechanism that drive poor mental health in children living with chronic pain. To improve physical rehabilitation and mental health, a major goal of psychological interventions for children with chronic pain is to identify, and then modify, the maladaptive pain-related expectancies that drive anxiety and fear of pain. However, there are currently no assessment instruments specifically tailored for clinicians and researchers to identify and assess maladaptive pain-related expectancies in children with chronic pain. The absence of such tools represents a critical missing piece of the toolkit available to clinicians and researchers. The aim of this project is to develop a set of assessment instruments capable of assessing pain and therapy expectancies and experiences and examine their relation to mental health amongst children with chronic pain.

### METHOD

Participants include children and adolescents with chronic pain (ages 12-17) and their carers who attend an Australian community clinic for multidisciplinary physical and mental health therapy. Chronic pain causes amongst participants are varied. Participants report on their expectancies and experiences of their pain and their therapy at each session across an eight-session therapy programme. Measures of physical and mental health assessments are taken before and after the therapy programme.

Assessment measures include questionnaires inviting participants to report on their experiences of chronic pain (e.g., "I have been able to control my pain recovery.") and therapy (e.g., "How much has the therapy helped you with day-to-day activities?") since their last therapy session, and their expectancies for their chronic pain (e.g., "I'll be able to control my pain recovery in the future.") and therapy (e.g., "My therapy will help me to be more independent") in anticipation of their next therapy session.

### RESULTS

The data collection phase of this study is ongoing, with a target sample of 100. Analyses will evaluate the psychometric properties of the expectancy and experience questionnaire instruments. Multilevel analyses will evaluate the degree to which questionnaire measures at baseline, and their change across treatment, predict 1) anxiety, fear of pain, and other mental health outcomes, 2) physical health outcomes including improvement in pain severity, engagement in adaptive physical behaviours, and intervention dropout, and 3), and child, caregiver, and clinician feedback on instrument use in therapy.

### DISCUSSION

The findings from the present study will reveal the manner that expectancies and experiences of chronic pain and therapy predict pain and therapy outcomes following an eight-session multidisciplinary therapy programme for children with chronic pain. These findings will be of value to researchers and clinicians seeking to understand psychological mechanisms implicated in childhood chronic pain and pain therapy. The evaluation of novel questionnaire measures will provide a tool for clinicians and researchers to identify children who hold maladaptive pain expectancies at the start of treatment, to target specific expectancies of concern for children, and systematically assess change in expectancies over the course of interventions.

# POSTER SESSION 01

Abstract No.: 0462

## Online Mindfulness-Based Cognitive Therapy Integrated with Psychology of Self: Pilot Trial for Malay Muslim with Psychological Distress in Singapore

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### BACKGROUND

Singapore's Institute for Mental Health (IMH) identified the need for culture-based research and clinical intervention, catering to the minority populations in Singapore, to foster treatment sustainability and recovery (Faizah & Humairah, 2017; Picco, 2018; Jeyagurunathan et al., 2018; Poon et al., 2020; Vaingankar et al., 2020, 2021). Minority Muslim communities reportedly struggle with social identity, acceptability, and economic stability (Hussin, 2011; Chua & Ng, 2015; Mathews, 2018; Rashith, 2019; Subramaniam et al., 2019). They were reported to foster a stigma towards mental illness, delay and drop-out of psychological treatments that do not address religiosity (Sagayadevan, Subramaniam, Abdin, Vaingankar, & Chong, 2015; Shafie et al., 2020; Seet et al., 2020; Jamil, 2020). Aims: The pilot trial aims to explore the effectiveness, feasibility, and experiences of Mindfulness-Based Cognitive Therapy - Integrated with the Psychology of Self (MBCT-IPS) for Malay Muslims with psychological distress.

### METHODS

Twelve Malay Muslims with psychological distress were recruited for a 2+8-week online group intervention that integrates the Psychology of Self (IPS) with the standard Oxford Mindfulness-Based Cognitive Therapy (MBCT), respectively. The primary outcome measure is the Depression, Anxiety, and Stress Scale (DASS-21). Secondary outcome measures are the 19-item Positive Mental Health (PMH-19) and Self-Compassion Scale-Short Form (SCS-SF). All measures were administered during pre and post-intervention.

### RESULTS

Ten out of 12 participants completed the therapy. However, only nine participants completed the assessment. The results found a reduction of scores for Depression (pre: M 2.50 (SD 2.24), post: M 1.33 (SD 1.58); Anxiety (pre: M 2.83 (SD 1.99), post: M 1.78 (SD 2.22); Stress (pre: M 5.17 (SD 1.95) post: M 2.78 (SD 2.59), and increase of scores for PMH-19 (pre: M 4.91 (SD 0.53) post: M 5.22 (SD 0.76) and SCS-SF (pre: M 3.78 (SD 0.53), post: M 4.26 (SD 0.56)). Three participants agreed that MBCT-IPS is feasible for themselves, citing mindful walking, 3-minute breathing space, and mindful movement as the most beneficial aspect of therapy. Experiences were cited as eye-opening and positive, with a newfound appreciation for awareness and mindfulness.

### CONCLUSIONS

MBCT-IPS effectively reduces psychological distress and improves positive mental health and self-compassion in the study. The researcher is currently conducting a randomized controlled trial, ClinicalTrials.gov Identifier: NCT05237336, to determine the effectiveness of the intervention designed. MBCT-IPS can potentially be the treatment of choice among Malay Muslims with psychological distress in Singapore.

Keywords: Culture, MBCT, Mental health, psychological distress, Spirituality

# POSTER SESSION 01

Abstract No.: 0479

## **Development of a Mobile App Promoting Self-Cognitive Behavioral Therapy for University Students with Mental Health Problems: Proverbs Matching Session Using ChatGPT Model**

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Mental health problems among university students, particularly in late adolescence, have been on the rise for some time. As universities welcome students back following the COVID-19 pandemic, their responsibility to manage and support student mental health is increasing. However, face-to-face counseling services have their limits, and students may have to wait up to a month to receive counseling, during which time it can be challenging for the counselor to monitor the student's condition and provide additional support. A meta-analysis of 19 randomized controlled trials of online cognitive behavioral therapy (CBT) treatment for anxiety found no significant difference in outcomes between online treatment and treatment provided by a therapist.(Reger, 2009) However, stand-alone programs that do not require additional support from a therapist are ideal aids for therapists, but are difficult to implement in practice due to low adherence rates.(Richards, 2012) To maximize treatment adherence and efficacy, a stand-alone program should be interactive, personalized, and include corrective feedback.(Barak, 2008, Helgadóttir, 2009)

In this study, we propose 'HAI-CBT', a mobile cognitive behavioral therapy app that uses ChatGPT, an artificial intelligence language model developed by OpenAI. ChatGPT is not only larger in scale than existing language models, but also capable of natural conversation. However, its use for treatment is limited due to the risk of unexpected responses. Therefore, we propose a safe and efficient way to use ChatGPT in a mobile CBT app, specifically for emotional clarification and cognitive reconstruction sessions.

The existing thought record sheet comprises ABCDE sessions; Activates problematic situations, writes down thoughts(Belief), clarify the emotion as Consequence, Dispute to reconstruct cognition and Evaluate how feelings have improved. In the Consequences session, HAI-CBT's language model suggests several emotions similar to the one described by the user, allowing for a more accurate expression of feelings. In the Disputation session, the language model provides proverbs as hints to help the user change their perspective. These two AI intervention sessions also serve as personalized corrective feedback, which can motivate and guide the therapy session.

A pilot experiment is currently underway to confirm the effectiveness of HAI-CBT and to receive feedback on potential improvements. The app will be provided to about 10 students who are waiting for counseling services at the university counseling center for four weeks with post-test interviews. Through the experiment, effectiveness and improvement direction of using the artificial intelligence language model in a mobile CBT app are expected.

## Regulating Your Mind and Heart during Social Stress with Digital Interventions

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**Background and purpose.** Social Anxiety Disorder (SAD) is a severe mental health problem that has doubled since the pandemic, with a prevalence rate of 20%, particularly in adolescents. Despite the availability of treatments for SAD, many socially anxious adolescents are hesitant to seek therapy due to the fear of social exposure and negative evaluations – leading to under-treatment of the disorder. To address this issue, our pilot study aims to test the effectiveness of evidence-based interventions in a digital format on cognitive (metacognition) and affective (heart rate variability) disturbances during a speech performance task. As adolescents increasingly grow up with technological advances, digital interventions suit them better, making them more accessible and less demanding. This pilot will first test the digital interventions in a sub-clinical student population before testing it in socially anxious high schoolers. We target metacognition and heart rate variability (HRV) because both are well-known to be impaired in SAD. However, almost all studies are correlational and do not tell whether both disturbances are mere symptoms or play a more mechanistic role in sustaining anxiety symptoms. Furthermore, there is likely a strong interplay between metacognitive and affective disturbances because of overlapping neurophysiological connections. Our design helps close both gaps and extends the current literature by examining the effects of short digital interventions on HRV and metacognition. **Study design.** To target metacognitive disturbances, the study will use short video interventions of attentional training (ATT) and detached mindfulness (DM). ATT and DM are well-known metacognitive therapies that are proven beneficial to lower anxiety symptoms. To target HRV, we use the slow breathing (SB) technique, which has been shown to directly increase HRV (higher HRV is a common index for health). Negative beliefs will be measured using the Metacognitions Questionnaire-Adolescent (MCQ-A), and self-reported state social anxiety will be measured with the State-Trait Anxiety Inventory (STAI). Participants (N = 80) will be divided into four groups: the first group will receive 12 min of ATT, the second 12 min of DM, the third 12 min of SB training, and the last group will be the control condition. Immediately after the training, participants will perform a three-minute stressful speech task and be recorded with a camera. The study will measure negative beliefs, social state anxiety, and HRV before, after, and during the speech task. Furthermore, the participants will judge performance using an adapted version of the Expected and Evaluated Performance Questionnaire and objective judges using the Social Behavior and Anxious Appearance Scale. All measurements will be taken on the same day. We expect that people in the intervention groups, compared to those in the control group, show reduced negative metacognition and increased HRV. Secondly, we expect the intervention groups to experience reduced self-reported anxiety during the speech performance task. Lastly, we expect the intervention groups to report a higher performance evaluation after the speech performance task. The project is currently undergoing and will be finished in April, and therefore I will be able to present the full results during the conference.

# POSTER SESSION 01

Abstract No.: 0502

## DNA-V for Adolescents with Anxiety and Depression during COVID: A Pilot Study

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### INTRODUCTION

DNA-V is a model originally designed “using Acceptance and Commitment Therapy (ACT) and Positive Psychology to help teens manage emotions, achieve goals, and build connection” (Hayes & Ciarrochi, 2015). The creators developed a DNA-V group programme that runs for six weeks. Thus far, there are no studies using DNA-V with young people who have anxiety and depression conditions. During the pandemic, therapy had to go online for an extended period of time. Even when therapy could be conducted face-to-face, clients and facilitators had to be masked. As such, it is unknown if DNA-V group therapy for young people with anxiety and depression could work, during the pandemic.

### METHOD

In our setting, DNA-V group therapy programme was modified from a six week to an eight week programme. This programme was developed for two modalities: an online format and a face-to-face format. (Experiential activities were adapted for the online format.) Young people from 13 to 18 years of age, with a primary diagnosis of mood and anxiety disorders of mild to moderate severity, took part in the group therapy. Pre-post measures were used to assess client progress: Child Adolescent Mindfulness Measure (CAMM), Action Fusion Questionnaire for Youth (AFQ-Y), Young Person - Clinical Outcomes in Routine Evaluation (YP-CORE), Revised Children Anxiety and Depression Scale (RCADS) client report (short version), RCADS Parent Report (short version). Due to difficulties with collecting outcome data, a large amount of data was missing and the remaining data could not be ascertained to meet assumptions for parametric analyses. As such, non-parametric analysis Wilcoxon Signed Ranks tests were used for analysing the data.

### RESULTS

The only statistically significant improvement was found for the RCADS-Parent Anxiety scale ( $Z = -2.103$ ,  $p = .035$ ). The remaining findings indicated that, while the raw data appeared to be in the direction of improvements, there were no statistically significant improvements.

### DISCUSSION

Based on our findings, the modified DNA-V program was ineffective for our young people who have anxiety and depression conditions, when delivered during the pandemic period. Possible reasons for the lack of improvement could be the (1) weakening of experiential elements when DNA-V was adapted and delivered for an online format, (2) limited mindfulness components in DNA-V, (3) confounding factors of difficulties from the pandemic period, (4) impact of online modality and/or use of masks in the therapeutic setting, (5) too small a sample size. Further investigation of the use of DNA-V for young people with mild-moderate anxiety and depression is needed.

# POSTER SESSION 01

Abstract No.: 0530

## Designing a Psychoeducational Intervention for Chronic Back Pain in Augmented Reality

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### BACKGROUND

Chronic back pain is the most common chronic pain disorder. There is no clear pathomechanism, whereby physiological-organic, cognitive-emotional, and social causes, in the sense of the biopsychosocial model, form the risk factors for pain chronification. In multidisciplinary guideline treatment, psychoeducation represents an independent method of education showing positive influence on psychological components of the disease. At the same time, the use of immersive technology, such as virtual or augmented reality, are assumed to have a superior impact on pain reduction and psychological variables. Thus, the aim of the current study was to show the state of research on the treatment of chronic back pain by means of psychoeducation using immersive technology.

### METHODS

Evidence synthesis was conducted through a scoping review following PRISMA guidelines. Data evaluation was performed by qualitative content analysis.

### RESULTS

Eleven out of initially 1,447 publications were included. One publication deals with the treatment of chronic pain by immersive technology, 6 publications with the treatment of chronic back pain by virtual reality, and 3 publications with the psychological variables of chronic back pain treatment. Four main categories were identified: (1) psychoeducation process and content, (2) motivation, (3) intervention duration, and (4) assessment and evaluation.

### DISCUSSION

The extracted data were discussed by incorporating the existing research on conventional intervention design, the Unified Theory of Acceptance and Use of Technology, clinical and health psychological models. In sum, well prepared efficacy studies with experimental designs are needed on psychoeducational treatments for chronic low back pain using immersive technology, in particular when using augmented reality. Based on this, conclusions and recommendations were drawn for the design of a psychoeducational intervention for chronic low back pain focussing on augmented reality.

# POSTER SESSION 01

Abstract No.: 0537

## **Effectiveness Evaluation of a Self-Compassion Meditation Intervention Using the Smartphone App to Improve Work Performance and Mental Health for Japanese Workers: A Pilot Study with Randomized Controlled Trials(RCT)**

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### INTRODUCTION

Workers' mental health problems are a social issue that causes economic losses worldwide. However, due in part to Covid-19, some of those in need of mental health services do not receive adequate support. Although assistance with mobile health applications (apps) is considered one of the effective means, very few have evidence of efficacy (Wasil et al., 2019). In the present study, we conducted a pilot study with RCT to examine the effectiveness of self-care guided meditation with elements of self-compassion using smartphone apps to improve work performance and mental health in Japanese workers.

### METHOD

The 91 participants (30 men and 61 women with mean age  $\pm$  SD of  $32.0 \pm 8.9$ ) who met the following criteria included: (1) Employees working more than 20 hours per week, (2) They are between the ages of 18 and 54, (3) Not on leave of absence, (4) Not business owner or students, (5) Not currently diagnosed with a mental disorder and K6 score of fewer than 13 points. In this study, mental health and work performance were measured using the Japanese version of the K6 (Kessler et al., 2002; Furukawa et al., 2008) and the WHO-HPQ (Kessler et al., 2003). Participants were randomly assigned to either the self-compassion meditation (SCM) group (N = 46) or the waitlist group (N = 45). Participants in the SCM group engaged in mindfulness and self-compassion meditation for 6-11 minutes once a day for one month using their smartphones. The study protocol was registered at the University hospital Medical Information Network Clinical Trials Registry (UMIN-CTR; ID: UMIN000049466).

### RESULTS

The 59 participants (19 men and 40 women with mean age  $\pm$  SD of  $31.8 \pm 8.8$ ; the SCM group N = 29, waitlist group N = 30) who responded to both the pre-assessment and post-assessment were included in the analysis; independent t-tests on the change between the pre- and post-assessment showed no significant improvement in mental health (K6) ( $t(56) = -1.19$ ,  $p = .24$ , Cohen's  $d = -0.31$ ), while work performance (WHO-HPQ) showed significant improvement ( $t(57) = 2.09$ ,  $p < .05$ ,  $d = 0.54$ ).

### CONCLUSIONS

This study showed that our one-month self-care guided meditation intervention with a self-compassion element using a smartphone application was effective in improving work performance. On the other hand, a significant effect on improving mental health was not confirmed. Since work performance has been suggested to be a leading predictor of change in mental health (Suzuki et al., 2015), it could take more time to improve mental health. It is also possible that the effect of the mental health intervention was limited in this study because it targeted only a healthy population. This study will be followed up, and the intervention effects on mental health will be examined in the future.

Funding: This study was funded by JP16H05653, JP19K03278, 22H01091, 22K18582, and AL150003.

# POSTER SESSION 01

Abstract No.: 0544

## **Longitudinal Development of Informant Discrepancies: Mother-Child Agreement on Child Psychopathology from Adolescence to Emerging Adulthood**

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### INTRODUCTION

As part of the assessment of psychopathology it is considered best practice to always collect collateral reports. However, in research as well as in practice, this procedure is only part of the diagnostic routine with children and adolescents and usually ends with a child's 18th birthday. Different informants' reports usually differ, and yet, no clear recommendations exist on how to interpret discrepant reports. In childhood and adolescence agreement between self- and parent report is moderate, and discrepancies have been shown to be associated with parent and child psychopathology, the parent-child relationship, and socioeconomic status. Research on informant discrepancies in adulthood is still scarce, however, agreement between self- and collateral report seems to be moderate as well. The developmental phase of emerging adulthood has been linked to the highest rates of mental disorders, but only little research has been conducted on this age group regarding informant discrepancies. Moreover, to our knowledge, no studies have so far investigated the longitudinal development of informant discrepancies from adolescence to emerging adulthood. As the assessment of psychopathology is used to guide decisions in both research and clinical care, improving our understanding of informant discrepancies is of great importance.

### METHOD

Data from N = 224 mother-child dyads was collected in adolescence (T1, M = 14 years) and again eight years later in emerging adulthood (T2, M = 22 years) as part of a longitudinal prevention study. At both assessments mothers and children completed questionnaires on children's symptoms of psychopathology (adolescence: CBCL/YSR; young adulthood: ABCL/ASR). At T1 mothers also reported on their own psychological distress and rated their parent-child-relationship. At T2 mothers again reported on their own psychological distress and both, mothers and emerging adults, additionally rated their parent-child-relationship, and each completed a structured clinical interview (current and lifetime diagnoses).

### RESULTS

We first compare the agreement between self- and mother report on children's psychopathology in adolescence and emerging adulthood and report the stability of the discrepancies between self- and mother report over time. Second, we investigate factors associated with informant discrepancies in adolescence and emerging adulthood. We further group dyads according to the stability of their agreement (constant, increasing or decreasing agreement) and investigate differences between these groups.

### DISCUSSION

Our results provide important insights into the longitudinal course of agreement between self- and mother reports of children's psychopathology and factors associated with discrepancies. This study provides first results about how parent-child discrepancies differ in adolescence and emerging adulthood and can thus guide the decision how to interpret collateral reports beyond adolescence. Strengths of this study include the longitudinal study design, the use of well-established parallel questionnaires of psychopathology and structured clinical interviews that enable diagnoses of psychiatric disorders beyond the participants self-reports.



# POSTER SESSION 01

Abstract No.: 0545

## **Effects of Psychological Flexibility on Mental Health Mediated by Psychological Characteristics of Japanese Young Adult Carers**

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In recent years, there has been growing concern about the mental health of young adult carers in Japan. While social support is essential in alleviating the burden on young adult carers, there are examples of young adult carers rejecting the assistance of others. They may reject this assistance so they can avoid the experience of losing the care role by receiving it, which may have an impact on their help-seeking preferences. Therefore, the aim of this study was to explore the relationships among the core processes of Acceptance and Commitment Therapy (ACT), help-seeking preferences, young carer tendencies, and outcome variables. A total of 141 Japanese university students aged 18–25 years completed questionnaires. Five of the 141 students answered that they fit the description of a young adult carer. Data were collected using (1) the Japanese version of the Acceptance and Action Questionnaire-II, (2) the Japanese version of the Cognitive Fusion Questionnaire, (3) the Japanese version of the Valuing Questionnaire, (4) a help seeking preference measure, (5) the Japanese version of the Young Carer Psychological Scale Revised version, (6) the Japanese version of the Hospital Anxiety and Depression Scale, (7) the 10-Item MOA Quality of Life Questionnaire, and (8) the Subjective Well-Being Scale. A hypothetical model was tested using structural analysis of covariance with the three ACT variables as independent variables, the mental health variables as dependent variables, and helping orientation and young carer tendency as mediating variables. The results showed that only values had an effect on helping orientation while helping orientation had an effect on young carer tendency, depression, and quality of life. The young carer tendency did not affect any of the outcome variables. The young carer tendency did not affect any of the outcome variables. Thus, it is suggested that being a young adult carer may not specifically increase the effectiveness of ACT. The fact that help-seeking preference affected young carer tendency suggests that increasing help-seeking preference may make it easier for young carers to initiate help-seeking behavior, resulting in a reduction in care burden. This survey was conducted with general university students. It is hoped that future surveys will be conducted with active caregivers to obtain suggestions for more effective intervention methods to reduce the burden on young adult carers and improve their mental health.

# POSTER SESSION 01

Abstract No.: 0546

## Effects of an Educational Training Program on Low-Intensity Cognitive Behavior Therapy for Nurses in Japan

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### INTRODUCTION

In Japan, cognitive behavioral therapy (CBT) has been subject to medical fees since 2010, and since 2016, hospitals have enabled calculations for joint implementation by doctors and nurses. However, the spread of CBT remains limited. Although the CBT training project of the Ministry of Health, Labour and Welfare has progressed since 2011, doctors and nurses, who make up the majority of the participants, have pointed out the difficulty in implementing high-intensity CBT in the limited time of medical examinations (Health and Global Policy Institute, 2021). In recent years, the expansion of community-based comprehensive care to include mental disorders has made it necessary for nurses to care not only for severe patients but also for people with mild to moderate mental disorders in various settings. It is highly useful for nurses to perform CBT, and demand is increasing for simple CBT that is easy for nurses to use on site in a short period of time, which involves implementing it at a low intensity rather than a high intensity. Given these circumstances, the present authors created and implemented a low-intensity CBT education and training program for Japanese nurses in 2021. Thus, this study aimed to examine the effects of the aforementioned low-intensity CBT education and training program for Japanese nurses.

### METHODS

Participants were recruited from January to July 2022 by publicizing nurses' CBT-related websites and distributing flyers to psychiatric hospitals. The low-intensity CBT education and training program was held online, and each session lasted three hours. The contents of the program included lectures on the characteristics of high- and low-intensity CBT, examples and possibilities of low-intensity CBT in nursing, and a 10-minute structured interview role-play exercise. Data on the participants were collected before the start, after the end, and one month after the end of the program. Data were collected using the Problem Solving Scale for Nurses (PSSN), General Self-Efficacy Scale (GSES), and a unique questionnaire regarding the utilization of training content and issues. One-way ANOVA was performed and descriptive statistics were obtained. This study was approved by the International University of Health and Welfare Ethics Committee (21-Im-053).

### RESULTS

The training program was conducted three times with 88 participants. Seventy participants (80.1%) were in their 30s to 50s, and 80 (91%) worked in psychiatric hospitals. The participants had an average of 17 years of experience as nurses (12 years in psychiatry). PSSN was significantly different among the three time points ( $F(2,174) = 13.8, p = .000$ ), with a large effect size ( $\eta^2 = .16$ ). GSES was also significantly different among the three time points ( $F(2,174) = 11.4, p = .000$ ), with a moderate effect size ( $\eta^2 = .12$ ). At the end of the training, 85 participants (97%) answered that they could "actively apply" the training content in nursing, and the percentages were high in building relationships with patients, improving symptoms, and assisting in daily life. One month after the end of the training, 60 participants (68%) answered that they were able to "actively apply" the contents of the training in nursing, and the most common response was in building relationships with patients, followed by improvement of symptoms and support for daily life. Challenges in using low-intensity CBT in nursing were in the training, understanding of the nursing team, absence of support, coordination of work, and understanding of other occupations.

### DISCUSSION

The results suggested that the low-intensity CBT education and training program for nurses enhanced nurses' self-evaluation of problem-solving behaviors and was effective in improving self-efficacy. In addition, 68% of nurses were able to utilize the contents of the training one month after its completion. Moreover, practicing the 10-minute structured interview was helpful especially in building relationships with patients. The results also suggested that the accumulation of training for nurses, understanding and support from those around them, and work coordination are necessary for the nurses to maximize the benefits of this education and training program.

# POSTER SESSION 01

Abstract No.: 0549

## Effects of Abuse Experiences and Parent-Child Relationships on Resilience in Japanese College Students

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### INTRODUCTION

Resilience, the ability to cope with adversarial situations, is considered important for people who have experienced abuse because it affects their reaction to trauma. However, it is understood that abused individuals have lower resilience. The study's aim is to examine whether the perception of experiences of abuse affects resilience.

### METHODS

A total of 225 Japanese college students were included in the analysis (mean age: 19.60, SD = 1.72). Participants in this study responded to the Child Abuse and Trauma Scale (CATS), the Mother-Child Relationships in Adolescence Scale (the descriptions "mother" in the items were modified to "parents"), and the Resilience Scale for College Students.

### RESULTS

No correlation was found between experiences of abuse and parent-child relationship ( $r = .054, p = .484$ ). A positive correlation was found between experiences of abuse and resilience ( $r = .21, p = .006$ ). There was no correlation between parent-child relationships and resilience ( $r = -.072, p = .349$ ). A hierarchical multiple regression analysis was used with the resilience scale as the objective variable and the CATS and Mother-Child Relationships in Adolescence Scale as independent variables. The results showed that when experiences of abuse were high, the parent-child relationship were weaker, and resilience was higher ( $\beta = -.370, p = .011$ ). When experiences of abuse were low, resilience was higher for higher parent-child relationships ( $\beta = .207, p = .098$ ).

### DISCUSSION

It was found that the perception of experiences of abuse tended to be associated with higher resilience. This suggests that the process of perception of abuse itself may have a positive psychological effect on abused people. However, it is possible that most of the abused people in this study already had high resilience at the time of their participation in the study. In light of the above, it is necessary to continue research to examine the effectiveness of each process of recovery from trauma and create support methods that are less burdensome for people who have experienced abuse.

# POSTER SESSION 01

Abstract No.: 0557

## **Cognitive Processes in Adolescent Panic Disorder: Examining the Applicability and Specificity of the Cognitive Model of Panic to Young People with Panic Disorder**

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### INTRODUCTION

Panic disorder (PD), characterised by recurrent, unexpected panic attacks and a persistent fear regarding future attacks, has a prevalence of 1 - 3% in adolescents (Sadler et al, 2018; Bittner et al, 2007).

The cognitive model of panic (Clark, 1986) provides an explanation of the psychological mechanisms underpinning the development and maintenance of PD. This model is well validated in adult populations, and a highly effective treatment has been developed (Clark et al, 1999). However, this model remains under-researched in adolescent populations. Adolescence is a critical period of biological, psychological, and social development (Jaworska & MacQueen, 2015). It is therefore plausible that the factors contributing to the presentation and maintenance of psychological disorders in this population may differ compared to adults and younger children.

A recent systematic review (Plaisted, 2021) found some preliminary support for a relationship between cognitive factors (e.g. anxiety sensitivity) and panic symptoms in young people, largely in community (non-clinical) groups. However, they found no evaluations of the cognitive model of panic in adolescents with clinical diagnoses of PD. Certain factors of the model, such as safety-seeking behaviours and interpretation of bodily sensations, are yet to be explored in this age group in the context of panic disorder. Evaluating the applicability and specificity of this model to adolescents with PD will improve understanding and treatment approaches for this population.

In this study we will explore the components of the cognitive model of PD in an adolescent clinical PD group compared to a clinical control group (adolescents with other anxiety disorders) and a community control group (non-anxious adolescents). We hypothesise that 1) The clinical PD group will have significantly higher levels of panic cognitions, avoidance behaviours, bodily sensations and safety-seeking behaviours compared to the clinical and the community control groups and 2) Panic cognitions, avoidance behaviours, bodily sensations and safety-seeking behaviours will predict concurrent panic symptom severity across the groups.

### METHODS

This study is cross-sectional, comparing across three independent groups of young people (aged 12–17 years, n=101). These are adolescents with PD ('clinical PD group', n=34), adolescents with other anxiety disorders excluding PD ('clinical control group', n=33), and adolescents with no anxiety disorder ('community control group', n=34). Five outcome variables were measured via self-report surveys: panic disorder symptom severity, panic cognitions, avoidance behaviours, bodily sensations, and safety seeking behaviours.

Participants were invited to take part through a research clinic where they were about to receive treatment (for the clinical PD and clinical control groups) and in the community through schools and extra-curricular clubs (for the community control group). Data will be analysed in R.

We pre-registered our analysis plan on the Open Science Framework, which can be viewed here: <https://doi.org/10.17605/OSF.IO/FVJ2Q>

### RESULTS

We will report the results of a multivariate multiple linear regression analysis comparing differences between the three groups' scores on factors in the cognitive model. These factors are panic cognitions, avoidance behaviours, bodily sensations, and safety-seeking behaviours, and we will include age and gender as covariates.

We will also report the results of a multiple linear regression analysis evaluating whether panic cognitions, bodily sensations, safety seeking behaviour and avoidance behaviour predicted concurrent panic disorder symptom severity, again including age and gender as covariates.

### DISCUSSION

This study will provide an exciting first look at the applicability and specificity of the cognitive model of panic to adolescents with PD. We will discuss the implications of the findings for future research, and how they may inform the development and practice of psychological treatment of adolescent PD.

# POSTER SESSION 01

Abstract No.: 0560

## A Pilot RCT of an App-Based CBT Program for Anger Management in Individuals with ASD without ID

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### INTRODUCTION

Individuals with autism spectrum disorders (ASD) without intellectual disability (ID) often have difficulties in anger management and control. Some even show severe anger outbursts, which sometimes result in physical harm to themselves and others. CBT has been successfully applied to alleviating anxiety for individuals with ASD, yet few attempts have been made to manage anger. Recently, given the low accessibility and high cost of traditional face-to-face CBT programs, CBT using technology-based interventions (TBIs), especially in the form of a mobile app, has emerged as an alternative treatment delivery format. This study aimed to develop and examine the effectiveness of an app-based CBT program for anger management, HaruASD, among adolescents and adults with ASD with ID.

### METHODS

Thirty adolescents and adults with ASD without ID and their caregivers participated in this study (25 males and 5 females with mean age  $\pm$  SD of  $21.83 \pm 5.44$ ). Participants were randomly assigned to either the waitlist control group or the intervention group. The waitlist control group did not receive any intervention, while the intervention group used the anger module of HARU ASD for 66 days. HARU ASD is a CBT app comprising 48 e-learning sessions that consist of 5 CBT skills: 1) psychoeducation, 2) behavioral activation, 3) relaxation training, 4) cognitive reconstruction, and 5) problem-solving.

Participants and their caregivers completed full or subscales of self-report and proxy report questionnaires (Trait Anger Expression Inventory-STAXI, Behavioral Anger Response Questionnaire-K-BARQ, Anger Coping Scale-ACS State-Trait Anxiety Inventory-STAI) before and after the intervention, and their behaviors during a 10-minutes simulated session that is designed to provoke participant's anger behaviors were evaluated by a direct behavior observation coding system.

### RESULTS

For participants' self-report, a significant decrease was found in the Support-seeking subscale of K-BARQ for the waitlist control group compared to the intervention group ( $F=7.357, p=.011$ ). A significant decrease in Inappropriate body movements during the direct behavioral observation was observed only in the intervention group ( $Z=-2.226, p=.026$ ).

The results of the caregiver proxy reports showed a significant decrease in the Anger-out subscale of STAXI ( $F=4.455, p=.046$ ), the Direct anger-out subscale of K-BARQ ( $F=10.866, p=.003$ ), and the State anger of STAI ( $F=5.043, p=.035$ ) in the intervention group, compared to the waitlist control group. Moreover, the intervention group showed a significant increase in the Anger suppression subscale of ACS ( $F=7.051, p=.014$ ) in comparison to the waitlist control group.

### CONCLUSIONS

This study shows that an app-based CBT program, HaruASD, can be an effective intervention for managing anger among adolescents and adults with ASD without ID. This finding supports the effectiveness of technology-based interventions for the ASD population. Replication studies should be followed to establish its effectiveness.

# POSTER SESSION 01

Abstract No.: 0565

## Effects of Increased Teachers' Behavior-Specific Praise on Children's Academic Engagement, Inappropriate Talking, and Out-Of-Seat Behavior

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### INTRODUCTION

In the school environment, children's inappropriate talking and out-of-seat behavior is a problem which must be addressed. Such problematic behavior of individual children may interfere with the teaching and learning of the whole class because other children may follow those who engage in the problematic behavior. In this study, we attempted to promote children's academic engagement by increasing teachers' behavior-specific praise, thereby decreasing problematic behavior. Additionally, to increase and maintain this behavior-specific praise, "setting self-recorded goals" and "performance feedback from the peer teacher" were implemented, and their effects were examined.

### METHOD

The study participants were children and their teachers in three general education classes (second-grade classes) in a Japanese elementary school. Class 1 comprised 33 children and a teacher, Class 2 comprised 34 children and a teacher, and Class 3 comprised 32 children and a teacher. Class 1 and 2 comprised the intervention groups, and Class 3 comprised the control group. During the baseline period, we measured the number of behavior-specific praise of the teacher and children's academic engagement, inappropriate talking, and out-of-seat behavior. The researcher explained to the teachers that behavior-specific praise decreases problematic behavior and instructed them to press a button on the counter each time they praised the children during class. During the intervention period, specific procedures for behavior-specific praise were taught. Subsequently, the target number of behavior-specific praise was set in consultation with the researcher, based on the data from the baseline period. Furthermore, a peer teacher provided weekly performance feedback on the number of behavior-specific praise based on the measured data. In the follow-up period, data were measured using the same procedure as in the baseline period. Data were analyzed using the Baseline Corrected Tau Calculator (Tarlow, 2016).

### RESULTS AND DISCUSSION

In the intervention groups, Class 1 showed an increase in behavior-specific praise and a decrease in inappropriate talking, while Class 2 showed no change in any of the target behaviors. In the control group, Class 3, no change in any of the target behaviors were revealed. In Class 1, the fact that a decrease in inappropriate talking was observed, but not an increase in academic engagement and a decrease in out-of-seat behavior, requires further investigation. The individual data confirm that this procedure is effective for certain children. A limitation of this study is that the data may have been biased due to the different subjects taught in the respective classes. Moreover, the longer time-sampling interval and the smaller number of data points may have affected the results compared to previous studies. It is suggested that further studies be conducted in the future to determine whether the promotion of academic engagement by behavior-specific praise is effective in reducing problem behavior, and to what extent.

# POSTER SESSION 01

Abstract No.: 0578

## Personalization Strategies in Digital Mental Health Applications for Depression: A Systematic Review

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### INTRODUCTION

Depression is a common disease worldwide. With the advance in technology, digital mental health applications and technologies for depression have been in the spotlight. However, there needs to be more personalization and in-situ support in digital mental health interventions in that tailoring strategies can improve adherence and engagement to interventions delivered through apps. Despite the necessity and importance of personalization in digital mental health interventions, there has been little systematic review of personalization strategies employed in depression intervention apps. This study aims to review existing mobile and web-based applications for depression along with personalizing and other features.

### METHOD

We systematically searched in Google Scholar, PubMed, and PsycInfo using the following key words: "Depression," "Application," "Digital Therapeutics," "Artificial Intelligence (AI)," "Machine Learning (ML)," and "Personalization". Four independent reviewers selected studies for inclusion and extracted and reviewed the data.

### RESULTS

Among thirty-seven studies identified for personalization strategies operationalized in the depression intervention apps, twenty-nine papers were included in this systematic review. Eight of these twenty-nine applications supported the customization functions (i.e. explicit change manually made by the user such as avatar setting), allowing a self-tailored environment to match users' personal preferences. All reviewed digital interventions for depression except one collected active data, and especially six utilized active and passive data from the users to personalize the digital interventions. Notably, we found that the ML model enhanced the sophistication of personalization by recognizing and predicting users' emotional states (n=7), recommending practical activities (n=1), or directly providing various evidence-based interventions (n=5) to improve depressive symptoms.

### DISCUSSION

The current review suggests future development directions in personalization elements of digital mental health apps for depression based on our findings to improve the effectiveness and user engagement of these apps and foster future research.

# POSTER SESSION 01

Abstract No.: 0581

## **A Study on Verification of the Effectiveness of Screening and CBT Intervention for Internalizing and Externalizing Problems in Children and Adolescents Using K-BYI-2 Group Testing**

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Various emotional and behavioral problems that occur or become problematic during childhood and adolescence may continue into adulthood and have a significant impact on individuals' daily lives, making early identification and intervention crucial. Since COVID-19 outbreak, there has been an overwhelming demand for remote assessment and intervention. In response to this demand, various remote assessment and intervention programs utilizing media and content such as VR and smartphone applications have emerged. Although the effectiveness of remote assessment and intervention programs has been verified in many studies, they are mostly limited to temporary and fragmented use and have limitations in long-term management and intervention. In adolescence, negative emotions such as depression and anxiety, as well as external behavioral problems such as anger and conduct problems, often co-occur, and an approach that takes this into account is required. In addition, in evaluating children and adolescents, information from surrounding individuals such as parents and self-reports is critical. Although there are some tools for evaluating depression, anxiety, and conduct problems in children and adolescents individually, there is currently no tool for comprehensively evaluating these pathologic constructs or problems that frequently occur during this period. To address this need, the Beck Youth Inventories, 2nd edition (BYI-2) was developed by Aaron T. Beck to provide an assessment tool that conforms to the DSM diagnostic criteria. After undergoing standardization research in South Korea, children and adolescents with emotional and behavioral difficulties can be identified early on using K-BYI-2. In addition, conceptualizing the identified pathology of children and adolescents in terms of cognitive-behavioral therapy (CBT) strategies and providing guidelines can be helpful. To efficiently approach mental health issues in children and adolescents and facilitate early intervention, we plan to conduct a group-based K-BYI-2 assessment through a non-face-to-face platform with schools and child and adolescent institutions. We aim to verify the effectiveness of a systematic approach that quickly identifies children and adolescents who need help and provides simple guidelines for CBT intervention. To develop a brief CBT guide for children and adolescents, we conceptualized the diagnostic prototypes for each subscale of the K-BYI-2 (self-concept, anxiety, depression, anger, and destructive behavior) based on the standardized research. Specifically, K-BDI-Y reflects negative thoughts about oneself, the world, and the future, feelings of hopelessness, decreased motivation and enthusiasm, physical and emotional symptoms, while K-BAI-Y captures anxiety and worry, physical symptoms and health concerns, social anxiety, and school phobia. K-BANI-Y represents feelings of anger, victimization, and aggressive and rebellious behavior, while K-BDBI-Y reflects behavioral problems such as aggression, property destruction, lying and stealing, and rule-breaking. To provide brief CBT guidelines for these conceptualized problems, we referred to 'Child and Adolescent Therapy Cognitive Behavioral Procedures(Kendall, 2011)' and provided intervention strategies for each target problem. To conduct remote group testing, we utilized the Link Test System from Korea Psychology Co., Ltd. to enable access through various devices such as smartphones, tablets, and desktops. To consider population size and conduct group testing, we plan to accept K-BYI-2 group testing applications from over 7,890 public institutions for children and adolescents, including elementary, middle, and high schools, in Seoul, Gyeonggi Province, Gyeongsangnam-do Province, metropolitan cities nationwide, and Sejong City, with at least 50 student applicants. After a 3-month intervention period using the provided guidelines, we plan to verify the effectiveness of the intervention by retesting with K-BYI-2. Through this research, we hope to help frontline schools or child and adolescent institutions quickly identify mental health problems and provide early intervention with CBT elements to help children and adolescents adapt and cope.



# POSTER SESSION 01

Abstract No.: 0583

## Interactions between Functions and Appraisal on Maintenance of Nonsuicidal Self-Injury

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### INTRODUCTION

Nonsuicidal self-injury (NSSI) refers to the deliberate, self-directed damage of body tissue without suicidal intent and for purposes not socially or culturally sanctioned (e.g., cutting, burning, and banging or hitting; International Society for the Study of Self-Injury, 2018). A history of engaging in self-injury is one of the strongest risk factors that predict completed suicide (Franklin et al., 2016). NSSI is a type of coping behavior that one engages in when experiencing psychological distress, and mechanism of selecting and repeating NSSI as a coping in such situations has been understood based on “function” and “appraisal.” The functions of NSSI are intrapersonal and interpersonal, and the state of the self-injurer varies with these aspects (Klonsky & Olino, 2008). The appraisal of NSSI, such as anticipation of the consequences of self-injury and self-efficacy to not self-injure, have been suggested to be associated with the maintenance of self-injury (Dawkins et al., 2018). However, the interaction between functions and appraisal on the maintenance of self-injury is unclear. In the present study, we examined the relevance of functions and appraisal to the maintenance of NSSI.

### METHOD

A questionnaire about whether one has engaged in NSSI within the past year, the Japanese version of the Inventory of Statements about Self-injury (ISAS: Klonsky & Glenn, 2009; Iijima et al., 2021 Trans), and the Appraisal of Self-injury Scale (ASIS: Iijima et al., 2020) were administered to 467 individuals who had engaged in NSSI. The ISAS comprises two factors: “intrapersonal function” and “interpersonal function.” The ASIS comprises five factors: “consideration for others,” “obsession with self-injury,” “limit of effect,” “usefulness of self-injury,” and “concerns of negative evaluation.”

### RESULTS

To examine the maintenance of NSSI, a logistic regression analysis was performed. The results showed that interactions between “obsession with self-injury” and “intrapersonal function” (O.R. = 1.70,  $p < .05$ ), between “concerns of negative evaluation” and “interpersonal function” (O.R. = 1.62,  $p < .10$ ), and between “consideration of others” and “interpersonal function” (O.R. = 0.62,  $p < .10$ ) were marginally significant. A simple slope analysis showed that “obsession with self-injury” had a positive effect on maintenance of NSSI when “intrapersonal function” was high, “concerns of negative evaluation” had a negative effect when “interpersonal function” was high, and “consideration of others” had a negative effect when “interpersonal function” was low.

### CONCLUSION

Maintenance of NSSI can be explained by the functions and appraisal of self-injury. The results indicate that efforts to reduce the obsession with self-injury and increase individuals’ efficacy for not engaging in self-injury can reduce NSSI with intrapersonal function. Being concerned about the interpersonal disadvantages of repeated self-injury can reduce NSSI with interpersonal function. Thus, by assessing the functions of self-injury, intervention for each aspect of appraisal may promote recovery from NSSI.

# POSTER SESSION 01

Abstract No.: 0585

## The Efficacy of a Serious Game for Individuals with Interpersonal Trauma

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### INTRODUCTION

Serious games have been developed and used for special purposes in various fields, such as education, medical care, public relations, and management, not simply to enjoy. These serious games must meet a special purpose, along with the fun game characteristics of general games. 'Thinking from the perspective of others' is one of the core therapeutic components of cognitive behavior therapy. The purpose of this study was to develop a serious game in which college students who had experienced interpersonal trauma could practice 'taking an alternative perspective on one's situation by providing mentoring to a game character who had a similar trauma and to verify its efficacy.

### METHOD

A serious game, 'The Best Mentor', was developed as a game that conducts seven sessions of mentoring, and participants must choose an appropriate one among the advice options provided to the game character as a mentor. The participants were 48 students who reported that they had experienced interpersonal trauma in the process of growing up, and currently felt distress about the traumatic event that was discussed in the experiment. The participants were randomly assigned to either the serious game + relaxation training condition (SG+RX, n = 22) or the Virture Rearity relaxation training condition (VR+RX, n = 22). The Korean version of the Smith Relaxation States Inventory (SRSI; Smith, 1998), Post-Traumatic Cognitions Inventory (PTCI; Foa, Ehlers, Clark, Tolin & Orsillo, 1999), Post-Traumatic Emotion Scale (PTES; Cho, 2018) and Chinese Positive Youth Development (CPYD; Shek, Siu, & Lee, 2007), which are self-report assessment tools, were evaluated pre-and post-training. In addition, the changes in 'warmness, dominance, reliability, and accessibility' for happiness, anger, and neutral facial expressions presented on the monitor were evaluated on a 7-point scale.

### RESULTS

After training, relaxation level, post-traumatic cognition, and post-traumatic emotion positively changed in both groups. In the SG+RX group, behavioral competence and confidence in the future increased more than in the VR+RX group, and accessibility to angry/happy faces was also higher.

### CONCLUSIONS

These results suggest that an interactive serious game to take an alternative perspective, learn coping skills, and convey empathy can induce positive changes in those who have experienced interpersonal trauma. It is necessary to verify the efficacy of serious games in clinical samples that have experienced interpersonal trauma and to seek ways to use them.

# POSTER SESSION 01

Abstract No.: 0597

## The Development of Child Abuse Pictorial Assessment Scale for Young Children

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### INTRODUCTION

In Korea, the protection system for child abuse has improved for the past 10 years. While the number of child abuse cases discovered has increased, the rate remains relatively low compared to other countries. While it is possible that the actual rate of child abuse in our country is relatively low, there is also a likelihood that cases are not being adequately identified. As a result, there is an increasing need for sensitive tools to improve the detection rate. Existing tools for assessing child abuse can be broadly classified into two categories: objective tools and projective tools. Objective tools often require adult rater (for observer rating) or interviewer due to young children's limited linguistic abilities. However, this approach may introduce rater subjectivity and/or ethical concerns for children when disclosing their parents' undesirable behaviors. On the other hand, projective assessments were not originally designed for child abuse detection and may raise concerns regarding psychometric properties. To address these limitations, a sensitive assessment tool that clearly addresses child abuse issues but avoids directly asking child about parents' maltreatment toward him/her is needed. Such an approach can reduce feelings of guilt and defensiveness and improve the accuracy of abuse/neglect reporting. The primary objective of this study is to develop a novel tool for assessing child abuse that incorporates objective questions as well as the benefits of projective tests.

### METHOD

The Child Abuse Pictorial Assessment Scale (CAPAS) contains presentation of a stimulus picture and asks questions about what will happen after the stimulus picture. To assess the child's thoughts on the question, a multiple-choice format which contains three pictorial options of selection is presented and asked to pick one. The initial items in the CAPAS were selected based on previous research on child abuse and includes 5 questions of physical abuse, 6 of emotional abuse, 5 of neglect, and 2 of sexual abuse, with the proportion of questions reflecting the relative frequency of each type of abuse occurrence. The appropriateness of the questions was confirmed through expert screening. A total of 141 young children (children recruited from community N=105, children substantiated with child abuse case N=36) completed the initial CAPAS with adult supervision. To address validity issues, this study administered Child Abuse Assessment Scale (CAAS) and Parenting Attitude Test (PAT) along with CAPAS. Since the clinical group in this study does not include sexual abuse, 2 items pertaining sexual abuse were removed in the final data analyses.

### RESULT

The exploratory factor analyses identified 2 factors, each pertaining to abuse (abuse scale, AS) and neglect (neglect scale, NS). Two factors were strongly correlated with each other ( $r=.69, p<.001$ ). Reliability analyses found that whole CAPAS, AS and NS have good reliability (Cronbach's  $\alpha$ 's=.90, .87, & .78, respectively). Scores on CAPAS, AS and NS significantly discriminate between community and clinical groups, demonstrating good discriminative validity. Also, scores on CAPAS, AS and NS are positively correlated with child-report CAAS score ( $r$ 's=.75, .74, & .62, all  $p$ 's<.001) and parent-report punishment parenting attitude score ( $r$ 's=.29, .29, & .23, all  $p$ 's<.01) and negatively correlated with scores on parental expression of support ( $r$ 's=-.29, -.28, & -.25, all  $p$ 's<.01) and parental rational explanation ( $r$ 's=-.28, -.26, & -.26, all  $p$ 's<.01), revealing good convergence validity.

### CONCLUSION

This study has clinical importance in that it developed an effective tool for detecting child abuse. Potential utility of this measure was discussed and suggestion for future study was made.

# POSTER SESSION 01

Abstract No.: 0603

## A Descriptive Examination of the Concomitant Perception of Over-Adaptative People in Japan

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### INTRODUCTION

Over-adaptation is one of the labels of the state image of mental ill-health due to self-inhibiting behavior. Psychological support has been provided to over-adapted individuals, such as acquiring social skills (Mashiko, 2016). However, its effectiveness has been inconsistent (Ren, 2021). One of the reasons for this may be the mixing of subtypes of over-adaptation with different qualities. Previous studies have pointed out that a lack of social skills (Mashiko, 2016) and cognitive distortions (Ishizu, 2012) are influential factors in maintaining adaptive behaviors. However, considering over-adaptive behavior from the perspective of cognitive-behavioral theory, it could be understood within the framework of rule-dominant behavior as it does not depend on its own contingency. Therefore, over-adaptive behavior may be influenced by contingencies. The present study aimed to conduct a descriptive study of cognitive-behavioral characteristics, including contingency perception, in over-adaptive individuals.

### METHODS

A total of 158 university students participated in the study. The following factors were measured: (a) demographics; (b) over-adaptation using the Adult Over-adaptation Scale (Mizusawa, 2014); (c) social skills using the Adult Social Skills Scale (Aikawa et al., 2005); (d) cognitive distortions using the short version of the Irrational Belief Measurement Scale (Mori et al., 1994), (e) entropy perception using the EROS Japanese version (Kunisato, 2011); (f) Behavioral inhibition/activation systems using the BIS/BAS scale, Japanese version (Takahashi et al., 2007); (g) behavioral activation using the BADS-SF, Japanese version (Yamamoto et al., 2015); (h) depression using the CES-D (Shima et al., 1985); and (i) stress reaction using the SRS-18 (Suzuki et al., 1997). This study was approved by the Waseda University Ethics Committee on Research with Human Subjects (consent number: 2021-355).

### RESULTS

Those whose degree of over-adaptation was greater than the median were subjected to hierarchical cluster analysis. This was done to examine the cognitive-behavioral characteristics of over-adapted individuals. As a result, three clusters were extracted that could be interpreted from the dendrogram shape. The first cluster included 23 (29%), 28 (35%), and 29 (36%) participants. One-way analysis of variance was performed to examine the characteristics of each cluster. The results showed that the second cluster had a significantly higher degree of contingency than the other clusters ( $p = .00$ ,  $\eta^2 = 0.36$ ). Cluster two also showed significantly lower degrees of depression and stress reactions than cluster three (depression [ $p = .00$ ,  $\eta^2 = 0.21$ ]; stress reaction [ $p = .00$ ,  $\eta^2 = 0.18$ ]).

### DISCUSSION

The results suggest that multiple over-adaptation subtypes are mixed. Individuals who over-adapt to many contingencies may have low depression and stress levels. That their behavior benefits others may be a pleasant event for them. Conversely, those with low levels of social skills and perceived contingency have high levels of depression and stress; their over-adaptive behavior might be maintained independent of their contingency. Therefore, in supporting over-adapted persons, subtype-specific interventions that consider their cognitive-behavioral characteristics may effectively transform their over-adapted state and reduce depression.

Keywords: Over-adaptation, social skills, cognitive distortions, depressive

## Virtual Reality Exposure for Socially Anxious Adolescents: Study Protocol for a Randomized Controlled Trial (RCT)

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Social anxiety disorder (SAD) is one of the most prevalent, impairing and persistent of all psychiatric disorders and typically emerges during adolescence (Kessler et al., 2005). Notably, the plasticity associated with adolescence provides a window-of-opportunity to deliver early interventions aimed at preventing the development of more severe SAD. Nonetheless, most adolescents with social anxiety (SA) do not receive adequate help and seeking help is often delayed until adulthood due to a number of barriers. A potentially promising solution is to connect to the adolescents' technologically driven environment by conducting exposure in virtual reality (VR). Research in adults with anxiety disorders has shown that virtual reality exposure therapy (VRET) is highly effective, with effect sizes similar to standard in vivo exposure (IVE; Carl et al., 2019; Emmelkamp et al., 2020; Morina et al., 2015). However, despite its potential in adolescents, high-quality research on VRET's effectiveness in this group is scarce (Kothgassner & Felnhöfer, 2020). There is only one pilot study in adolescents (13-16 years) with fear of public speaking (Kahlon et al., 2019). They found that symptoms significantly decreased and that treatment effects were maintained at 1 and 3 month follow up (however there was no control group). In conclusion, whereas VRET seems a promising treatment for adolescents with SAD, there is a compelling need for high-quality research into its efficacy. The aim of this study is to (1) investigate virtual reality exposure's (VRE) acceptability and efficacy compared to traditional exposure and (2) identify differential underlying mechanisms and predictors of outcomes. The research questions will be investigated in a sample of adolescents (13-16 years; N=120) with sub-clinical and moderate SAD. This study utilizes a single-blinded, randomized controlled trial (RCT) with three arms: VRE, IVE, and a WL (waitlist) condition. Participants in the active conditions (N=40 per condition) will follow a 7-session training protocol with the main difference being whether exposure is provided in virtual reality or in real-life. Primary (e.g., social anxiety) and secondary outcomes (e.g., depression, psychosocial functioning) will be assessed at baseline, post-treatment, and during a 3- and 6-month follow-up. In order to determine if similar mechanisms of change are involved in the two types of exposure, expectancy violation, habituation, and self-efficacy will be measured throughout treatment. Similarly, various predictors such as personality traits, clinical, and VR-related variables (e.g., immersiveness, technology-related attitudes) will be assessed at baseline. Finally, after the training, semi-structured interviews will be conducted to obtain qualitative feedback. We hypothesize that both VRE and IVE will be more successful in decreasing SA symptoms than WL, both in short term (post-assessment) and long term (3 and 6 months follow-up). Moreover, we predict that VRE will be as effective as IVE in reducing SA symptoms. Regarding mechanisms of change, we will explore whether the proposed mechanisms are in play in both types of exposure and we will further investigate whether the candidate predictors are related to treatment outcome. This study can contribute to the development of an effective early-stage intervention to prevent adolescents from developing severe SAD and to identify differential mechanisms and predictors to ensure that (1) VRE is optimized and (2) offered to adolescents who are most likely to respond.

# POSTER SESSION 01

Abstract No.: 0622

## Does Anxiety Exacerbate or Protect Against Social Difficulties for Children with ADHD?

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### INTRODUCTION

Children with Attention-deficit/Hyperactivity Disorder (ADHD) not only experience academic difficulties but also are perceived as lacking in social skills (Heiman, 2005). Recent theories view this to be resulting from cognitive distortion in processing social information, executive dysfunction, and/or difficulty in emotional regulation (de Boo & Prins, 2007). Meanwhile, there has been reports of mixed results regarding the effect of anxiety on social functioning in children with ADHD (Bishop et al., 2019). The aim of this study was to identify the specific social skill domains that are impaired in children with ADHD, and examine the extent to which co-occurring anxiety exacerbates vs. protects against specific social difficulties.

### METHODS

Social Skills Improvement System (SSIS; Gresham et al., 2010) was administered to parents and teachers for a sample of 235 clinically-evaluated and carefully-phenotyped children aged 8 to 13 years ( $M=10.19$ ,  $SD=1.39$ ; 94 girls) from the Southeastern U.S. The SSIS measures 7 specific social skill domains (communication, cooperation, assertion, responsibility, empathy, engagement, and self-control). Participants included 105 ADHD, 34 Anxiety Disorder (ANX), 52 with comorbid ADHD and Anxiety Disorder (ADHD-ANX), and 44 healthy controls (HC). Mixed-model ANCOVAs were performed separately for parent and teacher reports. All statistical analysis were performed using Jamovi v. 2.3 (The jamovi project, 2022).

### RESULTS

According to the parent's report, children with ADHD exhibited more social difficulties overall ( $p<0.001$ ). The ADHD x Subscale interaction was also significant ( $p<0.001$ ), with post-hocs indicating that ADHD-related difficulties were specific to communication ( $p=0.007$ ), cooperation ( $p<0.001$ ), responsibility ( $p<0.001$ ), and self-control ( $p<0.001$ ). In contrast, there was no main effect of ANX ( $p=.367$ ), ADHD x ANX interaction ( $p=0.096$ ), or ADHD x ANX x Subscale interaction ( $p=0.224$ ), indicating that co-occurring anxiety neither exacerbated nor protected against parent-reported social difficulties in ADHD. Teachers' report also indicated significant overall social difficulties for children with ADHD ( $p<0.001$ ), as well as a significant interaction between ADHD and ANX ( $p<0.001$ ). Post-hocs indicated that the ADHD and ADHD+ANX group both showed impairments in communication ( $p=0.049$ ), cooperation ( $p<0.001$ ), and responsibility ( $p=0.021$ ), whereas only the ADHD-only group showed impaired self-control ( $p=0.026$ ). However, there was no significant group differences between ADHD and ADHD-ANX. There was also a significant ANX x Subscale interaction ( $p=.04$ ); however, post-hocs indicated that children with anxiety did not demonstrate impairments in any of the tested social skills domains (all  $p>.35$ ).

### DISCUSSION

Both parents and teachers agreed that children with ADHD have specific social difficulties in the areas of communication, cooperation, responsibility, and self-control, but not empathy, assertion, or engagement. They both agreed children with ANX did not show meaningful social impairments. Meanwhile, reporter discrepancy was found for ADHD-ANX, such that co-occurring anxiety may be a protective factor that partially buffers against self-control difficulties for children with ADHD in the classroom. Overall, however, the current findings suggest that the effect of anxiety on social functioning seems to be minimal for both children with ADHD and children without ADHD based on both parent and teacher reports.

# POSTER SESSION 01

Abstract No.: 0623

## Associations between Metacognitive Beliefs about Friendships and Adjustment among Japanese University Students

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### INTRODUCTION

Japanese adolescents' friendships are often described as "superficial," with fear of evaluation and avoidance of intimacy linked to maladjustment (Ishimoto et al., 2009). These attitudes involve self-focused attention, the mentality of fearing evaluation by others, injury to oneself and others, and avoidance of intimacy. These can be understood within the framework of Metacognitive therapy as the Cognitive Attention Syndrome (CAS), a middle-level construct within the Self-Regulatory Executive Function (S-REF) model, is responsible for avoiding intimacy and fearing evaluation and self-injury, while upper-level metacognitive beliefs control the CAS and are involved in forming and maintaining superficial friendships. Although metacognitive beliefs and superficial friendships are not necessarily related, the relationship between metacognitive beliefs and superficial friendships remains unclear. To date, few studies have empirically examined this relationship. Therefore, this study aimed to examine superficial friendships from the perspective of metacognitive beliefs.

### METHOD

A total of 215 Japanese university students (46 male, 164 female, and 4 others, mean age  $18.87 \pm 1.23$  years). The following measures were used: (a) demographic information, including gender and age; (b) metacognitive beliefs related to friendships were assessed using the metacognitive beliefs about attention scale (which includes negative metacognitive beliefs about self-focused attention, positive metacognitive beliefs about self-focused attention, positive metacognitive beliefs about attentional bias, negative metacognitive beliefs about attentional bias) (MFAQ; Tomita et al., 2020); (c) avoidance of intimacy with others, evaluated using the Friendship Scale (consisting of self-closure, avoidance of being hurt, avoidance of hurt, pleasant relationships) (Okada, 1999); (d) sense of school adjustment, assessed using the Adolescent Adjustment Scale (Okubo, 2005), and (e) internal adjustment, which was evaluated using the Psychological Well-being Scale (Nishida, 2000). A theoretical path model, with metacognitive beliefs about friendships as the independent variable, avoidance of intimacy with others as the mediating variable, and school and internal adjustment as the dependent variables, was developed and tested using structural equation modeling (SEM).

### RESULTS

The results of the SEM indicated a good fit of the data ( $GFI=.98$ ,  $AGFI=.94$ ,  $CFI=.99$ ,  $RMSEA=.03$ ). Moreover, the analysis showed a positive association between metacognitive beliefs related to attention bias and avoidance of intimacy. Additionally, negative metacognitive beliefs about self-focused attention, negative metacognitive beliefs about attention bias, self-closure, and avoidance of being hurt were associated with maladaptive states among adolescents. Furthermore, the findings also revealed that metacognitive beliefs about attentional bias mediated avoidance of hurt and were associated with higher levels of school and internal adjustment. Conversely, negative metacognitive beliefs about attentional bias mediated avoidance of being hurt and were associated with lower levels of internal adjustment.

### DISCUSSION

Our results suggest that paying attention to external threats is an important factor in the development and continuation of superficial friendships. In addition, it was observed that among individuals with superficial friendships, focusing on the reactions and behaviors of others to avoid negative impressions can lead to maladaptive states. Therefore, to support maladjusted Japanese adolescents with superficial friendships, it may be beneficial to focus on their behavior at school.

# POSTER SESSION 01

Abstract No.: 0630

## Clinical Validation of Transdiagnostic Group Cognitive Behavioral Nursing Intervention Program for Elderly with Emotional Disorders

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### INTRODUCTION

At present, there is a lack of clinical psychological nursing model for elderly with emotional disorders in China. We tried to introduce and compile transdiagnostic group cognitive behavioral nursing intervention (TD-GCBT) program, and carry out the clinical validation.

### METHOD

Firstly, Delphi method was used to investigate the suitable strategies of TD-GCBT for elderly with emotional disorders. We screened out 42 cognitive behavioral intervention strategies, and developed expert consultation forms, which were distributed to 20 experts in the fields of geriatric psychiatry, psychiatric care and cognitive behavioral therapy. After two rounds of consultation, we got the top ten strategies. Combined with the characteristics of psychological nursing model in China, the key strategies and settings were improved, and a TD-GCBT program and self-help manual suitable for Chinese elderly with emotional disorders were developed. In addition, 120 elderly patients diagnosed with emotional disorders were randomly divided into TD-GCBT group (N = 40), Transdiagnostic individual cognitive behavioral nursing intervention (TD-CBT) group (N = 40) and treatment as usual (TAU) group (N = 40). 117 cases were followed-up. The main indicators were anxiety, depression, cognitive style, coping style, quality of life and caregiver burden, and the influence factors were discussed.

### RESULTS

There were significant differences in PSP scores between TD-GCBT and TAU group after treatment ( $p < 0.001$ ). The effect was maintained during the follow-up period of 6 months and 12 months. The results of repeated measurement analysis of variance showed that there were significant differences in the time point, grouping and interaction effect between the two groups ( $p < 0.001$ ). The scores of the caregiver burden scale in the two groups were significantly improved after treatment ( $p_{TD-GCBT} < 0.001$ ,  $p_{TAU} < 0.05$ ). Repeated measures analysis of variance showed that there were significant differences in time-point effect, grouping effect and interaction effect between the two groups ( $p < 0.001$ ). Compared with the TAU group, the scores of social function in TD-CBT group were significantly higher after treatment, 3 months follow-up and 9 months follow-up, the caregiver burden score was significantly lower than TAU group. Compared with TD-CBT group and TAU group, the scores of HAMD, PHQ-9, HAMA and GAD-7 in TD-GCBT group showed the main effect from baseline to 12 months ( $p < 0.001$ ), the main effect of the group ( $p < 0.001$ ) and the interaction of time  $\times$  group ( $p < 0.001$ ) were significant. The score of TD-GCBT group decreased the most compared with the other two groups.

### DISCUSSION

This study is the first TD-GCBT program for the elderly with emotional disorders in China. We found that it can effectively improve the emotion, reduce the burden of caregivers and improve the patient's fixed thinking, so that patients can cope with the problems in their lives more effectively, and improve the quality of life. The validity of the program was preliminarily verified, which provided the basis for developing and popularizing the group nursing intervention of senile emotional disorder in our country in the future.



## The Structure of Over-Adaptation in Japanese College Students

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Adaptation is a state of harmony between "external adaptation," that is, adaptation to the social and cultural environment, and "internal adaptation," adaptation to psychological stability and satisfaction (Kitamura, 1965). An over-adaptive state is defined as "a state in which internal adaptation is difficult due to excessive external adaptation" (Kuwayama, 2003). A common understanding has been reached that over-adaptation consists of the relationship between the two aspects of external and internal adaptation (Mashiko, 2013a). Previous studies on over-adaptation have the problem that the structure of over-adaptation is not unified. For example, among the five factors on the Over-Adaptation Tendency Scale for Early Adolescence created by Ishizu (2006), some studies include "self-inhibition" in the "external aspect" (Mashiko, 2010; Kazama, 2015), while others include "self-inhibition" in the "internal aspect" (Ishizu & Ambo, 2008; Ishizu & Ambo, 2009; Asai, 2014). There are differences in the indicators of the "external aspect" and "internal aspect" among studies. Some studies also use another variable, "sense of authenticity" (Mashiko, 2010; Mashiko, 2013b), which is "the degree of one's sense of being to one's core self" (Ito & Kodama, 2005), as an indicator of the "internal aspect." The contents of the "external aspect" and the "internal aspect" differ among studies, and comparisons among studies on the structure of over-adaptation are not easy, which is a problem that has hindered the development of research on over-adaptation. Therefore, the purpose of the present study was to clarify the structure of over-adaptation. A questionnaire survey was administered to Japanese undergraduate and graduate students from September to November 2022 using Google Forms, and 257 valid responses were obtained. The items used in the questionnaire were a face item asking about grade, age, and sex; the Over-Adaptation Tendency Scale for Early Adolescence (Ishizu, 2006) was used to measure over-adaptation; and the Sense of Authenticity Scale (Ito & Kodama, 2005) was used to measure sense of authenticity. As a result of factor analysis of each scale, a 27-item, five-factor structure was confirmed for the Over-Adaptation Tendency Scale for Early Adolescence, with six items deleted. One item was deleted from the Sense of Authenticity Scale, and a six-item, one-factor structure was confirmed. The results of t-tests on the scores of women and men showed no significant differences between the sexes in any of the variables. Structural equation modeling was conducted on two hypothesized models of the structure of over-adaptation. The goodness-of-fit for Model 1, which assumed "internal aspect" as a higher-order factor for "self-inhibition" and "self-doubt" was  $\chi^2(4) = .577$ ,  $p = .966$ ,  $GFI = .999$ ,  $AGFI = .997$ ,  $CFI = 1.000$ ,  $RMSEA = .000$ ,  $AIC = 22.577$ . The goodness-of-fit for Model 2, which assumed "internal aspect" as a higher-order factor for "self-doubt" was  $\chi^2(5) = 18.329$ ,  $p = .003$ ,  $GFI = .972$ ,  $AGFI = .917$ ,  $CFI = .946$ ,  $RMSEA = .102$ ,  $AIC = 38.329$ . Thus, Model 1 was adopted. Based on the results of the t-test, it can be said that over-adaptation among college students is a concept that can be captured without classifying it according to sex. Based on the results of the structural equation modeling, future studies on over-adaptation can be developed on the assumption that over-adaptation has an "external aspect" as a higher-order factor of "solicitude for others," "living up to one's expectation," and a "desire to be perceived as a good person;" as well as an "internal aspect" as a higher-order factor of "self-inhibition" and "self-doubt."

# POSTER SESSION 01

Abstract No.: 0648

## Supports of School Counselor and School Nurse (Yogo Teacher) for Childrens Sleep and Caffein Intake through Childrens Self-Governing Activities in Japanese Junior High School: Pre-study for Effective Intervention

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### INTRODUCTION

Shorts sleep duration of Japanese children has been pointed out. While the recommended amount of sleep for children ages 14-17 is 8-10 hours (National Sleep Foundation, 2011), the average sleep duration of Japanese junior high school students were eight hours and thirty minutes for ages 10-14, seven hours and forty minutes for 14-19 ages (General Affairs and Statistics Bureau, 2021). The Ministry of Education, Culture, Sports, Science and Technology (MEXT) (2021) has listed research on childrens sleep as one of the future issues related to the development of their lifestyle habits. Furthermore, children are more likely to easily consume caffeine in recent years. Children may consume caffeine as a preference without having sufficient knowledge of its potential health hazards. This study is a basic research to support junior high school students about sleep and caffeine intake through their committee activities. The Committee activities are one of the self-governing activities of junior high school students. The School Health Committee is one of the committee activities to promote health through cooperation among the school, family, and community. The Yogo teacher, school nurse in Japan, often plays the role of facilitator. A yogo teacher is a special licenced educator who supports children's growth and development through health education and health services on the basis of principles of health promotion in all areas of educational activities in school (Japanese Association of Yogo Teacher Education, 2003).

### METHODS

Participants were 450 Japanese junior high students (average age 14.04, SD=.81).

Original items for scaling students sleep were developed by yogo teachers. Those were consisted in sleep habits (wake-up time, time of sleep, and intermittent awakenings), feeling on awakening, daytime sleepiness, difficulty falling asleep, nocturnal awakening, cause of late bedtime, and caffeine intake. The examination was administered to all students of a junior high school as a part of the School Health Committee. Students were answered online via thier tablets provided by the school.

### RESULTS

Pearson's r showed wake-up time and time of sleep ( $r=.34$ ), feeling on awakening and daytime sleepiness( $r=-.22$ ), feeling on awakening and difficulty falling asleep ( $r=-.20$ ), and difficulty falling asleep and nocturnal awakening ( $r=-.20$ ,  $p>.01$ ). ANOVA showed differences between groups of caffeine intake for time of sleep ( $F=3.16$ ,  $p<.01$ ,  $h=.33$ ). Kruskal-Wallis test had a trend for time of sleep with frequency of caffeine intake ( $H=6.37$ ,  $p<.10$ ).

### DISCUSSION

We conducted a basic investigation of sleep and caffeine intake among junior high school students, utilizing their self-governing activities in this study. Wake-up time and time of sleep, feeling on awakening and daytime sleepiness, and nocturnal awakening were associated. We supported previous studies that there was no relation between caffeine intake and children's sleep behavior. It was suggested that supports for healthy sleep habits and supports related to healthy caffeine intake should be implemented individually.

# POSTER SESSION 01

Abstract No.: 0668

## Development of Virtual Reality Group Therapy Program in the Metaverse for Social Anxiety Disorder

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Social anxiety disorder is characterized by fear of being exposed to social situations and avoidance of social situations. The age of onset is typically in adolescence and early adulthood, when active social activities are needed, and hinders normal psychosocial adaptation. Therefore, early, accessible and sustainable treatment is required. However, due to their characteristics of being afraid to meet people, affected individuals have difficulty facing a counselor and receiving treatment, which leads to a high dropout rate. For this reason, we devised a more accessible digital-based treatment for social anxiety using the Virtual Reality (VR) and metaverse for accessibility and sustainability. Moreover, VR group therapy in the metaverse has the advantage of reducing the burden of face-to-face meetings and making cognitive behavioral therapy more efficient. In this study, we thus designed and implemented a VR cognitive-behavioral group therapy program to reduce social anxiety within the metaverse for early Korean youth with social anxiety tendencies, and tested its efficacy in reducing the symptoms of social anxiety. Ten young adults with social anxiety tendencies were recruited for the study, of which six were experimental groups and four were control groups. To test the effects of the customization freedom of avatars in the metaverse space on reducing social anxiety, the experimental group was divided into a high-degree freedom group (n=3) and a low-degree freedom group (n=3). And the control group did not participate in the therapy program. The VR group therapy program consisted of five sessions which were based on cognitive behavioral therapy and each program took 90 minutes. Pre- and post-tests were conducted twice with the same tool, one week before the start of the program and one week after the end of the program. Repeated measures ANOVA was conducted to assess changes in variables after treatment. As a result, the experimental group showed a significant decrease of social anxiety level, whereas the change in the control group was not significant. No significant differences between low- vs. high-degree freedom in avatar customization were found. Our results are encouraging in that it applies and validates cognitive behavioral group therapy, which was previously conducted face-to-face, to the virtual space in metaverse. In short, this study shows the efficacy and advantages of digital-based treatment, such as giving various stimuli required for treatment conveniently. This study may help future development of metaverse VR therapeutics.

# POSTER SESSION 01

Abstract No.: 0672

## **Moderating Effects of Psychological Flexibility on the Relationship between Empathy and Reactive/Proactive Aggressiveness**

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### INTRODUCTION

Previous studies have not found a consistent relationship between empathy and aggressiveness. Therefore, it is necessary to examine the relationship by using other variables. Recently, the relationship between psychological flexibility and aggressiveness has attracted attention. However, research on this topic has not progressed in Japan. In addition, no studies have examined the relationship between empathy and aggressiveness and focused on the interaction between empathy and psychological flexibility. Hence, this study aimed to examine the effects of psychological flexibility and inflexibility on reactive and proactive aggressiveness. It also investigated the moderating effects of psychological flexibility and inflexibility on the relationship between empathy and reactive and proactive aggressiveness.

### METHODS

This study was conducted between November 2 and 24, 2022, among students attending a Japanese university. In total, 198 subjects agreed to participate. Of them, those with even one missing item on the questionnaire were excluded from the analysis, finally leading to 123 participants. Participants' mean age was 20.74 years ( $SD=1.37$ ). This study used the (1) Self-report Reactive Aggressiveness Scale for University Students, (2) Self-report Proactive Aggressiveness Scale for University Students, (3) Multidimensional Emotional Empathy Scale, (4) Avoidance and Fusion Questionnaire for Youth, and (5) Acceptance and Action Questionnaire-II.

### RESULTS

A hierarchical multiple regression analysis was conducted with reactive and proactive aggressiveness as the objective variables and empathy, psychological flexibility, and psychological inflexibility as the explanatory variables. The results revealed a negative relationship between empathy and proactive aggressiveness and a positive relationship between psychological inflexibility and reactive and proactive aggressiveness. Furthermore, psychological inflexibility strengthened the negative relationship between empathy and proactive aggressiveness.

### DISCUSSION

The results indicated that higher psychological inflexibility was associated with higher reactive and proactive aggressiveness. Furthermore, psychological inflexibility strengthened the negative relationship between empathy and proactive aggressiveness. Hence, psychological inflexibility was a risk factor for aggressiveness. In addition, the negative relationship between empathy and proactive aggressiveness was strengthened by psychological inflexibility. Future intervention research should focus on psychological inflexibility in individuals with low empathy to improve aggressiveness.

# POSTER SESSION 01

Abstract No.: 0673

## Development and Effects of Mobile App-Based Acceptance and Commitment Therapy for Clinical Outpatients with Depressive Symptoms

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### INTRODUCTION

Due to the increasing social costs associated with rising prevalence of depression, cost-effective and evidence-based psychotherapeutic methods are being tried more diversely than before. Acceptance and Commitment Therapy (ACT) for depression is an effective method that contributes to the reduction of depressive symptoms and helps prevent recurrence by enhancing psychological flexibility. Its effectiveness has been repeatedly tested through a variety of studies. In addition, due to the development of information and communication technology, psychological intervention using mobile technology has been developed, but only a few studies have demonstrated the effects of mobile app-based ACT. Accordingly, this study aimed to develop and test the effects of mobile app-based ACT for clinical outpatients with depressive symptoms.

### METHOD

A total of 38 outpatients diagnosed depressive disorder (3 men and 17 women with mean age  $\pm$ SD of  $37.50 \pm 10.27$ ) were randomly assigned to a treatment group (n=21) and a control group (n=17), respectively. The treatment group underwent mobile app-based ACT for 4 weeks, while the control group waited without treatment, and both pre- and post-assessment scores of the two groups were compared. They completed Center for Epidemiologic Studies Depression Scale (CES-D), Acceptance-Action Questionnaire-II (AAQ-II), Hospital Anxiety and Depression Scale for Koreans (HADS), Avoidance and Fusion Questionnaire for Youth (AFQ-Y), Cognitive Defusion Effects Scale (CDES), Mindful Attention Awareness Scale (MAAS), Engaged Living Scale (ELS), and Satisfaction with the Life Scale (SWL). The data were analyzed using ANCOVA to test comparisons with two groups.

### RESULTS

The pre-dependent measures were used as covariates, and when considering the comparison between the two groups for post assessment scores, the treatment group showed significant improvement in depressive symptoms compared to the control group. Additionally, the treatment group also showed improved acceptance, rigidity, cognitive defusion, values, and commitment.

### CONCLUSIONS

The results of the present study suggest that mobile app-based ACT is a cost-effective **METHOD** that not only reduces depressive symptoms but also contributes to the improvement of key components of ACT. Finally, it will be possible to promote related studies in the future to expand the effects of mobile app-based ACT in clinical setting for individuals with depressive symptoms.

# POSTER SESSION 01

Abstract No.: 0676

## Digital Therapeutic Intervention for Smoking Cessation in Adult Smokers

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### INTRODUCTION

Nicotine dependence is a chronic and recurrent disease that requires long-term and consistent therapeutic management. Traditional treatments have included taking prescription medications and face-to-face counseling based on cognitive behavioral therapy (CBT). In many cases, however, some patients may not take their medications as described, which can reduce their effectiveness. Face-to-face counseling for smoking cessation frequently necessitates numerous visitings, which is time-consuming and expensive for patients. Digital therapeutics can be an alternative option that can supplement the limitation of existing treatment for smoking cessation, by increasing accessibility and affordability. The purpose of this study was to evaluate the safety and effectiveness of the program for smoking cessation.

### METHOD

For smoking cessation, we developed a treatment program that is a combination of a mobile application and VR. The program was based on cognitive behavioral treatment (CBT) and focuses on the change of the dysfunctional and irrational thoughts, beliefs, and behaviors that are associated with smoking. Examples of strategies used in this program include 'Relaxation techniques', 'Re-framing thoughts', 'Problem-solving', and 'Social support'. In addition, the motivational enhancement therapy (MET) approach was used to help the individual identify their reasons for wanting to quit and to increase their awareness of the benefits of quitting.

Adult men and women (N=30) who visited the Seoul St. Mary's Hospital to receive smoking cessation treatment were randomly assigned to [digital treatment group (DTG)] or [basic treatment group (BTG)]. DTG used the treatment application for 12 weeks, performed the CBT-based educational content given for each week, and kept daily smoking/cessation records. Additionally, they visited the hospital at 4-week intervals to conduct VR training, consisting of relaxation training, skills to deal with cravings, and problem-solving. BTG was provided with standardized educational materials for smoking cessation for 12 weeks and watched a CBT-based smoking cessation education video every 4 weeks. Both groups received the same level of medications for smoking cessation medication as before for the duration of the study.

### RESULTS

The abstinence rate at 12 weeks for DTG showed 55.6%, and BTG showed 38.5%. The average number of cigarettes smoked over the course of seven days at the 12-week mark was 2.2 for DTG and 14.4 for BTG, showing minimal cigarette usage in DTG.

### DISCUSSION

The CBT-based treatment application has the potential to increase the effectiveness of smoking cessation treatment by expanding access to ongoing therapeutic intervention and smoking cessation treatment. This study suggests that a new therapeutic intervention called complementary digital therapy for smoking cessation treatment can potentially contribute to reducing smoking problems in light to heavy smokers.

# POSTER SESSION 01

Abstract No.: 0683

## Clinical Effectiveness of Digital Therapeutics for the Improvement of Alcohol Use Disorder Based on Cognitive Behavioral Treatment in Koreans

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### INTRODUCTION

Recently, the growth of the digital healthcare service market is accelerating. The need to utilize digital software programs in the field of behavioral modification and chronic diseases is especially being emphasized. In South Korea, drinking is the number one disease burden factor. Also, the prevalence of alcohol use disorder (AUD) and the rate of drunk driving accidents are the highest among the OECD countries. In particular, due to the influence of COVID-19, alcohol-related deaths exceeded 10 per 100,000 people for the first time in 2020 which highlights that alcohol use (AU) is a serious social problem. Cognitive behavioral therapy (CBT) is an effective evidence-based treatment for AUD, one of the representative chronic diseases. To improve the AU problem, a CBT-based 12-week digital program, combination of mobile application and virtual reality, was developed. The safety and effectiveness of CBT-based DTx, targeted toward patients with AUD, were verified in this exploratory clinical study.

### METHOD

In this study, the CBT-based DTx was designed to improve awareness of cravings and behavioral processes by identifying the situations and emotions that trigger AU. Furthermore, there was included training content to correct dysfunctional and irrational thinking patterns for AU and to cope with trigger factors. In addition, Motivational Enhancement Therapy (MET) was used to enhance the therapeutic effect by promoting changes in AU behavior with consideration of user's motivation. From January to September 2022, an exploratory clinical study was conducted to provide 12 weeks of treatment to improve addiction in 30 patients diagnosed with AUD. After signing written consent, study subjects who were qualified to the screening assessment were randomly assigned to either the 'digital therapy group (DTG)' or the 'basic therapy group (BTG)'. DTG had digital therapy that provides digital content education through mobile application and virtual reality. Meanwhile, BTG got basic treatment which provides both written and video educational materials. At the time of 12th week, abstinence from alcohol drinking cessation and average daily alcohol consumption were evaluated.

### RESULTS

In the 12th week, the effect of abstinence from alcohol drinking cessation was higher in the DTG, utilizing the digital therapeutics, compared to the BTG. The DTG showed a 40% abstinence rate in the 12th week, and the BTG showed a 20% abstinence rate. Compared to the baseline, the DTG abstinence rate increased by 13.3%, while the BTG abstinence rate decreased by 6.7%. In addition, the average alcohol consumption per day was 2.7 drinks in the DTG and 4.3 drinks in the BTG which shows a low level of AU in the DTG.

### CONCLUSIONS

Since the COVID-19 pandemic, in-patient treatment for AUD has been continuously decreasing, and psychosocial services for alcoholics are insufficient compared to other diseases. DTx is an alternative treatment that can overcome the practical limitations of existing addiction treatments. The results of this study suggest the potential of improving clinical effectiveness by supplementing drug treatment and treatment. The CBT-based DTx will increase accessibility to alcoholism treatment and can contribute to the growth of patient-centered participatory medicine. Also, healthcare workers could monitor the patient's daily condition and reflect DTx in the treatment plan.

# POSTER SESSION 01

Abstract No.: 0690

## **The Moderated Mediating Effect of Mindfulness in the Relations among Parental Psychological Control, Emotional Dysregulation and Non-suicidal Self Injury (NSSI) in Korean Adolescents**

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Non-suicidal self-injury (NSSI) is a behavior that harms oneself without suicidal intent. Recently, NSSI has become a major concern among Korean mental health professionals who work with adolescents. Previous research has indicated that parental psychological control and emotional dysregulation are significantly associated with adolescent NSSI (Fox et al., 2015; Nock, 2009). Mindfulness is often considered as part of treatment for NSSI (Heath, Joly, & Carsley, 2016); however, there has been limited research examining the role of mindfulness in NSSI among Korean adolescents. Thus, the current study is to investigate whether emotional dysregulation mediates the relation between parental psychological control and NSSI, and to examine the moderated mediation effect of mindfulness. Participants of the study were 354 Korean adolescents (ages 13–17), who completed self-report measures such as the Psychological Control Scale-Youth Self Report (PCS-YSR), the Korean Version of the Difficulties in Emotional Regulation Scale (K-DERS), Cognitive and Affective Mindfulness Scale-Revised (K-CAMS-R), and Functional Assessment of Self-Mutilation (FASM). Data were analysed with SPSS 27.0 and SPSS Macro program. Results of the study were as follows: First, a partial mediating effect of emotional dysregulation was found in the relation between parental psychological control and non-suicidal self-injury. This means that parental psychological control not only directly affects NSSI, but also indirectly affects NSSI through emotional dysregulation. Second, the moderating effect of mindfulness in the relation between emotional dysregulation and NSSI was significant, suggesting that mindfulness can decrease the possibility of NSSI even if adolescents have difficulties with emotional regulation. Third, it was also found that mindfulness moderates the effect of parental psychological control on NSSI through emotional dysregulation. That is, adolescents' mindfulness ability can act as an internal protective factor against NSSI, even when parental psychological control influences emotional dysregulation as well as NSSI. Implications for effective intervention and prevention were discussed based on the findings of the study.



# POSTER SESSION 01

Abstract No.: 0691

## Effectiveness of a Randomized Controlled Trial of Online-Based Cognitive Behavioral Group Therapy (CBGT) for University Students

Miki Wakasugi\*, Kei-ichiro Watanabe, Eri Kawase, Risa Ito, Takayuki Yokoyama, Honami Arai, Maiko Ochiai

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### INTRODUCTION

A recent study indicated that university students suffer from depression and anxiety due to adolescent issues (Miyake & Okamoto, 2015), as well as stress caused by academic tasks. Cognitive behavioral therapy has been shown to reduce depression and anxiety in many studies, however, in Japan, few studies have investigated the effectiveness of online cognitive behavioral group therapy (CBGT) in a randomized controlled trial (RCT). Thus, the aim of this pilot study was to evaluate the effectiveness of an online-based CBGT intervention that focuses on Cognitive Restructuring Therapy due to the coronavirus pandemic for university students in RCT.

### METHODS

A two-armed randomized controlled trial was used with a calculated sample of  $N = 75$  participants, who were divided into two blocks of 49. For five weeks, the intervention group received five 45-minute workshops each week. Both the intervention group and the wait-list control group completed questionnaires during the same periods: pre and post for the former group, and pre1 and pre2 for the latter. To compare both groups, five questionnaires were used: The Japanese version of the POMS 2nd Edition-Adult Short (Juvia, P.H. & Douglas, M.M., 2015), the Japanese version of the BDI-II(Beck, A. T., et al, 2002), the Japanese version of the GAD-7 (Spitzer, R.L., et al, 2006), the Japanese version of the PHQ-9(Kroenke, K. et al, 2001) and the Depression and Anxiety Cognition Scale: DACS (Fukui, I., 1998). The study analyzed the data using a two-way analysis of variance for repeated measurements, with time (pre and post, pre1 and pre2) and group (intervention, wait-list control) as factors. Hence, the independent variables were defined as time and group, while the dependent variable was the questionnaire score.

### RESULTS

The main effects of BDI-II and PHQ9 differed significantly between the time of the intervention group and that of the wait-list group (BDI-II:  $F(1.00, 47.00) = 6.50, P = 0.01, \eta^2 = 0.03$ , PHQ9:  $F(1.00, 47.00) = 7.27, P = 0.01, \eta^2 = 0.04$ ). There was no significant difference in the main effect between the groups, and interaction between time and group. Furthermore, POMS2, BDI-II and PHQ9 were significantly different between the post-period of the intervention group and the pre2-period of the wait-list group (POMS2:  $F(1,47) = 4.32, P = 0.04$ , BDI-II:  $F(1,47) = 5.16, P = 0.03$ , PHQ9:  $F(1,47) = 5.80, P = 0.02$ ). The BDI-II, PHQ9, and 3 subscales of DACS: (threat prediction, self-denial, and interpersonal threat), showed a significant difference between the pre-and post-periods for the intervention group ( $P = 0.01, P = 0.00, P = 0.04, P = 0.04, P = 0.04$ , respectively). In addition, results showed a small effect size for the main effect of the group: POMS2( $\eta^2 = 0.05$ ), BDI-II( $\eta^2 = 0.04$ ), GAD7( $\eta^2 = 0.02$ ), PHQ9( $\eta^2 = 0.03$ ) and a subscale of DACS: self-denial( $\eta^2 = 0.03$ ).

### DISCUSSION

In conclusion, online CBGT (Cognitive Restructuring Therapy) impacted student's mental health, especially in terms of depression. There is a possibility that increasing the sample size would reveal significant differences in the main effect and interaction between the two groups. In addition, university student's feeling and stress levels likely vary over the course of workshops due to academic events, such as examinations and holidays, thus, further research is needed to account for school events. In terms of depression prevention, online-based Cognitive Restructuring Group Therapy is evidently worthy solutions.

# POSTER SESSION 01

Abstract No.: 0695

## **Developing and Validating the Effectiveness of a Web-Based Program for Accepting Differences in Romantic Relationships**

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The attitude of accepting differences in a couple relationship is essential for maintaining a harmonious relationship. However, conflicts often arise due to differences in values, personality, and behavior, and many couples are hesitant to seek offline psychological intervention. Because couples' problems are viewed as private and there is a reluctance to discuss them with others, including counselors. As a result, psychological intervention using digital devices is expected to be an effective alternative that reduces the barriers to traditional offline psychotherapy. This study developed a four-session web-based program for cultivating acceptance of differences and examined its efficacy. The program's content was based on Integrative Behavioral Couple Therapy (IBCT) and other acceptance-oriented therapies and reflected South Korean cultural characteristics. A total of 34 couples were randomly assigned to either a self-guided or clinician-guided group. Participants in the self-guided group completed a web-delivered task over four days, while participants in the clinician-guided group received feedback from the researcher on their responses. The results showed that both groups reported improvements in self-reported acceptance of differences, perception of partner's acceptance of differences, relationship satisfaction, and reduction of distress due to differences. Additionally, the clinician-guided group exhibited positive changes in more diverse aspects of their relationship, such as increased constructive communication, couple relationship intimacy, stability, and life satisfaction, and a reduction in conflict frequency and depression. Women in the clinician-guided group reported a greater increase in couple intimacy and life satisfaction and a greater decrease in distress due to differences than men. Therefore, it can be inferred that the effect of clinical guidance was greater for women than for men.

# POSTER SESSION 01

Abstract No.: 0700

## **The Effectiveness of Virtual Reality Stabilization Intervention on Alleviating Psychological Distress in Cured COVID-19 Patients and Healthcare Workers: Study Protocol for a Randomized Controlled Trial**

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### INTRODUCTION

The prolonged Coronavirus Disease 2019 (COVID-19) pandemic has caused psychological difficulties such as stress, anxiety, depression, and in many people all over the world. The COVID-19 patients and medical staffs working with COVID-19 patients appear to be most at risk of experiencing traumatic distress, we developed the virtual reality stabilization program that can effectively intervene in the aftermath of COVID-19. We will conduct a randomized controlled trial to confirm that VR stabilization intervention reduces posttraumatic stress symptoms, depression, anxiety and in COVID-19 patients and medical staffs. In this study, we aim to determine whether VR stabilization intervention is effective in mitigating COVID-19-related psychological distress.

### METHODS

This study is a randomized controlled trial. Among recovered COVID-19 patients and healthcare workers working in COVID-19 wards, we will include 50 individuals each with a PTSD Checklist-5 total score of 30 or higher. All participants will undergo (1) psychological assessment including PTSD Checklist-5, Beck Depression Inventory-II, State-Trait Anxiety Inventory-State, Event-Related Rumination Inventory, Fear of Coronavirus-19 Scale, WHO Quality of Life Scale Abbreviated Version, and an Expanded Posttraumatic Growth Inventory, and (2) physiological tests like as collection of salivary gland cortisol and a heart rate variability. All participants will be randomly assigned to the experimental group and the control group respectively. Participants in the experimental group will receive the VR stabilization intervention a total of five sessions once a week. We will give participants in the experimental group an inter-session assignment to practice stabilization techniques while watching their recorded VR videos every day. On the other hand, participants in the control group will experience the stabilization techniques developed in the app. Control group participants will receive a app-based stabilization intervention once a week for a total of five sessions, and be given inter-session assignment to practice the stabilization technique from the previous session using the app.

### DISCUSSION

We expect that the immersive VR stabilization intervention will be more effective than an app-based stabilization intervention in alleviating COVID-19-related psychological distress. If the effectiveness and feasibility of the VR stabilization intervention developed in this study is confirmed, it could be a simple and effective option for recovery for people experiencing COVID-19-related psychological distress. Furthermore, the intervention can be easily applied to people in other areas who have difficulty managing stress, anxiety, depression, and symptoms of PTSD.

# POSTER SESSION 01

Abstract No.: 0705

## Online-Therapy for Adolescents with Body Dysmorphic Disorder – Effectiveness of the Internet-Based Therapist-Guided Cognitive Behavioral Therapy Program ImaginYouth

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### INTRODUCTION

Body dysmorphic disorder (BDD) is especially prevalent in adolescence. Long waiting times for a therapy slot, skepticism toward psychotherapy, and feelings of shame make it difficult for sufferers to seek a cognitive behavioral therapy (CBT), which is considered the gold standard treatment for BDD. The aim of this study is to evaluate a low-threshold, internet-based therapist-guided CBT (ImaginYouth) for adolescents with BDD.

### METHOD

In a single-blind, randomized-controlled trial, adolescents (15-21 years) with a primary diagnosis of BDD were randomly assigned to ImaginYouth or an active control condition (supportive online therapy, SOT). ImaginYouth includes 12 weekly interactive CBT sessions (including homework), and the SOT includes 12 weeks of access to a BDD psychoeducational information center. In both conditions, participants are either psychotherapeutically (ImaginYouth) or supportively (SOT) accompanied via asynchronous, chat-based conversations with a study therapist. The primary measure is change in expert-rated as well as self-reported BDD symptom severity from pre to post intervention (12 weeks) on the Yale-Brown Obsessive-Compulsive Scale Modified for Body Dysmorphic Disorder (BDD-YBOCS) and the Dysmorphic Concerns Questionnaire (DCQ), as well as the responder rate ( $\geq 30\%$  symptom reduction on the BDD-YBOCS). The study is registered in the German Register of Clinical Studies (Deutsches Register Klinischer Studien; DRKS00022055), and the study protocol has already been published (Hartmann & Schmidt et al., 2021; <https://doi.org/10.3389/fpsy.2021.682965>).

### RESULTS

In a preliminary completer analysis (current status:  $n = 28$ ; until the congress, all participants will have completed the program), there was a significant and large change in expert-rated and self-reported BDD symptom severity in the ImaginYouth condition (BDD-YBOCS:  $p < .001$ ,  $\eta^2 = 0.82$ ; DCQ:  $p < .01$ ,  $\eta^2 = 0.56$ ). The reduction in expert-rated BDD symptomatology was significantly greater in the ImaginYouth condition than in the SOT condition (BDD-YBOCS: interaction effect group x time:  $p < .05$ ,  $\eta^2 = 0.28$ ). In the self-report, participants in the ImaginYouth condition also declared a greater reduction in BDD symptomatology than those in the SOT condition. However, this effect was just short of being significant (DCQ: interaction effect group x time:  $p = .07$ ,  $\eta^2 = 0.14$ ). In the ImaginYouth condition, 6 of 8 participants (75%) reached responder status, in the SOT condition, 5 of 16 participants (31.25%).

### DISCUSSION

Preliminary results indicate an effectiveness of the ImaginYouth program with respect to the core BDD symptomatology. Also, ImaginYouth appears to be superior to a supportive online therapy, i.e. a very conservative control condition. Therefore, ImaginYouth could be an alternative at least for a subgroup of patients and thus complement the highly needed therapy offer. A replication of the findings across the follow-up period and for other comorbid symptoms (depression, eating disorders, social anxiety disorder, and obsessive-compulsive disorder) is pending. Predictors of intervention effectiveness, especially with regard to participants characteristics, should also be investigated.

# POSTER SESSION 01

Abstract No.: 0709

## **Metacognitive Therapy for Children and Adolescents with Anxiety and Depression: A Pilot Uncontrolled Trial of Effects and Mediators over Time**

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### **BACKGROUND**

Metacognitive therapy (MCT) is an effective treatment for adults suffering from anxiety and depressive disorders. Although there is a growing body of evidence supporting the use of MCT within children and adolescents, the effectiveness of MCT in targeting both anxiety and depressive disorders in children and adolescents remains unknown.

### **AIM**

In the present study, we aimed at investigating whether MCT is associated with reductions in symptoms of anxiety and depression in children and adolescents, and whether treatment gains are temporally preceded by change in metacognitive beliefs and attention control as proposed by metacognitive theory.

### **DESIGN**

In an open trial design, 97 self-referred children and adolescents aged 10-17 (82% girls, mean age of  $12.85 \pm 1.9$ ) and their parents were included in the study. Treatment consisted of eight weekly group sessions of manual-based MCT for adults with GAD (Wells, 2009) with slight modifications for use with children. Children and adolescents were diagnostically evaluated before and after treatment to assess changes in diagnostic status following treatment. In addition, to establish mediators of treatment effect, we assessed child symptoms, metacognitive beliefs, and attention control at baseline, weekly throughout treatment, after treatment, and at 3 and 6 months follow-up.

### **RESULTS**

Following treatment, 74% of the children and adolescents were free of their primary disorder and 70% were free of all their anxiety disorders. Taken together, 68% were free of all their anxiety and depressive disorders following treatment. We found that improvements in symptoms were mediated by several domains of metacognitive beliefs and attention control.

### **DISCUSSION**

Our study demonstrates that MCT delivered to children and adolescents with anxiety and depressive disorders is feasible and associated with significant improvements in anxiety and depression. Moreover, we found preliminary evidence of metacognitive beliefs and attention control as potential drivers of change. In the paper, we discuss the implications for treatment of anxiety and depression in this age group. In conclusion, our study contributes to our theoretical and clinical understanding of using MCT in anxiety and depression in childhood and adolescence and provides initial data on mechanisms that appear to contribute to change.

# POSTER SESSION 01

Abstract No.: 0710

## **Psidamai – An Internet-Delivered Mindfulness Intervention for Treating University Students' Distress in Indonesia: Study Progress of a Randomized Controlled Trial**

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University students experience higher risk for having psychological distress, such as depression, anxiety, and stress. However, in low-middle income countries (LMICs), such as Indonesia, access to evidence-based mental health services is limited by the insufficient number of mental health professionals available and other barriers such as stigma or cost. Mindfulness interventions that are delivered via the internet are a promising strategy to treat distress and tackle access barriers among university students. Unfortunately, the effectiveness of these treatments has not been tested among university students in Indonesia. This study examined the effectiveness of a culturally attuned, four-week, clinician-guided Internet-delivered mindfulness intervention, that we called as PSIDAMAI, compared to wait-list control group in treating distress. From September to November 2022, participants (N= 156) reporting elevated distress (indicated by Depression, Anxiety, and Stress Scale-21 scores, DASS-21) were randomly assigned to treatment or wait-list control group. The treatment group then completed weekly online mindfulness lessons including formal mindfulness practices using audio guides. Trained counsellors provided regular support and guidance during the intervention. Assessments were completed at baseline, post-intervention (4 weeks after intervention commencement), and follow-up (1 month after the end of intervention). The primary outcome was reduction of distress symptom severity as measured by total DASS-21 scores after 4 weeks from intervention commencement. The study is currently in progress and is the first randomized controlled trial in Indonesia that examines the effectiveness of an Internet-delivered mindfulness intervention for treating distress. This study provides novel insights for the future development of other evidence-based, internet-delivered, mental health interventions in Indonesia.

# POSTER SESSION 01

Abstract No.: 0730

## Discrimination of Depressive Symptoms with Acoustic Features among Patients with Depressive and/or Anxiety Disorders: An Artificial Intelligence Approach

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### INTRODUCTION

Sound is a rich source of information, one notable example being the use of vocal features for making inferences about other people's mental states such as mood or affect. However, only a handful of studies have investigated the association between acoustic features of voice and mental health symptoms. Recent advances in artificial intelligence technologies have allowed us to investigate the acoustic characteristics that could be utilized to discriminate such symptoms more effectively, quickly, and in higher resolution. In this study, we present the use of artificial intelligence to discriminate against depressed individuals by analyzing their acoustic features of their voices.

### METHOD

We analyzed ninety-seven depressed and/or anxious patients' voices during a structured clinical interview, GRID-Hamilton Rating Scale for Depression (GRID-HAMD). The assessment took place at four-time points (pre, mid, post, and 4-month follow-up) in a randomized controlled trial of cognitive behavioral therapy. We calculated the correlation coefficient between statistics of sound features obtained while patients answered each GRID-HAMD item, and the total GRID-HAMD scores. Sound features were calculated with pyAudioAnalysis and Essentia which are libraries for sound analysis. Using the Boruta [METHOD](#) based on the decision tree model, statistics of sound features were squeezed into 31 features. A classifier called LightGBM, a decision tree-based model, was applied for depression detection. Finally, SHAP was calculated to evaluate which sound feature contributed to the classification of the model. The evaluation metric for the classification was defined by the F1-macro score.

### RESULT

The correlation coefficient between each statistic of sound features and the total GRID-HAMD scores revealed that sound features obtained while patients were discussing the third item on the GRID-HAMD (i.e. suicide) had the highest absolute coefficient value with total GRID-HAMD score. The top 3 highest correlation sound features were maximum spectral strong peak (Pearson's  $r = 0.444$ ), minimum 9th dimension of Mel-frequency cepstral coefficient (MFCC) (Pearson's  $r = -0.412$ ), maximum 5th dimension of spectral contrast coefficient (Pearson's  $r = 0.411$ ). The F1-macro score showed good classification ability (0.703), and SHAP indicated that the standard deviation of the spectral strong peak was the best contributor to the classification model.

### DISCUSSION

First, from correlation analysis, overall depressive symptom was best related with acoustic features acquired while the patients talked about their suicidal ideation. Second, the structured classifier, LightGBM, had a good classification ability. The acoustic characteristics of the GRID-HAMD item on suicidality significantly differed by depressive symptoms, which was represented by prosodic features such as utterance rate. This seems to reflect the fact that patients give shorter responses when they did not have any suicidal ideation and a simple "no" was sufficient. The study also showed that the standard deviation of the spectral strong peak, regarded as a spectral feature, is an important contributor to the classification. These findings demonstrate the utility of sound in detecting and discriminating depressive symptoms and its potential for clinical application to allow assessment with greater efficiency, speed, and quality in the field of mental health research and practice.

# POSTER SESSION 01

Abstract No.: 0745

## Psychometric Properties and Measurement Invariance of the Mental Health Screening Tools for Adolescents in Korea

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### INTRODUCTION

Depressive and anxiety disorders are significant mental health issues in adolescents, but relatively few mental health assessment tools have been validated in this population. The Mental Health Screening tool for Depressive disorder (MHS:D; Park et al., 2022), Anxiety disorder (MHS:A; Kim et al., 2021), and Suicide risk (MHS:S; Yoon, Park & Choi, 2020) are screening tools that have been rigorously validated by research, including clinical structured interview by psychologists. These tools show adequate sensitivity and specificity and can be easily administered with various environment such as online. To utilize these tools in youth populations, it is necessary to examine their reliability and validity in a normative youth sample. The aim of our study is to examine the psychometric properties of MHS:D, MHS:A and MHS:S for a large-scale youth sample and investigate measurement invariance across demographic subgroups.

### METHOD

A total of 6689 students and out-of-school adolescents participated in the present study. The participants ranged in age from 11 to 19 years ( $M= 15.3$ ,  $SD=2.60$ ). Approximately 53.6 % of the sample were female, and 11.2% were out-of-school youth. All participants completed online self-report questionnaires including MHS:D, MHS:S, MHS:A, Korean version of Perceived Stress Scale for Adolescents (Yoon & Kim, 2019), COVID-19 Peritraumatic Distress Index (Qiu et al., 2020), Korean Children's Somatization Inventory (Shin, 2003) and Korean version of Self Harm Inventory (Kim et al., 2019). We examined psychometric properties including reliability, validity, and factorial invariance. Additionally, we investigated the correlation coefficients between the MHS tools and mental health scales, such as somatization and perceived stress.

### RESULTS

MHS:D, MHS:A, and MHS:S showed good psychometric properties in adolescents. All three measures demonstrated excellent level of internal consistency (Cronbach's  $\alpha$  for MHS:D: .92, MHS:A: .93, MHS:S: .86), and a multi-group confirmatory factor analysis (CFA) confirmed a unidimensional factor structure, indicating measurement equivalence across gender and age. Significant correlations were found between the tools and mental health indicators such as stress, somatization, and self-harm, which further supported the high convergent validity of the tools.

### CONCLUSION

Findings suggest that MHS:D, MHS:A and MHS:S showed acceptable reliability and validity in a youth sample regardless gender or age, and implications about the interpretation of the tools according to the demographic characteristics are discussed. Given their brevity, accuracy, and accessibility, these screening tools can be highly useful for clinicians in community settings to identify depression, anxiety, and suicide risk in adolescents.



# POSTER SESSION 01

Abstract No.: 0766

## Strengthening the Freedom of VETO! A Randomized Clinical Trial to Test the Efficacy of Online Cognitive Training in Changing Eating Behaviors

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### OBJECTIVE

The results of many studies showed that psychological interventions have a small to medium effect on weight loss. Thus, new and more efficient interventions are needed to overcome this disease. It is also important to identify accessible, easy to use, online interventions. Based on data suggesting that changing eating behaviors leads to weight loss, we aim at testing two promising and accessible cognitive training techniques for implicit cognitive change, delivered online: Hypnosis and Food Inhibition Training (FIT).

### METHOD

Ninety-three participants were randomized into three groups: two active interventions and one active placebo. We measured weight, eating behaviors, emotions, and cognitive variables pre-, post, and at one-month follow-up intervention.

### RESULTS

On cognitive restriction, the result showed that this variable registered a significant increase in the FIT group with a significant time effect ( $F(2.90,76)=12.48, p<.000$ ) and time x group interaction effect ( $F(4.90,55)=4.47, p<.01$ ). The pairwise comparison analyses showed that in the FIT group, cognitive restriction significantly increased from pre-test to post-test ( $MD=-16.82, SE=2.63, d= 0.95, p<.000$ ) and from pre-test to one-month follow-up ( $MD=-13.58, SE=3.44, d=0.73, p<.01$ ). For daily food frequency, we found a statistically significant effect of time on daily food frequency ( $F(1,87.8)=31.72, p<.000$ ) and a significant effect of the interaction between time and group ( $F(2,87.8)=3.52, p<.05$ ). In terms of pairwise comparisons, we found that for the Control group, Daily Food Frequency was not statistically significantly different between the two time points up ( $MD=0.03, SE=0.03, d=0.19, p>.05$ ) but was statistically reduced in the Hypnosis group ( $MD=0.12, SE=0.02, d=0.76, p<.000$ ) and the FIT group ( $MD=0.08, SE=0.02, d=0.47, p<.01$ ). For all the other outcomes, we found a significant main effect of time, but no statistically significant main effect of the intervention or interaction between time and intervention.

### DISCUSSION

Results obtained showed that both techniques are efficient in terms of changing eating behaviors. Our study contributes to this area of research by identifying how these interventions impact eating behaviors, emotions, and cognitive factors besides weight loss, in an ecological context –everyday life.

# POSTER SESSION 01

Abstract No.: 0767

## **A Pilot Study of the Effectiveness and Feasibility of a Brief, Online, and Self-Guided Acceptance and Commitment Therapy Intervention for Intellectual and Developmental Disability Support Staff**

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<sup>1</sup> York University, Canada

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### INTRODUCTION

Intellectual and developmental disability support staff (i.e., "IDD Support Staff") are frontline human service workers at a high risk of burnout (Guy et al., 2010; Johnson et al., 2005). Burnout is a syndrome that develops in response to chronic exposure to workplace stress (Lizano, 2015), and is characterized by three dimensions: emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment (Maslach & Jackson, 1986). Burnout presents higher risk for health, mental health, and industry-related challenges, such as chronic fatigue, recurrent flu/infections/colds, memory issues (Cordes & Dougherty, 1993; Peterson et al., 2008), depression, anxiety, psychological distress, (Johnson et al., 2005; Leiter & Maslach, 2001; Lizano, 2015; Morse et al., 2012), compromised work performance and self-efficacy, and risk of client abuse (Emery & Vandenberg, 2010; Hastings & Remington, 1994; Pingo et al., 2020; Rose et al., 1998; Taris, 2006). Acceptance and Commitment Therapy (ACT) is a third-wave Cognitive Behavioural Therapy (CBT) that demonstrates effectiveness in reducing burnout in human service workers. However, delivery modes of ACT have traditionally been limited to group-based in-person settings. More recently, ACT has been adapted into variations of brief, online, and self-guided application – which have demonstrated effective outcomes in reducing burnout in some human service workers, as well as some community-based and clinical samples (Barrett & Stewart, 2020; Hofer et al., 2018; Jeffcoat & Hayes, 2012; Lappalainen et al., 2014; Räsänen et al., 2016; Smith & Gore, 2012; Vilardaga et al., 2011; Wharton et al., 2019). However, such delivery modes are largely unexplored specifically for IDD support staff for issues linked to burnout and workplace stress. The present research pilots the design and implementation of a brief, online, and self-guided modularized adaptation of an Acceptance and Commitment Therapy (ACT) intervention for intellectual and developmental disability (IDD) support staff to reduce burnout and psychological distress, and increase psychological flexibility and work performance.

### METHOD

A randomized waitlist control trial was implemented with an intervention group (n=5) and waitlist control group (n=11) of IDD support staff. Participants were recruited from disability service agencies across Ontario, Canada and completed the demographic questionnaire, the Kessler Psychological Distress Scale (K10), the Acceptance and Action Questionnaire (AAQ-II), the Comprehensive Assessment of Acceptance and Commitment Therapy Processes (CompACT), the Maslach Burnout Inventory – Human Service Version (MBI-HS), the Individual Work Performance Questionnaire (IWQP), and a follow-up feasibility questionnaire. Participants completed the outcome measures pre- and post-intervention, and the follow-up feasibility questionnaire only post-intervention.

### RESULTS

Independent t-tests and Wilcoxon signed-rank tests indicated that the intervention significantly reduced burnout and increased psychological flexibility between-groups and within the waitlist group only ( $p < .05$ ). Thematic content analysis identified key themes and patterns in the qualitative open-ended questions about the intervention's perceived feasibility. Specifically, 60% of participants found "Acceptance/Defusion" skills most helpful for their professional role, 40% reported preferring more time on Acceptance/Defusion skills, 44% reported that modules can be improved by 1) adding more ACT resources, and 2) enhancing the online formatting/visual interface, and 70% reported that the module components were easy to understand.

# POSTER SESSION 01

## DISCUSSION

This study is the first to implement a brief ACT intervention for IDD support staff that is also simultaneously online-based and self-guided. The findings demonstrate preliminary evidence for implementing online-based interventions for IDD support staff; and present feasible future directions in enhancing workplace mental health and well-being. Incorporating brief, online, and self-guided ACT as part of mandatory onboarding for IDD support staff can help prevent burnout and increase psychological flexibility in the workplace.

# POSTER SESSION 01

Abstract No.: 0768

## Use of Mobile Applications in Therapy: Case of an Obsessive-Compulsive Disorder

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CBT often integrates a variety of tools to aid in patient progress: cognitive restructuring, exposure with response prevention, relaxation and/or meditation techniques, etc.

Choosing appropriate extra-therapeutic exercises requires collaboration between both patient and therapist.

Exercises are usually noted to ensure that patients retain not only the details but also the regularity. This also provides additional motivation for optimal performance. Despite this methodology, some patients do not carry out the assigned exercises between sessions. Reasons for these lapses include having lost the instructions, not having remembered to perform the exercise, and sometimes hesitation in exercise completion.

Given these limitations, a patient suffering from obsessive-compulsive disorder (OCD) was provided with a mobile phone application (AppTCC in french = AppCBT in english) that provided additional therapeutic support. Using AppTCC on their office computer, the therapist was able to access software that provided the ability to create a personal clinical file for the patient, including history, all CBT tools, psychometric scales, behavioral charts, functional analyses, and exposure exercises. The patient had access to a mobile application provided detailed information about the exercises along with reminders to perform them on a pre-established basis.

This poster presents the result of patient Mr. X, suffering from contamination OCD (washing rituals). Mr. X's clinical history is provided along with results from Y-BOSC before and after CBT management using AppTCC.

AppTCC allowed for the therapist to not only provide additional exercises but they received feedback from the patient when exercises were completed along with success rates. The data for each exercise includes exposure duration, pre- and post-levels of anxiety as well as anxiety experienced during exposure. The poster provides details regarding the type of exposure exercises and the evolution of these exercises over time. Ongoing data collection through AppTCC also measured the patient's motivation to perform and pursue more complicated exercises; reinforcement was provided immediately through therapist response through AppTCC. results are presented using output from the AppTCC graphic interface.

A number of important points can be underlined in this innovative therapeutic approach: use of new technology by both patients and therapists that can streamline the CBT process; positive patient acceptance and good therapeutic adherence; motivational reinforcement for patients influencing feelings of self-efficacy; therapist ease in validation of not only correct performance but also in immediate modification of exposure where necessary (e.g., ineffective or poor execution of the exposure exercise); reinforced monitoring of patient progress; and an overall improvement in therapeutic alliance.

# POSTER SESSION 01

Abstract No.: 0769

## Lessons Learned from ADHDcoach, an Internet-Delivered Intervention for Parents of Children Diagnosed with ADHD

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Attention/deficit-hyperactivity disorder (ADHD) is a common mental health issue in children with a prevalence of 5.9% in children with significant costs for young people suffering from this disorder, their families and society (Faraone et al., 2021). Despite the fact that psychological and pharmacological treatment exists for this condition and has been proved to be effective in reducing symptoms, a high percentage of children with ADHD do not access treatment. Behavioral parent training (BPT) is the first line treatment recommended for ADHD in children, however, there are numerous barriers in receiving treatment. Technological developments such as mobile apps, virtual reality, autonomous conversational agents or Internet-delivered interventions have been developed for ADHD (Corrigan et al., 2023; Gisladottir & Svavarsdottir, 2017; Jang et al., 2021; Păsărelu et al., 2023). So far, several BPT programs delivered online have been tested in highly developed countries and indicated mixed findings. The aim of the present study was to investigate the preliminary efficacy of an Internet-delivered intervention for parents of children with ADHD. Parents of children diagnosed with ADHD were recruited from a Child Psychiatry Clinic from Cluj-Napoca, Romania. Eligible parents had children with a primary diagnosis of ADHD, aged between 6 and 11, have the ability to read and write Romanian, had Internet access and were currently not undergoing psychological treatment or counselling, receive no medication or if medication was received, no changes in the last 3 months were registered. The Internet-delivered intervention (ADHDCoach) was based on an existing BPT protocol tested with a Romanian sample (David et al., 2021) and Rational Emotive Behaviour Therapy (REBT). Nine modules were delivered over four weeks with a clinician guiding each parent on the platform. Limitations of the present research, future directions to improve parents' adherence to such programs and lessons learned for this study will be discussed.

# POSTER SESSION 01

Abstract No.: 0770

## Use of an Application as a Therapeutic Tool: Case of a Panic Disorder with Agoraphobia

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CBT often integrates a variety of tools to aid in patient progress: cognitive restructuring, exposure with response prevention, relaxation and/or meditation techniques, etc.

Choosing appropriate extra-therapeutic exercises requires collaboration between both patient and therapist.

Exercises are usually noted to ensure that patients retain not only the details but also the regularity. This also provides additional motivation for optimal performance. Despite this methodology, some patients do not carry out the assigned exercises between sessions. Reasons for these lapses include having lost the instructions, not having remembered to perform the exercise, and sometimes hesitation in exercise completion.

Given these limitations, a patient suffering from Panic Disorder with Agoraphobia (PDA) was provided with a mobile phone application (AppTCC in french = AppCBT in english) that provided additional therapeutic support. Using AppTCC on their office computer, the therapist was able to access software that provided the ability to create a personal clinical file for the patient, including history, all CBT tools, psychometric scales, behavioral charts, functional analyses, and exposure exercises. The patient had access to a mobile application provided detailed information about the exercises along with reminders to perform them on a pre-established basis.

The current poster presents the results of Ms. L, suffering from PDA and receiving CBT therapy.

Ms. L's clinical history of PDA, results of psychometric evaluations before, during, and after therapy along with tailored CBT management using AppTCC in behavioral task and execution.

AppTCC allows the therapist to develop and submit exercises to the patient. Once performed, the therapist is alerted and information including exposure duration as well as anxiety measures before, during and after exposure.

The poster presents a sample of patient exercises and their evolution over time. AppTCC collects data on the impact on anxiety score as well as recording salient cognitions. All of this information is retained in the patient's file and can be easily accessed by the therapist. The data collected includes patient motivation and perceived success of the performed exercises; the therapist can provide immediate feedback in the form of validation and reinforcement of patient performance.

Results are presented using output from the AppTCC graphic interface.

A number of important points can be underlined in this innovative therapeutic approach: use of new technology by both patients and therapists that can streamline the CBT process; positive patient acceptance and good therapeutic adherence; motivational reinforcement for patients influencing feelings of self-efficacy; therapist ease in validation of not only correct performance but also in immediate modification of exposure where necessary (e.g., ineffective or poor execution of the exposure exercise); reinforced monitoring of patient progress; and an overall improvement in therapeutic alliance.

# POSTER SESSION 01

Abstract No.: 0771

## **Sluggish Cognitive Tempo and Attentional Bias of Anger: A Mediation Model of Interpersonal Sensitivity**

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Sluggish Cognitive Tempo (SCT) refers to difficulties with cognitive functioning, characterized by slow or lethargic reactions, perceptions, or cognitions that persist over time, often seen in individuals who struggle with school or work, and is particularly associated with attention deficit hyperactivity disorder. Attentional bias of anger refers to the tendency for individuals to focus solely on anger-inducing stimuli, ignoring other information or emotions. Interpersonal sensitivity refers to the tendency for individuals to react sensitively during conversations or interactions with others, particularly in situations involving criticism, rejection, or discomfort. The mediating effects between these three factors have not been extensively studied, but they can interact with each other. The purpose of this study is to explore the relationship between SCT symptoms and attentional bias of anger, and the mediating role of interpersonal sensitivity. Thirty-seven participants were recruited to complete a visual dot task with eye tracking (11 male and 26 females with Mean  $\pm$  SD of 21.2  $\pm$  1.7). Emotional stimuli were presented for 1,000ms with pairs of face stimuli depicting emotional (either anger, sad or happy) and neutral faces in adults (Lee et al., 2013). Attentional bias score was calculated by subtracting the mean first fixation duration of emotional faces from the mean first fixation duration of the neutral faces. A positive score represents attentional bias, a negative score represents attentional avoidance. We administered the Adult Concentration Inventory (ACI; Becker, Burns, & Willcutt, 2015) and the Korean version of Symptom Check List-90-R (SCL-90-R; Derogatis, 1976; Kim, Kim, Won, 1984). The ACI has consisted of 16 items, which measures SCT symptoms. The SCL-90-R has ten subscales of psychiatric symptoms (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, and Paranoid Ideation). The results showed that SCT symptoms would positively predict and attentional bias on anger ( $B = .32$ , 95% Confidence Interval = [.19, .45]); the relationship between SCT symptoms and attentional bias of anger was a complete mediation of interpersonal sensitivity; and interpersonal sensitivity positively predicts attentional bias on anger ( $B = 10.29$ , 95% Confidence Interval = [2.19, 18.39]). These findings suggest a positive relationship between SCT symptoms and attention bias of anger, and the effect of a complete mediation of interpersonal sensitivity. Furthermore, hypersensitivity in interpersonal relationships may facilitate a bias toward anger, which in turn may exacerbate sluggish cognitive tempo.

# POSTER SESSION 01

Abstract No.: 0781

## Implementation of a Web-Based Stress Check System for High School Students to Promote Mental Health

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### INTRODUCTION

The number of suicides among children under the age of 18 in FY2020 in Japan was 499, a 40% increase compared to the previous year, and the top three causes were worries about career paths, poor academic performance, and discord between parents and children (MEXT 2022). Screening by criteria for defining "high-stress" students who perceived high levels of stress and providing appropriate feedback to promote mental health are needed. This study aims to screen "high-stress" levels for high school students using web-based survey and provide appropriate feedback for preventing mental health problems.

### METHOD

The study was conducted after approval from the Ethical Review Board of Chiba University Graduate School of Medicine. Beforehand, parents gave the informed consent of the study. Before answering the web-based survey, children read the research information sheet for the informed assent and were requested to select an "I agree" checkbox. We conducted web-based questionnaire survey "the stress check" for high school students three times a year for two years. The questionnaire was based on the Public Health Research Foundation Type Stress Inventory (PSI: Sakano Y, Okayasu T, Shimada H, 2007), which consists 43 items and of the following three subscales: psychological and physical stress reactions (15 items), stressor (16 items), and social support (12 items) for high school students. It took about 10 minutes to answer the questions. The criteria for determining "high-stress" levels were set with reference to the criteria for determining "high-stress" individuals in the workplace stress check system based on the Occupational Health and Safety Law in Japan. The "high-stress" group (A) was defined as total subscale score of stress reactions  $\geq 30$  out of 45 points. The "high-stress" group (B) was defined as total subscale score of stress reactions  $\geq 25$  out of 45 and sum of stressor and social support subscale scores of  $\geq 61$  out of 84. Others are "normal-stress" group (N). After "the stress check", the results of "high-stress" levels and "normal-stress" levels are determined by automatic tabulation. After the stress check is conducted, teachers share the results in a screening meeting at school, and students who are determined to be "high-stress" are given feedback in an educational consultation. The techniques of cognitive-behavioral therapy including problem-solving are used as a method of feedback. Students can also check the results themselves and learn the techniques of cognitive-behavioral therapy such as three good things exercise "Posiren" and cognitive restructuring "Kokororen" as stress management methods with videos.

### RESULTS

We conducted web-based "stress check" 6 times for high school students (aged 15-18) from June 2021 to February 2023. A total of 29,014 students (boys=11,237, girls=16,461, others=1,316) in FY2021, 14,810 students (boys=6,449, girls=7,660, others=701) in FY2022 participated in "the stress check". Of the participating students, 12.3% to 14.2% were identified as "high-stress". Comparing by gender, 15.2% of all girls and 9.2% of all boys were in "high stress" situations. It was found that girls were 1.65 times higher than boys in the "high-stress" condition. In addition, girls tended to be higher than boys in stressors subscale, and boys were lower than girls in social support subscale. Based on the results of "the stress check", screening meetings were held at high schools to provide appropriate feedback to "high-stress" students. Further analyses using latent growth curve model (LGCM) and growth mixture model (GMM) are currently in progress.



# POSTER SESSION 01

## DISCUSSION

It seems easy for students to participate in the Web-based "stress check". Although the criteria for determining high stress were set according to the stress check system in the workplace, the percentage of "high-stress" individuals was around 10%, a result similar to that obtained in "the stress check" for high school students. We will continue the research to examine factors that cause "high-stress" and provide more appropriate feedback based on the techniques of cognitive-behavioral therapy to promote mental health.

## CONCLUSIONS

Using Web-based stress check by setting certain criteria, it may be possible to screen students with "high-stress" levels, to provide appropriate feedback, and to prevent mental health problems at early stage.

# POSTER SESSION 01

Abstract No.: 0784

## Internet-Based Sleep Educational Intervention for Parents of Children with Sleep Disturbance

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### INTRODUCTION

Sleep difficulties affect children's daytime behavior and emotions (Chao, 2022; Matsuoka et al, 2022). Children with autism spectrum disorder (ASD) have a higher frequency of sleep difficulties, and like typical developing children, sleep difficulties affect daytime behavior (Hirata et al, 2016). For sleep problems in children with ASD, programs for parents have been shown to resolve sleep difficulties and improve behavioral problems (Malow et al., 2014; Moon, 2010). However, the Japanese have a sleeping culture that differs from that of children in predominantly Caucasian countries/regions. Most children share a bedroom with their families and do not have their own bedrooms (Mindell et al, 2013; Mindell et al, 2010), so it may not be appropriate to implement existing programs. Therefore, we developed an 8-session sleep education program for parents, called the "Sleep Support program", based on the "Basic Platform" (Japan Developmental Disabilities Network, JDDnet Project Committee, 2020), which was developed in Japan as a parent training program for children with neurodevelopmental disorder characteristics. "Sleep Support program" consisted of "lectures," "exercises," and "homework." We implemented "Sleep Support program" for two parents of young children with insomnia and daytime behavior problems.

### METHODS

The mothers of two infants, Child A (5 years; boy, no diagnosis) and Child B (4 years; boy, ASD), who were seen at a hospital in the prefecture, participated in the study. In the intervention, textbooks, worksheets for parents, and home worksheets were provided and implemented individually via the Internet using teleconferencing tools. The main content of the program included instruction on "child sleep," "adjusting the sleep environment," "bedtime routine," and as a behavioral strategy "reinforcement," and "observing behavior." Subjective measures [parental questionnaires (i.e., the Japanese Sleep Questionnaire for Preschoolers: JSQ-P, Children's Sleep Habits Questionnaire: CSHQ) and sleep diaries] were used to record changes in children's sleep. Other observables included parental stress (Parenting Stress Index: PSI) and questionnaires related to children's behavioral problems (Strength and Difficulties Questionnaire: SDQ, Child Behavior Checklist: CBCL).

### RESULTS

The two parents had a 100% attendance rate, one had a 100% homework submission rate, and the other, 71% of homework submission rate. The duration of the program was 15 weeks for Child A and eight weeks for Child B. In Child B, melatonin was administered before follow-up. Parents reported that bedtime gradually became earlier for both children. Child A had shorter sleep latency after the intervention, and Child B had shorter sleep latency at follow-up. In Child A, the SDQ scores decreased after the intervention and were maintained at follow-up. In Child B, the CBCL scores did not change after the intervention and decreased at follow-up. After the intervention, PSI scores decreased in mothers of Child A and increased in mothers of Child B.

### CONCLUSIONS

A sleep education program for parents of two young children was implemented, and changes were observed in their children's sleep and daytime behavioral problems. Melatonin was initiated in Child B, indicating a further improvement in sleep problems. Different results were obtained for parental stress, and the impact of program implementation on parental stress was not specified.

# POSTER SESSION 01

Abstract No.: 0797

## Comparing Psychological Distress in School-Attending and Out-of-School Adolescents during the COVID-19 Pandemic: The Moderating Role of School Enrollment

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### INTRODUCTION

The COVID-19 pandemic has led to psychological distress among many teenagers, including anxiety, fear, depression, and anger (Gazmararian et al., 2021; Thakur, 2020). Out-of-school adolescents may be more susceptible to the negative effects of social isolation on mental health (Liem et al., 2001; Tang et al., 2021). However, little has been studied about the prolonged COVID-19 impact on adolescent mental health in relation to school enrollment. Thus, in the descriptive cross-sectional study, we aimed to compare levels of psychological distress between school-attending adolescents and out-of-school adolescents during the COVID-19 pandemic. We also investigated the moderating role of school enrollment on the association between COVID-19-related stress and psychological distress in adolescents.

### METHOD

The study included a sample of 6,689 adolescents from South Korea, of whom 5,937 were school-attending and 752 were out-of-school adolescents. Data was collected between July and August 2021 through online questionnaires that included informed consent, socio-demographic questions, and several psychometric scales: the Mental Health Screening for Depressive Disorders (MHS:D; Park et al., 2022), Mental Health Screening for Anxiety Disorders (MHS:A; Kim et al., 2021), Mental Health Screening for Suicide Risk (MHS:S; Yoon, Park & Choi, 2020), Korean Version of Perceived Stress Scale for Adolescents (KPSS; Yoon & Kim, 2019), and COVID-19 Peritraumatic Distress Index (CPDI; Qiu et al., 2020). ANCOVA analyses were conducted to compare levels of psychological distress between students and school dropouts. Four moderation models were tested, using school enrollment as the moderator of the association between COVID-19 distress and psychological distress. Adolescent age and gender were included as covariates.

### RESULTS

The mean scores of depression, anxiety, suicidal risk, perceived stress, and COVID-19 distress for school-attending students were 4.99 (SD=7.71), 3.88 (SD=6.75), 0.50 (SD=1.67), 16.28 (SD=5.93), and 8.85 (SD=10.33), respectively. The mean scores for the same psychometric scales among school dropouts were 10.06 (SD=12.61), 8.21 (SD=11.27), 1.83 (SD=3.50), 18.82 (SD=7.01), and 11.36 (SD=13.21), respectively. The results showed that school dropouts reported significantly higher levels of depression ( $F=141.34, p<0.001$ ), anxiety ( $F=128.39, p<0.001$ ), suicidal risk ( $F=235.14, p<0.001$ ), stress ( $F=35.22, p<0.001$ ), and COVID-19 distress ( $F=39.11, p<0.001$ ) than school-attending students. Furthermore, school enrollment was found to moderate the association between COVID-19 distress and depression ( $b=-.13, t(6682)=-7.72, p=.000$ ), anxiety ( $b=-.14, t(6682)=-8.49, p=.000$ ), and suicidal risk ( $b=-.14, t(6682)=-15.50, p=.000$ ) whereas school enrollment did not moderate the effect of COVID-19 distress on perceived stress ( $b=.00, t(6682)=.16, p=.87$ ).

### CONCLUSION

Our study findings suggest that adolescents who are out of school are more vulnerable to mental health issues compared to school-attending adolescents. Moreover, school enrollment acts as a buffer against the development of psychological symptoms when experiencing COVID-19 peritraumatic stress. Therefore, prioritizing measures for school dropouts is crucial in policies aimed at protecting and promoting the mental health of adolescents. Accessible interventions should be developed to support the psychological well-being of out-of-school adolescents in socially disadvantaged environments, ensuring they receive appropriate treatments within their local community.

# POSTER SESSION 01

Abstract No.: 0798

## **A Co-designed Digital Cognitive Bias Modification of Interpretations for Anxiety and Depression in Children: Study Protocol of a Randomised Control Trial**

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### INTRODUCTION

Anxiety and depression are common and impairing disorders in children. Access to effective interventions is critical to reduce symptoms yet only 1 in 4 children with these disorders receive evidence-based care due to barriers related to accessibility, cost and flexibility. Cognitive bias modification of interpretations (CBM-I) overcomes traditional barriers to face-to-face therapy as it uses repetitive training tasks which can be delivered digitally without the input of a therapist. While there is promising evidence for the efficacy of CBM-I for reducing anxiety symptoms in children, adherence and engagement in CBM-I is typically low meaning they are under-utilised for addressing the critical treatment gap in child mental health. Further, no CBM-I programs for children have been designed with input from end-users and relevant stakeholders. This study describes a study protocol for a co-designed digital CBM-I program for children with elevated symptoms of anxiety and depression.

### METHODS AND ANALYSIS

This study is a randomised controlled trial, with 100 participants (children with elevated anxiety and/or depressive symptoms aged 8 to 10 years) allocated to either the intervention group or the wait list control group. The intervention was co-designed with 20 parents, children and mental health professionals to make it engaging and developmentally appropriate. The intervention consists of 3 weeks of a web-based CBM-I training with 8 training sessions. Outcomes will be assessed at baseline, 1-week post-training and 3 months post-training. The primary outcomes are anxiety and depressive symptom severity and the secondary outcome is interpretation bias. Adherence and program acceptability will also be assessed.

### DISCUSSION

This study is the first digital CBM-I intervention for children with elevated anxiety and depressive symptoms which has been co-designed with end-users and stakeholders. It includes features that make it engaging and relevant to children. The findings will add to the knowledge of CBM-I as an effective, accessible and flexible treatment option – either during a waitlist or as an adjunct to cognitive behavioural therapy - for children with anxiety and depression.

Link to study registration: <https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=384980&isReview=true>

# POSTER SESSION 01

Abstract No.: 0799

## **The Potential Effects of a Brief Cognitive Behaviour Therapy Psychoeducational Workshop on Caregiver's Burden, Psychological Distress, and Mental Health Literacy in Caregivers of Persons with Dementia: A Study Protocol**

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Dementia, a neurological degenerative disorder has been estimated to be the third most common disability burden among the elderly in Malaysia. The negative implications of the disorder extend beyond that of the individual themselves and commonly affect family caregivers as the elderly' capacity deteriorates, thus requiring assistance and understanding from family caregivers. Family caregivers are faced with challenges such as caregiver burden, psychological distress, and complicates with poor mental health awareness of their psychological well-being due to their focus on caring for persons with dementia. This study proposes a protocol inspired by past literature recommendations that are aimed to develop a brief, feasible, and practical psychoeducation workshop integrating the brief Cognitive Behaviour Therapy and The Coping with Caregiving program (derived from the CBT model) in addressing the caregiver's burden, psychological distress, and mental health literacy using a repeated measure quasi-experimental study, with a control group design. To explore the effectiveness of the proposed protocol, a mixed between-within subject analysis of variance (ANOVA) shall be leveraged to analyse 60 prospective participants who will be selected using purposive sampling. The targeted identification of cognition, behaviour, and emotions from the modified b-CBT model is expected to be able to address symptoms relating to psychological distress and caregiver's burden, and mental health literacy.

Results from the proposed study will exhibit the potential changes measured by the Depression, Anxiety, and Stress Scale, 21 items (DASS-21), Zarit Burden Interview (ZBI), and Mental Health Literacy Scale (MHLS) across three time points (baseline, post-intervention, and one-month follow-up). The reporting guideline for this study follows the TREND statement reporting guidelines.

# POSTER SESSION 01

Abstract No.: 0800

## Examination of the Usability and Feasibility of a Social Anxiety Reduction Program in a University Student Counseling Center: Preliminary Result (Work in Progress)

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### INTRODUCTION

Social anxiety is a frequently reported problem among college students, leading to substantial impairment in the social, occupational, and familial areas (e.g., Merikangas et al., 2002). Korte and Schmidt (2015) developed a brief single-session preventative intervention called the Safety Behavior Elimination Intervention (SAFE) for those with subclinical social anxiety. Those receiving SAFE compared to a health focus control group showed significantly more significant reductions in social anxiety symptoms, depression, and levels of impairment. The SAFE is also translated and adapted to the Japanese population and has shown its efficacy to Japanese college students (Arai et al., 2022). Although there is evidence of its efficacy for Japanese college students, it is unclear whether SAFE can be applicable in a college counseling setting. Therefore, the present study aims to see the usability and feasibility of SAFE in a University Student Counseling Center.

### METHOD

Participants were comprised of individuals reporting subclinical levels of social anxiety. Subclinical social anxiety was defined as scores under 90 on the Liebowitz Social Anxiety Scale (LSAS). We conducted a two-day workshop for college students with high social anxiety in a University Student Counseling Center. The workshop was conducted as part of student counseling support. The workshop lasted 90 minutes per session for a total of three hours over two weeks. The original SAFE is a single-session workshop. However, we divided it into two days so university students could participate between classes. In addition, we conducted exposure techniques within the workshop session. Due to the spread of Covid-19, the first round was led online in March 2022 and the second and third rounds in person in September 2022 and February 2023. A total of 24 individuals were recruited to participate in the present study. Of the 24 participants, 4 did not meet the eligibility criteria because their LSAS scores were above 90. The principal investigator provided them with alternative support, including individualized workshop content. Twenty students participated in the workshop, and seven (3 males, 4 females, mean age = 25.71, SD = 8.65) returned their responses about the workshop and symptom measures. We asked three questions about the workshop: 1. How well did you understand the program materials? (acceptability) 2. Why did you decide to attend the workshop? (reasons for attending) 3. Any additional comments in an open-ended format. We also collected LSAS to measure social anxiety symptoms before and after the program.

### RESULTS

SAFE was rated positively on the acceptability item, 5 participants answered very easy to understand, and 2 answered easy to understand. For the reason for attending items, 6 participants answered that they were interested in the program content, and 1 answered that others recommended the program. No significant improvement in LSAS was observed.

### DISCUSSION

The present study initially validated the SAFE intervention in a University Student Counseling Center setting. In particular, the results demonstrated the usefulness of the SAFE on acceptability items. In the context of student counseling support, it is important to conduct prior screening of anxiety symptoms to decide whether an individual or group approach is appropriate. Limitation: A number of participants who returned the survey were low in this study. Future research needs a more effective way to collect surveys from participants, such as reward students who answer the survey. We only assessed the symptom before and right after the program. Longer follow-up is needed to examine the effectiveness of the prevention function of SAFE.

# POSTER SESSION 01

Abstract No.: 0805

## Exploration of Major Negative Emotions Related to Adolescents Self-Injury Using Topic Modeling and Sentiment Analysis

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### INTRODUCTION

Recently, more and more adolescents are using online channels to obtain information about Adolescent self-injurious behaviors (SIBs) or to gain comfort and sympathy for themselves. Given the situation, this study aimed to analyze the topics and major negative emotions in each topic related to adolescent SIBs through analyzes of the texts posted on Naver Jisik-iN, Korean representative knowledge sharing platform.

### METHOD

Data were adolescent SIB-related texts posted on Naver Jisik-iN from Jan. 2012 to Dec. 2021. Initial text data were collected through web crawling and then a total of 18,092 text data written by adolescents were selected for the final analyses. After deriving topics of adolescent SIBs through topic modelling, the topics related to factors influencing SIBs were selected. And then the major negative emotions in each selected topic were identified through sentiment analysis with labelled emotions of multiple classes (anger, sadness, fear, disgust, surprise, happiness, and neutral).

### RESULTS

Through topic modeling, a total of 12 topics were found, including “unstable family environment”, “school violence”, “academic stresses”, “Body dissatisfaction”, and “fear of abandonment and attention seeking”. As a result of sentiment analysis, the negative emotions related to adolescent SIBs were high in the order of sadness(40.4%), anger(31.2%), surprise(3.6%), fear(2.9%), and disgust(2.6%). In addition, it was confirmed that the proportion of sadness has increased dramatically since 2018. Looking at each topic's share of the major negative emotions, we found that sadness(54.1%) was the top negative emotion for “academic stresses”, anger(49.9%) for “unstable family environment”, anger(45.6%) for “fear of abandonment and attention seeking”, and anger(39.3%) for “Body dissatisfaction”, while “school violence” was similar to anger(35.3%) and sadness(34.7%).

### DISCUSSION

The results of this study are expected to be used as basic data for early diagnosis and intervention studies on adolescent SIBs in the future. Therefore, we discussed practical directions for prevention and intervention of adolescent SIBs influenced by negative emotions such as depression, anger, and anxiety.

# POSTER SESSION 01

Abstract No.: 0834

## A Screening Approach by a Web-Based Stress Check System for Young Carers and Child Poverty in High School in Japan; A Pilot Study

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### INTRODUCTION

Young carers and children in poverty are described as "invisible" children. Many recent studies have reported that they have multidimensional backgrounds, poor mental health, or the risk of social exclusion. The importance to provide early screening for professional support has been pointed out in many countries. The latest surveys by the Japanese government reported that 4.1% of high school students were so-called 'young carers' in 2021, and the child poverty rate was 13.5% in 2019. Currently, many local governments are working on establishing support systems. This study aimed to determine the feasibility to screen high-stress students with states of young carers or child poverty through a web-based self-report scale for perceived stress and a brief questionnaire.

### METHOD

The study was conducted after approval from the Ethical Review Board of the Chiba University Graduate School of Medicine. Beforehand, parents gave the informed consent of the study. Before answering the web-based survey, children read the research information sheet for the informed assent and were requested to select an "I agree" checkbox. We used the Public Health Stress Inventory for High School Students (PSI, Sakano et al., 2007) consisting of 43 items to assess stress reaction (SR), stressor (ST), and social support (SS). Students who scored  $\geq 30$  out of 45 points on the SR scale (66.7% or more) were defined as high-stress students. In addition, a pilot version single-answer question about the primary stressor (7 items) was implemented. We identified students who chose "family care" as the young carer (YC) group, "family illness/disability" as the potentially young carer (PYC) group, and "life or money" as the child poverty (CP) group. The results can be viewed by the students themselves, and information of simple the techniques of cognitive-behavioral therapy such as three good things exercise "Posiren" and cognitive restructuring "Kokororen" for mental health promotion will be provided. Teachers can provide educational consultation to identified high-stress students as young carer, or in child poverty.

### RESULTS

Two web-based stress checks were conducted for high school students (15-18 years old) in 2022. We found the screening performance as follows. The first results (n=5,430): YC group, 30 (0.55%); PYC group, 101 (1.86%); CP group, 486 (8.95%). The most frequently selected stressor was "academic performance and future" (n=2,587, 47.64%), the second was "no stressor" (n=1,246, 22.95%), and the third was "other" (n=624, 11.49%). The percentage of high-stress students in the first results: overall, 12.3%; YC group, 13.3%; PYC group, 15.8%; CP group, 16.9%. The second results (n=7,032): YC group, 41 (0.58%); PYC group, 137 (1.95%); CP group, 685 (9.17%). The most frequently selected stressor was about "academic performance and future" (n=2,943, 41.85%), the second was "no stressor" (n=1,847, 26.27%), and the third was "other" (n=885, 12.59%). The percentage of high-stress students in the second results: overall, 12.7%; YC group, 9.8%; PYC group, 13.9%; CP group, 20.0%. The analysis is currently conducted using growth mixture model (GMM) etc.

### DISCUSSION

This web-based stress check on student's device; to examine perceived stress conditions and the primary stressor including young carers and child poverty, was a simple, practical, and potentially effective as a screening method. We would like to continue our research to consider how to provide counseling support smoothly, such as linking with local human resources and cognitive behavioral therapy techniques for improving students' mental health, while examining the factors to lead to counseling support for young carers and students in poverty for preventing their isolation.

### CONCLUSION

These findings suggest that it is feasible to screen high-stress students with young carers and child poverty through the web-based self-report stress check system.



# POSTER SESSION 01

Abstract No.: 0842

## Digital Phenotyping of NSSI: Study Protocol

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### INTRODUCTION

Digital phenotyping is a useful approach to predicting and preventing non-suicidal self-injury in daily life by assessing an objective and ecological source of measurement at multiple points. Digital phenotyping in NSSI quantifies an individual's phenotype by capturing self-injury-related markers such as mood, sleep condition, and heart rate. Predicting the high risk of NSSI in daily life can prompt the delivery of early interventions in real-time. Despite its usefulness, few studies have examined individuals' dynamic patterns of NSSI in their daily lives. This study aims to identify real-time predictors and to explain an individual's dynamic course of NSSI.

### METHOD

This study will recruit at least 150 adults who experienced NSSI on five or more days in the last year. When participants are enrolled, active(e.g., ecological momentary assessment) and passive(e.g., heart rate, step count) data will be collected via a smartphone app and wrist-worn wearables for 14 days. These real-time monitored data will be processed through machine learning techniques to determine reliable predictors of NSSI. The growth mixture model will also be used to identify daily and individual-level changes.

### DISCUSSION

This study can potentially understand dynamic new mechanisms on how an individual's self-injurious behavior can occur and predict it in everyday life. Furthermore, this advanced approach can inform optimal strategies to prevent NSSI and provide personalized interventions in real-time.

# POSTER SESSION 01

Abstract No.: 0854

## The Effectiveness of Verbalization as Behavioral Therapy for Adolescents with Autism: A Preliminary Study

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### INTRODUCTION

Individuals with autism spectrum disorder (ASD) often experience difficulties with social interaction and communication, which can lead to emotional challenges such as depression and anxiety, especially in adolescence. Despite being studied in small cohorts, Cognitive Behavioral Therapy (CBT) has demonstrated effectiveness in addressing emotional and social difficulties experienced by adolescents with ASD. Specifically, behavioral therapy has been shown to be effective in improving outcomes for individuals with ASD who have limited language abilities.

However, successful implementation of behavioral therapy with adolescents with ASD requires specific strategies that tailored to the distinctive characteristics of ASD, in addition to other evidence-based techniques. The goal of this preliminary study was to evaluate the effectiveness of verbalization - verbally describing a face - and its potential as a behavioral intervention to enhance social abilities in adolescents with ASD.

### METHODS

A total of 10 adolescents with ASD and 12 typically developing (TD) adolescents participated in the study, which consisted of two experimental conditions: verbalization (ASD = 6, TD = 4) and control (ASD = 6, TD = 6). For all conditions, a computerized task was used. Participants were presented with a target face for a short period of time, then completed a task specific to the condition. In the verbalization condition, participants were presented with two sentences describing the target face and instructed to choose the one that more accurately described the face. Participants in the control condition were presented with two sentences that described themselves and asked to select the one that more accurately reflected their self-concept. A face recognition task was administered before and after the task to compare pre- and post-performance.

### RESULTS

The results showed no significant interaction effects between groups and conditions. However, the main effect for conditions was shown to be significant. Specifically, the verbalization group performed better than control groups in the post-face recognition test compared to the pre-test. There was no significant main effect for groups, indicating that there was no significant difference in performance between the ASD and TD groups.

### DISCUSSION

These findings suggest that verbalization may be a useful behavioral strategy for enhancing social abilities, including face recognition, in both ASD and TD adolescents. Although the improvement in the ASD group was not significantly greater than that observed in the TD group, the fact that verbalization was effective for both groups is promising. It is not surprising that the TD group showed improvement since verbalization has been found to be effective for this population in previous studies. However, given that individuals with ASD typically struggle with face recognition compared to TD individuals, further research is needed to determine whether verbalization can lead to greater improvement in the ASD group.

For clinical practice, the computerized programs utilizing verbalization task may be a cost-effective behavioral strategy with a simple and short experimental manipulation. While promising, the use of verbalization as a CBT strategy requires further investigation to determine its effectiveness and feasibility for adolescents with ASD.

# POSTER SESSION 01

Abstract No.: 0861

## A Feasibility Study of Web based Stress Check System in Elementary Schools Using Tablet Devices

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### INTRODUCTION

The COVID-19 pandemic has affected children in many ways. According to the "Summary of the **RESULTS** of the Survey on Student Guidance Issues, including Problematic Behavior and Truancy of Students" (MEXT 2021) in FY2020, the number of long-term absences from elementary and junior high schools was 287,747, of which 196,127 were truants, an increase of 8.2% over the previous year in Japan. Therefore, we have started to provide mental health support through a "Web based Stress Check System" utilizing tablet devices in order to grasp and respond to children's concerns and stress situations at an early stage.

Children can check the results of their own stress status on their devices and can browse information resources about techniques of cognitive-behavioral therapy such as three good things exercise "Posiren" and cognitive restructuring "Kokororen". Teachers and staff can recognize mental health condition including psychological and physical stress reactions of the children and needs for educational consultation and support.

This study aims to examine the feasibility of web based stress check system to screen high-stress children and to respond to children's concerns and requests for consultation.

In addition, by conducting the web based stress check regularly, we continue accumulating data on children's stress status, which will be utilized in better educational consultation activities at schools to promote mental health.

### METHODS

This study was approved by the Ethics Review Committee of the Graduate School of Medicine, Chiba University, as a "Social Implementation Study on the Operation of a 'Web-based Stress Check System for Children. Through the Board of Education, three public elementary schools were asked to conduct the study. Written informed consents were obtained from the parents. Before answering the web-based survey, children read the research information sheet for the informed assent and were requested to select an "I agree" checkbox, if they wanted to participate in the study.

The questionnaire was based on the 30-item PSI (Public Health Research Center version of the Elementary School Stress Inventory) (Sakano et al., 2007), which consists of the Stress Reaction (SR) (12 items), Stress Factor (ST) (9 items), and Social Support (SS) (9 items) subscales. A score of 20 or more out of 36 was defined as "high stress".

Children also completed the short form of the Japan School Climate Inventory (JaSC) (Nishimura et al., 2017). A tablet-based "Web Stress Check System" was administered twice a year, in July and December, to fourth- to sixth-grade elementary school students.

The results of the survey were fed back to the children using paper advice sheets. Interviews with their homeroom teachers or school nurses were conducted with children with high stress who requested educational consultation.

### 業績:

261人の子供のうち、両親が参加を拒否した24人の子供と237人が最初の調査に参加しました。両親が参加を拒否した23人の子供と238人が<>回目の調査に参加しました。

全体では、第31回調査で13人(1.35%)、第14回調査で7人(17.14%)がそれぞれ高ストレスでした。18人の子供が両方の調査で高いストレスを感じていました。<>人の子供は最初の調査でのみ高ストレスであり、<>人の子供は<>回目の調査でのみ高ストレスでした。

小学4年生では、ストレスの多い子どもの数は第7回調査で10人、第5回調査で11人であった。15年生では、最初の調査で6人、13回目の調査で10人。<>年生では、最初の確実性で<>人、<>番目の調査で<>人。

# POSTER SESSION 01

日本の学校気候尺度とストレス反応との関連では、高ストレス反応児が学校風土に不満を表明する事例があった。担任、養護教諭、教育カウンセリング担当教員がストレスの多い子どもたちをサポートし、その様子をじっくりと観察した。

結論:

本事例から、Webストレスチェックシステムは、子どもが自分自身や教師に即座にフィードバックされ、高ストレス児の早期発見や早期対応につながる可能性が示唆された

# POSTER SESSION 01

Abstract No.: 0875

## Psychometric Properties of the Birleson Depression Self-Rating Scale for Children using the Multidimensional Item Response Theory in Japanese Non-clinical Adolescent

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### INTRODUCTION

The Birleson Depression Self-Rating Scale for Children (DSRS-C; Birleson, 1981) is a self-administered instrument for screening depression in children and adolescents in Japan. The DSRS-C was developed by Birleson (1981) and translated into Japanese by Murata et al. (1996). Although the DSRS-C was originally developed for children, it is easier to administer to adolescents than other depression screening scales because the items are easier to understand and softer in wording (Okada et al., 2009). The DSRS-C has a two-factor structure for the analyses of adolescents (Okada et al., 2009), but its psychometric properties have not been fully examined. Therefore, this study aimed to examine the psychometric properties of the DSRS-C in adolescent data using multidimensional item response theory (MIRT).

### METHOD

An online survey was administered to 1800 adolescents aged 15–18 years (mean  $16.58 \pm 1.06$  years, 900 males and 900 females). The DSRS-C is an 18-item, three-point rating of one's condition over the past week. Before proceeding to answer the questions, the purpose of the study and ethical considerations were presented, and only those who agreed to them selected "consent" and completed the subsequent anonymous survey. This study was approved by the ethics committee of Niigata University of Health and Welfare. All the analyses were conducted using R version 4.2.2 (R Core Team, 2022). The mirt package (Chalmers, 2012) was used for MIRT.

### RESULTS

The decay of eigenvalues of the scree plot, which was calculated from the polychoric correlation coefficient matrix between each item and the minimum average partial criteria, was confirmed. From these two results, two factors were determined to be appropriate. Factor analysis with MIRT resulted in Tucker–Lewis index = 0.972, comparative fit index = 0.976, root mean square error of approximation = 0.043, standardized root mean square residual = 0.051, and Bayesian information criterion = 55170.49 in a two-factor structure. GeominQ was used for rotation. The inter-factor correlation was 0.383. The item response category characteristic curve and test information curve were calculated and plotted for each item.

### DISCUSSION

The results of this study revealed the following two points. First, the DSRS-C consists of two factors in the analysis using MIRT. The inter-factor correlations were comparable to those in studies on children (e.g., Namikawa et al., 2011). Second, the use of MIRT revealed detailed item-by-item accuracy. In the future, comparative studies with the measurement accuracy of other scales measuring depression are needed.

### ACKNOWLEDGMENT

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# POSTER SESSION 01

Abstract No.: 0879

## **A Review of Grief Reactions and Post-traumatic Growth in Bereaved Adolescents**

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The death of father or mother is extremely painful for adolescents, who are experiencing a particular stage of physical and mental development. Individuals experience normal grief after the death of a loved one, while a few still show reactions that affect functioning after more than a year (DSM-5-TR criteria), such as intense longing, emotional distress, which is known as prolonged grief disorder (PGD). Some also experienced positive psychological changes such as helping others or valuing life, referred to as post-traumatic growth (PTG). To better understand the PGD and PTG of bereaved adolescents, this study reviews existing researches by searching the web of science. It was found that the grief reactions of bereaved adolescents were mixed with their own physical and psychological development, including their brain development, cognitive of death, and emotional change, and they would go through the grief stages: facing the drastic changes in their lives, experiencing the pain and loss of bereavement, moving on with their lives in grief, and reinterpreting death. Their grief responses were characterized by denial, avoidance, hiding, and grieving alone, and were also more likely to manifest in sleep problems, decreased academic performance, alcohol abuse, and disruptive behaviors, among which girls are also more likely to integrate the role of "caregiver" into themselves. At least 10% of bereaved adolescents may have PGD. In addition, some quantitative and qualitative researches indicated that bereaved adolescents experience PTG, such as feeling grateful for life, altruistic behavior, maturity, spiritual change, self-change, and understanding of life. Bereavement also causes some adolescents to "grow up faster" and to recognize that events in the world are random and unpredictable. Meanwhile, peer support has a significant impact on their PGD and PTG. However, previous researches in this field are limited and mostly summarized the characteristics of their grief response and post-traumatic growth in terms of developmental stage, without directly comparing bereaved adolescents with other groups in terms of symptoms of grief reactions. Some previous studies have conflated adolescents with children or adults who were bereaved during childhood. Besides, most of studies focused on the external impact factors and ignored the internal cognitive processes of bereaved adolescents. Future research in this area could be developed to clearly define the group of bereaved adolescents, distinguish between their normal grief and PGD, explore their special prolonged grief reactions, focus on their own cognitive processes in the formation of PGD and PTG, pay attention to how to better mitigate the level of prolonged grief reactions and promote PTG from different perspectives (e.g., cognitive), as well as expand the research on this group methods (e.g., network analysis) to provide better guidance for practice.

## Competencies Shared by Cognitive Behavioural Therapies: A Narrative Review

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*Christ Deemed to be University, India*

There are multiple models of supervision in psychotherapy. They are classified based on the school of psychotherapy such as psychodynamic, cognitive behavioural, feminist, person centred (Smith, 2009), on the supervisees development (Rønnestad & Skovholt, 2003), nature of supervisory alliances and the systems (Hawkins & Schwenk, 2011). Supervision specifically in Cognitive Behavioural Therapy (CBT) has been relied on as the pedagogical strategy in clinical training for multiple reasons. For one, CBT offers a manner of approaching therapy, where there is structure within a session and there is a treatment plan in broader case management (Beck, 2020). Second, since CBT has found its place in empirically supported treatment **METHODS**, there has been an increased emphasis on its dissemination (Friedberg et al., 2009). Similar therapies such as Metacognitive Therapy (MCT), Dialectical Behaviour Therapy (DBT), Mindfulness Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT) are considered as extensions of CBT, as all work on cognitions. However, a fundamental difference between traditional CBT and 'third wave' CBT is that the former focuses on the content of thoughts while the latter on the function of thoughts (Hofmann et al., 2010). Therefore, increasing attention has been given towards broader models and general principles to be followed in CBT supervision (Milne, 2017; Milne & Reiser, 2017). Yet there is a lack of consensus on whether competences of the therapist are shared among the various CBT treatments. An explicit framework for initiating, developing, implementing and evaluating competences serve as means of measuring outcomes in supervision (Falender & Shafranske, 2004). The aim of the current study is to identify the shared competencies suggested by Cognitive Behavioural Therapies. The current narrative review is conducted as part of a larger investigation of the core competencies in therapeutic supervision conducted by the authors. Studies were selected using the keywords competencies, supervision, cognitive, behavioural, therapies, ACT, Dialectical from Google scholar, PubMed and ProQuest published in the last ten years. From the list, specifically studies that have discussed process variables associated with CBT, MCT, MBCT, DBT, and ACT were included. Studies that did not include information on supervision of the trainee therapist or years of experience of the treatment facilitator were excluded from the review. Themes of competency as identified from these studies were organized into global themes and sub themes. Competencies associated to skills, knowledge and attitudes were organized along with distinctive competencies for specific therapies.

# POSTER SESSION 01

Abstract No.: 0889

## Patients' Perspectives on Implementation of Remote Cognitive Behavioral Therapy for Insomnia: A Qualitative Study

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### INTRODUCTION

Insomnia is the most frequent sleep disorder, and it has an enormous economic cost. Cognitive behavioral therapy for insomnia (CBT-I) is a highly effective nonpharmacologic treatment, and treatment guidelines for insomnia in various countries place CBT-I as the most recommended treatment (Sateia et al., 2017; Qaseem et al., 2016). However, implementation of CBT-I has not progressed and physicians rarely refer individuals with insomnia disorder to CBT-I. Examining the perspectives of insomniac patients toward CBT-I will help to identify factors that promote its implementation. Furthermore, the recent COVID-19 pandemic and the lack of therapists have increased the demand for remote CBT-I using information and communication technology (ICT) (Lee & Yu, 2021). However, most individuals with insomnia disorder are elderly and tend to have difficulty using ICT themselves to receive remote CBT-I. Therefore, it is necessary to investigate not only the CBT-I itself but also the patient's perspective on remote CBT-I. The aim of this study was to examine patients' perspectives on the implementation of CBT-I and remote CBT-I and discuss strategies for enhancing CBT-I accessibility.

### METHOD

Semi-structured interviews were conducted before implementing remote CBT-I with 12 insomniac patients who agreed to receive remote CBT-I. Patients visited the clinic and receive remote interview in the form of a video conference with an interviewer in another area using a PC. CBT-I were also to be conducted remotely in the same system (Japan Registry of Clinical Trials: 11000187). Researchers with a master's degree or a clinical psychologist conducted the interviews. The interviewers asked about the patient's understanding of CBT-I, their concerns about remote CBT-I, and their motivation to undergo remote CBT-I. We used a thematic analysis approach (Braun & Clarke, 2006) in which common ideas were identified across interviews and then grouped into larger conceptual themes.

### RESULTS

The interviews revealed motivation regarding resistance to pharmacotherapy and acceptability to remote CBT-I. In addition, most patients do not know what kind of treatment CBT-I is, and increasing awareness is a challenge.

### DISCUSSION

More efforts are needed to make more people aware of CBT-I and to raise their expectations of CBT-I's effectiveness. The lack of knowledge about CBT-I is consistent with the findings of previous study (Koffel et al., 2020). Koffel et al.,(2020) stated that patients have expressed concerns about CBT-I using web-based or online application, but this study suggests that no concerns were expressed because the patients came to the clinic to receive remote CBT. In order to promote CBT-I, it is necessary to incorporate various forms of delivery, such as remote settings as well as face-to-face.

### ACKNOWLEDGMENTS

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# POSTER SESSION 01

Abstract No.: 0893

## **An Examination of the Relationship between the Fostering Behavior of Social Foster Care Facility Staff and Their Sense of Efficacy in Caring for Children in Residential Care in Japan**

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### INTRODUCTION

In Japan, approximately 80% of the foster care is conducted in institutional settings. In addition, the care of children in social foster care in Japan is extremely difficult due to the complexity of their backgrounds. This makes it difficult for the facility staff to maintain a good sense of efficacy in performing their duties. As a result, a high staff turnover rate has become a problem, with about half of the staff leaving their jobs after less than five years. The early turnover of staff at social foster care facilities can be a factor that hinders the improvement of the condition of children who may have attachment and emotional problems due to their complicated upbringing. Therefore, it is necessary to support facility staff to enhance their self-efficacy in performing their duties of taking care of children in the facility. Thus, the purpose of this study was to examine the relationship between the caregiving behavior of social foster care facility staff and their sense of efficacy in taking care of children in the facility.

### METHOD

Responses were obtained from 284 persons at 16 social care facilities. Among those who cooperated in the survey, 263 persons (mean age  $34.55 \pm 9.86$  years, 133 females, mean length of service  $5.65 \pm 5.21$  years) whose answers were complete were selected for analysis. A self-administered questionnaire survey was conducted by mail method. (1) Basic information: age, gender, years of service, position, qualifications, experience in dealing with abused children. (2) The foster care behavior of facility staff toward children in the facility: The scale of foster care behavior of social care facility staff (Takii & Ito, 2020). (3) Efficacy expectations and outcome expectations for foster care of children in residential care: Each was asked as a single item. (4) Human relations foster care efficacy: The "Human Relations" Child Caregiver Efficacy Scale (Nishiyama, 2006). This study was conducted with the approval of the Ethics Committee of the author's university.

### RESULTS & DISCUSSION

First, a cluster analysis was conducted based on the factor structure of the Foster Care Behavior Scale for social foster care facility staff. As a result, it was determined that a four-group classification was appropriate: "watch-over type (n=70)," "high reprimand type (n=86)," "low reprimand high involvement type (n=77)," and "general low involvement type (n=30). Next, a one-way analysis of variance was conducted to examine the relationship between child-rearing behavioral characteristics and the sense of efficacy of the facility staff in caring for the children in their care. The results showed that the "low reprimanding and high involvement" and "looking after" groups had higher efficacy in caring for children in residential care than the "low general involvement" and "high reprimanding" groups. In this study, we found that the "low reprimanding and high involvement" and "watching over" groups were more effective than the "general low involvement" and "high reprimanding" groups in terms of nurturing children.

# POSTER SESSION 01

Abstract No.: 0894

## Implementing Exposure Therapy in Real-World Dental Settings

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Dental care-related anxiety and fear (DFA) is a global public health problem, with ~15% of individuals affected to the degree that it a barrier to their receiving care. High levels of DFA increase individuals' tendency to avoid regular dental care and delayed treatment can lead to more pain, reinforcing DFA in a vicious cycle. Given that dental care plays an important role in maintaining and improving oral health, and DFA is an impediment to dental care across payer and healthcare systems, an approach to decrease dental fear is needed. Exposure therapy is known to be effective in addressing the fear and avoidance cycle but its implementation and dissemination in real-world dental settings is lacking. The purpose of this study was to implement exposure therapy and to examine its utility and practicality in an actual dental setting with dental personnel. A total of 29 patients who experienced dental fear/anxiety/phobia and dental avoidance for more than one year were recruited at West Virginia University and Indiana University. The exposure consisted of two sessions: (a) chairside exposure using films of dental visits and procedures on a computer tablet (i.e., iPad), and (b) naturalistic exposure in a prophylaxis dental appointment. The films were secured from open access sources available at no cost on the internet. The 45-minute iPad session was in a private treatment room in a dental clinic, with the patient seated in a dental chair, with dental-related sights, sounds, and smells as in a typical dental treatment environment. An individualized systematic desensitization approach with repeated trials was used, with 10 films ascending stepwise from least to most fear-provoking. Patients progressed through each film sequentially, based on the amount and reduction of anxiety they reported in each trial. Subjective Units of Distress (SUDS) on a 0-100 scale were recorded after each trial. During the second, naturalistic exposure session, patients saw a dental hygienist and dentist for dental prophylaxis and examination; SUDS were recorded during the procedure. The maximum SUDS of each film's first trial were significantly different across films ( $F = 8.4, p < .001$ ), consistent with the intended ordering of the films. In the chairside iPad exposure session, the average number of trials was 22 (range:14 - 19). Approximately 80% of patients were exposed to the most fear-evoking films (i.e., films 8, 9, or 10). The average SUDS before ( $M = 32.4, SD = 22.5$ ) and after ( $M = 27.7, SD = 24.6$ ) the exposure was calculated. There were 26 of 29 patients who completed the naturalistic exposure session which followed the iPad exposure. The average SUDS before the naturalistic exposure was 37.8 ( $SD = 25.8$ ) and after the session was 19.4 ( $SD = 18.9$ ). The patients reported significantly less distress after the naturalistic exposure than before ( $t = 3.9, p < .001$ ). This study shows the potential of providing exposure therapy in real-world dental settings, involving dental personnel and a computer table to benefit patients.

# POSTER SESSION 01

Abstract No.: 0912

## Efficacy of Delivering Streamlined Cognitive Behavioral Therapy with Online Psychotherapy Tools for Depression: A Feasibility Study in Japan

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### INTRODUCTION

As mental illness is one of the five noncommunicable diseases defined by Ministry of Health, Labour and Welfare (MHLW), depression has a lifetime prevalence of 6.3% in the Japanese population. In recent years, cognitive behavioral therapy (CBT) has gained considerable attention and has been recommended as an effective therapy for depression worldwide. However, a typical CBT session lasts 30-50 minutes. In contrast, a clinician's average outpatient time in Japan is about 8.3minutes, making it challenging for physicians to conduct CBT in the limited available time. Conceivably reflecting this fact, the implementation rate of CBT in psychiatric clinics remains low, as reported as 6.9% in one report. The most frequently cited reason preventing implementation in clinical settings was lack of time. For adequate dissemination, a less time-consuming way to provide CBT is essential. As such, this study aimed to develop an individual CBT program enabling one to perform CBT more efficiently in a 15-minute session and examine its efficacy.

### METHOD

Streamlined CBT (SCBT) was developed following the book (Wright et al.,2010, Otto et al2011) and added tips to MHLW's manual on cognitive-behavioral therapy for depression. Emphasis was put upon structuring the materials to ensure that a CBT session followed a framework and adhered to an agenda, despite the limited assigned time. An open-access website containing all the necessary materials with sufficient information in a downloadable format was constructed, emphasizing accessibility and allowing one to utilize resources from a home environment. A team of clinical experts revised and assembled the materials through consensus and collaboration. The efficacy of the developed SCBT program was conducted through a multicenter feasibility study of 12 adult patients with depression. The primary outcome was change in Quick Inventory of Depressive Symptomatology (QIDS) scores over time, measured every session throughout the intervention. Health Labour Sciences Research Grant funded this study (JP20GC1016).

### RESULTS

Several CBT worksheets were designed and developed. In particular, the worksheet filled by the patient at the end of the session was created so that their task was straightforward, having only to place a checkmark on the possible agenda to be engaged. This delivery style allowed a more manageable way for patients to work on their agenda at home. Seven videos were developed to demonstrate CBT strategies, all 5 to 7 minutes long. Integration of multimedia elements with all other available resources, including case materials, patient handouts, textbooks, and worksheets, allowed even those with difficulty to concentrate on working with the agenda. A total of 12 patients (seven men and five women) were recruited for the feasibility study. The mean age of participants was 42.1 (standard deviation: SD 12.0), with a mean QIDS of 12.9 (SD 5.50) before the intervention. After the five sessions, we confirmed the decrease of QIDS score with a mean, 10.4 (SD 4.72).

### DISCUSSION

This is the first pilot study for SCBT undertaken as a national research project in Japan, which allows CBT sessions to be conducted in a short period of time for patients with depression. The efficacy of the developed SCBT will be discussed while also considering "efficiency" from the both the patient's and the therapist's perspective. We plan to discuss future issues and prospects based on data collected up to the day of the presentation.

# POSTER SESSION 01

Abstract No.: 0913

## The Employment of Logic for Enhancing Cognitive Behavior Therapy Sessions

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There have not been written any papers that directly discuss correlations between logic and CBT. Regardless, the ideas that lie in the very basis of CBT have both philosophical and, consequently, logical roots. In the current state of human knowledge, logic is represented in many fields such as computational sciences, philosophy, linguistics, psychology, and others. The scope of logic not only concerns the rules for correct reasoning anymore but also involves such concepts as information flow, social interaction and communication (van Benthem, J., 2017).

In 1967 Aaron T. Beck published the book (Beck, A.T., 1967) where he summarised his previous research on the cognitive therapy, or cognitive behavior therapy (CBT) as it is known today. This therapy views humans' thoughts to be the cornerstone of their suffering. A. Beck was clear about the source of his inspiration, namely Stoic philosophers, in particular Epictetus, who considered logic to be useful for identification and abandoning false beliefs that lead to harmful emotions. The guiding idea outlined in the talk stems from Beck's suggestion that "... there was a thinking disorder at the core of psychiatric disorders like anxiety and depression." (Beck, J., 2011). Here the place where logic comes into a play. It deals with neither cultural or language difficulties, it rather has a certain number of so-called tools that might be useful for the therapists and clients in their collaborative work.

The overall project's aim is to answer how logic can be used for helping people with depression/disorders back to normal reasoning abilities. One angle to look at it is to provide the subjects with certain syllogistic tasks as done by Channon S. and Backer J. (1994). Their study suggests that people who face depression are not able to complete syllogistic tasks. The question this thesis is interested in is rather twofold. On one account there has been evidence for illogical reasoning of people with certain deviations from their normal reasoning abilities. The other point to be made whether providing certain logic-based techniques would help the subjects to normalise their reasoning abilities. I look at the problem of jumping to conclusion for people who have anxiety and emotional regulation problems. The use of conditionals is considered within real life scenarios. As Kornreich C. et al (2017, p.1) puts the rationale for undertaking the experiments in schizophrenic patients: "Conditional reasoning (if p then q) is used very frequently in everyday situations. Disturbances in appropriate use of conditional reasoning could lead to errors with serious consequences". Conditional statements are often used when clients (patients) are trying to describe their beliefs. Therefore, the logic-based technique should serve therapists for getting to the facts, thoughts about the facts that might reveal maladaptive thinking process and, consequently, maladaptive core beliefs.

The proposed experimental part is aimed to test the logic-based technique offered in the context of CBT therapeutic session. The participants are going to be tested in the beginning of the treatment before the employment of a logic-based technique. They will be offered a sequence of statements to make deductive inference. At first, the participants will not have any particular rules of inference at hand. After the preliminary results, the rules for making valid inference will be provided and participants will be tested again. I will also discuss why this approach has more advantages than the Wason selection task, that is widely used test of conditional reasoning (Wason, 1968). The same tasks will be provided upon application of the logic-based technique at the last session. The idea is to test reasoning about the real-life scenarios from participants' own experience rather than made up stories or problems.

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# POSTER SESSION 01

Abstract No.: 0915

## **A Preliminary Study on the Scale Development of Loneliness Syndrome**

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The purpose of this study is to develop a cognitive behavioral therapy theoretical model by exploring the causes and formation process of loneliness syndrome, symptoms of loneliness syndrome, and coping-related factors in the COVID-19 national disaster situation. To achieve our goals, we apply the grounded theory approach. The main results of this study are as follows. First, simple and serious levels were derived for cognitive, emotional, and behavioral characteristics. Second, it was confirmed that although it conforms to existing studies on family, friends, and opposite sex friends, Korean factors are different. Third, the characteristics of collective, others-oriented, fusional loneliness were confirmed as Korean elements. Fourth, it was analyzed as severe loneliness and vigilance of cognitive elements, denial, maladaptive aspects of the emotional domain, and various over-dependent behaviors. Fifth, both basic and preliminary surveys were conducted to derive sub-scales of loneliness syndrome and to make a item of loneliness syndrome. Furthermore, this study attempted to identify the concept of the loneliness syndrome scale and to verify the validity of the scale including the subscale by evaluating the validity and reliability of loneliness syndrome. First, a basic survey was conducted on 18 male and female adults in their 20s and 30s. After exploratory factor analysis and expert council, a total of 131 preliminary survey test sheets were developed. Second, a preliminary survey was conducted on 956 adult men and women. Question analysis, exploratory factor analysis, and confirmatory factor analysis were conducted. Third, considering the existence of different conceptual definitions of loneliness syndrome. according to various theories, it was necessary to carry out the conceptual definition of loneliness syndrome and its item development successively. Through the development of a scale, it is intended to contribute to proving the therapeutic effect based on cognitive behavioral therapy.

# POSTER SESSION 01

Abstract No.: 0927

## The Impact of Education on Reading the Mind in the Eyes Test in Children and Adolescents

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In recent years, a number of tasks have been developed to measure Theory of Mind (ToM), or the cognitive capacity to identify and reason about mental states in other people (Premack & Woodruff, 1978). One of the most widely used tasks to measure ToM is Reading the Mind in the Eyes Test (RMET), developed by Baron-Cohen et al. (1997; 2001) to evaluate adults with Asperger Syndrome and high-functioning autism. Since then, RMET has been utilized to measure the ToM of individuals with a wide range of psychological conditions, such as depression, social anxiety disorder, eating disorders, and borderline personality disorder.

The RMET has also been applied to children and adolescents, and it is known that scores improve in accordance with the developmental progression of ToM (e.g., Moor et al., 2012). Relevantly, previous research has demonstrated that RMET scores are affected by education levels. For example, Kynast et al. (2021) showed that individuals with higher education present better performance on RMET in a large sample of German adults. Similarly, Greenberg et al. (2023) showed a relationship between education and RMET scores through a Bayesian multilevel analysis of adolescents and adults across 57 countries. However, previous studies fail to specify what sort of educational environment is influential in enhancing ToM. The present study aimed to depict the impact of education (i.e., school types attended) on RMET in a large sample of Japanese youth.

Participants were 1500 children and adolescents (500 participants each from junior high school, senior high school, and university; 250 males and 250 females, respectively) recruited via online survey platform. They were asked to respond to (1) The Asian RMET (Adams et al., 2010), (2) The Autism-Spectrum Quotient (AQ) (Wakabayashi et al., 2004), (3) Social Interaction Anxiety Scale (Kanai et al., 2004; for university students), (4) Social Anxiety Scale for Adolescents (Okajima et al., 2009; for junior and senior high school students), (5) Short Fear of Negative Evaluation Scale (Sasagawa et al., 2004), and (6) Patient Health Questionnaire-9 (Muramatsu, 2014). They were also asked to respond to a series of questions regarding their schools, including whether it is a national, public, or a private school, single-sex school or coeducational school, integrated junior and senior high school, part-time evening school, or correspondence school.

A series of ANOVAs were conducted to examine whether students from different types of schools scored uniquely on the Asian RMET. The most striking discrepancy was found between boys' school, girls' school, and coeducational school; students from coeducational school scored higher than students from single-sex schools. ANOVAs were conducted for social anxiety, depression, and AQ scores as well. The results showed that social anxiety scores were lowest for boys' school, and depression scores were highest for girls' school. However, these internalizing symptoms were not responsible for the discrepancy in RMET performance. No significant differences were found in AQ scores. Taken together, a larger diversity in student population, instead of psychological conditions, seemed to be associated with higher performance on RMET.

Students from national junior and senior high schools, as well as students from public universities, scored lower on RMET. Likewise, students from integrated junior and senior high school scored lower on RMET than students from regular schools. Interestingly, mean social anxiety scores were also lower in these schools. The entrance exam systems for these schools promote the homogeneity of their student population. Thus, it can be interpreted that while schools accommodating students with similar background offer an environment less socially demanding, exposure to diversity and interpersonal variability is beneficial in acquiring ToM. Implications and future directions are discussed.

# POSTER SESSION 01

Abstract No.: 0930

## Effect of Therapist Empathy Skills on the Therapeutic Alliance in Japanese Therapist: Focus on the Interaction between Mindfulness and Acceptance

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### INTRODUCTION

The therapeutic alliance is a factor that universally contributes to the effectiveness of all types of psychotherapy. For this reason, various skill trainings have been developed to improve the quality of the therapeutic alliance. Among others, therapist empathy skills have been shown to be moderately or more associated with the therapeutic alliance (Nienhuis et al., 2018). However, it has been suggested that the use of appropriate skills requires taking into account the psychological factors of individual therapists (Bennett-Levy, 2019). Therefore, the present study examined the relationship between the therapeutic alliance and therapist factors among Japanese psychotherapists.

### METHODS

Seventy-four psychotherapists (19 men, 53 women; mean age,  $30.10 \pm 8.70$  years) were examined using the Japanese version of the Working Alliance Inventory (WAI; Kasai, 2006) by Hovarth et al. and the Japanese version of the Detached Concern Scale (DC; Yamashiro and Ito, 2021), Japanese version of Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003; Fujino et al., 2015), Acceptance Process Questionnaire (APQ; Shima et al., 2017) were administered. The APQ is a scale that measures acceptance in terms of form and function, consisting of four factors: form: "choice not to avoid private events" and "cessation of reactions"; function: "expansion of behavioral repertoire" and "reality perception". It is composed of four factors.

### RESULTS

To examine the effects of empathy, mindfulness, and acceptance on the therapeutic alliance, we conducted a hierarchical multiple regression analysis with WAI as the objective variable.

Results indicated that empathic concern had a significant positive effect on WAI ( $\beta = 3.2, p < .001$ ) and MAAS had a significant positive effect on WAI ( $\beta = .47, p < .01$ ). There was also an interaction effect between the APQ subscale "expanded behavioral repertoire" and MAAS, indicating that even after controlling for empathy, the interaction term between mindfulness and expanded behavioral repertoire influenced the treatment alliance. ( $\beta = -.05, p < .05$ ). In addition, the results of a simple slope analysis indicated that the influence of mindfulness and expansion of behavioral repertoire on the therapeutic alliance was enhanced when the expansion of behavioral repertoire and mindfulness were low ( $b = 0.76, t = 3.57, p < .01$ ;  $b = 0.23, t = 2.00, p < .05$ ).

### CONCLUSIONS

The results of the present study extend those of Krafft et al. (2017). In other words, the results suggest that the element of acceptance, in which mindfulness attention and awareness allow people to not only be aware of their own emotions and not be trapped by them, but also to choose behaviors consistent with their goals, is important in the therapeutic alliance in a therapeutic setting. In addition, the fact that there was an interaction between a part of acceptance and mindfulness suggests that future Th. training should focus on the acceptance of one's own reactions to various stimuli and contexts, in addition to training in empathy and mindfulness, and that research on the effectiveness of such training is desirable (Anderson et al., 2020).

# POSTER SESSION 01

Abstract No.: 0945

## Development and User Engagements of i-ACT for Life Mobile Application for Prevention and Management of Psychological Distress

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### INTRODUCTION

The COVID-19 pandemic has challenged the ways of modern healthcare delivery, and remote methods of delivering evidence-based mental healthcare are more important now than before (Ho et al., 2020).<sup>1</sup> Digital mental health interventions have already been lauded for its ability to reduce cost, transcend physical limits, and increase flexibility and autonomy of users (Wasil et al., 2021) <sup>2</sup>, making its use arguably vital in managing the mental health impact of the pandemic. Given that rates of mental disorders are expected to increase post-pandemic (Varma et al., 2021)<sup>3</sup>, novel methods to introduce preventative and management of mental health issues are needed to reduce the strain on Malaysia's already overburdened mental healthcare system (Beckstein et al., 2021).<sup>4</sup> Objective: The present study elaborated the development and user engagements of i-ACT for Life, a mobile application of Acceptance and Commitment Therapy (ACT)-integrated with Islamic spiritual strategies for prevention and management of psychological distress for Malaysian.

### METHOD

The mobile application i-ACT For Life was developed based on the cloud-based instant messaging i-ACT for Life program that has been tested its effectiveness through a randomized controlled trial.<sup>5</sup> The program comprises five weekly modules (Grounding, Unhooking, Acting on Values, Being Kind, and Making Room). Each corresponded to an ACT core process and was supplemented with Qur'anic verses, Hadith (sayings, practices, and silent approval of Prophet Muhammad), religious/spiritual activities, and spiritual-relevant poems. The micro-contents were designed in infographic format, 7 interactive exercises and quizzes, 11 audio exercises, and 7 psychoeducation videos. The major improvements from the original program are translation and adaptation into the Malay language. The users are encouraged to take Depression, Anxiety, and Stress Scale-21 items (DASS-21) before and after the program. The current mobile application is integrated as part of Selangor Mental Sihat (SEHAT), a comprehensive mental health application involving mental health awareness, literacy, screening, early intervention, and subsidized psychiatric intervention sponsored and managed by one of the state governments in Malaysia.

### RESULTS

i-ACT for Life mobile application was live in SEHAT since October 2022 in conjunction with World Mental Health Day. As of February 2023, the number of users for SEHAT and i-ACT for Life is 17,105 and 2,922, respectively. Total number of user engagements are follows: Opening of the Program – 2,918 (99.86%), Week 1 – 1,447 (49.52%), Week 2 – 48 (1.64%), Week 3 – 25 (0.86%), Week 4 – 9 (0.31%), and Week 5 – 5 (0.17%). None of the users have completed pre-and post-DASS-21 for analysis of program outcome.

### CONCLUSIONS

The total number of engagements suggests that the i-ACT for Life mobile application is accessible for the users. However, sustainability of user engagements and issue on program completion need to be further studied. Increase promotion of the program, continuous reminders to the users, and therapist-assisted initiative may be the solutions for the issues.

Keywords: Cognitive-behavioral, COVID-19, Culture, Digital mental health intervention, Prevention



# POSTER SESSION 01

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## To Be or Not to Be Flexible: Individual Differences in Anxiety in Preschoolers and Preadolescents

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Affective flexibility refers to the ability to flexibly alternate between emotional and neutral aspects of a given situation. Optimal levels of affective flexibility allow children to optimally deal with an affective challenge by analyzing different perspectives and selecting the best perspective. This ability has been investigated in two different studies conducted with 41 preschoolers ( $M = 69.63$  months,  $SD = 3.95$ ) and 120 preadolescents (11-12 and 13-14 years old) using two different versions of the Emotional Flexible Item Selection Task (EM-FIST, Jacques & Zelazo, 2001) varying in task complexity and the role played by emotions (task relevant or irrelevant). In the first study, conducted with preschoolers, we designed a card version of the EM-FIST in which emotion was task irrelevant and children had to flexibly alternate between different non-emotional aspects of emotional faces (neutral, happy and angry faces presented in three different blocks). Our findings provide support for the validity of this card version of the EM-FIST by indicating high test-retest reliability. Looking at gender differences, our findings reveal that girls are more flexible than boys in terms of accuracy performance when they are required to swiftly process emotional information. Interestingly, we show that preschoolers who exhibit high levels of anxiety symptoms show superior flexibility (accuracy performance) when they have to process positive information. In our second study, conducted with preadolescents, we designed a computerized version of the EM-FIST in which emotion was task relevant as children had to flexibly alternate between different emotional and non-emotional aspects of emotional faces (neutral, happy and angry faces which were mixed during each trial). Firstly, we found an age improvement in affective flexibility from 11-12 years old to 13-14 years old indicating that this ability continues to develop during this developmental window. Moreover, high anxious participants had slower responses when they were required to view one stimulus in two different ways and thus switch between emotional and non-emotional aspects of that emotional stimulus. In particular, our findings indicate that girls are more flexible than boys as they provided faster responses when they had to process emotional information. Our results imply that individual differences in trait anxiety have a different impact on affective flexibility according to the role played by emotions: if that emotion is task relevant or irrelevant to the task at hand.

Keywords: affective flexibility, trait anxiety, preschoolers, preadolescents

## Understanding Affective Flexibility during Adolescence: The Role of Inhibition and Working Memory

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There are several studies stating that cognitive flexibility is a complex ability by showing that it is based upon working memory and inhibition skills. However, most of these studies did not take into account if this relation holds true when we look at executive functions in an affective context. The present study aimed to take a closer look at the relation between individual differences in affective flexibility and affective measures of inhibition and working memory in adolescents. Specifically, we employed three executive functioning tasks using emotional stimuli namely the Attentional Control Capacity for Emotion (ACCE) task, the Emotional 2-back task and the Emotional Stroop task in order to assess affective aspects flexibility, working memory and inhibition during adolescence. A total of 110 of preadolescents and adolescents (54 girls), aged between 12 and 18 years old ( $M = 15.36$ ,  $SD = 2.07$  years) participated in this study. Firstly, our findings revealed that affective executive functions in general and affective flexibility in particular still continue to develop from middle childhood to late adolescence. Secondly, we found an interesting gender-related difference in terms of affective flexibility with boys displaying longer reaction times compared to girls when applying the emotional rule after performing a non-emotional, or a different emotional rule. This is the first study to show that affective flexibility is highly predicted by both inhibition and working memory processes at the level of accuracy performance and reaction time. In conclusion, our research provides valuable insights into how affective flexibility relates to affective aspects of inhibition and working memory during adolescence.

Keywords: affective flexibility, executive functions, affective, adolescence

# POSTER SESSION 01

Abstract No.: 0956

## Co-production of a Blended Intervention to Prevent Relapse in Obsessive Compulsive Disorder (OCD)

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### INTRODUCTION

OCD is in the category of the sixth largest contributor to “non-fatal health loss” globally (WHO, 2017) costing the UK Health service £9.8 billion per year. The short-term efficacy of CBT for OCD is well established. However, relapse rates are high. Up to 60% of adults experience relapse after CBT, in most cases (85%) within the 12-months following completion of therapy (Braga et al., 2010). Despite the high personal, societal and economic cost, no therapeutic intervention to prevent relapse is standard practice.

Aim: The aim of this study was to develop a ‘blended’ relapse prevention intervention for OCD using a co-production model, with ‘People with Personal Experience’ (PPE) of OCD, in collaboration with OCD academic and clinician experts. A blended intervention was chosen to capitalise on the combined strengths of face-to-face and digital approaches, and the advantage of increased accessibility.

### METHOD

A steering group comprised of N = 6 PPE and co-facilitated by N = 2 clinical academic psychologists met (via a video-conferencing platform) weekly for 14 weeks to develop the content of the group intervention and mobile health application. N = 2 clinical experts were consulted on the development separately throughout the process. The ‘Person-Based Approach’(PBA) methodology to intervention development was used. PBA systematically incorporates the views, ideas, and input of PPE at each step of the process from planning to implementation. This facilitates an iterative process and enables any problems with engagement to be identified and resolved before implementation, avoiding wasting resources at the time of efficacy testing (Morrison et al. 2018). On completion of the co-production phase, PPE were invited to take part in a qualitative interview to gain an in-depth understanding of their experience of co-producing the intervention. The interviews were conducted by researchers with no prior involvement in the co-production process, N = 5 PPE took part. Qualitative data was analysed using Reflexive-Thematic Analysis (RTA) (Braun & Clark, 2006; 2019).

### RESULTS

A 10-session group programme, (to be delivered via a video conferencing platform, once a month) and a mobile digital health application were developed. Each session focuses on a different aspect of relapse prevention. The app was designed to be used daily throughout the intervention period and following completion. The app is comprised of 10 sessions that mirror the content of the group intervention. It also includes interactive activities and video clips pertaining to cross-cutting relapse prevention strategies. Four themes were derived from the RTA that examined the process and experience of PPE in co-production. PPE reported initially being “hesitant” about the co-production process, with fears that PPE involvement may be treated as ‘tokenistic’. However, PPE reported finding the co-production experience to be “normalising and validating”. Value in the opportunity to “bring about change” via the development of an intervention designed to help others, with the potential to be easily accessible, was reported.

### DISCUSSION

PPE participation led to positive feelings towards co-production as a methodology, and PPE were keen to see it further utilised in the field. PPE perceived there to be a limit to what could be gained in research without lived experience input, positioning it as a vital element in the development of successful OCD interventions. The next stage of research is to assess the feasibility and acceptability of the blended intervention via a feasibility Randomised Controlled Trial.

# POSTER SESSION 01

## PROTOCOL REGISTRATION

Open Science Framework: Millar, J. F. A., & Waites, E. (2021, Dec). Improving and maintaining mental health: Development of a blended intervention for relapse prevention in Obsessive Compulsive Disorder (OCD). Retrieved from [osf.io/chxp8](https://osf.io/chxp8)

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# POSTER SESSION 01

Abstract No.: 0971

## Exploring Stress Sources, Coping Styles, and Cognitive Distortions among Korean Workers: A Preliminary Investigation

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### INTRODUCTION

Upon the increased awareness of severity in mental health programs among employees and the needs for deal with these issues, diverse forms of the Employee assistance program (EAP), a work-based intervention program designed to assist employees in resolving personal problems, have been actively sought. In recent years, evidence for the effectiveness of cognitive-behavioral therapy (CBT) on dealing with emotional issues among employees has been accumulated, though the effect size varies across studies. Critics have pointed out the importance of examining stress type, cognitive appraisal, and coping style experienced by employees as a way to enhance the effectiveness of CBT. This study explored the major stress sources, coping styles, and frequently activated cognitive distortions of employees, and examines whether these variables differ by age and gender.

### METHOD

Data were collected from 239 workers (female=123) through two online surveys. The surveys included a demographic questionnaire (7 items of age, gender, occupation, job titles, total years of work experience, annual income, employment status) and a stress experience questionnaire which asked various questions about stress they experienced using open-ended questions. The coding system was developed upon the basic principles of CBT. Three trained coders analyzed the responses to identify the most frequently reported stress sources, coping styles, and cognitive distortions.

### RESULTS

The analysis revealed that the most prevalent source of stress was 'interpersonal relations in the work setting' (37.7%), followed by 'other interpersonal conflicts' (17.2%) and 'job demands' (12.6%). The coping style most frequently reported by participants was 'emotion-focused' (46.5%), followed by 'problem-focused' (32.6%) and 'avoidant' (12.6%). The most commonly observed cognitive distortions in participants' responses were 'overgeneralization' (19.1%), 'magnification' (14.7%), and 'mental filter' (14.0%). However, these results differed slightly when analyzed by gender and age groups. Women tended to report 'interpersonal relationships in the work setting' as a stress source more often than men did. Although both men and women reported using emotion-focused coping most frequently, they differed in the specific ways they coped with their emotions. Regarding age, workers in their 20s reported 'job demands' as a stress source more frequently than those in their 30s and 40s did. While emotion-focused coping was the most commonly used coping style across both age groups, there were slight differences in how they managed their emotions.

### CONCLUSIONS

This study provided information about major stress sources, coping styles, and cognitive distortions among Korean employees, both within and outside of the workplace. These results suggest the need to consider age and gender as well as these cognitive factors in designing and delivering CBT-based EAP. These factors might help to resolve issues of individual difference in treatment responses. Further studies using more rigorous statistical methods is needed to replicate these findings. Additionally, investigating other individual factors, such as personality traits or cognitive appraisal styles, and job characteristics that may impact stress responses could provide a more comprehensive understanding of the factors that contribute to stress among workers.

# POSTER SESSION 01

Abstract No.: 0978

## Efficacy of a Cognitive Behavioral Therapy-Based Online Group Self-Help Program: Randomized and Non-Randomized Controlled Trials

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### INTRODUCTION

- Despite evidence-based interventions being available, approximately 30% of individuals diagnosed with depression do not receive any form of care due to barriers such as cost, accessibility, and stigma.
- CBT-based self-help programs may be a cost-effective alternative or supplement to traditional care, as they often require minimal or no professional support.
- The use of information and communication technology, such as videoconferencing, may help reduce barriers to accessing evidence-based care and increase engagement in interventions.
- We have developed a structured manual for a CBT-based online group self-help program (COS) and compared its effectiveness to an active comparator and waitlist control.

### METHODS

#### 1. Interventions:

##### A. The COS Program:

- Each seven session of the COS is approximately 50 minutes long, with 4-6 participants and a facilitator. Sessions typically introduce cognitive distortions and encourage participants to share experiences for emotional support.

##### B. Active Comparator:

- A CBT-based application (APP) was utilized for the active comparator. It was shown its effect in a randomized controlled trial (Hur et al., 2018).

#### 2. Research Procedures:

- Individuals who have any depressive disorder (determined by the Structured Clinical Interview for DSM-5 — Clinician Version) or have a PHQ-9 score of  $\geq 5$  were included in the study.
- A total of 127 individuals were randomly assigned either to the COS or to the APP group.
- Individuals assigned to a waitlist control ( $n = 48$ ) were recruited separately three months later.
- Depressive symptoms, suicide ideation, and dysfunctional attitudes were assessed at baseline and post-intervention (3 weeks later for the waitlist control).
- Intend-to-treat (ITT) analysis was conducted using generalized mixed models.

### RESULTS

- Both the COS and the APP groups showed reductions in depressive symptoms and dysfunctional attitudes compared to the waitlist control.
- For suicidal ideation, statistically significant improvements were observed only in the COS group.

### CONCLUSION:

- The randomized controlled trial demonstrated the efficacy of both the COS and the APP groups in reducing depressive symptoms and dysfunctional attitudes.
- Our results also hold promise for the potential efficacy of COS in reducing suicide ideation. This finding is in contrast to a previous meta-analytic study, which have shown that self-guided digital interventions that are not explicitly targeting suicidal ideation have not been effective in reducing suicidality.
- Future research should continue to explore the potential of online self-help group interventions for depression.

# POSTER SESSION 01

Abstract No.: 0984

## Development of an Internet-Based Cognitive Behavioral Therapy Program for Hong Kong People with Social Anxiety Disorder

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Social anxiety disorder (SAD), also known as social phobia, is one of the most common mental disorders worldwide. In Hong Kong, the 12-month prevalence of SAD is 3.2% with more than 230,000 sufferers, but the treatment rate is 8.7% only (Lee, Lee & Kwok, 2005), which indicates that most of the sufferers are undiagnosed and untreated. People with SAD often exhibit social avoidance, strong anxiety, distress and physical symptoms, which may have negative impacts on their mental health and quality of life. One of the most effective treatments for SAD is cognitive behavioral therapy (CBT), and internet-based CBT (iCBT) has shown promise in reducing general and social anxieties, as well as improving the quality of life of those with SAD (e.g. Carlbring et al., 2007; Tillfors et al., 2011). While widely utilized in North America and North Europe, internet intervention is underdeveloped in Asia, such as Hong Kong.

This protocol study developed an iCBT program called "EASE Online" for Hong Kong people with SAD for a randomized controlled trial (RCT) for testing its program effectiveness in reducing anxiety symptoms and psychological distress, and improving quality of life. The "EASE Online" program includes an online platform, a mobile application and a virtual reality (VR) system for exposure therapy. The program functionalities involve 9 structured online modules, a private messaging system, forum, online booking and assessment, client portfolio and reminder for the client account; and managing booking appointment and forum, processing application, checking online questionnaires, creating cohorts, and monitoring client's progress for the therapist account. The themes of the 9 online modules are: (1) Get to know your social anxiety responses; (2) Identify automatic thoughts and cognitive distortions; (3) Self-talk & Positive self-statement; (4) Behavioral experiment; (5) Fear hierarchy; (6) Exposure therapy; (7) Identify cognitive rules; (8) Relax cognitive rules; (9) Say "Good-bye" to social anxiety. The 9 online modules are presented in the forms of videos, text, session review, exercise and feedback, with the content of mood check, videos of briefing, case demonstration and debriefing, and relaxation exercises. A blended mode of service delivery is adopted, which includes the 9 online modules, three face-to-face/Zoom counseling sessions, and two sessions of VR exposure therapy (VRET). The VR system includes five VR social scenarios: (1) Job interview; (2) Deliver a presentation; (3) Appraisal of work performance; (4) Expression of disagreement; (5) Drinking in public. Participants are openly recruited and referred by local social service organizations, and screened by an online questionnaire and an intake interview. An estimated 300 qualified participants will be invited to take part in the "EASE Online" program in a 3-Arm RCT. Qualified participants are randomly assigned to three conditions: (1) Web-based "EASE Online" program; (2) App-based "EASE Online" Program; and (3) waitlist control (WLC) group who will join the Web-based "EASE Online" Program after the two experimental groups completed the service. All participants complete the same online questionnaire at pre-test, post-test, 3- and 6-month follow-up assessments. Cohorts are adopted to facilitate the implementation of the RCT. Linear mixed effect modeling will be performed to test the clinical effectiveness of the "EASE Online" program.



# POSTER SESSION 01

Abstract No.: 0989

## Emergency Medical Services (EMS) Personnel's Knowledge About the Link between Firearm Ownership, Firearm Storage Practices, and Suicide Risk: Implications for Training

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### INTRODUCTION

Each year, over 800,000 individuals die by suicide globally. In many countries, such as the United States (US), firearms are a common suicide method. Firearm ownership and non-secure storage practices (e.g., unlocked, loaded) are associated with increased suicide risk. Accordingly, encouraging secure firearm storage is a key component of suicide prevention strategies. However, prior work has found that many healthcare providers hold inaccurate beliefs about the risks associated with firearms. This study (1) characterized emergency medical services (EMS) providers' beliefs about the links between firearm ownership and storage practices with risk for suicide and (2) determined if these beliefs differed by personal firearm ownership.

### METHOD

We recruited a sample of 218 US EMS personnel who completed a web-based survey (M[SD] age = 31.1y[10.2y]; 81.1% male; 84.4% non-Hispanic White). On average, participants reported 8.6y (SD = 8.4y) of EMS service; the most common EMS role was paramedic (46.3%). A plurality (32.3%) of participants worked in EMS roles in large cities (population > 250,000). We used descriptive statistics and binary logistic regression.

### RESULTS

Of the sample, 43.1% (95% CI = 37.0-49.1%) agreed that firearm ownership is related to suicide risk, 47.7% (95% CI = 41.0-54.1%) agreed that how a firearm is stored is related to suicide risk, 78.0% (95% CI = 72.4-83.5%) agreed that how a firearm is stored is related to other types of firearm violence; and 61.0% (95% CI = 54.7-67.9%) agreed that counseling individuals to securely store firearms will lead to changes in their firearm storage practices. Data on EMS providers' current firearm access was available for 198 of the respondents, among whom 68.2% (95% CI = 61.3-74.4%) reported firearm access. Participants who reported firearm ownership were significantly less likely to agree with the following beliefs than those who denied firearm ownership: firearm ownership is related to suicide risk (37.8% vs. 66.7%; OR = 0.30 [95% CI = 0.16-0.57],  $p < .001$ ); how a firearm is stored is related to suicide risk (41.5% vs. 69.8%; OR = 0.31 [95% CI = 0.16-0.58],  $p < .001$ ); how a firearm is stored is related to other types of firearm violence (77.8% vs. 90.5%; OR = 0.37 [95% CI = 0.15-0.94],  $p = .036$ ); and counseling individuals to securely store firearms will lead to changes in their firearm storage practices (57.8% vs. 73.0%; OR = 0.51 [95% CI = 0.26-0.97],  $p = .041$ ).

### DISCUSSION

Many EMS providers, particularly those who own firearms, are unaware of the link between firearms and suicide risk, connection between firearms and other forms of violence, and efficacy of firearm secure storage counseling. Given that many EMS personnel interface with patients at elevated suicide risk, targeted training regarding firearm secure storage counseling may be strategic; however, additional work is needed to determine if and how EMS personnel might be viable messengers of secure firearm storage.

# POSTER SESSION 01

Abstract No.: 0995

## Effect of a Rice-Farming Video Game as a Digital Intervention on Nature Affinity and Psychological State in Urban-Dwelling Adults during COVID-19

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### INTRODUCTION

Maintaining a healthy lifestyle for modern urban dwellers requires nature affinity and psychological well-being. However, the COVID-19 pandemic has led to a reduction in nature affinity and an increase in psychological anxiety due to epidemic prevention measures such as social distancing and quarantine. Even if the pandemic becomes endemic and people return to normalcy, they may experience similar life patterns with each new pandemic. Video games have become popular for leisure activities, and the WHO has recommended them to reduce stress among isolated people. This study aims to explore the potential impact of a rice-farming action video game called "Sakuna: Of Rice and Ruin" on nature affinity and psychological well-being in urban-dwelling adults in the context of the COVID-19 pandemic.

### METHOD

We recruited participants with inclusion criteria as follows: a) no prior major psychiatric diagnoses, b) ages between 19 and 40, c) city residents for the last 6 months or more, d) never played that game or has never played it within the last six months. After informed consent was given, the participants were assigned to the immediate game intervention group (IGG; n=34) and the waitlist group (WLG; n=32) based on block randomization. The baseline assessment was taken before playing the game. After starting to play the game, the second assessment was taken at the end of week 1 and the last assessment was taken at week 3. The Nature Relatedness (NR) and Nutrition Quotient (NQ) scales were applied to assess nature affinity, and the World Health Organization's Quality of Life brief (QOL), Brief-Fear of Negative Evaluation Scale (BFNE), Social Avoidance and Distress Scale (SADS), and Toronto Alexithymia Scale (TAS) State-Trait Anxiety Inventory (STAI), The Centre for Epidemiologic Studies Depression Scale Revised (CESD-R), The Korean Resilience Quotient (KRQ), General Self Efficacy Scale (TGS), Spiritual Well-Being Scale (SWBS), The International Physical Activity Questionnaire-Short Form (IPAQ-SF) were used to assess psychological state. We aimed to evaluate and analyze the status before and after the game intervention by paired t-test and repeated measure ANOVA.

### RESULTS

First, we compared the IGG and the WLG. In terms of nature affinity, we found that the total NR score and the self-subdomain score of the NR scale were statistically significantly increased in the IGG compared to the WLG with a significant time-group interaction. In terms of psychological state, we found a statistically significant increase in total QoL scores over time in the IGG compared to the WLG. Other psychological statuses did not differ significantly between the two groups. Next, we analyzed all subjects' changes from pre- to post-game intervention (n=66). A significant increase in the self and experience subdomains of NR and total NR score was observed, and a significant increase in the dietary behavior subdomain of NQ and total NQ was observed. In the psychological aspect, a significant increase was observed in the total and all subdomains of QoL, and a significant decrease (improved) was observed in SADS, TAS, STAI, and CESD. A significant increase in KRQ score was observed, but no significant findings were observed for the other scales.

### CONCLUSIONS

Our findings suggest that farming action games partially promote nature-relatedness and quality of life in urban adults during COVID-19. Furthermore, analyses by merging two groups suggested that rice-farming game intervention may have positive effects on nature-relatedness, nature-friendly dietary behaviors, quality of life, anxiety, depression, interpersonal relationships, and resilience. The positive effects of pro-nature games in the confined environment of urban regions provide helpful evidence for how digital technologies can shape future urban environments for nature affinity and psychological well-being, which could be extended to environments such as metaverses.

# POSTER SESSION 01

Abstract No.: 0998

## **Exploring Clients' Perspectives: The Use of Videoconferencing in Psychological Therapy. An Interpretive Phenomenological Analysis (IPA) Study**

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### **BACKGROUND**

Videoconferencing psychological therapy has been used for a long time before the COVID-19 pandemic. Little was known about clients' experiences of psychological therapy via videoconferencing compared to clinicians' experiences, specifically, the delivery to clients in the United Kingdom (UK) during times of crisis.

Aims: The purpose of this research study and research question was to explore how clients experienced psychological therapy via a videoconferencing platform and what it meant for them to receive psychological therapy treatment over this medium.

### **METHODOLOGY**

This qualitative research study used phenomenology as a philosophical basis. Semi-structured interviews were conducted online with six individuals who experienced videoconferencing psychological therapy. Interviews were analysed using Interpretive Phenomenological Analysis (IPA).

### **FINDINGS**

From the data analysis, three group experiential themes emerged. Firstly, some participants suggested that the effectiveness of online therapy was comparable to in-person therapy, while others felt it was less effective. Secondly, the importance of the therapeutic relationship transcended the medium used, highlighting its paramount significance. Lastly, the online environment provides an aspect of anonymity. For some individuals, this was a barrier to expressing their emotions, while for others, it enabled them to escape societal expectations.

### **CONCLUSION**

Technology plays a beneficial role in delivering psychological services, which will continue to build and evolve with the advancement of technology. The lived experience of clients receiving videoconferencing psychological therapy has highlighted the influence of the online environment on the therapeutic experience. The findings emphasise the need for clinicians to adapt and address practical implications while offering suggestions for future research. The key limitation of this study is that all participants were residents in Wales, which could limit the generalisability of the results to other geographical areas.

# POSTER SESSION 01

Abstract No.: 1006

## Study on Effectiveness of a Guided Imagery Program for People with Spinal Cord Injury

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### INTRODUCTION

Persons with spinal cord injury may experience various emotional problems and increasingly severe depression after SCI can hinder social participation.

### METHODS

The aim was to develop the protocol of a standard group therapy program for recovery of healthy body image, using principal components of psychological treatment. The participants of this study were 11 people with Spinal Cord Injury. The principal components of the program were composed of cognitive behavioral therapy, guided imagery, existential psychotherapy (meaning-centered psychotherapy), and supportive psychotherapy. We developed the program using standard **METHODS** of group therapy program, based on conferences with researchers, psychiatrists and psychotherapists. The program consisted of 6 sessions each of which taking about 90 minutes. The program participants were 8 people with SCI. The effectiveness of the program was evaluated through pre-to-post psychological tests and in-depth interviews.

### RESULTS

As the result, the post-test depression scale changed from mild depression(18.7) to normal(13) in comparison with the pre-test in the program participants. Disability acceptance increased slightly from 31.4 points to 32.3 points. However, there were no significant differences in the other scales, including distress, PSS, QOL, body image.

### DISCUSSION

Even though no significant differences in the quantitative assessments were found between pre-test and post-test, the means changed positively in all scales and all the participants reported positive psychological and behavioral changes after participating in the program. It is meaningful that, there are not many psychological or mental programs for people with SCI in Korea, thus, more efforts must be made for providing such programs.

# POSTER SESSION 01

Abstract No.: 1020

## Effectiveness of Online CBT for Junior High School Student with Hikikomori due to Social Anxiety

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### PURPOSE

The state of "HIKIKOMORI" refers to a state in which a person does not go to school or work and is shut off from interpersonal relationships with people other than family members (Saito, 2010). It is estimated that 1.15 million people in Japan are in a state of withdrawal (Cabinet Office, 2016, 2019). The number of people in this state is reported to be 1.15 million in Japan (Cabinet Office, 2016, 2019). One of the psychiatric backgrounds of Hikikomori is high social anxiety (Kondo, et al., 2013). The social anxiety is so severe that the person is unable to go out and receive support.

In light of this situation, this study reports on a case in which online cognitive-behavioral therapy was conducted with a junior high school student who was HIKIKOMORI due to social anxiety. In addition, reports from not only the client but also the client's family were included to discuss the significance of supporting both the client and their families.

### METHODS

Subjects: junior high school student with HIKIKOMORI and his mother.

### METHODS

Clients were asked to respond to the LSAS-J (Asakura et al., 2002), SCQ (Clark, 2005), PHQ-9 (Muramatsu & Ueshima, 2009), and GAD-7 (Muramatsu, 2014). Family members were asked to respond to the HBCL (Sakai et al., 2004), ABS (Nonaka, et al., 2018), Negative Evaluation Scale (Sakai et al., 2010), Efficacy Scale (Sakai & Sakano, 2009), and the Hikikomori Family Relationship Functioning Scale (Nonaka et al., 2012).

### INTERVENTION

From November 20XX to March 20XX+2, bi-weekly online counseling sessions of 30 minutes were conducted. At the beginning of counseling, client was only able to talk for about 5 minutes due to social anxiety symptoms. During this period, therapist asked the client to decide how long he wanted to talk, and we talked only during that time, with the remainder of the time spent counseling with his mother. As the client had more time to talk in the course of the sessions, I conducted CBT on social anxiety during this time. Specifically, therapist trained the client to turn his attention outward and to practice speaking what he thought without thinking too much when talking to others. Once the clients were able to have some conversations with therapist, behavioral experiments were conducted outside the home.

Ethical considerations: Verbal consent was obtained from the clients and their families regarding case reports.

### RESULTS

The changes in assessment over the course of this were tested using the TAU-U. In each of the LSAS-J ( $Z=-3.78$ ,  $p<.001$ ), SCQ frequency ( $Z=-3.89$ ,  $p<.001$ ), SCQ beliefs ( $Z=-4.27$ ,  $p<.001$ ), PHQ-9 ( $Z=-3.50$ ,  $p<.001$ ) and GAD-7 ( $Z=-3.67$ ,  $p<.001$ ) that clients completed showed significant decreases. In the assessments completed by the mothers, the HBCLs showed a decrease in aggressive behavior ( $Z=-2.20$ ,  $p<.05$ ) and family avoidance behavior ( $Z=-2.50$ ,  $p<.05$ ) and an increase in ABS social participation scores ( $Z=-2.99$ ,  $p<.01$ ), indicating a recovery from the hikikomori state.

# POSTER SESSION 01

## DISCUSSION

This study examined the effectiveness of online CBT for junior high school student who were Hikikomori due to social anxiety. The intervention improved social anxiety symptoms, as well as outgoing behavior and study attendance. Family assessments confirmed these changes. These results indicate the effectiveness of online cognitive-behavioral therapy for socially anxious and hikikomori individuals. On the other hand, the clients' social anxiety symptoms did not fully decrease. This limitation can be attributed to the clients' limited social participation and inability to conduct sufficient behavioral experiments. Once a person becomes a hikikomori, opportunities for social participation are limited, which in turn limits the occasions in which behavioral experiments can be conducted. By increasing the number of places where people can safely participate in society even after becoming hikikomori, it is thought that an environment will be created in which sufficient behavioral experiments can be conducted. In the interest of recovery from hikikomori, there is a need to secure places where people in a state of Hikikomori can participate in society in a safe and comfort environment.

# POSTER SESSION 01

Abstract No.: 1032

## A Study Protocol for Real-time Monitoring to Predict Depressive Symptoms

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### BACKGROUND

According to the WHO, Depression is the fourth leading cause of global disease burden. However, traditional clinical and self-report assessments of depression have limitations in providing timely diagnosis and intervention. Recently, digital phenotyping studies have found the possibility of overcoming these limitations through the use of wearable-devices and smartphones.

### OBJECTIVE

The present study aims to identify the digital phenotype that significantly predicts depressive symptoms.

### METHOD

The study will recruit a total of 150 participants in their 20s who have experienced depression for the past two weeks in Korea. The study will collect passive (eg., steps, heart rate, phone usage) data and Ecological Momentary Assessment (EMA) through smartphone and wearable-device for two weeks. Passive data will be collected through sensors on the smartphone and wearable-device, while EMA data will be collected four times a day through a smartphone app. A machine learning algorithm and multilevel model will be used to construct a predictive model for depressive symptoms using the collected data. This study will be conducted longitudinally, with two repeated measurements over six months.

### DISCUSSION

There is still much to learn about digital phenotypes in the field of mental health. By identifying accurate predictors of depression, people with depression may benefit from just-in-time and cost-effective intervention.

# POSTER SESSION 01

Abstract No.: 1033

## The Relationship between Insecure Attachment and Suicidal Ideation Is Mediated by Self-Criticism

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### INTRODUCTION

It is well known that adolescence is a period of rapid physical and hormonal changes and that these changes can impact the psychological well-being of young people. Adolescents who perceive their attachment style with their parents as unstable may be particularly vulnerable to emotional suffering and may be less likely to seek help from their parents during stressful situations. This, in turn, can increase their risk of suicidal ideation. Inconsistent and rejecting care from parents in early childhood can also contribute to negative self-representations, negative views of others, and a negative outlook on the world. When adolescents internalize their parents' negative attitudes, they may develop self-critical tendencies, which can prolong and exacerbate psychological distress and increase the risk of suicidal ideation. To better understand the relationship between perceived parental attachment, self-criticism, and suicidal ideation, this study aimed to examine the mediating role of self-criticism in this relationship. By identifying the specific mechanisms that contribute to suicidal ideation in adolescents, we can develop more effective prevention and intervention strategies to support young people during this critical period of development.

### METHOD

A total of 343 adolescents in Korea completed self-report questionnaires, which included the Inventory of Parents Attachment (IPA: Armsden & Greenberg, 1987), Suicidal Ideation Questionnaire (SIQ: Reynolds, 1987), and Depressive Experiences Questionnaire (DEQ: Blatt, D'Afflitti, & Quinlan, 1976). These questionnaires measured adolescents' perceived parental attachment, suicidal ideation, and self-criticism. IPA consists of three different sub-scale, truth, communication, and isolation. The data were analyzed using SPSS 21.0 and Amos 21.0.

### RESULTS

The results were as follows. Firstly, there were significant correlations found among all variables ( $r = -.61 \sim -.90$ ,  $p < .001$ ). Secondly, Perceived parental attachment significantly predicted suicidal ideation. ( $R^2 = .41$ ,  $p < .001$ ). Thirdly, Self-criticism significantly mediated the relationship between parental attachment perceived by adolescents and suicidal ideation ( $\chi^2(32) = 66.830$ ,  $CFI = .991$ ,  $TLI = .987$ ,  $NFI = .983$ ,  $SRMR = .0333$ ;  $RMSEA = .056$  (95% CI: .037~.075)). In addition, self-criticism significantly mediated the relationship between perceived attachment to both father and mother and suicidal ideation.

### CONCLUSION

This study found that insecure attachment in adolescents not only has a direct impact on suicidal ideation but also acts as a mediator through self-criticism. Adolescents who perceived they lacked parental care during childhood are vulnerable to suicidal ideation through self-criticism, which is an automatic and difficult-to-control response. Therefore, interventions aimed at reducing self-criticism in adolescents with insecure attachments can help prevent suicide. Additionally, the relationship between parents and children affects how they perceive themselves, others, and the world throughout their lifetime. Hence, simultaneous parent education, along with education for adolescents, can prevent suicidal ideation along with self-criticism. Educational institutions such as schools need to make efforts in this regard as well.



# POSTER SESSION 01

Abstract No.: 1056

## Development of the Bereavement Coping Scale for Adolescents: An Initial Development and Preliminary Factor Structure

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### INTRODUCTION

Adolescents who have lost a loved one experience a shift in their perceptions of the world, as they navigate through the grieving process while also dealing with typical developmental challenges (Hogan & DeSantis, 1996a, 1996b). The grieving process in adolescence is shaped by various factors in their development process (Schultz, 1999). To provide effective interventions to bereaved adolescents, it is necessary to identify appropriate coping strategies. However, the lack of specific instruments designed to assess bereavement-related coping responses has limited research and interventions for this population (Crunk et al., 2021). Considering this, this study aimed to develop a scale that can measure coping responses in adolescents during the grieving process.

### METHOD

An initial questionnaire consisting of 98 items using Likert 4-point scale was developed through literature review, semi-structured clinical interviews of five bereaved young adults, and an open-ended survey with 27 young adults who experienced the loss of a family member during their adolescent years. An exploratory factor analysis was performed on the preliminary items using data from 225 participants (143 adolescents, 82 young adults). The mean age of the participants was 26.04 (SD = 6.16) and among them, 83.1% (n = 187) were women.

### RESULTS

After conducting the exploratory factor analysis, 31 items with four factors were identified as suitable: Acceptance (10 items), continuing bonds (6 items), positive perspectives (8 items), and daily activities (7 items). Cronbach's  $\alpha$  of the scale was .89 and its sub-factors ranged from .78 to .85.

### DISCUSSION

The results align with the Dual Process Model (Stroebe & Schut, 2010), a widely accepted framework for understanding coping strategies of bereaved individuals. The model emphasizes the importance of loss-oriented coping and restoration-oriented coping in facilitating adaptive grieving following a loss. The two factors, acceptance and continuing bonds, measure loss-oriented coping, while the other two factors, positive perspectives and daily activities, measure restoration-orientation coping. The identification of adaptive coping strategies for grieving adolescents is crucial, and further validation is required for this scale. The Bereavement Coping Scale for Adolescents can serve as a valuable instrument for evaluating coping strategies and positive adaptation when confronting the aftermath of the loss of a family member.

# POSTER SESSION 01

Abstract No.: 1057

## **Interprofessional Education and Training for Low Intensity Cognitive Behavioral Therapists, High Intensity Cognitive Behavioral Therapists, and Mental Health Professionals**

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### INTRODUCTION

In the 15 years from 2002 to 2017, the number of patients with mental illness in Japan increased from 2.6 million to 4.2 million (Ministry of Health, Labor and Welfare patient survey). On the other hand, about three-fourths of residents with mental illness have not received medical care (World Mental Health Japan Survey, 2016). Under such circumstances, dividing the functions, psychiatrists will have advanced knowledge and skills for severe patients, and general medical doctors, dentists, pharmacists, nurses, etc. will have basic mental health care knowledge and skills for mildly ill patients. Therefore, in 2018, Chiba University started training general doctors, dentists, pharmacists, nurses, and co-medicals for preventing patients from being mild insomnia, anxiety, depression, dementia, and addiction in daily medical practice, providing counseling support through low-intensity cognitive behavioral therapy ("mensuppo" course). Training courses were online teaching materials. In addition, we held case review conferences with "mensuppo" and psychiatrists ("menpro") together. Furthermore, since 2009, we have started a high-intensity cognitive behavioral therapy (CBT) training course for clinicians as Chiba Improving Access to Psychological Therapies (Chiba IAPT). Cooperating with mensuppo, menpro, and IAPT, we examined the possibility of a mutual referral network model for mildly and severely ill patients.

### METHOD

Participants in the low-intensity cognitive behavioral therapy course ("mensuppo") took 15 lectures and 15 conferences on cognitive behavioral therapy, and psychiatrists in the mental health professional course ("menpro") took 15 conferences. We held case review conferences from 2019 to 2022 with both courses and received designated comments from psychiatrists.

### RESULTS

259 people of various professions participated in the "mensuppo" course and 13 psychiatrists participated in the "menpro" course for four years from 2019 to 2022. Furthermore, one of the participants went on to graduate school at Chiba University and at least 3 of them became high-intensity therapists. Practical reports had come from multiple professions.

### DISCUSSION

In 2019, the case review conferences were held with mental health professionals, but from 2020 onwards, due to the influence of COVID-19, we had to change face-to-face conferences to online. Regarding the establishment of cooperation with mensuppo, menpro, and IAPT, it is necessary to create opportunities that all participants can work on the same issues together such as emergency response training. Also, many of the participants who learned low-intensity have no clinical psychology experience. It is a future task to accumulate practical training for clinical use at each site.

# POSTER SESSION 01

Abstract No.: 1068

## **ACT for Life: The Development and User Engagements of Mobile Application for Prevention and Management of Psychological Distress**

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### INTRODUCTION

The COVID-19 pandemic has challenged the ways of modern healthcare delivery, and remote methods of delivering evidence-based mental healthcare are more important now than before (Ho et al., 2020).<sup>1</sup> Digital mental health interventions have already been lauded for its ability to reduce cost, transcend physical limits, and increase flexibility and autonomy of users (Wasil et al., 2021) <sup>2</sup>, making its use arguably vital in managing the mental health impact of the pandemic. Given that rates of mental disorders are expected to increase post-pandemic (Varma et al., 2021)<sup>3</sup>, novel methods to introduce preventative and management of mental health issues are needed to reduce the strain on Malaysia's already overburdened mental healthcare system (Beckstein et al., 2021).<sup>4</sup> Objective: The present study elaborated the development and user engagements of ACT for Life, a mobile application of Acceptance and Commitment Therapy (ACT) for prevention and management of psychological distress for Malaysian.

### METHOD

The mobile application ACT For Life was developed based on the cloud-based instant messaging i-ACT for Life program that has been tested its effectiveness through a randomized controlled trial.<sup>5</sup> The program comprises five weekly modules corresponded to an ACT core processes (Grounding, Unhooking, Acting on Values, Being Kind, and Making Room). The micro-contents were designed in infographic format, 7 interactive exercises and quizzes, 12 audio exercises, and 7 psychoeducation videos. The major improvements from the original program are translation and adaptation into the Malay language. ACT For Life also drops the integrated Islamic spiritual strategies from the original program for multireligious people in Malaysia. The users are encouraged to take Depression, Anxiety, and Stress Scale-21 items (DASS-21) before and after the program. The current mobile application is integrated as part of Selangor Mental Sihat (SEHAT), a comprehensive mental health application involving mental health awareness, literacy, screening, early intervention, and subsidized psychiatric intervention sponsored and managed by one of the state governments in Malaysia.

### RESULTS

ACT for Life mobile application was live in SEHAT since October 2022 in conjunction with World Mental Health Day. As of February 2023, the number of users for SEHAT and ACT for Life is 17,105 and 726, respectively. Total number of user engagements are follows: Opening of the Program – 724 (99.72%), Week 1 – 446 (61.43%), and Week 2 – 29 (3.99%). None of the users have attended Week 3 modules and above and hence none have completed pre-and post-DASS-21 for analysis of program outcome.

### CONCLUSIONS

The total number of engagements suggests that the ACT for Life mobile application is accessible for the users. In comparison to the similar programme, i-ACT For Life, the number of users for ACT for Life is less. Furthermore, sustainability of user engagements and issue on program completion need to be further studied. Increase promotion of the program, continuous reminders to the users, and therapist-assisted initiative may be the solutions for the issues.

Keywords: Cognitive-behavioral, COVID-19, Culture, Digital mental health intervention, Prevention

# POSTER SESSION 01

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# POSTER SESSION 01

Abstract No.: 1081

## Study on Efficacy of Parent-Child Interaction Therapy for Single-Mother Families in Low Income

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### INTRODUCTION

Child abuse and neglect are severe social issues that can have lifelong physical and mental health consequences for a child. Extant literature has identified high parenting stress, low parenting efficacy, and low socioeconomic status as risk factors for child abuse. A recent study by S. Choi et al. (2020) highlights that unwed single-mother families are a highly vulnerable population due to their disadvantaged socioeconomic status and insufficient social support resources. Several previous studies, including the research conducted by William et al. (2006), have demonstrated an association between child abuse and family structure, highlighting that families headed by single mothers with low income are more susceptible to child maltreatment. Impoverished single mothers often encounter challenges in fulfilling both their financial and caregiving responsibilities alone, which can lead to feelings of frustration, social discrimination, and isolation. Moreover, a substantial number of these mothers were victims of childhood maltreatment, which suggests their potential difficulties in emotion regulation and coping with stressors. Therefore, it is highly recommended that single-mother families receive intervention through a well-designed parenting program aimed at reducing parenting stress and improving parenting efficacy. Parent-Child Interaction Therapy (PCIT) is widely recognized as one of the most effective evidence-based family therapies for improving parent-child relationships. Numerous randomized controlled trials (RCTs) have demonstrated its efficacy, particularly for abusive parents or for children with behavioral problems. Accordingly, the present study aims to examine the efficacy of PCIT in improving outcomes for low-income single-mother families.

### METHOD

To examine the efficacy of PCIT for low-income single-mother families, a mixed-method study was conducted with eight mother-child dyads. Firstly, the mothers were administered four assessment instruments before and after the intervention - the Dyadic Parent-Child Interaction Coding System (DPICS; Eyberg et al., 2005), the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999), the K-Parent Echelle Globale du Sentiment de Competence Parentals (K-EGSCP; Sung & Back, 2011), and the Parent Stress Inventory (PSI; Abidin, 1983). Secondly, the participants received 10-13 sessions of PCIT. Finally, in-depth interviews were conducted with the participants about their experiences with PCIT after the intervention.

### RESULT

The data obtained from the quantitative study were analyzed using the paired-sample t-test, which revealed a significant increase in positive parent-child interactions (i.e., behavioral descriptions, reflection feedback, and praise) and a significant decrease in negative parent-child interactions (i.e., questions and commands). In the qualitative study, three categories, thirteen themes, and fifty sub-themes were derived. The core fundamental theme that emerged from the analysis was "PCIT is an effective method for enhancing single mothers' ability to have positive interactions with their children and regulating their emotions through coaching specific child treatment skills." However, the study result also suggests that there is a need to tailor some part of PCIT for the unwed-mother and child dyad to meet their unique need.

# POSTER SESSION 01

Abstract No.: 1085

## A Case Study of Cognitive-Behavioral Family Therapy for A Son with Tic Disorder

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### OBJECTIVES

This study explored the factors that affected the tic disorder and the changes in the tic symptom through cognitive-behavioral family therapy, focusing on the family therapy case of the son with tic disorder.

### METHOD

The study participants were the parents, son (client), daughter, and grandparents. The therapist held 7 counseling sessions including individual, couple, and family sessions. We used thematic analysis approach to identify, describe and analyze contents from data to explore contributing factors for tic disorder and the changes in the tic symptom. The analysis results were displayed using network.

### RESULTS

The results of this study are as follows. First, the factors that affected the tic disorder were inconsistent parenting methods, dysfunctional communication, and unclear family structures. Inconsistent parenting methods included inconsistent parenting methods of grandmother and father, and inconsistent parenting methods of parents. The dysfunctional communication included the communication of disconnecting grandfather and father, the nagging of grandmother, and the exploding communication of father. The unclear family structure included the excessive interference of grandmother and the rigid marital subsystem. Second, through the application of cognitive-behavioral family therapy, the parents became aware of the client's tic disorder-related factors. Therefore, as parents formed a consistent parenting method, a functional communication, and a clear boundary between families, the changes of the client revealed. In particular, clear boundaries between family members included the separation of rooms from parents, and grandparents and nuclear family. On the other hand, the consistent parenting method included the mother's dedicated parenting initiative and the mother's less sensitive response to the client's tic symptoms. The changes of functional communication were a decrease in grandmother's nagging and a frank communication among family members. Due to these changes, the client's tic symptoms decreased.

### CONCLUSION

The results of this study show that therapists need to explore the factors of parenting, communication, and family structure that affected tic symptoms rather than focusing on tic symptoms of a child. In addition, the results of this study reveal that family therapists should be able to gain insight into these factors to clients and family members, and that they need to focus on changes of family structure, parenting and communication.

Keywords: Tic disorder, Cognitive-behavioral family therapy, Parenting methods, Dysfunctional communication, Family structure

# POSTER SESSION 01

Abstract No.: 1088

## A Systematic Review of Scales for Assessing the Quality of Group Cognitive-Behavioral Therapy Therapists

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### INTRODUCTION

Therapists' quality is considered to influence treatment outcomes of group cognitive behavioral therapy (group CBT). The purpose of this study was to review the instruments for assessing the quality of group CBT therapists.

### METHODS

We conducted a systematic review of instruments for assessing therapists for group CBT.

#### 1) Inclusion criteria

- (1) Quantitative measurement of therapists' proficiency in CBT
- (2) Targeting group CBT in an adult population with mental health problems
- (3) Publications written in English

#### 2) Exclusion criteria

- (1) Addressing individual therapy only
- (2) Addressing online-therapy only
- (3) Targeted population other than adults with health problems (e.g. child population, families of patients)
- (4) Narrative reviews or commentaries

#### 2) Search methods

- Period: January 1980 to June 2021
- Search engines: Scopus, Web of Science, Medline, PubMed
- Search formula: "therapist competence/y" or "therapeutic competence/y" or "clinical skill" "clinical competence/y" or "assessing competence/y" or "competence/y assessment" or "intervention competence/y" AND "group therapy" or "group format" or "group treatment"

### RESULTS

Of the database searches (n = 95,326) and snowball searches (n = 17), 84,767 articles were identified, after excluding duplicates (n = 10,576). The first-stage screening (review of titles and abstracts) retrieved 128 articles. Of them, 121 articles were excluded after the second-stage full-text screening (review or commentary n = 15, therapist was not evaluated n = 54, not quantified n = 18, population Non-formal n = 27, non-standard CBT n = 6), and seven scales were finally identified as the instruments to assess therapists for group CBT (Wong et al., 2019; Campbell et al., 2013; Trijsburg et al. Burlingame et al., 2002; Bassett et al., 2016; Bastick et al., 2018; Chawla et al., 2010). The identified instruments have the following limitations; (1) only targeting specific diseases, such as substance abuse, borderline personality disorder, and acquired brain disorders, and (2) not specifically targeting traditional group CBT (i.e. the instrument comprehensively addresses psychotherapies other than CBT (e.g. or mindfulness, schema therapy)).

### DISCUSSION

In this study, we explored a scale for evaluating the quality of group cognitive-behavioral therapy therapists. Seven scales for evaluating group CBT therapists were identified. However, these instruments are either not specific for group CBT or only targeting specific populations. To ensure the quality of group CBT, the development of an instrument to measure the basic skills (overarching various targets, CBT skills, and settings) of group CBT therapists is needed.

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## Parental Experiential Avoidance and Adolescent Psychopathology: The Mediating Roles of Attitudes Towards Emotional Expression and Adolescent Experiential Avoidance

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Experiential avoidance (EA), which refers to the unwillingness to experience distress, has emerged in recent years as a critical transdiagnostic factor in the maintenance of adolescent psychopathology (e.g., Papachristou et al., 2018, Mellick et al., 2017). Parental EA, the phenomenon in which parents are unable to cope with witnessing their child's distress and seek to control the form or frequency of their child's internal experiences in emotionally arousing situations (Cheron et al., 2009), has been linked to increased adolescent psychopathological symptoms (e.g., Fulton et al., 2014). However, literature on the underlying mechanisms is still nascent. Studies have suggested a close relationship between EA and beliefs about emotion, in that, individuals with negative beliefs about emotions were also highly experientially avoidant (Trincas et al., 2016). Research has shown that parenting, in general, could influence the child's beliefs and use of coping strategies (Morris et al., 2007). Therefore, it is plausible that when parents hold negative attitudes towards emotions and engage in high levels of parental EA, they may transmit similar negative beliefs about emotions to their child through social learning and/or emotion coaching (Katz et al., 2012). When adolescents hold negative attitudes about emotions, they may over-rely on EA as a coping strategy to manage unwanted internal experiences. The inflexible use of EA may then contribute to the development of psychopathological symptoms. Thus, we aimed to examine whether the association between parent's negative attitudes towards emotion expression/parental EA and adolescent psychopathological symptoms could be serially mediated by adolescents' negative beliefs about emotion expression and adolescent EA.

We recruited 330 families consisting of parents and their adolescent child. Adolescents were between 12 and 17 years old (Mage = 14.19, 58.2% female). Participants completed the administered questionnaires at three time points, each six months apart. Parents completed the Parental Acceptance and Action Questionnaire (PAAQ; Cheron et al., 2009) and the Attitudes towards Emotional Expression Scale (AEES; Joseph et al., 1994) at Timepoint 1. Adolescents completed the AEES at Timepoint 1, the Acceptance and Action Questionnaire II (AAQ-II; Bond et al., 2011) and Timepoint 2, and the Youth Self Report (YSR) at Timepoint 3.

Using a path analysis model, we found that parental EA ( $b = .156, p = .026$ ), but not parents' attitudes towards emotional expression ( $b = .062, p = .416$ ), positively predicted adolescents' attitudes towards emotional expression. Adolescents' attitudes towards emotion expression positively predicted their own EA ( $b = .971, p < .001$ ). Adolescents' EA positively predicted internalizing ( $b = .129, p < .001$ ) and externalizing symptoms ( $b = .083, p < .001$ ). Importantly, adolescents' attitudes towards emotions and EA serially mediated the association between parental EA and adolescent internalizing ( $b = .019, p = .042$ ) and externalizing symptoms ( $b = .005, p = .049$ ). Consistent with current literature, we found that parental EA positively predicted adolescent psychopathological symptoms. Secondly, negative attitudes towards emotional expression and adolescent EA emerged as significant serial mediators, suggesting that these may be change targets for adolescents with increased psychopathological symptoms. Lastly, parents' negative attitudes towards emotional expression was not a significant predictor of adolescent psychopathological symptoms. This suggests that the manifestation of parental EA could be more salient to the adolescent than parents' negative attitudes towards emotional expression, thus emerging as a more impactful factor in shaping adolescents' attitudes towards emotional expression. Future studies may consider examining adolescents' perceptions of parental EA and parents' attitudes towards emotional expression and its effect on adolescent psychopathological symptoms.



# POSTER SESSION 01

Abstract No.: 1099

## Mediating Effect of Smartphone Dependence on the Relationship between Delayed Bedtime and Anxiety among Adolescent during the COVID-19 Pandemic

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### INTRODUCTION

Covid-19 Pandemic caused considerable impact on life style, mental health and quality of life. As Social distancing including remote learning is introduced, adolescents experienced anxiety, increased smartphone use and delayed sleep phase. The purpose of this study is to evaluate the relationship between adolescent's anxiety, smartphone dependence and sleep onset during the Covid-19 period, and the effect of gender and economic difficulties due to Covid-19 on this relationship.

### MATERIALS AND METHOD

A total of 4,254 participants were analyzed, using the 2020 Korea Youth Risk Behavior Survey. Generalized Anxiety Scale-7(GAD-7), Smartphone Overdependence Adolescents Scale(SOAS), were used to assess Anxiety and smartphone dependence. Correlation and mediating effects were analyzed on the GAD-7, SOAS, and Sleep onset and the characteristics of the four groups classified according to gender and economic difficulties due to Covid-19 were analyzed. SPSS 25.0 was used for analysis. Baron & Kenny's method, Sobel test were used for mediating effect verification.

### RESULTS

Of 4,254 included participants, 2195(51.6%) were female, mean age was  $13.63 \pm 0.91$  years, and 971(22.8%) experienced economic difficulties due to Covid-19. Female group showed higher GAD-7( $1.61 \pm 0.60$  vs.  $1.42 \pm 0.52$ ,  $P < 0.01$ ), SOAS( $1.88 \pm 0.60$  vs.  $1.74 \pm 0.58$ ,  $P < 0.01$ ) and late sleep onset( $24.85 \pm 1.37$  vs.  $24.25 \pm 1.28$ ,  $P < 0.01$ ). The group that experienced economic difficulties due to Covid-19 showed higher GAD-7( $1.61 \pm 0.62$  vs.  $1.49 \pm 0.55$ ), SOAS( $1.86 \pm 0.62$  vs.  $1.79 \pm 0.59$ ). There were positive correlations between GAD-7 and SOAS ( $r = 0.376$ ,  $p < 0.01$ ), SOAS and Sleep onset ( $r = 0.228$ ,  $p < 0.01$ ) and GAD-7 and sleep onset ( $r = 0.211$ ,  $p < 0.01$ ). SOAS partially mediated the relationship between GAD-7 and sleep onset (Indirect effect= $0.154$ , Sobel test 10.13,  $p < 0.001$ ) except the male group that experienced economic difficulties due to Covid-19 (Indirect effect= $0.214$ , Sobel test 3.00,  $p = 0.003$ ).

### CONCLUSION

This study confirmed earlier reports about the relationship between adolescents' anxiety, smartphone dependence and sleep onset. We also found partial mediating effect of smartphone dependence on the relationship between anxiety and sleep onset but this effect didn't apply to male group that experienced economic difficulties due to Covid-19. Further research on the intervention in the use of smartphone and gender difference in isolated adolescents with anxiety may be needed.

# POSTER SESSION 01

Abstract No.: 1107

## **Effects of Counseling on Youth in Readiness for Self-Reliance: Multiple Analysis of the Efficacy of Counseling on Psychological Symptoms, Self-Identity, and Self-Esteem**

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We verified the effect of counseling for youth in readiness for self-reliance(YRSS). Study 1 was conducted with 31 YRSS received an average of 9.9 counseling sessions from a certified counseling psychologist. Psychological symptoms decreased, and self-esteem and self-identity increased significantly in the measurement before and after counseling. Counseling satisfaction was high and problems in work and career, emotion, personality, family, interpersonal relationships, and behavioral habits were reported to decrease. Qualitative research was conducted consecutively to understand the counseling experience in more depth, with 5 YRSS who participated in Study 1. As result, 26 extracted concepts were grouped into 13 themes and 3 categories. Empathic and interactive relationships facilitated participants' sense of security, authenticity, awareness, shift in perspective, reflection and integration. These experience and process influenced the integration of self-identity, the strengthening of self-esteem, and the treatment of psychological symptoms.

# POSTER SESSION 01

Abstract No.: 1112

## **Effects of Emotional Reactivity on Non-suicidal Self-Injury Motivation in Adolescents: Mediating Effects of Negative Urgency and Difficulties in Emotional Regulation**

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The purpose of this study was to examine the dual mediating effects of negative urgency and difficulties in emotional regulation on the relationship between emotional reactivity and non-suicidal self-injury motivation in a non-clinical sample of adolescents. By identifying factors that increase the motivation for non-suicidal self-harm, we aimed to advance knowledge and suggest treatment and intervention options.

We assessed the Emotional Reactivity Scale, Multidimensional Impulsivity Scale, Difficulties in Emotional Regulation Scale, and the Functional Assessment of Self-Mutilation among 205 middle and high school adolescents with a history of self-injury via an online survey. Using SPSS Process Macro, and bootstrapping, we analyzed and tested the significance of the mediating effects. First, we found that emotional reactivity was positively related to non-suicidal self-injury motivation, negative urgency, and difficulties in emotional regulation. Secondly, negative urgency was positively associated with difficulties in emotional regulation but not with non-suicidal self-injury motivation. Difficulties in emotional regulation were positively associated with non-suicidal self-injury motivation. Third, It was found that negative urgency and difficulties in emotional regulation sequentially bi-modalized the relationship between emotional reactivity and non-suicidal self-injury motivation.

These findings suggest that emotional reactivity has a direct effect on non-suicidal self-injury motivation, and an indirect effect through the sequential mediation of negative urgency and difficulties in emotional regulation. Furthermore, the effect of emotional reactivity on non-suicidal self-injury motivation was moderated by negative urgency and difficulties in emotional regulation, suggesting that non-suicidal self-injury motivation occurs when negative urgency and difficulties in emotional regulation are combined.

These results suggest that negative urgency and difficulties in emotional regulation are important in evaluating and intervening adolescents with high motivation for non-suicidal self-injury motivation. It is expected to help develop programs to reduce the motivation for self-harm in adolescents, and can be used as a basic resource for counseling to reduce negative urgency and improve emotional regulation in adolescents.

# POSTER SESSION 01

Abstract No.: 1116

## **Discriminant Validity of K-CBCL 6-18 Dysregulation Profile in the Differential Diagnosis of ADHD and Conduct Disorder: Focused on Children and Adolescents with Psychological Disorders in Child Foster Care**

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### INTRODUCTION

The Child Behavior Checklist Dysregulation Profile (CBCL-DP) refers to difficulties with self-regulation in the domains of cognition, behavior, and emotion. CBCL-DP is identified as severe psychopathology that leads to functional impairment in various domains. It has been shown that this profile is predictive of continuous sufferings, including current difficulties. Deficient Emotional Self-Regulation (DESR) is also a profile that is associated with multiple behavioral problems and psychopathology. However, DESR has lower severity of emotional dysregulation compared to CBCL-DP. Previous researches have shown that a lot of children and adolescents from welfare institution were diagnosed with ADHD and Conduct Disorder. Given that a lot of ADHD and Conduct Disorder meet CBCL-DP or DESR, it suggests the need of verifying the differences between two disorders. Although both disorders meet CBCL-DP and DESR at high rates, it is hard to differentiate between CBCL-DP and DESR as half of ADHD cases are comorbid with Conduct Disorder. However, it was confirmed that CBCL-DP have different roles in two disorders. It suggests that CBCL-DP can be used to distinguish one from the other. This study verified the discriminant validity of the CBCL-DP in the diagnosis of ADHD and Conduct Disorder.

### METHOD

The subjects were school-aged children and adolescent with ADHD and Conduct Disorder participating in the "Psychotherapy and Counseling Services for Children and Adolescents in Foster" from 2013 to 2021, and they were assessed with K-CBCL 6-18 by caregivers. Total 267 children and adolescents were diagnosed with pure ADHD and 31 subjects were diagnosed with pure Conduct Disorder.

### RESULTS

It was significant the correlations between CBCL-DP and three subscales of ADHD and Conduct Disorder, and all correlations were higher than .80. For ADHD, 139 (52.1%) of the 267 participants met the clinical range of CBCL-DP and 95 (35.6%) had DESR. In contrast, for Conduct Disorder, 17 (54.8%) of the 31 participants had DESR and 10 (32.3%) met the clinical range of CBCL-DP. In addition, the CBCL-DP of ADHD ( $M=210.64$ ,  $SD=26.31$ ) was significantly higher than that of Conduct Disorder ( $M=200.19$ ,  $SD=23.72$ ), and the DESR of ADHD ( $M=195.75$ ,  $SD=8.40$ ) was higher than that of Conduct Disorder ( $M=190.82$ ,  $SD=8.26$ ). Also, it was significant the difference between Attention Problems scale of ADHD ( $M=73.09$ ,  $SD=11.34$ ) and Conduct Disorder ( $M=66.35$ ,  $SD=10.33$ ). Furthermore, among four cut-off points of CBCL-DP, sum of the T-scores of 210, sum of the T-scores of 211, T-scores of 70 for each scale, T-scores of 71 for each scale, using cut-off points of total scores of 210T and 211T significantly discriminated ADHD and Conduct Disorder. According to the ROC analysis, the CBCL-DP showed a sensitivity of 61% and a specificity of 65% at a T-score of 203.5 points. The cut-off point for CBCL-DP was rounded up to 204 points, and the classification accuracy was 61.1%.

### CONCLUSIONS

The profiles with a higher proportion were different in the two groups. CBCL-DP was more prevalent in ADHD, whereas DESR was more prevalent in Conduct Disorder. On the other hand, ADHD had higher scores and proportion in CBCL-DP than Conduct Disorder, while it had higher scores but lower proportion in DESR. This suggests that the level of dysregulation in ADHD is higher than in Conduct Disorder. In addition, only the cut-off point of 210T and 211T significantly discriminated between ADHD and Conduct Disorder. This can be interpreted that it is relatively reasonable to utilize the criteria in which the sum of the three subscales falls within the clinical range rather than the criteria in which each subscale meets the level of clinical significance. This study is worthwhile to point out that it compares and provides an optimal cut-off point to discriminate between ADHD and Conduct Disorder, which are highly comorbid psychological disorders.

# POSTER SESSION 01

Abstract No.: 1120

## The Effect of Stress Management Education on Work Engagement of Customer Complaint Handlers in Japan

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### PROBLEM

The number of malicious complaints in which customers and others make unfair accusations against products and services, such as making excessive demands, has been increasing (Ministry of Health, Labor and Welfare, 2022). The high turnover rate of claims-handling contact persons due to the onset of stress symptoms among workers who respond to these aggressive approaches has become a challenge for both workers and companies (Nita, 2007). The effectiveness of ACT (Acceptance and Commitment Therapy) based interventions has also been examined in such specific stressful situations where the coping repertoire in the workplace is limited (Kawada and Shimada, 2011). Furthermore, work engagement is essential in customer complaint handling operations and may influence the workplace retention rate. Therefore, the purpose of this study was to examine the status of work engagement as well as changes in stress reactions by providing cognitive-behavioral stress management education based on ACT to the subjects.

### METHODS

Thirteen employees (mean age:  $34.58 \pm 5.90$  years) engaged in customer complaint handling were given a 90-minute stress management education, and were asked to respond to the following questionnaires before and approximately 2 weeks after the start of the education. (a) demographic items, (b) tolerance to stress: Occupational Stress Brief Questionnaire (Shimomitsu, Haratani, & Nakamura, 2000), (c) psychological flexibility: Japanese version of Acceptance and Action Questionnaire-II (AAQ-II; Kinoshita, Yamamoto Shimada, 2008), (d) work engagement: Japanese version of the Utrecht Work Engagement Scale (UWES-J; Shimazu, Schaufeli, Okada, & Kosugi, 2008), (e) proactivity in customer relations (created for this study, measured by VAS; Visual Analogue Scale). This study was conducted with the approval of the Waseda University Ethics Committee on Research with Human Subjects (consent number: 2015-194).

### RESULTS

The difference in AAQ-II scores before and after stress management education was considered as high/low influence of the education, and the participants were divided into two groups: high/low AAQ-II group. A two-factor analysis of variance was conducted, using the number of points indicating stress tolerance for each group and the time before and after the education as independent variables, and work engagement as the dependent variable. The results showed that the interaction between group and time period was not significant. Furthermore, the results of the visual analysis showed that work engagement tended to increase significantly for some in the AAQ-II low group. In addition, the scores indicating stress tolerance in the low AAQ-II group increased after education. In addition, the scores for aggressiveness in dealing with customers were generally high (average of 19 out of 25 points) even before the training.

### DISCUSSION

In this study, it was suggested that the complaint handlers were exposed to high stressful situations on a daily basis, and therefore, they had already developed a method of acceptance in which they gave up controlling the situation and accepted the event as it was. This is also suggested by the fact that the positive scores for customer service before and after the training were high regardless of the group. From the free descriptions of customer service, it was also observed that even in the case of unreasonable demands or highly aggressive and emotional appeals from customers, the accepting acceptors tried to perform their duties smoothly by controlling their emotions as acceptors. In addition, when a visual analysis was conducted, an increase in work engagement was observed in some of them.

## Current Practice of Group Psychotherapy in Japan: A Nationwide Survey

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### OBJECTIVES

The implementation of psychotherapy is expected to change over time, influenced by various factors such as evidence of each psychotherapy and training. This study aimed to investigate the current status of the practice of group psychotherapy in Japan. Further, challenges in the implementation of group psychotherapy at each facility were investigated.

### METHODS

A questionnaire was mailed to 3734 psychiatric institutions (2153 hospitals and 1581 clinics) nationwide in January 2022. The survey items included facility characteristics, implementation status of group psychotherapy, implementation details, and implementation issues. Approval from the Ethics Committee of Keio University School of Medicine (No. 20211076).

### RESULTS

#### 1. Status of implementation

The number of responses was 730 (response rate: 19.6%), and 728 (excluding 2 invalid responses) were included in the analysis (clinic: 373 (51.2%), university hospital/national center: 53 (7.3%), psychiatric hospital: 152 (20.9%), general hospital: 147 (20.2%).

Of them, 201 facilities (27.6%) were implementing group psychotherapy (psychiatric hospital: 90 (59.2%), clinic: 66 (17.7%) university hospital/national center: 24 (45.3%), general hospital: and 21 (14.3%).

4.2 (SD=6.7) different programs were in place. The largest proportion of patients receiving group psychotherapy was 1-10% of all patients in 88 cases (43.8%).

#### 2. Mode of implementation

The frequency of implementation was 1.4 (SD=1.4) times per week, the average duration per session was 77.2 minutes (SD=35.1), the average number of sessions was 9.2 (SD=6.3), and the average number of participants was 8.2 (SD=5.3). Semi-closed practices were the most common, with 123 (61.2%), followed by closed practices with 85 (42.3%), and open practices with 80 (39.8%).

There were 2.4 therapists (SD=1.4). Professions of the therapists included 169 (84.1%) licensed psychologists/clinical psychologists, 116 (57.7%) nurses, 109 (54.2%) physicians, and 109 (54.2%) psychiatric social workers.

Group psychotherapy was implemented as a stand-alone treatment in 145 cases (72.1%), as part of day-care in 117 cases (58.2%), and as clinical research in 6 cases (3.0%).

#### 3. Subjects of implementation

Patients alone accounted for the largest number of cases (146, 72.6%), while 61 cases (30.3%) were conducted with patients and their families. Depression and depressive disorders were the most common mental disorders, accounting for 128 cases (63.7%), followed by schizophrenia and psychotic disorders in 110 cases (54.7%), developmental disorders in 107 cases (53.2%), and bipolar disorder in 101 cases (50.2%).

#### 4. Approaches

The most common group psychotherapy approach was psychoeducation (139 cases: 69.2%), followed by CBT (128 cases: 63.7%), social skills training (SST) (120 cases: 59.7%), and mindfulness-based psychotherapy (44 cases: 21.9%).

5. The most common training in group psychotherapy was CBT (138 cases: 68.7%), social life skills training (SST) (131 cases: 65.2%), and psycho-education (99 cases: 49.3%).

#### 6. Sufficiency of Group Psychotherapy

# POSTER SESSION 01

Regarding the sufficiency of group psychotherapy at their own facilities, 84 (41.8%) respondents answered that they were "Somewhat insufficient" and 74 (36.8%) answered that they were "Somewhat sufficient". The most common reasons for not satisfactory were "Fewer types of programs," 73 (41.0%), "Location and space problems," 69 (38.8%), and "Program content (quality) problems," 61 (34.3%), in that order.

## 7. Implementation Issues

The most common reason given by facilities not implementing group psychotherapy was "It would be good to implement group psychotherapy, but for various reasons it is not being implemented" at 353 (67.4%), followed by "Insufficient staff" at 259 (73.4%), "Location/space problems" at 234 (66.3%) and "Insufficient staff" (259 (73.4%)) and "Location/space problem" (234 (66.3%)).

## DISCUSSION

Fewer than 30% of the facilities provide group psychotherapy. About 40% of the facilities felt that group psychotherapy at their own facilities was "rather insufficient," and issues related to the type and content of the programs and the lack of space and places to implement them were cited.

The majority of the facilities implementing group psychotherapy were psychiatric hospitals and university hospitals/national centers, and the implementation rate of group psychotherapy was high in proportion to the size of the hospital. Depression and depressive disorders were the most common disorder targets, and the content of the sessions included psychoeducation, CBT, and SST. The response rate for this study was low, and selection bias should be noted.

# POSTER SESSION 01

Abstract No.: 1129

## Development of ESM application for Cognitive Behavioral Therapy

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### INTRODUCTION

Experience sampling method (ESM) is a approach for exploring the meaning that can be found in the actual experiences of the research subject's daily life and grasping the nature of the phenomenon(Hektner, Schmidt, & Csikszentmihalyi, 2006). According to the 'Guidelines on Measuring Subjective Well-being' published by the OECD, ESM is recommended as the best alternative for measuring subjective quality of life(OECD, 2013). ESM signals to the subjects several times a day to collect the individual's external and internal experiences about the current situation, so 'daily life' and 'immediate response' are representative characteristics. Therefore, as a research **METHOD** that has high ecological validity and can overcome the limitations of bias due to recall, it has been used in various cultures for many years with the development of communication devices(Mehl & Conner, 2011), so it is increasingly being suggested as a clinical tool in mental health care(von Klipstein et al., 2023). Cognitive Behavioral Therapy (CBT) has been known to have the strongest empirical evidence for treating various mental disorders such as depression or anxiety disorders (Bahk, Song, Lee, & Choi, 2018). However, CBT is resource-intensive and consequently is not available to many patients(Gratzer, & Khalid-Khan, 2016). In particular, CBT assigns tasks as a treatment technique, but It is not easy for clients who feel severely depressed or anxious to complete the tasks on their own. Therefore, an auxiliary device will be required for this process. In this context, ESM is considered as an effective method. ESM is an intensive longitudinal design method that repeatedly measures the daily life of the same participant by focusing on variables (emotion, cognition, motivation, context, etc.) that can fluctuate in a short period of time (Vagelsmeier et al., 2019). It is a method in which participants carrying a pager or mobile phone record and report their activities when called randomly at an allotted time in a previously prepared Experience Sampling Form (ESF). The session recording time is about 5 minutes, and various experiences of individuals are sampled through 5 to 10 calls a day and a period of about a week. Recently, attempts to develop mobile-based ESM are increasing, but cases targeting a specific clinical group and treatment are very rare(Bhavnani et al., 2017; Geiger & MacKerron, 2016; Kingma et al., 2017; Van Agteren et al.,2021). Accordingly, this study aims to develop ESM application specialized for CBT. The research question is as follows. What are the ESF(experience sampling form) questionnaire of specialized to CBT ? What is the effect of CBT treatment when using the ESM app?

### METHOD

1) Configuring the ESF(experience sampling form) to be used in the CBT approach

Using the Delphi method, an evaluation of the appropriateness of applying the existing ESF items to CBT is conducted by 5 clinical psychologists. In particular, the emphasis is placed on the method of converting the tasks given to clients into ESM form and converting them into data.

2) CBT version ESM app development

Operate a technology development team to develop an ESM app program that can improve the response accuracy and convenience of respondents using smart devices. In particular, responses are developed to be possible with images or voices.

3) Expert evaluation

The opinions of the expert evaluation team are collected to supplement the practicality and function.

Expected results and effects

With the consent of the client, the expert will be able to evaluate the client and establish a more effective intervention strategy using the data collected through the mobile device.



# POSTER SESSION 01

Abstract No.: 1136

## The Effectiveness of a Mobile-App Based Relaxation Training on Stress Reduction and Physical Relaxation

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### INTRODUCTION

Stress is a mental health problem that can have negative health outcomes, including cardiovascular disease, depression, and anxiety. Research has shown that cognitive behavioral therapy (CBT) techniques such as cognitive restructuring, behavioral activation, and relaxation can help individuals reduce stress and promote physical and psychological relaxation. Recently, mobile app-based CBT programs have emerged as an alternative option for treating mental health problems. Previous research has supported that mobile app-based CBT approaches are as effective as traditional face-to-face CBT, while being more accessible and affordable. In this study, we developed a mobile app-based relaxation program, which is designed as one of the modules in an app-based CBT program for stress management. The purpose of this preliminary study was to explore the effectiveness of the relaxation module in reducing stress and inducing physical relaxation.

### METHOD

The relaxation module of the app comprises psychoeducation on relaxation using a chat-bot, as well as audio and video exercises, such as progressive muscle relaxation and guided imagery relaxation. A total of 51 participants aged between 20 and 45 were recruited through the internet and randomly assigned to either the intervention group or the control group. The participants were limited to those who were not currently using mental health services or taking psychiatric medication to minimize the potential confounding factors on the effectiveness. The experimental group ( $n = 25$ ) was required to use the app for one month at least two or three days a week, while the control group ( $n = 26$ ) did not receive any intervention. Both groups completed pre- and post-assessment measures of stress and physical relaxation utilizing the Perceived Stress Scale (Cohen et al., 1983), the Smith Relaxation State Inventory-Revised (Smith, 2005), the Relaxation Inventory (Crist et al., 1989), and the Relaxation Ability Scale (Ma & Gim, 2021). The assessments were conducted using an online survey platform ([www.qualtrics.com](http://www.qualtrics.com)).

### RESULTS

The results of the repeated measures analysis of variance indicated that there were no significant group differences in perceived stress level and relaxation state measured by the Smith Relaxation State Inventory and the Relaxation Inventory. However, a significant interaction effect of time and groups ( $F(1, 49) = 8.207, p < .01$ ) and a main effect of time ( $F(1, 49) = 4.721, p < .05$ ) were found for the relaxation ability. Post hoc analyses revealed that the score of relaxation ability scale significantly increased in the intervention group,  $t(24) = -3.337, p < .01$ , while there was no change in the relaxation ability score in the control group,  $t(25) = .525, p = .604$ .

### DISCUSSION

The present study suggests that the mobile app-based relaxation program had a positive impact on participants' ability to relax, highlighting the potential of app-based relaxation training as a tool for managing stress and promoting relaxation, despite the lack of significant improvements in perceived stress level and physical relaxation state in this study. This is significant because successful implementation of app-based CBT programs could provide a low-cost and convenient option for individuals to manage stress, especially for those who cannot afford traditional CBT or live in remote areas. Although this study only explored the effectiveness of the relaxation module and not an entire CBT program for stress reduction, these preliminary findings contribute to the growing body of literature on the effectiveness of app-based CBT programs as stress management interventions. The limitations of this study, such as the small sample size and lack of long-term follow-up, are discussed in detail, and recommendations for future research are proposed.

# POSTER SESSION 01

Abstract No.: 1141

## **The Differential Structures of Socio-Ecological Resilience Network between Rural and Urban Chinese Adolescents**

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### INTRODUCTION

A growing number of adolescent psychopathology and resilience study adopts a network approach to account for the heterogeneity and complexity of the multivariate relationships of influencing factors. A network approach helps illustrate critical variables in one network of related psychosocial constructs or processes that shape psychopathology and resilience, as well as how the variables are interacting and reinforcing each other. Literature has proposed that people who are more resilient or possess more psychosocial resources may reveal a less intensively connected network than those with lower levels of resources or resilience. However, such a contention still needs more empirical evidence to support it.

### METHOD

A comparison study was conducted in a city in Eastern China to compare the psychosocial resources as well as depression severity between adolescents from rural and urban areas (different levels of psychosocial resources). A purposive sampling strategy recruited 684 rural adolescents and 1123 urban adolescents. A battery of questionnaires on depression, stressful life events, emotion regulation, social support, social capital and psychological flexibility were administered. A network analysis was performed using the R package.

### RESULTS

Network analysis revealed a critical role of psychological flexibility in the depression-related psychosocial network structure. Differential emotion regulation strategies were found across the two groups of adolescents, with rumination and self-blame being the most central nodes for the rural group and catastrophizing for the urban group. Network comparison analysis showed significant differences between the network structure, indicating a more strongly connected network reported by rural adolescents in comparison to their urban counterparts.

### DISCUSSION

The study pioneered adopting a network approach to evaluate differential resilience network structure and intensity among Chinese adolescents with either a rural or urban background.

Results supported the argument that adolescents living in a relatively resources deprived environment would show a more intensively activated psychopathology network as indicated by depression. Theoretical and practical implications are discussed.

# POSTER SESSION 01

Abstract No.: 1143

## The Relationship between Daily Activities and Mood: A Study of Korean Users of the Harukong App

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### INTRODUCTION

Digital therapeutics are gaining attention for their potential to treat mood disorders. These interventions frequently incorporate mood tracking and journaling features, which draw upon cognitive-behavioral therapy techniques. This study examines the relationship between mood records and the records of various daily activities, as captured by a daily mood-tracking app.

### METHOD

We examined app data from 3,079 Korean users who used the Harukong app in Korean. Harukong is a user-friendly app developed by BlueSignum Corp. that enables users to record their mood, sleep, weather, and activities using simple, tappable buttons. Independent variables included sleep duration, engagement, weather, and activity category. The study employed generalized linear and penalized regression models for analyzing the effect of these variables on mood scores.

### RESULTS

The Korean users in this study had an average mood score of 3.91 out of 5 ( $SD = 1.09$ ) with a median score of 4. The regression analysis revealed that taking walks, experiencing sunny weather, having a night snack, and engaging in social activities with friends and lovers positively affected mood. Conversely, longer sleep duration, meeting acquaintances, and experiencing cloudy weather had a negative effect on mood. Notably, engaging in no social activities had a strong negative effect on mood ( $\beta = -0.33$ ).

### DISCUSSION

This exploratory highlights the potential utility of mobile-app-based digital mood trackers as valuable tools for mood management and overall well-being. The results suggest that engaging in social activities, especially with significant others, can be an effective way to enhance mood. Future research should explore the underlying mechanisms and examine whether these findings generalize to other populations and develop personalized mood-enhancing interventions based on individual data.

Abstract No.: 1148

## The Relationship between Mobile Based Application(CoCon) And Child Behavior Problems(CBCL)

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### INTRODUCTION

In our previous studies(Song, Yi, & Park, 2020), we validated a mobile-based serious game called "CoCon" by comparing it with conventional standardized neuropsychological assessments. CoCon is a screening tool developed to detect potential high-risk users with cognitive control difficulties, such as impulsivity, inattention, inhibition failure, and difficulties in organizing and planning. It is designed to be used in various ecological settings. CoCon's unique algorithms, which were developed based on the adaptive staircase procedure, help reduce environmental disturbances and collect data that accurately represents the user's cognitive control. Additionally, CoCon assesses ecological behaviors such as the number of confirmed clues and incomplete game exits. These behavioral markers provide important sources of data with ecological validity. The objective of this study is to examine the correlation between ecological game behaviors and the behavioral and emotional problems that parents report about their children's daily lives.

### METHOD

The participants in this study were children and adolescents who volunteered after reading the notice distributed online and in the local community. They were instructed to play CoCon, a smartphone app consisting of 10 subgames. The participants' primary caregivers, usually their mothers, completed the Korean version of the Child Behavior Checklist for Ages 6-18 (CBCL), which is a standardized questionnaire. The CBCL is designed for parents to assess their children's behavioral and emotional problems based on their daily lives. Correlation analysis was conducted to verify the relationships between the ecological behaviors of CoCon and the subscale scores of CBCL. The sample size used for the analysis was 113 children and adolescents (73 males, 40 females; mean age=11.6, SD= 1.38).

### RESULTS

There were significant correlations between ecological game behaviors of CoCon and subscores of CBCL. Specifically, the number of times the thief was identified using clues obtained by completing sub-games was positively correlated with attention problems ( $r=0.316, p<.001$ ), attention-deficit/hyperactivity problems ( $r=0.232, p=.014$ ), and sluggish cognitive tempo ( $r=0.310, p<.001$ ). The number of confirmed clues was positively correlated with anxious/depressed ( $r=0.221, p=.020$ ), thought problems ( $r=0.187, p=.050$ ), anxiety problems ( $r=0.223, p=.019$ ), and stress problems ( $r=.260, p=.006$ ). The number of one's game achievements showed a significant negative correlation with total competence ( $r=-0.252, p=.008$ ) and school score ( $r=-0.342, p<.001$ ) in the competence scales. Regarding incomplete game termination, the number of times the exit button has been pressed was positively related to internalizing problems ( $r=-0.226, p=.017$ ), such as anxious/depressed ( $r=0.248, p=.009$ ) and withdrawn/depressed ( $r=0.201, p=.035$ ), depressive ( $r=0.236, p=.012$ ) and anxiety problems ( $r=.0219, p=.021$ ) in DSM-oriented scales. Additionally, it was statistically related not only to obsessive-compulsive problems ( $r=0.206, p=.030$ ) and stress problems ( $r=0.268, p=.004$ ), but also to attention problems ( $r=0.274, p=.004$ ), attention-deficit/hyperactivity problems ( $r=0.194, p=.041$ ), and sluggish cognitive tempo ( $r=0.263, p=.005$ ).

### DISCUSSION

According to this study, the ecological game behaviors of CoCon can help identify behavioral and emotional problems in children and adolescents. Recent studies(e.g., Chen et al., 2022) have attempted to establish a relationship between digital behavioral markers measured on mobile devices and mental health and cognitive function in real life. In particular, behavioral markers displayed in serious games designed for measuring or training cognitive function can provide important behavioral data with ecological validity. Game-based cognitive assessment can be useful not only in evaluating and intervening in the behavioral and psychological problems of

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children and adolescents, but also in overcoming the limitations of conventional assessment **METHODS**, such as poor ecological validity. The present study's findings suggest that evaluating ecological behavior through game behavior provides a more valid perspective.

## Reference

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# POSTER SESSION 01

Abstract No.: 1152

## Effects of Behavioral Activation Intervention for Depressed Elderly Living in the Community; Focusing on the Development of a Protocol for Non-professionals without Mental Health Management Training

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### INTRODUCTION

Behavioral activation(BA), which has been proven effective as evidence-based treatment for depression, is a therapy that is easy and structured enough for non-professionals without mental health management experience to learn and apply(Dimidjian et al., 2011). This study aims to verify the effectiveness of behavioral activation therapy for elderly people in high-risk groups for depression, loneliness, and suicide who live in the community, using non-professionals (i.e., social workers) who have not received mental health training.

### METHOD

From six elderly welfare institutions in the region that have entered an ultra-aged society, we selected 60 elderly individuals who received special management services(30 individuals for the experimental and control groups each) due to high levels of depression, loneliness, and suicidal ideation as research subjects (mean ages = 77.16 (SD = 5.747)). Twelve social workers who have never received mental health management training at each institution were selected, and the following protocol was applied to provide behavioral activation education: Step 1 - Manual provision for behavioral activation treatment and education on the principles and **METHODS** of behavioral activation by two psychiatrists (6 hours), Step 2 - After the first session, the individuals were encouraged to analyze their own sessions, record the issues they encountered during treatment and what they want to receive from the supervision process in the "Supervision Record", Step 3 - Review of "Supervision Record" by two psychiatrists and one psychology major, Step 4 - Supervision conducted through online conferences before each subsequent session (the same process was repeated for each session, and a total of eight supervision sessions were held), Step 5 - Award for excellent counselor and FGI. Mixed-effect analysis was conducted to verify the difference in depression (GDS) scores between the experimental and control groups of elderly individuals after behavioral activation intervention.

### RESULTS

The results of analyzing the effects of behavioral activation intervention by social workers who received education according to this protocol showed that the 12 social workers treated 26 of the 30 elderly participants and there was a significant difference in the pre- and post-treatment depression scores between the experimental and control groups( $F(1, 50)=5.040, p=.029$ ). That is, the post-depression scores of elderly people who received behavioral activation intervention decreased significantly, while the depression scores of the control group elderly people did not change (experimental group pre-M=10.34, post-M=8.92; control group pre-M=9.85, post-M=10.80). The main contents of the eight supervision sessions were anxiety about whether they were doing it correctly and coping **METHODS** for unexpected elderly reactions. The main focus of the eighth session of the Supervision was on the caregivers' anxiety about whether they were doing things properly and their unexpected reactions to the elderly. It was observed that errors commonly occurred due to the failure to pay attention to the emotional state of the elderly, but from the fifth session of the repeated cycles of the sessions, the caregivers showed increased understanding of the principles of behavioral activation and confidence in their interventions. In the follow-up FGI conducted after the program, it was reported that connecting behavior and emotions was the easiest and that the procedure of linking behavior and emotions was helpful in improving the elderly's depression. Connecting values and value-based actions with the elderly during the intervention was the most difficult, and the caregivers wanted to improve their ability to capture the function of context-based behaviors in order to facilitate behavioral activation interventions. The standardized procedures for counseling and

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the strengthening of elderly care capabilities through weekly Super Vision sessions were seen as strengths, and it was suggested that a systematic training program for mental health management specialists for public service workers should be implemented. **CONCLUSION:** This study's results are consistent with the study by Bauer et al. (2021), who developed a collaborative care program by training behavioral activation care managers. It support the use of behavioral activation in a protocol for caring for depressed older adults in the local community through education for caregivers who have not received training in mental health management.

# POSTER SESSION 01

Abstract No.: 1156

## Development and Evaluation of a Developmental Support and Problem-Solving Platform for Children with Special Needs and Their Parents in Kindergarten

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### BACKGROUND AND OBJECTIVES

According to a nationwide survey of kindergartens in Japan, more than 80.0% reported having at least one child with special needs enrolled, while 13.1% reported that they provide adequate care to promote the overall development of such children. Kindergartens need to play a central role in supporting child-rearing in their communities. Therefore, it is necessary to establish specific methods related to child-rearing support centered on kindergartens. Therefore, in this study, we developed and evaluated a developmental support and problem-solving platform for parents of young children with special needs enrolled in kindergartens to clarify their needs related to child rearing and establish a support system that promotes cooperation between kindergarten teachers and parents.

### METHODS

Forty-one parents of toddlers enrolled in kindergarten who had parenting concerns and their children were the subjects of this study. Eleven parents of older children (5-6 years old), 15 parents of older children (4-5 years old), 14 parents of younger children (3-4 years old), and one parent of a toddler under three years old participated in the study. The study began with a web-based pre-assessment and an online course on applied behavior analysis and developmental psychology. In addition, 26 parents who requested to participate in the study were divided into two groups: One group received a sheet summarizing the results of interviews with kindergarten teachers and behavioral observations by a licensed psychologist, and the other group received individual interviews (behavioral observation + individual consultation group). In the individual interviews, the participants were interviewed about how they were doing at home, and suggestions were made for solving the problems. The other group received a sheet summarizing the child's strengths based on the results of the parents' questionnaire and individual interviews (parents' questionnaire + individual consultation group). The content and methods of the individual interviews were the same among the groups.

### RESULTS AND DISCUSSION

As a result of the online course, 81.0% of the parents were satisfied. In addition, 85.8% of the parents answered that some of the topics discussed in the online course were useful for their child-rearing. Parenting concerns included: communication and interaction with their children, tantrums, child temperaments such as irritability, picky eating, child attention and concentration, and child habits. Data is currently being collected on the level of satisfaction of parents in the behavior observation + individual consultation group and the parent questionnaire + individual consultation group, as well as on changes in their children's development. By evaluating the results of the questionnaires from parents and kindergarten teachers, we will propose a child-rearing support system that encourages cooperation between kindergarten teachers and parents.

### INFORMED CONSENT

This study was conducted after detailed explanations were given in writing and orally based on the research description, which received ethical approval, including personal information protection by the Sakushin Gakuin University Ethics Committee, and consent was obtained from the parents.



# POSTER SESSION 01

Abstract No.: 1160

## **Efficacy of Guided and Unguided Internet-based Transdiagnostic Psychological Intervention for Improving Depressive and Anxiety Symptoms: A Pilot Randomized Controlled Trial**

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### OBJECTIVES

Internet-based psychological interventions are shown to be efficacious in treating depression and anxiety and offer a high level of anonymity, accessibility, and flexibility with relatively low therapist input and delivery costs. Yet, the necessity of therapist guidance in achieving better treatment outcomes remains debatable. This pilot randomized controlled trial compared the efficacy and acceptability of a guided and unguided internet-based transdiagnostic intervention for managing depressive and anxiety symptoms in an adult Chinese population.

### METHODS

A total of 94 individuals with at least a moderate level of anxiety and/or depressive symptoms, as indicated by General Anxiety Disorder-7 (GAD-7) and/or Patient Health Questionnaire (PHQ-9) scores  $\geq 10$  were randomly assigned to one of the three conditions, guided treatment ( $n = 31$ ), unguided treatment ( $n = 31$ ), and waitlist control groups ( $n = 32$ ), in a 1:1:1 ratio. Participants in both guided and unguided self-help groups would receive the 7-week online transdiagnostic intervention called LifeLeX. This multimodal intervention consists of psychoeducation on depression and anxiety symptoms, behavioral activation, exposure exercise to anxiety-provoking situations, cognitive restructuring, and positive emotion training. In addition to the online intervention, the guided treatment group received phone coaching on a weekly basis, and the unguided treatment group received technical support only. Primary outcomes were depressive and anxiety symptoms (PHQ-9 and GAD-7). Secondary outcomes included quality of life, insomnia severity, and perceived stress.

### RESULTS

The linear mixed effects model revealed significant improvements in depression and anxiety symptoms as well as insomnia severity from baseline to immediate post-intervention assessment and 1-month follow-up in the guided treatment group relative to the waitlist control group. No significant difference was found in perceived stress and quality of life.

### CONCLUSIONS

Guided internet-based transdiagnostic intervention appears to be efficacious and acceptable in alleviating depressive and anxiety symptoms and insomnia severity in adults with anxiety and/or depressive symptoms. The self-help format with minimal therapist guidance appears to be a low-cost, widely disseminable option to deliver transdiagnostic interventions. Fully-powered, high-quality RCTs are warranted to further confirm the treatment outcomes. Potential mechanisms of change could be explored.

# POSTER SESSION 01

Abstract No.: 1162

## Effectiveness of a Mobile-Based Cognitive Behavioral Therapy Program for Anger Management: A Preliminary Study

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### INTRODUCTION

Anger is a common and natural emotion, one encountered in nearly everyone and one that most people report experiencing several times a week (Averill, 1983). However, the way of how we control and express anger is crucial for our mental health. Individuals who have difficulty controlling their anger often experience problems with interpersonal relationships, social adjustment, and sometimes even physical health. Cognitive Behavioral Therapy (CBT) is a well-known evidence-based treatment for anger management, and many studies have reported its effectiveness in improving anger awareness and coping skills. Especially mobile-based CBT programs are useful tools for providing more efficient and accessible mental health services to individuals experiencing anger management issues. The purpose of this study is to develop a mobile-based CBT program for anger management and examine its effectiveness in improving users' anger coping behaviors.

### METHOD

The program consists of five sessions, namely, 1) recognition of anger patterns, 2) identification of anger triggers, 3) **METHODS** for calming down during an anger episode, 4) strategies for avoiding anger, and 5) identification of reasons for anger. Each session aimed to provide anger management psychoeducation and practice CBT skills through 5-10 minutes conversations with the chatbot. A total of sixteen participants (aged 22 to 44, 13 females and 3 males) were recruited through internet. The participation is limited to participants who are not currently using mental health services or receiving medication treatment in order to purely explore the effectiveness of the program. They were randomly assigned to either an experimental or a control group, with the experimental group ( $n = 6$ ) receiving the anger management program for a period of one month and the control group ( $n = 10$ ) receiving no treatment. Participants completed pre- and post-assessments, which include the Perceived Stress Scale (PSS; Cohen et al., 1983), the State-Trait Anger Expression Inventory (STAXI; Spielberger et al., 1988), and the Anger Coping Scale (ACS; Koh & Park, 2005).

### RESULTS

A two-way repeated measures ANOVA test was conducted on the PSS, STAXI, and ACS scores. The generalized estimating equation(GEE) approach was used for the anger suppression subscale of ACS in which the normality assumption was not satisfied. As a result of the analysis, significant time\*group interaction effects were observed for tension-releasing coping ( $F(1, 14) = 6.568, p = .023$ ) and anger suppression (Wald chi-square = 4.964,  $p = .026$ ) of the ACS. Post hoc tests showed that the control group did not show any change in their tension-releasing coping scores compared to the pre-assessment, while the experimental group showed an increase (pre:  $M = 9.50, SD = 4.04$ ; post:  $M = 12.50, SD = 2.07$ ) that is a marginally significant,  $t(5) = -2.372, p = .064$ . For anger suppression subscale, the within-group pre-post changes were not significant for both the experimental group ( $Z = -1.511, p = .131$ ) and control groups ( $Z = 1.344, p = .179$ ).

### CONCLUSION

The present study suggests that a mobile-based CBT program for anger management can be a good alternative to traditional face-to-face CBT programs. Although there were no statistically significant improvements in variable measures, observed increasing trend in tension-releasing coping behavior among the experimental group after using the app indicates that the program may be effective in improving anger management skills. The marginally significant results of the present study may be attributed to the small sample size. Furthermore, the number of participants in the experimental group was almost half that of the control group. Based on these preliminary findings, further investigation with a larger sample size is necessary to explore the effectiveness of mobile-based CBT programs for anger management. The implication of this study is that the effectiveness of a mobile-based CBT program for anger management is explored in a real-life setting. The present study will provide important empirical and scientific evidence for the future development of mobile-based CBT programs.

# POSTER SESSION 01

Abstract No.: 1177

## A Preliminary Study on the Development of a Gardening Mindfulness Program for Maladjusted Adolescents at School

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### INTRODUCTION

The purpose of this study is to develop and verify the effectiveness of a gardening mindfulness program for maladjusted adolescents at school. Based on previous studies which discovered that gardening activities relieve symptoms such as depression, anxiety, and stress and promote recovery to reduce mental health problems, this study proposed as an alternative a program combining gardening activities and mindfulness, an evidence-based psychotherapy **METHOD**.

The program was developed according to the ADDIE model and consists of five stages: analysis, design, development, execution, and evaluation. Based on the ADDIE model, demand survey, expert FGI (Focused Group Interview), and content validity verification were conducted. A program which combines gardening as a healing therapy and mindfulness as a psychological therapy is expected to greatly contribute in managing the psychological pain and discomfort experienced by maladjusted adolescents at school.

### METHOD

This study used the One-Group Pretest-Posttest Design to verify the effectiveness of the newly developed gardening mindfulness program. Participants (n=8) were selected from alternative education center. The experimental results measured before and after participation in the program and the evaluation scores were compared before and after participation in the program and the difference in evaluation score between pre and post test score was compared to confirm the effect. In measuring psychological effects, depression, anxiety, stress, loneliness, vitality, and life satisfaction scale were used. In addition, satisfaction survey was conducted after the follow-up test to evaluate the program satisfaction of study participants.

### RESULTS

As a result, depression ( $Z=-2.521b$ ,  $p=0.12$ ), anxiety ( $Z=-2.240b$ ,  $p=.025$ ), loneliness ( $Z=-2.521b$ ,  $p=0.12$ ) and stress ( $Z=-2.52b$ ,  $p=.012$ ) showed statistically significant changes. On the other hand, vitality ( $Z=-2.536c$ ,  $p=.011$ ) and life satisfaction ( $Z=-2.361c$ ,  $p=0.21$ ) increased significantly after participating in the program. As a result of the satisfaction survey and analysis, the overall satisfaction with the program was reported above average. In addition, program effects such as psychological skill acquisition, mindfulness experience, psychological relaxation and stability, psychological effects through nature, interpersonal relationships, new knowledge acquisition, and experience were reported positively.

### CONCLUSION

This study is meaningful in that it showed that the program is effective in reducing psychological problems such as depression and anxiety of maladjusted adolescents at school and increasing their life satisfaction and vitality through a program combining gardening and mindfulness. Since the program's effectiveness has been verified in this preliminary study, it could support the idea of providing more psychological support for maladjusted adolescents at school.

# POSTER SESSION 01

Abstract No.: 1180

## **The Progress Report on the Study of the Efficacy of Internet-Based Small Group Cognitive Behavioral Therapy (i-SGCBT) in Patients with Somatic Symptoms and Related Disorders**

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### BACKGROUND

We report on our ongoing study, which aims to demonstrate the efficacy of Internet-Based Small Group Cognitive Behavioral Therapy (i-SGCBT) in patients with Somatic Symptoms and Related Disorders (SSRDs). SSRDs, including Somatic Symptom Disorder and Functional Neurological Symptom Disorder (Conversion Disorder), are currently one of the most common types of disorders in the general population. Previous studies have shown the effectiveness of cognitive behavioral therapy (CBT) in the treatment of each Somatic Symptom Disorder and Functional Neurological Symptom Disorder.

We are currently conducting a small group study of the effects of i-SGCBT treatment and will report on our progress (Kyoto Prefectural University of Medicine, Medical Ethics Review Board Committee; ERB-G-1943). Therefore, this presentation is ongoing and remains incomplete. We would like to list a number of the challenges of implementation and other issues.

### METHODS

The design of the protocol for this study is a single-arm and non-Randomized Controlled Trial. Participants: Somatic symptoms and related disorders (DSM-5), Intervention: i-CBSGT, Comparison: Comparison of and After Treatment Intervention, Outcome: The severe of SSD, anxiety and depression scales and QOL. These measurement points are T0 (At entry), T1 (Pre-intervention), T2 (Post-intervention), and T3 (at follow-up; 6 months). Subjects for this study were recruited from outpatients at the University Hospital of Kyoto Prefectural of Medicine. Within the study, i-CBSGT started in December 2020.

### SAMPLE

A 49-year-old woman developed psoriatic arthritis a number of years ago and was treated for it; however, her pain worsened in her back and fingertips, and the patient consulted some physicians. In August X, she visited our outpatient clinic, and her doctor diagnosed her with SSD according to the DSM-5 because of her significant cognitive symptoms of pain.

She chose i-SGCBT for this study. Before the introduction of i-SGCBT, there was no Internet access at her home. However, because of her family's active cooperation in the research and treatment, an Internet environment was established in her home. The patient was able to complete all 8 sessions, and she became more compassionate toward herself. Although some pain remained, she was free from distress. The permission of the individual was obtained for the publication of this report; however, the details have been changed to protect privacy.

### RESULTS (ONGOING RESEARCH)

Currently, the program has been implemented in 9 groups, recruiting a total of 27 people. The dropout rate is 3.7%, which is below that of previous studies on CBT for Somatic Symptom Disorder.

### CONCLUSION

This study has started well. However, a number of issues remain: First, people who do not have Internet access at home; second, elderly people who are uncomfortable with the Internet; and third, those who experience excessive interpersonal tension through the Internet. Nevertheless, the participants generally appreciated the program. This study is ongoing and it requires continuation. In the future, we would like to create a smoother system for i-CBT.

# POSTER SESSION 02

Abstract No.: 0048

## **Making Psychological Space by Constructing Growth After the Sewol Ferry Disaster for Pairs of Parents of the Sewol Ferry Disaster Victims**

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The Sewol ferry disaster not only caused the deaths of 304 passengers but also left family members with grief and pain. It is crucial for married parents of the victims to reconstruct and reorganize their self-regulatory system in order for them to live their life after the disaster. One of the means people with a traumatic life event use is to make psychological space by constructing growth (PSG) to cope with catastrophic information with respect to the death of their offsprings. To investigate whether parents of the victims regulate types of PSG independently and/or concurrently as couples, we used a Repeated Measures of Actor-Partner Interdependent Model (RM APIM; Kenney et al., 2006) using the dynamical systems method (Butner & Story, 2010). Among participants, we selected a total of eighteen pairs of parents who participated in the present study for three consecutive years (n=36, mean age = 47.36 y, SD=4.88). The present study expanded from individuals to pairs of parents of the Sewol ferry disaster victims and looked at a dynamic attractor state using different pairs of PSG.

Results indicate that although a catastrophic life event occurred for parents of the victims, life growth is an individualistic and unique process for each parent, i.e., parents of the victims did not necessarily construct psychological space and/or grow as couples.

# POSTER SESSION 02

Abstract No.: 0049

## **Paradoxical Trade-Offs and Gender Differences in the Human System for Family Members of Victims of the Sewol Ferry Sinking**

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On the morning of April 16, 2014, the South Korean ferry Sewol sank and 304 people died. Although this adversarial event occurred in the past, the challenge to their self-regulatory systems persists among the family members of casualties of the sinking of the Sewol (FMCSS) since then. This study aims to understand the human system (HS) from a dynamical systems perspective. A total of 112 FMCSS (58% female, mean age = 44.18, s.d. = 8.01) participated in the current study by self-report once per year from year 2015-2017. We used the Repeated Measure of Actor-Partner Interdependence Model (Kenny, Kashy, & Cook, 2006) with change as outcome and graphed the network structure of the HS simultaneously over time (Butner et al., 2015; Butner et al., 2017). Females differed from males in dynamism of parts of regulation. Although they encountered the same catastrophic event, there was a distinct network structure in the HR based on short- and long-term temporal trade-offs for each gender.

# POSTER SESSION 02

Abstract No.: 0130

## **The Adaptation and Efficacy of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) among Adolescents with Post-Traumatic Stress Disorder (PTSD) in Malaysia**

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This study is a parallel design randomized controlled trial that aims to study the feasibility and efficacy of Trauma – Focused Cognitive Behavioral Therapy (TF - CBT) adaptation in Malaysia to improve post-traumatic disorder symptoms, depressive symptoms, and social cognitive abilities. Participants are adolescence aged 13 to 17 years old who have experienced one or more episodes of abuse such as sexual abuse or physical abuse and have developed post-traumatic disorder symptoms. The symptoms will be screened using the Post-Traumatic Stress Symptoms for Children (PTSS-C). Participants with severe cognitive impairment, severe disruptive or aggressive behavior problems, active suicidal ideation and problematic substance use that is affecting their functioning are not eligible. Data will be collected from local welfare institutions for children in Selangor and Perak. Using a double - blind **METHOD**, 210 participants will be randomised to either the 1) intervention group, where they will receive TF - CBT over 8 group sessions or the 2) control group, where they will be given psychoeducation and taught relaxation skills over the same number of sessions. Follow-up sessions will be conducted at 1 month, 3 months and 6 months post – termination. The Child Depressive Inventory (CDI) and PTSS-C will be used to measure depressive and post-traumatic symptoms respectively at baseline, termination and also at each follow-up point. For measures of social cognitive abilities, the Strange Stories task will be administered to test Theory of Mind ability, the Facial Emotion Recognition (FER) task and the Expanded Attributional Style Questionnaire (EASQ) will be administered to assess the emotion recognition ability and attributional style of the participants at baseline, termination and follow-up points. The study hypothesised that participants will show improvements in terms of their depressive, post-traumatic symptoms and social cognitive abilities following 8 group sessions of TF-CBT.

Keywords: Trauma - Focused Cognitive Behavioral Therapy (TF-CBT), adaptation and efficacy, Post-Traumatic Stress Disorder (PTSD), depression, social cognition

# POSTER SESSION 02

Abstract No.: 0142

## **Investigating the Efficacy of Attention Bias Modification on Treating Patients with Sub-clinical Generalized Anxiety Disorder: Combined the Emotional Attention Network Test and Wells' Attention Training Techniques to Improve Attention Control**

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### INTRODUCTION

Because attention bias modification (ABM) performed using modified dot-probe tasks is hindered by low reliability (McNally, 2019), this study reviewed recent studies that conducted the emotional attention network test (e-ANT) to determine the advantages and disadvantages of using a new ABM training model (i.e., e-ANT ABM) and implemented the attention training technique (ATT) proposed by Wells (2007) to improve the attention control and anxiety levels of subclinical patients with generalized anxiety disorder (GAD).

### METHOD

This study recruited 66 university students who met the criteria for GAD diagnosis, and they were randomly assigned to one of the four attention training scenarios: (1) e-ANT ABM+ATT (15 people, and 12 of them being women); (2) eANT placebo training + ATT placebo training (16 people, with 11 of them being women); (3) eANT ABM+ATT placebo training (17 people, with 12 of them being women); and e-ANT placebo training + ATT (18 people, with 14 of them being women). After the training sessions, the participants were presented with worry induction tasks. Participants' attentional bias and worry level were assessed using random dot-probe task and symptom self-evaluation.

### RESULTS

This study discovered that after the worry induction tasks, participants receiving the e-ANT ABM + ATT training scored negatively on the attentional bias index (ABI), and their scores were significantly lower than those receiving the e-ANT ABM + ATT placebo training. Participants receiving the e-ANT placebo training + ATT scored negatively on the ABI, and their scores were significantly lower than those receiving the e-ANT ABM + ATT placebo training. In addition, after the worry induction tasks, participants receiving the e-ANT ABM + ATT training scored significantly lower on subjective worry compared with participants receiving the e-ANT placebo training + ATT placebo training. Participants receiving the e-ANT ABM + ATT placebo training and receiving the e-ANT placebo training + ATT training also had significantly higher subjective worry compared to their level of worry before they received the worry induction tasks and before they received the attention training.

### DISCUSSION

This study integrated two new attention trainings (i.e., the e-ANT ABM and the ATT) and developed a new ABM training medium for participants diagnosed with GAD. The research results partially met the expectations. Compared with other attention training types, the e-ANT ABM + ATT training after receiving worry induction tasks could more effectively help participants to resist the attentional bias and worry from threat stimuli. However, due to the COVID-19 pandemic, this study had a small number of participants; measurement with outcome indicators, selection of tools, and the experimental designs were also restricted. Future studies may further verify the training effects of the new ABM medium.



# POSTER SESSION 02

Abstract No.: 0150

## **Development and Validation of the Korean Parenting Anxiety Scale for the Parents of Elementary School Children**

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The purpose of this study is to develop a Korean Parenting Anxiety Scale for the parents of Elementary School Children(KPAS-ES), and to verify reliability, validity, and empirical usefulness. Through preliminary research for item development, the operational definition of parenting anxiety and preliminary 88 questions were prepared, and the validity of the contents was verified through Delphi survey and a preliminary scale of a total of 50 questions was formed. In Study 1, a preliminary survey was conducted on 264 parents with children aged 6 to 12 years old, and exploratory factor analysis was conducted by collecting data. As a result, factor analysis was performed, and a 7 factor structure, 31 items were confirmed. In Study 2, a confirmative factor analysis on 483 parents showed a good fit. The stability and suitability of the factor structure for the Korean parenting anxiety scale was confirmed through looking into construct validity, convergent validity, and discriminant validity. Finally, through verifying the structural equation model, it was confirmed that parenting anxiety is completely mediated in the relationship between parental role stress and parental burnout, and parenting anxiety is partially mediated in the relationship between parental life stress and parental burnout. This scale can be used in parental education and parenting policies, and is expected to be highly utilized as useful data for follow-up studies on parenting and child development. The significance and limitations of the study were discussed.

# POSTER SESSION 02

Abstract No.: 0184

## Fear of Positive Evaluation Is Not Related to Quality of Life in Japan

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### INTRODUCTION

Individuals with social anxiety disorder (SAD) experience lower quality of life (QOL) than individuals without SAD (Eng et al., 2005). Therefore, QOL is an important outcome measure in SAD treatment. QOL is associated with fear of negative evaluation (FNE) and fear of positive evaluation (FPE) which are core cognitive features of SAD (Dryman et al., 2016). Dryman et al. (2016) showed that both higher FNE and higher FPE are related to poorer QOL. However, culture appears to have an impact on the relationship between FPE and QOL. In Asia including Japan, the correlation between FNE and FPE is lower than that in the United States (Wang et al., 2012). In Asia, FPE is considered to include humility as well as fear of evaluation (Wang et al., 2012), and in Japan, humility is important and higher FPE is related to better QOL (Tsuda, 2021). Therefore, in a Japanese sample, even as FNE is negatively associated with QOL, FPE can be positively associated. The present study is an examination of the relationships between FNE and FPE and QOL in Japanese university students.

### METHODS

The participants were 65 Japanese university students (43 males, 3 unknown, Mage = 21.12, SD = 0.76) who had a high score (> 43) on the Japanese version of the Liebowitz Social Anxiety Scale (Asakura et al., 2012). Participants completed a Japanese version of the Fear of Positive Evaluation Scale (FPES; Maeda et al., 2015), a short Fear of Negative Evaluation Scale for Japanese (FNE; Sasagawa et al., 2004), and the subjective Well-being Inventory Japanese Edition (SUBI; Tanan et al., 1995). The SUBI has seven subscales (general happiness, upsetability, social support, physical ill-health, family group support, deficiency in social contacts, and confidence in coping).

### RESULTS

Multiple regression analysis was used to examine the unique variances accounted for by FNE and FPES scores in each SUBI subscale score. FNE was a significant positive predictor of upsetability ( $\beta = .59, p < .01$ ). Participants with higher FNE tended to feel anxious and upset. FPES was not a significant negative predictor of any SUBI subscale.

### DISCUSSION

In this study, although FNE was a positive predictor of upsetability, FPE did not predict QOL. In Japanese populations, improving FNE might improve QOL, especially susceptibility to anxiety and upset, but improving FPE might not have a positive impact.

# POSTER SESSION 02

Abstract No.: 0221

## Improving the Diagnosis and Assessment of Illness Anxiety Disorder

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### INTRODUCTION

Illness Anxiety Disorder (IAD) has a devastating, chronic and long-lasting effect on people worldwide (Fink et al., 2010). IAD affects up to 13.1% of the adult population (Weck et al., 2014) and has been exacerbated by the coronavirus pandemic (Newby et al., 2020). However, IAD has only recently been identified as a mental health disorder in the Diagnostic and Statistical Manual, replacing the 'Hypochondriasis' diagnosis which has been criticized for being vaguely defined, over restrictive, and narrow (Fink et al., 2004). Although IAD is intended to address the limitations of Hypochondriasis, little empirical work has addressed its reliability, validity, and clinical utility. To address this gap, we sought to improve the diagnosis and assessment of IAD, by addressing whether the current diagnostic criteria for IAD are reliable, valid, and clinically useful, as well as determining the most reliable and valid assessment tools for detecting IAD and discriminating it from non-problematic, transient health anxiety.

### METHOD

Individuals who self-identified as experiencing persistent and frequent worries about health were recruited into the study from the community. Participants were administered a diagnostic interview to assess IAD, its features, subtypes, comorbid and differential diagnoses. Participants also completed an online survey, including self-report assessment measures of IAD severity (e.g., Short Health Anxiety Inventory), other mental health symptoms (e.g., generalised anxiety and depression), and health service use. Psychometric properties (e.g., reliability and validity, sensitivity/specificity) were assessed and compared across tools and cut-off scores used to discriminate non-problematic health worries (no IAD) from IAD.

### RESULTS

Preliminary results will be presented outlining the symptoms, features and subtypes of Illness Anxiety Disorder, comorbidities with both psychological disorders and chronic health problems and the reliability in self-report measures in identifying IAD.

### DISCUSSION

The findings from this research will help detect people with IAD using reliable, valid, and easy to administer assessment measures. The study will also determine the optimal diagnostic criteria for IAD to improve the ability of clinicians to diagnose patients with IAD. This will help to inform suitable treatment approaches for people with IAD.

# POSTER SESSION 02

Abstract No.: 0228

## Effects of Changes in Craving and Rule-Governed Behaviour on Stealing Behaviour in Kleptomania

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### INTRODUCTION

Theft is a widespread crime that results in significant damage, so measures to prevent recidivism are an important issue. Shoplifting is characterized by its relative ease and the tendency for underreporting; some of the prevalence of shoplifting even in adulthood may be a symptom of dependence on stealing—that is, kleptomania. It has been suggested that the frequent repetition of such stealing behaviour results in the formation of an automatic response chain from steal-related stimuli to stealing behaviour (Asami et al., 2021). When stealing behaviour becomes automatic, self-monitoring and self-control are extremely difficult, and the factors that maintain this automatic response chain include emotions (e.g., craving) and cognition (e.g., rule-governed behaviour; e.g., Marlatt & Donovan, 2005). This study therefore examined the influence of craving and rule-governed behaviour on stealing behaviour.

### METHOD

Sixteen kleptomania patients (5 males, 11 females), with a mean age of  $51.38 \pm 16.87$  years, attended CBGT program and responded to questionnaires and cognitive tasks at the beginning and end of six sessions. The information collected included: demographic data; stealing behaviour: kleptomania symptoms (K-SAS; Asami et al., 2020) and recidivism risk (IORNS; Miller, 2006); cognitive fusion (CFQ; Shima et al., 2016); and self-control (RRS; Sugiwaka, 1995). In the cognitive tasks, craving was assessed with the Arousal Implicit Association Test and rule-governed behaviour was assessed with the Positive Implicit Relational Assessment Procedure (IRAP). Five participants did not meet the achievement criteria in the IRAP. The research protocol was approved by the local ethics committee.

### RESULTS

Although the dynamic risk of IORNS was reduced ( $t(15) = 2.381, p = .031$ ) and the K-SAS showed a decreasing trend ( $t(15) = 2.017, p = .062$ ), there were no significant changes in craving or rule-governed behaviour at the end of the six sessions. In addition to, self-control of RRS was improved ( $t(15) = -2.959, p = .010$ ). Pearson's correlation analysis of the associations among the variables revealed no significant association between craving and stealing behaviour, although there was a moderate correlation between weaker craving and lower cognitive fusion of CFQ ( $r = .446, p = .083$ ), and a moderate correlation between stronger craving and higher self-control of RRS ( $r = .466, p = .069$ ). There was a moderate correlation between weaker rule-governed behaviour and lower static risk / higher protective factors of IORNS ( $r = .452, p = .078; r = -.635, p = .008$ ).

### DISCUSSION

The results suggest that improvement in rule-governed behaviour may improve recidivism risk for stealing, while craving was not shown to be significantly associated with stealing behaviour. It is thus possible that interventions to reduce the cognitive aspect of rule-governed behaviour may be effective in the treatment of kleptomania. Moreover, improvement in self-monitoring in real-life situations may lead to avoidance of situations in which craving could occur, which in turn might lead to a reduction in the craving itself. On the other hand, increasing opportunities for situations in which craving might occur by placing more importance on long-term than short-term rewards may lead to increased craving. Therefore, it is necessary to examine the effects of changes in craving and rule-governed behaviour on stealing behaviour through longer-term research.

# POSTER SESSION 02

Abstract No.: 0236

## Study Protocol for a Randomized Controlled Trial of Culturally-Adapted and Program-Adopted Cognitive Behavioral Therapy for Children and Adolescents' Anxiety in Japan: A Multi-, Inter-, and Cross-Cultural Clinical Child Study (MIXCS)

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### INTRODUCTION

Though there is strong support for the effectiveness of cognitive behavioral therapy (CBT) for anxiety disorders in children (Higa-McMillan et al., 2016), there has been limited research on evaluating CBT for children's anxiety in Asia (Hall, Ibaraki et al., 2016). For practitioners who work in diverse cultural contexts, it is important to determine whether they should apply a program-adopted cognitive behavioral therapy (PA-CBT) or a culturally-adapted cognitive behavioral therapy (CA-CBT) for their clients. The aim of this protocol study was to conduct a Multi-, Inter-, and Cross-cultural Clinical Child Study (MIXCS) that examines the efficacy of CA-CBT and PA-CBT in comparison with a psychological control (moral educational control: MEC). Additionally, commonalities and differences in therapy factors between CA-CBT and PA-CBT are explored.

### METHOD

This study has been designed as a randomized, controlled, and assessor-masked multicenter superiority trial with three groups: PA-CBT, CA-CBT, and MEC across three different sites: Kyoto, Hyogo, and Nagano prefectures in Japan from 2022 to 2025. Participants will be allocated to the three groups in equal ratio at the first stage of randomization with biased-coin assignment balancing gender and age. The primary outcome is to examine participants' remission of their primary anxiety disorder by an independent evaluator based on the Anxiety Disorders Interview Schedule for DSM-IV (ADIS; Silverman & Albano, 1996). The secondary outcomes are clinician's severity ratings, child self-reported anxiety symptoms, depressive symptoms, cognitive errors, and family accommodation, in addition to parent-reported anxiety symptoms and family accommodation. This study additionally measures therapy factors in order to explore commonalities and differences between culturally adapted and program adopted CBTs. Finally, satisfaction and comprehension are also collected. The objective is to recruit at least 99 families for the analysis. Treatment will be delivered ten times weekly, with four evaluations: two weeks before the treatment (pre), three months after the base date when the treatment starts (after), and six months (6FU) and 12 (12FU) months after the post-assessment. This study was approved by Doshisha University Research Ethics Review Committee, Kwansei Gakuin University Committee for Regulations for Behavioral Research with Human Participants, and Shinshu University Certified Review Board of Clinical Research.

### RESULTS & DISCUSSION

This study will suggest that if both treatment conditions produce substantial therapeutic gains, practitioners can select either treatment protocol depending on each therapy factor such as clients' preferences and therapists' proficiency. In addition, the study will identify

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common and different therapy factors between culturally adapted and program adopted CBT sessions such as compliance and proficiency. Therefore, the study will provide practical implications for clinical decision-making in the treatment of child and adolescent anxiety disorders.

Takashina, H. N., Ueda, S., Sakai, M., Takahashi, F., Sato, H., Hudson, J. L., . . . Ishikawa, S. (2023, January 20). Multi-, Inter-, and Cross-cultural Clinical Child Study. Retrieved from [osf.io/mfqp9](https://osf.io/mfqp9)

# POSTER SESSION 02

Abstract No.: 0260

## The Effect of Smiling on Self-Attention in Social Anxiety

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The purpose of this study is to examine the effects of smiling on negative emotions, persistent thoughts, and anticipatory anxiety caused by speech tasks. The hypotheses to be examined in this study are: (1) smiling before the task will suppress the establishment of negative mood, (2) smiling after the task will decrease negative mood, (3) smiling after the task will decrease the number of negative thoughts after the speech, and (4) smiling will decrease the number of anticipatory thoughts before the speech.

The Fear of Negative Evaluation Scale (Sasagawa et al., 2004) and others were used to screen the high FNE group: 5 participants in the pre-task smile condition (M = 20.40 years old, SD = 1.50), 5 participants in the post-task smile condition (M = 21.00 years old, SD = 1.26), 4 participants in the control condition (M = 23.75 years old, SD = 1.75). M = 23.75 years old, SD = 6.10 and 5 participants in the pre-task smile condition (M = 19.40 years old, SD = 0.80), 4 participants in the post-task smile condition (M = 19.25 years old, SD = 0.43), and 4 participants in the control condition (M = 19.00 years old, SD = 0.71) for the low group (M = 20.41 years old, SD = 3.00). The following scales were used in this study: 1) Depression and Anxiety Mood Scale (DAMS; Fukui, 1997) 2) Impact of Event Scale-Reviewed (IES-R; Asukai, 1999) 3) Number of thoughts in the thoughts obtained during the thought sampling period. Smile facial expression manipulation: A 5-mm sticker was placed on the zygomaticis major and orbicularis oculus muscles, and the participants were instructed to move the two stickers closer together. Control facial expression manipulation: Participants were instructed to reproduce the controlled facial expression of the pen technique by holding disposable chopsticks in their mouths vertically. Each facial expression was maintained for 40 seconds. The procedure was as follows. A speech task was performed, and the smiling facial expression manipulation was performed either before or after the task. Negative mood was measured before and after the task, and a thought sampling task was performed for 10 minutes after the task. On the second day, the participants were instructed to give a speech but not an actual speech, and a thought-sampling task was performed.

Negative mood manipulation by the speech task was adequate. To examine the influence of facial expression manipulation on the persistence of negative mood, a three-factor mixed design analysis of variance was conducted on the DAMS depressive general mood and anxiety mood scores: social anxiety traits  $\times$  facial expression manipulation  $\times$  measurement timing (before and after the thought-sampling task). The results showed a quadratic interaction for the depressive general mood score ( $F(1, 21)=9.19, p<.05$ ), and subtest results indicated that scores were significantly lower before and after thought sampling in the high social anxiety and post-task smile conditions. A quadratic interaction was also found for the anxious mood score ( $F(2, 21)=6.20, p<.01$ ), and subtest results indicated that scores decreased before and after thought sampling in the high social anxiety and post-task smile conditions. Thus, we can say that in the high social anxiety trait group, smiling after a speech task was confirmed to be effective in preventing negative mood from persisting. This is a result that dictates the validity of the ICS model. The high FNE group in particular is a subject for whom the cognitive loop associated with negative experiences is easily established. In addition, the thought sampling period is a period when (Post-Event-Processing: PEP) is likely to occur, and thus it is predicted that negative mood will increase. However, although the number of thoughts did not decrease, a decrease in negative mood was observed, indicating a decrease in negative mood associated with PEP. In sum, hypotheses (2) and (3) were partially supported in the present study, indicating that facilitating new processing in the sensory loop after a speech task decreases the persistence of negative mood.

# POSTER SESSION 02

Abstract No.: 0265

## Analysis of Temperament and Character Profile of Random Item Users

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### INTRODUCTION

Despite the positive relationship between random item users and internet overindulgence, the possibility that heterogeneous latent groups are mixed within random item users has been raised through previous studies (Lee, Jeon, & Chae, 2022). The purpose of the study is to investigate the biopsychosocial characteristics based on the temperament and character of Cloninger's Temperament and Character Inventory (TCI) and to suggest the healthy characteristics among random item users.

### METHOD

This study measured temperament and personality, cognitive emotion regulation strategies, daily stress, positive emotion, and negative emotion of 266 young adults (mean age:  $23.3 \pm 2.49$ ) in the Greater Busan area using TCI-revised short (TCI-RS), Cognitive Emotion Regulation Questionnaire (CERQ), Daily Hassles Scale for Korean Worker (DHS-KW) and Positive Affect and Negative Affect Schedule; (PANAS), respectively. Mplus5.21 was used to derive latent groups based on seven personality variables of temperament and character. Then, a t-test was conducted using JAMOVI (R Core Team, 2021; The jamovi project, 2022) to identify the differences between the groups.

### RESULT

First, two latent groups were identified through latent profile analysis (LPA) and named as poor and good adaptive group, respectively. The good and healthy group showed lower score of harm avoidance (HA) temperament and higher score of self-directedness (SD) character of TCI. Second, there were significant differences of positive emotion, negative emotion, adaptive and maladaptive cognitive emotion regulation strategy, and daily stress between latent groups.

### CONCLUSION

It was confirmed that there is a significant difference of biopsychosocial characteristics according to temperament and character profiles, meaning that there is healthy adaptation group in random item users. In other words, the healthy group showed high scores of SD and Cooperativeness (CO) representing a good adaptation and well-being. These findings were supported with additional characteristics of higher positive emotion and adaptive cognitive emotion regulation and lower negative emotion, maladaptive cognitive emotion regulation and daily stress. This suggests that random item users are not necessarily related to internet gaming disorder and further research is needed to investigate this relationship.

Soojon Lee, Yongjun Jeon, & Chae (2022). Can Random Reward Item Usage Predict the Internet Gaming Disorder Tendency? *The Journal of the Korea Contents Association*, 22(6), 439-452

Cloninger, C. R., Przybeck, T. R., Svrakic, D. M., & Wetzel, R. D. (1994). *The Temperament and Character Inventory (TCI): A guide to its development and use*.

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# POSTER SESSION 02

Abstract No.: 0286

## The Mediating Role of Limited Future Time Perspective in the Relationship between Career Stress and Anxiety among Korean College Students in the Post-COVID Era

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### INTRODUCTION

Youth unemployment has been one of Korea's most serious national problems in recent years, and the economic crisis caused by the COVID-19 pandemic has worsened the situation (Kim, 2022). College students are experiencing heightened levels of stress related to future career prospects (Koch et al., 2021; Rajabimajid, Alimoradi, & Griffiths, 2021), which may lead to anxiety (Cho, Yoo, & Park, 2021; Monaco, 2021). Future time perspective (FTP) refers to an individual's subjective perception of the future and expectation about their ability to achieve their goals and aspirations over time (Cartensen, Isaacowitz, & Charles, 1999). In this regard, an individual's open-ended FTP involves exploring one's role in society and pursuing a future career (Lang & Carstensen, 2002). However, as higher education has shifted online, students have had fewer opportunities for professional growth and career exploration (Aristovnik et al., 2020; Zhai & Du, 2020). Thus, in the face of career stress in the post-COVID era, students may perceive their available time for job preparation is limited. Consequently, this could be a leading cause of an increase in anxiety levels (Kooij et al., 2018). The current study examines the relationship between career stress and anxiety among Korean college students in the post-COVID era and the mediating role of the limited FTP.

### METHOD

Data was collected from 79 Korean college students ( $M=22.33$ ,  $SD=1.87$ ) approximately two years after the onset of the COVID-19 outbreak. Career stress, FTP, and state anxiety were assessed using the following measures: Korean Career Stress Inventory (Choi et al., 2011), Future Time Perspective Scale (Han & Noh, 2016; Lang & Carstensen, 2002), and State-Trait Anxiety Inventory (Kim, 1978; Spielberger, Gorsuch, & Lushene, 1970). The scores for FTP were reverse-coded to evaluate the extent to which students perceive their future time as limited. Linear and hierarchical multiple regression analyses were conducted to test the hypotheses (PROCESS macro by Hayes, Model 4).

### RESULTS

As hypothesized, greater career stress was a significant predictor of heightened state anxiety ( $\beta=.515$ ,  $SE=.085$ ,  $t=5.266$ ,  $p<.001$ ). However, in the model including limited FTP as a mediator, the direct effect of career stress on state anxiety was nonsignificant, and limited FTP fully mediated the relationship. That is, students who experience career stress may be more likely to feel their future time is limited ( $\beta=.423$ ,  $SE=.064$ ,  $t=6.644$ ,  $p<.001$ ), which could contribute to higher levels of anxiety ( $\beta=.683$ ,  $SE=.131$ ,  $t=5.227$ ,  $p<.001$ ).

### DISCUSSION

College students have faced numerous challenges in pursuing their career goals before graduation while bracing themselves for an uncertain job market in the wake of the COVID-19 pandemic. In this context, how individuals perceive the opportunities and time available for preparing for their future will be crucial factors in their abilities to cope with the given circumstances and alleviate anxious states. These findings cast light on the significant mediating role of college students' FTP in processing stressors related to their careers and managing the subsequent anxiety during the post-COVID period (Henry, Zacher, & Desmette, 2017; Rudolph et al., 2018). Further investigation will be needed to develop open-ended FTP as a component of cognitive behavioral therapy and mitigate the long-term effects of the COVID-19 pandemic on college students' mental health.

Lang, F. R., & Carstensen, L. L. (2002). Time counts: future time perspective, goals, and social relationships. *Psychology and Aging*, 17(1), 125–139. <https://doi.org/10.1037/0882-7974.17.1.125>

# POSTER SESSION 02

Abstract No.: 0290

## Research Trends in Prolonged Grief Therapies in Korea

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### INTRODUCTION

The death of a close person is a universal experience and the most painful experience of loss (Go, 2018). Most people with loss experience gradually recover and adapt to daily life, some may experience physical and psychological pain when the mourning process is not appropriate or there are unusual variables related to the loss. The need for research on the mourning process after bereavement has emerged, and Diagnostic and Statistical Manual of Mental Disorder, 5th Edition (DSM-5, APA, 2013), classified Persistent Complex Bereavement Disorder as a disorder that requires additional research. Furthermore, DSM-5-TR (Text-Revision, APA, 2022) presented Prolonged Grief Disorder as a new diagnosis. Therefore, this study aims to overview Korean studies related to the therapies of Prolonged Grief from 2013 to the present (January 2023), and examines the research trends and limitations.

### METHOD

This study analyzed papers published in Korea from 2013 to the present, by using the following search engines: Nurimedia (DBPIA), Research Information Sharing Service (RISS), National Assembly Library of Korea (NANET), Korea Institute of Science and Technology Information (ScienceOn), and Koreanstudies Information Service System (KISS). We first searched for the topics "grief", "mourning", "bereavement" or "loss", and further searched for "therapy", "program", and "group" was followed. As researchers use different expressions or concepts of grief, various search terms are examined. A total of 3,423 papers (DBPIA, 1122; RISS, 1076; NANET, 580; ScienceOn, 332; KISS, 313) were retrieved and 16 papers were finally selected for analysis, after excluding duplicate papers, papers with qualitative methodologies, and papers published prior to 2013, 16 papers were finally selected for analysis.

### RESULTS

The 16 selected papers were analyzed for publication years, participants, sessions, measurements, therapeutic techniques, variables, and statistical analysis methods. Most papers were published in 2018 (6 papers), followed by 2013 (4), 2020 (2), and one each for 2016, 2017, 2019, and 2022. Middle-aged women participated most frequently in the studies (6 papers), and the remaining participants were mainly families: families (5), children (1), and parent (1). The number of participants was as follows: five or fewer (1 paper), 6 to 10 (7), 11 to 15 (4), 16 or more (3), and unidentified (1). Regarding therapy sessions, nine or more sessions were the most common (7 papers), followed by eight sessions (6), and less than 5 sessions (3). In most cases, the type of bereavement and the period after the bereavement were not reported (15 and 12 papers, respectively). The Beck Depression Inventory (BDI) was most frequently used measurement tool (7 papers), followed by the Texas Revised Inventory of Grief (6 papers). Therapeutic techniques included media use (5 papers), cognitive-behavioral therapies or factors (3), religion-based techniques (2), acceptance and commitment therapy or related techniques (2), and a combination of other therapies (4). The variables used to explore the effectiveness of therapies in terms of negative and positive outcomes were as follows: bereavement (e.g., sadness and related variables) and depression were the most commonly used for negative outcomes, while post-traumatic growth and quality of life were used for positive outcomes. ANOVA was the most frequently used statistical analysis method (6 papers).

### DISCUSSION

This study analyzed 16 selected papers published in Korea from 2013 to the present, examining trends in Korean studies on the therapies for prolonged grief. The findings suggest that prolonged grief lacks a clear definition in the Korean academic literature and that there is limited research on its related therapies based on evidence-based practices. As such, future research should aim to provide a clear conceptualization of prolonged grief and investigate its characteristics, such as the type and duration of grief, in order to inform evidence-based therapies.

# POSTER SESSION 02

Abstract No.: 0308

## Long-Term Effects of Group Cognitive Behavioral Therapy for Adult Patients with Attention Deficit/Hyperactivity Disorder and Subsequent App Intervention

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### INTRODUCTION

The effectiveness of cognitive behavioral therapy for patients with Attention Deficit Hyperactivity Disorder (ADHD) in adulthood has been widely demonstrated since around 2010, but a lack of long-term follow-up data has been pointed out (Lopez et al., 2018). In this study, we aimed to 1) conduct a 5-year follow-up study of group cognitive-behavioral therapy for ADHD patients in adulthood to examine its long-term effects, and 2) examine the effectiveness of a habit-forming application of time management behavior as a follow-up.

### METHODS

Subject selection criteria: patients with diagnosed ADHD who participated in a randomized controlled trial conducted by the authors in 2017 (Nakashima et al., 2021), aged 20 to 65 years. Meet the ADHD diagnostic criteria of the Diagnostic Interview for Adults with ADHD (DIVA), with ADHD symptom severity of at least 65 points in the clinical range of A (inattention/memory) of the CAARS Japanese version. Patients must have been attending a psychiatric hospital for at least one month. However, psychiatric hospitalization within 30 days of application, schizophrenia, bipolar disorder, neurocognitive disorder, and substance-related disorders were excluded.

Assessment items: ADHD inattention/memory problem scores (CAARS)

Procedure: Participants were asked to participate in the study by e-mail, and only those who gave their consent were asked to complete the questionnaire. In addition, using the habit-forming application "Minchare", we interviewed participants about their daily efforts to deal with ADHD symptoms and asked them to post pictures of their efforts. This study was approved by the Ethics Committee of the Hizen Psychiatric Center (approval number 2022-3).

### STATISTICAL METHODS

To examine the effects of the group cognitive behavioral therapy program, dependent variables were compared by t-tests between the time points of measurement of effectiveness indices (before the program intervention, immediately after the end of the intervention, and after 5 years), respectively. In addition, to examine the effect of APP, dependent variables were compared by t-tests between the time points of the measurement of the effectiveness index (5 years, 2, 4, and 6 months after the intervention), respectively.

### RESULTS

Of the 24 subjects in the study, 13 out of 20 agreed to participate in the study, excluding 4 subjects who were undeliverable due to a change of e-mail address or other reasons. There were no significant differences between the pre-2017 program intervention and the 5-year follow-up ( $t(12) = .579$ , n.s.). Ten of the 13 patients continued to use APP for 6 months. Although there was some decrease in the efficacy index, there was no significant difference between the 5-year follow-up and the 2-, 4-, and 6-month follow-ups ( $t(9) = 1.422$ , n.s.,  $t(8) = 1.295$ , n.s.,  $t(9) = 1.623$ , n.s.).

### DISCUSSION

At 5 years, the effects of the group cognitive-behavioral therapy program had disappeared. Yearly follow-up was indicated for ADHD

## POSTER SESSION 02

patients. The dropout rate of 23.0% at 6 months of the app intervention in this study was compared to the dropout rate of 15.6-25.0% in face-to-face cognitive-behavioral therapy over 6-16 weeks (Solanto et al., 2010; Emilsson et al., 2011). ) and a dropout rate of 28.3% during an 8-week intervention with a psycho-educational app (Selaskowski et al., 2022); ., 2015), it can be said that the rate was low despite the fact that the intervention was very long-term. In addition, no significant effect of APP was observed at 6 months after the intervention. This could mean that the participants are receiving some benefit from the app that cannot be measured by effect metrics. In the future, it will be necessary to consider reviewing the effect indicators.

# POSTER SESSION 02

Abstract No.: 0333

## Maladjustment in ASD Girls at School Age

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### INTRODUCTION

Autism Spectrum Disorders (ASD) are characterized by Wing's Triad of Impairments, which often cause maladjustment in interpersonal relationships (Ueno et al., 2010). Female patients with ASD tend to experience secondary effects, such as loss of identity and depression, due to maladjustment during adolescence (Sunagawa, 2016). However, few studies have addressed how pre-adolescent girls with ASD can be supported (Iwao, 2018). Therefore, the purpose of this study was to interview women with ASD, investigate if they experienced maladaptive feelings, support the needs of school-aged girls with ASD, and examine the targets of psychological intervention. We submit this will help reduce maladjustment and prevent the occurrence of secondary disorders these girls may face.

### METHOD

Participants: 3 males and 11 females (7 females and 3 males with a diagnosis of ASD, Asperger's syndrome, or pervasive developmental disorder or findings by a physician, and 4 females with typical development who did not have a diagnosis of a developmental disorder). Age: 20-41 years (M=27, SD=6.33).

### METHOD

Semi-structured retrospective interviews were conducted in person or via an online meeting tool. The difficulties and support needs of elementary school children were investigated.

### RESULTS

As a result of the analysis, we extracted three difficulties that girls with ASD experienced: struggles in interpersonal relationships, being bullied, and a discrepancy between the school environment and ASD characteristics. Based on these results, it was inferred that these factors are closely related to the characteristics of ASD. In addition, through a comparison with male ASD participants, it was found that the girl-specific culture of grouping contributed to girls with ASD's difficulties in interpersonal relationships. The results show that the difficulty experienced in elementary school increased in severity throughout middle school and continued into junior high school. Our findings demonstrate that the difficulties were similar at all stages of the process. The results also showed that similar factors influenced the relationship between ASD and girls at all developmental stages. This indicates that the difficulty experienced in elementary school was more severe and persisted beyond junior high school. This suggests that it may be useful to implement interventions in elementary schools to address the factors that contribute to the difficulties. This may include tools to develop a sense of efficacy and competence to assist adolescents to cope with difficulties and may be effective in reducing maladaptive feelings. Interviews also revealed that children's support needs were not well understood by their parents. Moreover, the interviews included references supporting these requirements. It was found that girls with ASD sought an understanding of their surroundings, relationships with people outside of school, and the acquisition of interpersonal skills. This study also suggests that utilizing psychologists' expertise would be beneficial in addressing support needs. In particular, there was a desire to experience social skills training (SSTs) to acquire interpersonal skills. The development of SSTs tailored to the characteristics of girls with ASD and situations in which they are likely to experience difficulties may prove to be an effective intervention method.

# POSTER SESSION 02

Abstract No.: 0393

## **Effectiveness of Written Exposure Therapy for Korean Patients with Post-Traumatic Stress Disorder: Non-Randomized Waitlist Controlled Trial**

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### INTRODUCTION

Written exposure therapy (WET) is a five-session exposure-based post-traumatic stress disorder (PTSD) treatment protocol. WET's brevity could potentially overcome the barriers to implementing evidence-based therapy. The present study examined the effectiveness of WET among Korean patients with PTSD via a waitlist-controlled trial.

### METHODS

The study was conducted at a psychiatric outpatient clinic in a university hospital between March 2019 and September 2022 (KCT0008112). A total of 57 patients with PTSD were non-randomly allocated to either WET (n=27) or the waitlist (n=30). After the waiting period, the waitlist group also participated in WET, and we conducted a follow-up assessment. Both groups were followed up until the 24th week after the start of the first session. Primary outcomes were PTSD symptoms (CAPS-5, PCL-5), depressive symptoms (Patient Health Questionnaire-9: PHQ-9), and general function (Global Assessment of Function: GAF).

### RESULTS

PTSD and depressive symptoms, and general function were significantly improved after treatment in the WET group compared to the control group. The between- and within-group effect size were large. After waiting period, waitlist group also participated in WET and all scores were significantly improved. Within-group effect sizes were large at post-treatment and follow up. The drop-out rate in both groups was 10.7% (5 of 46).

### CONCLUSION

The present study provides evidence for WET successfully reducing PTSD and depressive symptoms and improving general function among Korean patients with PTSD. Moreover, WET was well-tolerated, and well-received by Korean patients with PTSD.

# POSTER SESSION 02

Abstract No.: 0408

## The Changes of Public Stigma toward Autism Spectrum Disorder in College Students through Lecture and ASD Simulation Intervention

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### INTRODUCTION

In recent years, global awareness for the inclusion of people with disorders has been growing. The United Nations adopted the "Convention on the Rights of Persons with Disabilities" in 2006 (United Nation, 2006). However, stigma against diverse disorders has not been erased and consequently become an obstacle to accomplishment of the global goal. Autism spectrum disorder (ASD) is one of disorders which can be targeted as stigma. Moreover, previous studies suggested that people from Eastern countries have more stigma toward ASD due to its cultural norms, such as collectivism. Someki et al. (2018) showed that public stigma scores toward ASD is higher in Japan than in the US. Therefore, the aim of this study is to examine the efficacy of an intervention based on ASD simulation to improve knowledge of ASD and reduce the public stigma against it.

### MATERIAL AND METHODS

In this study, 121 university students responded to questionnaires about knowledge and public stigma toward ASD. Then, 54 who consented to participate were randomly allocated either an experimental condition ( $n = 26$ ) or a control condition ( $n = 28$ ). Both groups took the same lecture including the nature of ASD and how to support them emphasizing the similarities between people with and without ASD. Then, participants in the experimental condition underwent ASD simulation by performing tasks with blurred vision, auditory sensitivity, and tactile malfunction, while the control group was asked to perform the same tasks under normal sensory conditions. Finally, we asked the same questionnaires as before the intervention, and asked about their level of satisfaction with the intervention.

### RESULTS

The results showed that both groups improved their knowledge of ASD ( $F(1, 52) = 10.43, p < .01$ ), and the experimental group only decreased their feelings of stigma (negative feelings in situations involving people with ASD) ( $F(1, 52) = 7.80, p < .05$ ). In addition, the experimental group was highly satisfied after the intervention, and many people expressed positive responses in the free response questionnaires.

### DISCUSSION

These results indicate that the intervention may have an effect on the knowledge of ASD and the emotional aspect of stigma toward ASD. In addition, the acceptability of the participants in the experimental condition was high and only minimum load was required to implement the intervention. Previous studies targeting ASD have examined social distance, emotional aspects have not been examined (Someki et al., 2019; Torii et al., 2021). Therefore, the improvement of the emotional aspects of stigma toward ASD through short-term intervention can provide meaningful implications for the movement of the inclusive society. Future studies should identify how and what aspects of emotional aspects of stigma can affect discriminatory behaviors.

# POSTER SESSION 02

Abstract No.: 0413

## Early Enhancement Effect of Low-Frequency Repetitive Transcranial Magnetic Stimulation on Cognitive Behavioral Therapy in Patients with Panic Disorder

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Cognitive behavioural therapy (CBT) is the first-line treatment for panic disorder (PD). However, some patients still have poor response to CBT, especially in the early stage of treatment. Thus, to find a new method to enhance the early effect of CBT is necessary. Current research aimed to verify whether low-frequency repetitive transcranial magnetic stimulation (l-rTMS) may enhancement the effect of CBT for PD patients in the early stage. PD patients were recruited and randomly assigned to the experimental group and the control group using a random number table. The patient of experimental group received CBT combined with true l-rTMS, and the control group received CBT combined with pseudo l-rTMS. Both groups received 12 sessions of CBT and 20 times of l-rTMS intervention in the first month of CBT. The target of l-rTMS stimulation was the left dorsolateralprefrontal cortex, the stimulation time was 30 minutes, and the frequency was five times once week. The patients' panic symptoms, anxiety and depression were assessed with the Panic Disorder Severity Scale (PDSS), HAM-D, HAMA and other scales at the end of 0,2,4,6,8,10,12 weeks, a total of 7 times. The reduction rate of PDSS total score before and after treatment was the main therapeutic index. A total of 50 patients with panic disorder were recruited and randomly assigned to the experimental group and the control group with 25 cases each. A total of 10 cases fell out of the two groups. The IPP analysis method was used to analyse the general demographic data and clinical characteristics of 40 patients who completed the treatment. It was found that there were no statistically significant differences between the two groups in terms of age, sex, course of disease, education, severity of panic disorder, anxiety, depression, personal and social functions ( $P>0.05$ ). The difference of PDSS scores between the two groups at different time points (0,2, 4, 6, 8, 10 and 12 weekends) was compared by repeated measurement analysis of variance. It was found that there were statistical differences between groups, time points and interaction effects ( $p<0.05$ ). Further post-mortem analysis: inter-group univariate analysis of variance found that there was a statistically significant difference in the total PDSS score between the two groups at the end of the 2nd, 4th, 6th and 12th weeks, and the PDSS score of the study group was lower than that of the control group; Intra-group paired t-test showed that the scores of PDSS in the two groups at the end of 2, 4, 6, 8 and 12 weeks were lower than the baseline. It is suggested that the overall effect of true l-rTMS combined with CBT is better than that of pseudo-stimulation group, especially in the early stage of treatment. The changes of HAM-D, HAMA, PSP and SCL-90 scores in the two groups at different time points were compared by repeated measurement analysis of variance. It was found that the time point effect was significant, while the inter-group and interaction effects were not significant. The paired t-test showed that the scores of anxiety symptom, depressive symptom and SCL-90 of patients in the two groups at the end of 12 weeks of treatment were significantly lower than that of the baseline ( $p<0.05$ ), and the scores of personal and social functions were higher than those before treatment ( $p<0.05$ ). The effect of l-rTMS real stimulation combined with CBT in the treatment of panic disorder is better than that of l-rTMS false stimulation combined with CBT, which can significantly improve panic symptoms, especially has the advantage of early stage. L-rTMS treatment has good safety and compliance, and can be further used in the clinic.



# POSTER SESSION 02

Abstract No.: 0450

## The Influence of COVID-19 Stress on SNS Addiction Tendency in College Students: The Parallel Multiple Mediation Effect of Basic Psychological Needs Frustration

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### INTRODUCTION

As COVID-19 is prolonged, SNS usage is significantly increasing due to maladaptive stress-coping behavior (Son & Heo, 2020). COVID-19 stress causes Basic Psychological Needs frustration (BPNF) by directly restricting daily life, which will lead to a high SNS addiction tendency. This study aimed to confirm the implications for clinical intervention by examining whether BPNF mediates the relationship between COVID-19 stress and SNS addiction tendency in college students.

### METHOD

The survey was conducted online from October 12 to 31, 2021. A total of 368 college students in Korea ( $M=21.74$ ,  $\pm SD=2.15$ ) responded. There were three main scales; COVID-19 Stress Scale for Korean People (CSSK; Kim et al., 2021) consists of 3 sub-factors (fear of infection 9 items, difficulties due to social distancing 6 items, anger toward others 6 items). Korean version of the Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS; Lee, 2020) consists of 6 sub-factors of 4 items each; autonomy satisfaction, competence satisfaction, relatedness satisfaction, autonomy frustration, competence frustration, and relatedness frustration. This study used 12 items of 3 BPNF factors. SNS addiction tendency scale (Suh & Cho, 2013) consists of 3 sub-factors (SNS obsession and withdrawal symptoms 10 items, SNS overcommunication and immersion 7 items, and excessive time consumption for SNS 3 items).

### RESULT

There was a positive correlation between COVID-19 stress and autonomy frustration ( $r=.207$ ,  $p<.001$ ) and competence frustration ( $r=.162$ ,  $p<.01$ ). However, there was no significant correlation with relatedness frustration. Also, there was a positive correlation between COVID-19 stress and SNS addiction tendency ( $r=.246$ ,  $p<.001$ ). There was a significant correlation between SNS addiction tendency and BPNF (autonomy frustration  $r=.244$ ,  $p<.001$ , competence frustration  $r=.244$ ,  $p<.001$ , and relatedness frustration  $r=.216$ ,  $p<.001$ ). Parallel multiple mediation analysis was conducted after correlational analysis. Due to its low correlation with COVID-19 stress, relatedness frustration was excluded from the analysis. First, when COVID-19 stress was a single variable, it had a positive effect on autonomy frustration ( $B=.244$ ,  $p<.001$ ) and competence frustration ( $B=.211$ ,  $p<.01$ ). Then, as a result of analyzing the effect of the independent variable and two mediators on the SNS addiction tendency at the same time, COVID-19 stress ( $B=.161$ ,  $p<.001$ ), autonomy frustration ( $B=.086$ ,  $p<.05$ ), and competence frustration ( $B=.090$ ,  $p<.05$ ) all had a significant effect on SNS addiction tendency. Finally, it was affirmed that COVID-19 stress had a significant effect on SNS addiction tendency ( $B=.201$ ,  $p<.001$ ).

### CONCLUSION

The positive correlation between COVID-19 stress and SNS addiction tendency is in line with previous studies that the maladaptive coping behavior of stress leads to SNS addiction tendency (Lim & Yang, 2020). The positive correlation between COVID-19 stress and BPNF, and BPNF and SNS addiction tendency, can be seen as consistent with the negative correlation with BPNS in previous studies (Cho, 2016; Kwon, 2013). The reason why the correlation of relatedness frustration did not appear can be understood from the previous study that COVID-19 may have increased the time to stay at home, enhancing communication time with family and promoting non-contact communication with others (Cantarero, van Tilburg, & Smoktunowicz, 2021). In addition, the mediation effect of BPNF between COVID-19 stress and SNS addiction tendency was affirmed. This result suggests that college students who are under a lot of COVID-19 stress may have a high SNS addiction tendency because their autonomy and competence are frustrated. In the future, by developing a program that can restore frustrated autonomy and competence in a pandemic situation such as COVID-19, a clinical intervention will be able to prevent it from leading to SNS addiction tendency (Behzadnia & FatahModares, 2020).

# POSTER SESSION 02

Abstract No.: 0482

## Considering the Degree of Acquisition of Perspective Taking in Junior High School Students Stress Management Education

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### INTRODUCTION

Stress management education (SME) based on cognitive-behavioral therapy is effective for improving school maladjustment in adolescents. However, the effectiveness of SME for groups tend to vary among individuals (Kanayama et al., 2004). One individual difference is the "the perspective taking" (Hoffman, 1984), in which the individual considers things from others' viewpoints. This study examines the effects of SME, in which procedures to improve the degree of perspective taking were added to conventional SME, for the acquisition and execution of coping.

### METHOD

An intervention study was conducted with 712 students, enrolled in public junior high schools in Japan, and data from 534 students were included in the final analysis. The measures used were (a) demographic items, (b) degree of perspective taking: Multidimensional Empathy Scale for Children (Hasegawa et al., 2019), (c) acquisition of coping: Coping Scale for Junior High School Students (Shimada, 1998), and (d) execution of coping: Coping Scale for Junior High School Students, partially modified (Shimada, 1998). Procedure: The standard group was administered conventional SME, and the intervention group was administered conventional SME and a procedure to improve the degree of perspective taking. The local ethics committee approved this study (Approval number:2020-127).

### RESULTS

To examine the effect of the intervention on the perspective taking, an analysis of variance was conducted with perspective taking as the dependent variable and the intervention method (standard group, intervention group), group (high, medium, low perspective taking group), and timing (pre-, post-, follow-up) as independent variables. The results showed a significant effect of timing in the low group for obtaining perspective taking ( $F(2, 139) = 11.19, p < .001, \eta^2 = .08$ ). Multiple comparisons showed that the low group improved from pre- to post- ( $p < .001$ ) and pre- to follow-up ( $p < .001$ ) in the intervention group. To examine the effects of the intervention on the acquisition and performance of coping, we conducted an analysis of variance with acquisition and performance of coping as dependent variables and intervention method, group, and timing as independent variables. No significant effects or interactions were found for acquisition or coping performance. As a post-hoc analysis, we calculated the amount of change in acquisition of perspective taking, acquisition of coping, and execution of coping for each of the two groups and conducted a correlation analysis to examine the relationship between the improvement in acquisition of perspective taking and the improvement in acquisition and execution of coping. The results showed that in the group with low acquisition of perspective taking, the changes in acquisition of perspective taking, acquisition of coping ( $r = .38, p = .00, r = .29, p = .00$ ), and execution of coping ( $r = .22, p = .01, r = .21, p = .01$ ) from pre- to post-follow-up were significantly positive correlations.

### DISCUSSION

The results indicate that, in the low perspective taking group, the acquisition and execution of coping improved as the degree of perspective taking increased. Therefore, for junior high school students with a low level of perspective taking, the addition of an intervention that considers the level of this acquisition to the SME can have a greater effect on the SME.

# POSTER SESSION 02

Abstract No.: 0513

## The Effect of Time Perspectives on Posttraumatic Growth: The Mediating Effect of Stress Coping Strategies

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### INTRODUCTION

People with Posttraumatic Stress Disorder(PTSD) experience the symptoms such as intrusion symptoms, avoidance, negative alterations in cognitions and mood, and marked alterations in arousal and reactivity(APA, 2013). However, some people who have experienced trauma experience post-traumatic growth(PTG). The variables that affect post-traumatic growth include time perspectives and stress coping strategies, which are concepts that are very closely related to human life. Zimbardo & Boyd(1999) defined the time perspectives as an individual's attitude and preference toward time(past, present, and future). These time perspectives consists of five factors: past-positive time perspective(PP), past negative time-perspective(PN), present hedonistic time perspective(PH), present fatalistic time perspective(PF), future time perspective(F). Stress coping strategies include seeking social support, problem-solving coping, and avoidance coping. The type of time perspectives may affect which stress coping strategies are used, and stress coping strategies may be related to PTG. In the present study, we examined the mediating effects of the three stress coping strategies in the relationship between the five factors of the time perspectives and PTG in people with trauma.

### METHOD

A package of Traumatic Events Questionnaire, Zimbardo Time perspective Inventory(ZTPI), Coping Strategy Indicator(CSI), Posttraumatic Growth Inventory(PTGI) were administered to 303 undergraduate and graduate students(215 women and 88 men). The data was analyzed using SPSS Statistics 21.0 and PROCESS MACRO v4.0.

### RESULTS

First, the coping strategy of seeking social support mediated the relationship between past-positive, past-negative, present hedonistic time perspective and PTG respectively. Second, Problem-solving coping strategy showed significant mediating effects between all time perspectives and PTG except for the present hedonistic time perspective. Finally, there were no significant indirect effects of avoidance coping strategy in the relationship between time perspectives and PTG.

### CONCLUSIONS

The tendency to view the past positively and enjoy the present can increase social support and lead to post-traumatic growth. And Individuals who have past positive and future-oriented time perspective could develop PTG, using problem-solving coping strategy. On the other hand, people with past-negative time perspective tend to reduce their social support and problem-solving coping strategies, which can hinder the development of PTG. Also, the attitude that the present is determined by fate decreases PTG by diminishing problem-solving coping strategy. These findings show that people who experienced traumatic event with positive time perspective could be promote PTG through social support or problem-solving coping strategies. However, those who have more negative time perspective tend to less use the active coping strategies, so it could hinder the development of PTG. The results of the present study suggest that the role of social support and problem-solving coping strategies is important in the effect of time perspective on post-traumatic growth and it should be the focus of clinical intervention.

# POSTER SESSION 02

Abstract No.: 0522

## **The Effects of Childhood Abuse Experience and Emotional Schema on Non-suicidal Self Injury in College Students: The Moderated Mediating Effect of Distress Intolerance**

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Non-suicidal self injury (NSSI) is becoming a social problem as a maladaptive coping method to deal with negative emotion in adolescence, and can lead to pathological results such as depression and suicide in adulthood as well as adolescence. However, the NSSI research of late adolescents such as college students were insufficient compared to that of early adolescents. Therefore the purpose of the study was to explore risk factors to affect NSSI in college students. For this, hypotheses were made based on one of leading prominent models, Nock's integrated model of NSSI (2009): a distal (e.g., child abuse experience) and proximal risk factors (e.g., distress intolerance) were introduced. In addition, we aimed to investigate the moderated mediating effect of emotional schema through distress intolerance on the relationship between child abuse experience and NSSI. A total of 246 university students (59 men and 187 women) completed the following questionnaires: The Parent-Child Conflict Tactics Scale (PCCTS), The Functional Assessment of Self-Mutilation (FASM), Leahy Emotional Schema Scale II (LESS-II), and Distress Tolerance Scale (DTS). SPSS 26.0 and SPSS PROCESS Macro 4.0 were used for the statistical analysis. The main results were as follows. First, there was positive correlations between child abuse experience, emotional schema, distress intolerance, and non-suicidal self injury. Second, mediating model showed that the relationship between child abuse experience and NSSI was fully mediated by distress intolerance. Third, using multiple regression and slope analysis, the moderation effect of emotional schema on the relationship between distress intolerance and NSSI was found. Finally, emotional schema also moderated the mediating effect of child abuse experience on NSSI through distress intolerance. These results suggest that emotional schema therapy would be considered as effective intervention for those who have child abuse experience and NSSI.

# POSTER SESSION 02

Abstract No.: 0525

## **Associations of Disability Severity and School Life in Children and Adolescents with Autism Spectrum Disorder: A Study Based on the NSCH Data**

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### INTRODUCTION

Children and adolescents with autism spectrum disorder (ASD) experience more difficulties in school life than those with normal development due to the characteristics of their disability. Considering the characteristics of ASD students with disabilities, it is necessary to help them do better in school. This study aims to analyze the association between disability severity and school life in children and adolescents with ASD.

### METHOD

Study participants were 930 children and adolescents with ASD aged 6 to 17 years collected in 2021 at National Survey of Children's Health (NSCH). The NSCH data includes information about children's health and school life. Chi-square test was performed to analyze demographic characteristics according to the disability severity of ASD. Severity was divided into 3 groups (mild, moderate, severe). Multiple regression analysis was performed to analyze the relationship between each group's school life, and age, sex and race variables were controlled. SAS 9.4 was used for data management and analysis.

### RESULTS

A total of 930 participants were included in the study. The mild group consisted of 452 (48.60%) people, the mean age was  $12.33 \pm 3.50$  years, and there were 355 (78.17%) males and 97 (21.46%) females. The moderate group consisted of 373 (40.11%) people, the mean age was  $12.33 \pm 3.50$  years, and there were 301 (80.70%) males and 72 (19.30%) females. The severe group consisted of 105 (11.29%) people, the mean age was  $10.78 \pm 3.59$  years, and there were 77 (73.33%) males and 28 (26.67%) females. There was a difference in difficulty in school life according to the disability severity of ASD. When referenced on the mild group, severe group had many difficulties in school attendance ( $\beta = -0.7459$ ,  $p < .0001$ ), learning motivation ( $\beta = -0.5737$ ,  $p < .0001$ ), and participating in events or activities ( $\beta = -0.5380$ ,  $p = .0002$ ), that were statistically significant. The moderate group had many difficulties in school attendance ( $\beta = -0.3488$ ,  $p = .0003$ ), doing well in school ( $\beta = -0.2946$ ,  $p < .0001$ ), and homework ( $\beta = -0.2137$ ,  $p = .0001$ ), that were statistically significant.

### CONCLUSIONS

There was a difference in school life with difficulties according to the disability severity of ASD. Professionals should take consider the characteristics of ASD to help children and adolescents participate in school life, and make appropriate suggestions based on the disability severity of ASD.

# POSTER SESSION 02

Abstract No.: 0529

## Self-Guided Application-Based Treatment with Virtual Reality for Panic Disorder and Agoraphobia

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### BACKGROUND

Application-based treatment options have been developed to complement exposure-based cognitive behavioral therapy for panic disorder (PD), agoraphobia (AG), or panic disorder with agoraphobia (PDA). While mobile applications including self-guided virtual reality exposure therapy (VRET) might yield an innovative and readily administered treatment approach, research on its efficacy is still limited. The current study thus investigates the effect of self-guided application-based treatment comprising psychoeducation and VRET for PD, AG, and PDA.

### METHODS

Following a screening and a baseline assessment, patients with PD, AG, and PDA are randomly assigned to either an experimental group (EG) or an active control group (CG). EG patients then go through a six-week phase with application-based psychoeducation, followed by a therapist-led preparatory session for the subsequent four-week phase of application-based self-guided VRET. To account for the non-specific effect of psychotherapeutic face-to-face contact, patients in the CG instead receive a therapist-led relaxation and stress-reduction session with the instruction to engage in a four-week phase of self-guided relaxation training, which is not accompanied by an additional application. Then, all patients undergo a closing session including a post-treatment assessment. Six weeks after the treatment, a follow-up diagnostic session takes place. Symptom severity is assessed by the panic and agoraphobia scale (PAS, primary outcome), further outcomes include measures of positive mental health, depression, readiness to change, and self-efficacy. Assessment takes place at baseline, interim, post-treatment, and follow-up. The study design was published as a study protocol and was prospectively preregistered in the ISRCTN registry for clinical trials (ISRCTN10661970).

### CURRENT STATUS AND DISCUSSION

Currently, 19 patients (8 EG, 11 CG) have completed the treatment. As a final sample size, it is planned to include 30 patients, that is 15 per group. The study aims at providing insights into the efficacy of self-guided digital treatment options comprising psychoeducation and VRET. The results might help to provide an evidence base for the applicability of this innovative new approach to treat PD, AG, and PDA.

# POSTER SESSION 02

Abstract No.: 0542

## The Role of Impulsivity in Compulsive Sexual Behavior in a Japanese Sample

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### INTRODUCTION

Compulsive Sexual Behavior Disorder (CSBD) is an impulse control disorder characterized by repetitive sexual behavior and activities, and failure to control sexual urges despite significant distress or impairment (Gola et al., 2022). Previous studies suggest that impulsivity may be considered a risk factor for CSB because of the association between CSB and impulsivity (e.g., Bóthe et al., 2019). However, it is not fully clear which features of impulsivity are related to CSB. This study aimed to identify the features of impulsivity related to CSB from the perspective of men and women.

### METHOD

An online survey was conducted with a sample aged between 18 and 59 years representing Japan in terms of sex at birth, age, and region of residence (N = 1,094, 541 women, 532 men, and 21 others, Mean age = 39.9, SD = 11.6). The Participants completed a questionnaire that included the Japanese version of the Compulsive Sexual Behavior Disorder Scale-19 (CSBD-19; Bóthe et al., 2020; Okabe & Ito, 2022) and the short Japanese version of the UPPS-P Impulsive Behavior Scale (S-UPPS-P; Cyders et al., 2014; Hasegawa et al., 2020). CSBD-19 has five factors: control, salience, relapse, dissatisfaction, and negative consequences. S-UPPS-P consists of five factors: lack of perseverance, lack of premeditation, sensation seeking, positive urgency, and negative urgency. All research activities were approved by the institutional review board of the first author's institution. Participants were asked for their informed consent after the study's purpose and ethical considerations were explained to them. The dataset is the same sample used for other research purposes.

### RESULTS

The correlation coefficient was calculated. The CSBD-19 score showed a strong positive correlation with the S-UPPS-P total ( $r = .36$ ), positive urgency ( $r = .38$ ), negative urgency ( $r = .33$ ), and sensation seeking ( $r = .33$ ). The correlation between the CSBD-19 score and lack of perseverance ( $p = .66$ ) and lack of premeditation ( $p = .66$ ) were not significant. In addition, regression analyses separately for men and women were conducted, with the CSBD-19 score as the dependent variable and five factors of S-UPPS-P as the predictor variable. For men, negative urgency ( $\beta = .15$ ) and positive urgency ( $\beta = .25$ ) significantly predicted the CSBD-19 score. For women, sensation seeking ( $\beta = .15$ ) and positive urgency ( $\beta = .14$ ) significantly predicted the CSBD-19 score.

### CONCLUSIONS

The results suggest that risk factors for CSB may be different slightly between women and men (e.g., Bóthe et al., 2019; Levi et al., 2020). This study provides empirical findings that the role some features of impulsivity play in the development and maintenance of CSB from a community sample in Japan. Future research should be conducted on individuals with treatment seeking.

# POSTER SESSION 02

Abstract No.: 0561

## Alexithymia and Experiential Avoidance Mediating between Trauma Exposure and PTSD Symptoms

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### INTRODUCTION

Exposure to a traumatic event is common for most adults in lifetime and may lead to physical and psychological harm. For those more vulnerable individuals, trauma exposure may further cause persistent emotional processing deficits, which in the long run may constitute subtle characteristic such like alexithymia. While dealing with strong emotional experiences, trauma survivors sometimes might employ experiential avoidance, one of the maladaptive cognitive ways, as self-remedy for emotional suffering. However, repetition of such a short-term remedy may even increase the possibility to develop PTSD. This potential etiological path to PTSD deserves an examination. Yet, there is scarce empirical research addressing alexithymia and experiential avoidance with young adults. In the present study, we proposed a model about the relationships of Alexithymia, Experiential Avoidance, and PTSD symptomatology.

### METHOD

This study recruited 447 participants with mean age 26.87 (SD = 6.73) and 65% females. Self-report online measures including the Chinese version of Traumatic Life Events Questionnaire (TLEQ), Posttraumatic Diagnostic Scale (PDS-5), Acceptance and Action Questionnaire-II (AAQ-II), and Toronto Alexithymia scale-20 (TAS-20) were used to evaluate the trauma history, PTSD symptoms, experiential avoidance, and alexithymia, respectively. Of the 23 traumatic events on TLEQ, only the event that evoked intense fear, helplessness, or horror would count. For the PDS-5, a higher score suggests more severe symptoms related to four dimensions of PTSD. The score of AAQ-II indicates the tendency to use experience avoidance. TAS-20 that consists of three subscales, i.e., difficulty Identifying Feelings, difficulty defining feelings, and externally-oriented thinking, yields tendency of total alexithymia tendency as well as subscale scores.

### RESULTS

Significantly positive inter-correlations were found among all variables. Using the PROCESS macro (Model 6), a serial full mediation model was yielded, in that trauma exposure predicted PTSD symptomatology, with alexithymia and experiential avoidance as serial mediators. More specifically, direct effect of trauma exposure on PTSD symptoms was significant. There were also significant paths of trauma exposure indirectly affecting PTSD symptomatology. Trauma exposure indirectly affected PTSD symptomatology through first alexithymia and then experiential avoidance. Experiential avoidance also could mediate the effect from trauma exposure to PTSD symptom.

### DISCUSSION

The results show that individuals having more trauma exposure would form greater alexithymia tendency, with more difficulties to recognize and describe one's own emotions. This kind of emotional processing deficit would lead individuals to use greater experiential avoidance to deal with distress, and consequently, cause more severe PTSD symptoms. Moreover, trauma exposure history could positively predict experiential avoidance. It seems that experiential avoidance may play a pivot role in the developmental model of PTSD. Accordingly, for clinical application, it is suggested that, when helping individuals with trauma exposure history, a trauma-informed intervention should take into consideration of reducing the tendency to use experiential avoidance while dealing with trauma-related distress.

Keywords: PTSD; Alexithymia; Experiential avoidance; Trauma



# POSTER SESSION 02

Abstract No.: 0562

## Impact of Internet Gaming Disorder and Attention Deficit Hyperactivity Disorder in College Students on Depression: Focus on Automatic Thoughts

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### INTRODUCTION

With the COVID-19 pandemic, Internet Gaming Disorder (IGD) has become an issue, especially for college students, as online classes have become more prevalent. 32.2% of IGDs are complicated by ADHD (Ko et al., 2008), and as ADHD proneness increases, so does IGD proneness (Tateno et al., 2016). College students with high ADHD proneness generally have lower grades and more problems related to academics, making passing exams and graduating difficulties (Shinoda & Sawazaki, 2012). Automatic thoughts have been cited as the most important factor in IGD (Davis, 2001). Individuals with IGD have higher negative automatic thoughts and higher depression (King et al., 2016). Individuals with ADHD have significantly higher negative automatic thoughts than healthy individuals, with ADHD and depression combined leading to more negative automatic increased negative automatic thoughts (Mitchell et al., 2013). Therefore, the present study examined how ADHD symptoms, IGD symptoms, and automatic thoughts are related to depressive symptoms in college students, in whom IGD is likely to be a problem.

### METHOD

Out of 428 college students, 373 (133 males and 240 females, mean age  $19.70 \pm 1.90$  years) were analyzed. Measurements: 1. IGDS-J (Sumi et al., 2018), 2. ASRS (Kessler et al., 2005), 3. ATQ-R-J (Sakamoto et al., 2004), 4. CES-D-J (Shima et al., 1985).

### RESULTS

t-tests showed that the group above the ADHD cutoff (ADHD group) had significantly higher IGD scores, negative automatic thoughts, and depressive symptoms than the group below the ADHD cutoff (non-ADHD group) ( $p < .001$ ). Path analysis revealed that IGD positively affected negative automatic thoughts ( $\beta = .25, p < .001$ ), ADHD symptoms positively affected negative automatic thoughts ( $\beta = -.32, p < .001$ ) and positive automatic thoughts ( $\beta = .18, p < .01$ ), and negative automatic thoughts ( $\beta = -.72, p < .001$ ) and positive automatic thoughts ( $\beta = -.18, p < .01$ ) influenced depressive symptoms.

### DISCUSSION

Since the ADHD group has higher IGD scores and depressive symptoms than the non-ADHD group, it is important to note IGD and depressive symptoms in college students with ADHD. Also, there may be an indirect influence from IGD and ADHD to depression via negative automatic thoughts. In other words, it was suggested that in addition to support for IGD and ADHD, intervention specifically for negative automatic thoughts may decrease depression in ADHD individuals with comorbid IGD. Although automatic thinking is already one of the treatment components in cognitive behavioral therapy for adult ADHD (Safren et al., 2005), our results suggest that addressing automatic thinking may be particularly important when IGD is comorbid.

# POSTER SESSION 02

Abstract No.: 0563

## The Effects of Detached Mindfulness on Cognitive Factors and Social Anxiety

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### INTRODUCTION

Self-focused attention has been considered a pivotal maintenance factor of Social Anxiety Disorder (SAD). Detached mindfulness (DM) in Meta Cognitive Therapy (MCT) aims to obtain therapeutic benefits by observing inner images and emotions, directly targeting maladaptive self-focused attention. As another intervention, ATT in MCT, facilitating external attention, is also known to help alleviate self-focused attention. However, despite the same theoretical background, the differential therapeutic mechanisms of both techniques still need to be thoroughly investigated. The current study aimed to investigate the effects of DM and ATT on decentering, self-focused attention, post-rumination, and social anxiety symptoms.

### METHOD

Individuals who scored over 64 on the Social Avoidance Distress Scale (SADS) were recruited. They were randomly assigned to the DM group (n = 21), the ATT group (n = 20), or the control group (n = 20). Participants in experimental groups (DM vs. ATT) were asked to complete pretests, followed by daily intervention for five consecutive days. On day 5, participants conducted a speech task prior to posttests. A control group without daily intervention completed tests from 1st day to on 5th day. Finally, an experimenter offered a debrief session to the participants.

### RESULTS

Significant differences were found in decentering and self-focused attention between the interventions and the control group (DM vs. Control, ATT vs. Control). Significant differences were found in post-rumination and anxiety symptoms between the DM and the ATT. Finally, the multiple sequent analysis indicated that decentering and self-focused attention sequentially mediated the relationships between DM and social anxiety symptoms. The ATT was significantly related to social anxiety symptoms only via decentering, not self-focused attention.

### DISCUSSION

Our findings suggest that the DM and ATT were effective in reducing self-focused attention compared to the control but displayed differential mechanisms on social anxiety symptoms.

## The Perceptions of Safety Cues in Social Anxiety

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Anxiety is associated with high sensitivity to potential threats. However, recent studies suggest that rather than potential threats, anxiety is related to the perception of safety and the processing of safety-related information. According to a meta-analysis, in the classical fear conditioning paradigm, high anxiety was related to a strong fear response to stimuli that have never been associated with threats, that is, safety cues (Duits et al., 2015). This suggests that people with anxiety have difficulty distinguishing safety and threat cues. However, most research has focused on general anxiety, and research on how social anxiety processes social safety cues is limited. This study aimed to explore perceptions of safety cues in social anxiety.

A total of 87 college students participated in the experiment and completed the Social Phobia Scale and Social Interaction Anxiety Scale to measure their social anxiety and the Center for Epidemiological Studies Depression Scale to measure depression. In the experiments, the participants were requested to read four segments of a scenario and rate the safety of the situation as well as how anxious they felt. The first segment presents a neutral context, and the second segment presents a potential threat. The third segment differed depending on the conditions: explicit safety cues were presented in the safety condition, whereas neutral information that sustained the potential threat was presented in the threat condition. The fourth segment of the story has a neutral conclusion. The conditions consisted of social-safety, social-threat, nonsocial-safety, and nonsocial-threat scenarios.

The results of the correlation analysis revealed that, across all conditions and segments, social anxiety symptoms had a negative correlation with safety ratings and a positive correlation with anxiety ratings. Hierarchical regression analysis controlling for depression indicated that the relationship between social anxiety, safety, and anxiety ratings remained significant in Segments 1 and 2. However, the relationship between social anxiety and safety ratings in Segments 3 and 4 of the social-safety condition was not significant after controlling for depression. To examine the relationship between safety cue perception and social anxiety symptoms, the increase in perceived safety was obtained by subtracting the safety ratings in segment 2 from those in segment 3. The correlation between the increase in perceived safety and social anxiety symptoms was significant in the social-safety condition ( $r=.31, p<.01$ ). This result remained significant even after controlling for depression ( $\beta=.33, t=2.69, p<.01$ ), indicating that higher levels of social anxiety were associated with increased sensitivity to safety cues in a social context. A general linear model was used to determine whether the changes in perceived safety in the two consecutive segments were significant according to social anxiety. An interaction effect between the change in the increase in perceived safety and social anxiety was observed in social-safety condition ( $F(1.348)=4.19, p<.05$ ). The higher the social anxiety, the more significant the changes in the increase from Segments 1 to 4 in the social-safety condition. This suggests that when safety cues are presented in a social context, individuals with high social anxiety experience a greater increase in perceived safety compared to other segments where safety cues are absent.

This study indicated that social anxiety is related to high sensitivity to safety cues in a social context. These results were not observed in a nonsocial context, suggesting a context-specific effect of social anxiety. The results also suggest that individuals with social anxiety can discriminate between safe and unsafe situations and do not have an impaired perception of safety cues in a social context. However, despite the increase in perceived safety when safety cues were presented, anxiety did not decrease significantly. This suggests that cognitive factors judging a situation as safe may not lead to emotional changes, such as reduced anxiety.

# POSTER SESSION 02

Abstract No.: 0580

## Examination of the Cognitive Processes in Everyday Social Situations Based on Metacognitive Therapy

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### INTRODUCTION

Self-focused attention (SFA) from the observer perspective, that is, people with high social anxiety focus their attention on themselves through the eyes of others, is important in the cognitive-behavioral model of social anxiety disorder (SAD) (Clark & Wells, 1995). One of the effective treatments for SAD is Metacognitive Therapy (MCT: Wells, 2009). In MCT, the A-M-C model is used for case formulations: A denotes the activating event, which is specifically identified as an internal trigger, a thought, rather than a situation, M represents metacognitions and CAS which consists of excessive conceptual processing in the form of worry and rumination, and C refers to emotional and behavioral consequences (Wells, 2009). CAS includes self-focused attention, and MCT emphasizes modifying self-focused attention by monitoring external attention (Wells, 2007). However, it has not been investigated whether the cognitive processes of the AMC model are actually occurring in the daily life situations of socially anxious individuals. Therefore, the purpose of the present study is to examine the cognitive process in social situations of daily life based on MCT using the Ecological Momentary Assessment. In the present study, A was positioned as two perceptions of stimuli, gaze and evaluation, which had predicted self-focused attention in Nanamori et al. (2022), M as self-focused attention from the observer perspective, and C as anxiety. The hypothesis is that perception of evaluation would influence anxiety via gaze perception and self-focused attention.

### METHOD

The subjects were 22 students with high social anxiety (4 men and 18 women with mean age  $\pm$  SD of  $20.82 \pm 2.06$ ). Web questionnaires were sent to the participants three times a day for 10 days, asking about their perception of gaze and evaluation in a social situation within the past five hours, their self-focused attention from the observer perspective, and their anxiety level.

### RESULTS

Since the data had a hierarchy of levels 1 (repeated assessments) and 2 (individuals), multilevel structural equation modeling was conducted to examine the effects on anxiety via self-focused attention among the level 1 variables. The result showed that goodness of fit did not meet the criteria (CFI = .82, RMSEA = .168, SRMR = .103). However, the additional consideration of the path from the perception of evaluation to anxiety met the criteria for the acceptable fit (CFI = 0.968, RMSEA = .086, SRMR = .049).

### CONCLUSIONS

In the present study, the result indicates that in addition to the cognitive process that perceiving gaze in being evaluated situations leads to anxiety via self-focused attention, there is also a cognitive process in which the perception of being evaluated itself leads to anxiety in daily life. Since SAD displays a continuum between the clinical and non-clinical groups (Kollman et al., 2006), the result may apply to SAD patients. One of the MCT techniques effective for SAD is situational attentional refocusing (SAR), which aims to reduce self-attention by directing attention to moderate external stimuli (Wells, 2009). Patients with SAD have the characteristics of excessive perception of gaze from others (Schulze et al., 2013). The results of this study suggest that teaching patients to observe the gaze of others in the situation being evaluated in SAR to suppress excessive gaze perception may be effective in reducing self-focused attention. The result that the perception of evaluation directly affects anxiety may be related to the intensified concern for others' evaluation, which is one of the maintaining factors of social anxiety (Clark & Wells, 1995). Improvement of SAD requires not only a reduction of self-focused attention but also interventions to reduce fear of evaluation.

# POSTER SESSION 02

Abstract No.: 0594

## The Effect of Consequence-Based Approach-Avoidance Training in Internet Gaming Disorder

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### INTRODUCTION

This study seeks to investigate the effect of consequence-based approach-avoidance training, developed by Van Dessel, Hughes, and De Houwer (2018), on a player's approach bias to gaming cues and attitude changes in groups with internet gaming disorder. Consequence-based approach-avoidance training, in contrast to conventional approach bias modification, which consists of repeatedly avoiding game stimuli to replace approach associations with avoidance associations regarding game stimuli, is training to help infer the conceptual causality that implies valuable results can be generated by avoiding gaming cues.

### METHODS

A screening test was conducted involving 130 adult participants living in Daegu, South Korea, and 57 adults who played the online game League of Legends (LoL) and scored more than 10 points on the Internet Gaming Use-Elicited Symptom Screen (IGUESS) participated in the experiment. Participants were randomly assigned to either consequence-based approach-avoidance training conditions ( $n=16$ ), approach bias modification conditions ( $n=17$ ), or pseudo-training conditions ( $n=17$ ). Participants evaluated themselves on the Korean Gaming Craving Scale and were asked how much time they spent playing games. Subsequently, they underwent an Approach-Avoidance Task (AAT) to measure their approach bias towards games, and a Single Target-Implicit Association Test (ST-IAT) was conducted to measure their implicit attitude toward games. Then, consequence-based approach-avoidance training, approach bias modification training, and pseudo-training were conducted twice, following their respective conditions. The intervals between the first and second training sessions were one and ten days, and the Korean Gaming Craving Scale, Approach-Avoidance Tasks, and Implicit Association Tests were conducted immediately after the second training session. Participants were asked to measure their time spent gaming one week after the training session.

### RESULTS

The analysis of the D-Score in the ST-IAT found that while there was no change in positive implicit attitude toward games in the three groups, negative implicit attitude changed significantly ( $F(2,47)=3.97, p=.026$ ). In particular, the negative D-score post-treatment was significantly reduced in the approach-avoidance training group compared to that in the other two groups. Analysis of the Korean Gaming Craving Scale showed that the degree of gaming craving decreased in all three groups. However, there was no significant change in the AAT scores or game usage time in any of the three groups.

### CONCLUSIONS

These results suggest that after consequence-based approach-avoidance training, participants with internet gaming disorder associated gaming cues and negative words slowly as interest in various hobbies expanded. Finally, the significance and limitations of this study as well as recommendations for future research were discussed.

# POSTER SESSION 02

Abstract No.: 0598

## **Stress Management Education for Autism Spectrum Syndrome (ASD) Children in Japan's Shizuoka Prefecture**

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Japan's Ministry of Education, Culture, Sports, Science, and Technology (2010) strive to adapt school children to school life and improve their personalities while providing guidance and support for solving and preventing problems. Furthermore, it describes the need for educational counseling using stress management education (SME) and assertion training techniques for cultivating relationships and promoting mental development to cope with increasingly complex situations. SME is an educational activity for developing stress prevention ability and maintaining health. SME consists of four elements: (1) knowledge of stress, (2) realizing stress, (3) learning stress coping, and (4) using stress-coping methods (Yamanaka, 2002). Autism Spectrum Syndrome (ASD) children experience significant daily stress due to their perception of a threat state caused by their disability characteristics (Grodin et al., 1994). Communication, socialization, sensory variables, physical variables, executive functions, hardness, and maladaptive behaviors can easily stress ASD children (Baron et al., 2006). A survey of ASD university students indicated that students with high ASD tendencies have a negative mood, high-stress responses, and poor mental and physical health compared to those with low ASD tendencies (Ise et al., 2015). On the other hand, Sakamoto (2007) indicated that fourth to sixth graders with developmental disabilities generally experience more school stress than typically developing children. Due to stress management education's significance for ASD children, it is necessary to investigate the types of guidance provided in schools. Therefore, we designed this study to clarify stress management education for ASD children and teachers guiding public elementary and junior high schools in Shizuoka Prefecture. We posted questionnaires to 48 public elementary schools and 12 public junior high schools in Shizuoka Prefecture and asked them to return the questionnaire by post. We also included a cover letter with the questionnaire explaining that students should not disclose their school name or specific students' or teachers' names. We also informed them that their confidentiality would be protected and that the data would be used only for anonymous statistical analysis. Teachers (N = 27, 45% collection rate) returned the questionnaire. Among the respondents, 1 (3.7%) had less than five years of teaching experience, 1 (3.7%) had 5-10 years, 4 (14.8%) had 11-20 years, 7 (25.9%) had 21-30 years, and 14 (51.9%) had 31 years or more experience. Among the respondents, 19 (70.4%) stated they knew, and 8 (29.6%) stated they did not know about stress management education. Regarding stress management education, 13 (48.1%) said they knew about the concept of stress, 11 (40.7%) stated they understood their stress, 9 (33.3%) stated they have learned how to deal with stress, and 9 (33.3%) said they are used to stress. These results indicated that many teachers in the education field knew about stress management education, but only about half used their knowledge. We expect future stress management education to be conducted according to each person's characteristics due to differences in ASD children's educational needs.

# POSTER SESSION 02

Abstract No.: 0600

## **The Effect of Interoception on Worry among College Students with a History of Panic Attacks**

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According to the Diagnostic and Statistical Manual of Mental Disorders-Fifth version(American Psychiatric Association, 2013), panic disorder is distinguished from panic attacks by persistent concern or worry about additional panic attacks or their consequences. Considering persistent worry is pathological and affected by metacognition, the present study aimed to investigate the role of metacognition toward interoception including interoceptive accuracy and interoceptive sensibility. Furthermore, we examined how interoceptive trait prediction error - the difference between interoceptive accuracy and interoceptive sensibility – affects the worries of individuals with a history of panic attacks. For this purpose, 28 undergraduate students who had experienced a panic attack at least once and agreed to participate were assigned to two groups based on the frequency and severity of their worries: the high worry panickers(HWP group; n=15) and the low worry panickers(LWP group; n=13). The heartbeat tracking test which asked participants to silently count their perceived heartbeats within a specified time-frame was administered. As a result, a significant group difference in interoceptive trait prediction error, but not in interoceptive accuracy and interoceptive sensibility, was found. Specifically, the HWP group overestimated their interoceptive ability whereas the LWP group relatively underestimated it. Across the entire sample, interoceptive trait prediction error and interoceptive accuracy showed a significant relationship with worry. The present study has practical implication in that it experimentally examined the relationship between metacognition in interoception and worries in relation to panic disorder. Finally, further implications, limitations, and suggestions for future research were discussed.

# POSTER SESSION 02

Abstract No.: 0601

## Implicit and Explicit Self-Esteem in Social Anxiety Disorder

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### INTRODUCTION

Numerous studies have suggested that patients with social anxiety disorders (SAD) report lower self-esteem than the normal control group (de Jong, 2001; de Jong, 2002; de Jong, Sportel, Hullu, & Nauta, 2012). There is concern about positive response bias in the measurement of explicit self-esteem, which is measured through self-reporting. In addition to measuring automatic and experiential attitudes toward oneself, implicit self-esteem is also less susceptible to response bias. Furthermore, there have been inconsistent findings regarding the relationship between social anxiety and implicit self-esteem (de Jong, Sportel, Hullu, & Nauta, 2012; Tanner, Stopa & De Houwer, 2006). This study aimed to investigate the relationship between explicit and implicit self-esteem among individuals with a tendency toward SAD and examine how explicit and implicit self-esteem affect the severity of symptoms experienced by these individuals.

### METHOD

Individuals who scored 85 or above on the Social Avoidance and Distress Scale (SADS) and 42 or above on the Brief-Fear of Negative Evaluation (B-FNE) scale were selected as the social anxiety group (n=47). The normal control group (n=47) consisted of individuals who had scored in the bottom 10% on both SADS and B-FNE scale. Both groups were assessed for explicit self-esteem using the Rosenberg Self-Esteem Scale (RSES) and for implicit self-esteem using the Implicit Association Test (IAT). Symptom severity was measured using the Social Interaction Anxiety Scale (SIAS) and Social Phobia Scale (SPS).

### RESULTS

Correlation analysis of the IAT score and other measures showed a significant negative correlation between the RSES and self-positive IAT response time ( $r(94) = -.26, p < .01$ ). Comparison of the implicit and explicit self-esteem of the two groups indicated that the SAD group had significantly higher levels FNE, SIAS, SPS than the normal control group ( $t(92) = -12.12, p < .001$ ;  $t(92) = -9.46, p < .001$ ;  $t(92) = -9.93, p < .001$ ), and significantly lower levels of explicit self-esteem ( $t(92) = 19.05, p < .001$ ). In the implicit self-esteem test, the rate of self-positive IAT response time was significantly lower in the SAD group ( $t(92) = -2.12, p < .05$ ). As a result of examining the effect of self-esteem on the severity of SAD symptoms, it was found that social interaction anxiety was significantly predicted by implicit self-esteem ( $B = -.185, p < .05$ ), whereas anxiety experienced in social performance situations was explained only by explicit self-esteem ( $B = -.572$ ). When examining the effect of implicit self-esteem on social interaction anxiety in detail, it was found that the faster the self-negative IAT response time, the higher the anxiety level.

### CONCLUSIONS

These results indicate that individuals with social anxiety have a lower ability to conceptualize themselves positively than the normal control group. In particular, this suggests that implicit self-esteem related to automatic and experiential self-evaluation has a significant influence on the process of interacting with others.



# POSTER SESSION 02

Abstract No.: 0624

## Development of the Japanese Version of the Gaming Disorder Symptom Questionnaire

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### BACKGROUND AND PURPOSE

Although gaming disorder has been officially recognized as a psychiatric disorder by ICD-11, there are still few ICD-11 compliant scales to measure this. Although gaming is widely prevalent in Japan, none of the Japanese versions of the scales to measure gaming disorders conform to ICD-11. Therefore, in this study, we translated the Gaming Disorder Symptom Questionnaire (GDSQ; Zhang et al., 2022) and examined its reliability and validity.

### METHODS

We obtained permission from the original authors of the GDSQ, translated the original version into Japanese, and confirmed the back-translated version with the original authors. After cognitive debriefing, the Japanese version of the GDSQ was prepared. Then, 128 junior high school students (66 males, 55 females, and 7 did not respond; mean age:  $13.9 \pm 0.35$  years) in Japan responded to a questionnaire. The questionnaire included the Japanese version of the GDSQ, DSM-5 criteria scales for game severity, depression, anxiety, ADHD characteristics, and quality of life.

### RESULTS

Cronbach's alpha coefficient for the GDSQ-Japanese version was 0.919. The GDSQ-Japanese version was positively correlated with measure game time ( $r=0.56$ ,  $p<0.01$ ), game severity (DSM-5 criteria) ( $r=0.82$ ,  $p<0.01$ ), anxiety ( $r=0.30$ ,  $p<0.01$ ), depression ( $r=0.27$ ,  $p<0.01$ ), and ADHD characteristics ( $r=0.32$ ,  $p<0.01$ ); and negatively correlated with quality of life ( $r=-0.20$ ,  $p<0.05$ ). A confirmatory factor analysis of the three-factor model was conducted in accordance with the factors of the original GDSQ, [CFI=.794; RMSEA=.102; GFI=.756].

### DISCUSSION

The reliability and validity of the scale showed good values, while the goodness of fit of the factor structure in the three-factor model as in the original version was low. Although this scale is considered to be effective in the assessment of game dependence based on previous studies, the data is insufficient at present and there is a bias in age. Therefore, it is necessary to collect additional data and examine its statistical validity in the future. The original version had three factors: impaired control, increasing priority, and continued use despite the occurrence of negative consequences. It has been suggested that impaired control may predict game disorder, and the Japanese version of the GDSQ may function as a preventive intervention against game disorder and as an aid for early intervention.

# POSTER SESSION 02

Abstract No.: 0625

## Examining the Relationship between Intolerance of Uncertainty and Cognitive Emotion Regulation Strategies: A Network Analysis

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### INTRODUCTION

The COVID-19 pandemic has changed almost every aspect of people's lives. Due to its unpredictable nature, a growing body of literature has focused on the possible impact that this wide range of uncertainty may have on mental health. Specifically, intolerance of uncertainty (or IU), a dispositional characteristic of having negative beliefs about uncertainty (Koerner & Dugas, 2006, 2008), and its potential negative influence on internalizing disorders have been extensively studied in recent years (e.g., Bavolar, et al., 2021; Del Valle et al., 2020; Parlapani et al., 2020; Satici et al., 2022). Also, it has been suggested as a transdiagnostic factor of mood and anxiety disorders (Boelen & Reijntjes, 2009; Carleton et al., 2014; Holaway et al., 2006; Toline et al., 2003). In addition to IU, cognitive emotion regulation (or CER) strategies are also proposed as the transdiagnostic factors of internalizing disorders (Aldao & Nolen-Hoeksema, 2010). To our knowledge, there is only a limited body of literature examining the relationship between IU and CER. Thus, as both of them are studied as important factors which influence the maintenance and prognosis of internalizing disorder, this study aimed to explore the relationship between IU and CER. And we used network analysis due to its advantages that allow a comprehensive understanding of the relationship between variables, visualizing partial correlation among them.

### METHODS

Data of 272 college students in Seoul, South Korea, was analyzed. The participants' mean age was 21.3 (SD = 1.7) with 75.74% of participants being female. Intolerance of uncertainty and cognitive emotion regulation strategies, (namely, acceptance, catastrophizing, and positive reappraisal) were assessed using the Korean version of the following measures:

- The short-form of the Intolerance of Uncertainty Scale (IUS-12; Carleton et al., 2007; Kim, 2010)
- Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001; Ahn, Lee & Joo, 2013)

\*KIUS: The Korean version of the IUS-12

Statistical Analyses Network analysis was conducted using the 'Graphical Gaussian Model' in the R package 'qgraph (Epskamp et al., 2012)'. Each node represents the variables (i.e. intolerance of uncertainty, acceptance, catastrophizing, and positive reappraisal) and the edges indicate partial correlations between two nodes, controlling for other nodes in the network. To minimize the number of spurious edges, GGMs of the network were regularized via a 'least absolute shrinkage and selection operator' (LASSO; Friedman et al., 2008) with the extended Bayes information criterion (EBIC) set to  $\gamma = 0.5$ . In addition, we investigated the centrality indices of nodes, and bootstrapped difference tests for edge weights, using the R package 'bootnet (Epskamp & Fried, 2018)'.

### RESULTS

The results of this study showed that several KIUS items were positively correlated with each other. Positive reappraisal was negatively related to catastrophizing, whereas a positive relationship was observed between positive reappraisal and acceptance. Some of the KIUS items (#9, #11) were negatively correlated with positive reappraisal, except for KIUS #3. Catastrophizing was more closely correlated with items of KIUS than Positive reappraisal with several items of KIUS (#1, #2, #4, #5, #6, #8, #11) being positively associated with Catastrophizing. Additionally, a positive correlation was identified between acceptance and some of the KIUS items ((#2, #3, #4, #5), except for KIUS #9). The novelty and clinical implication of the findings of this study are discussed.

# POSTER SESSION 02

Abstract No.: 0636

## **A Cross-Sectional Study of the Effects of Experiential Avoidance and Cognitive Fusion on Social Anxiety Mediated by the Fear of Negative and Positive Evaluations**

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### BACKGROUND

Social anxiety often develops by adolescence and the disadvantages of suffering from it early in life are enormous. Notably, the cognitive component of cognitive-behavioral models of social anxiety typically focus on the Fear of Negative Evaluation (FNE). However, the Fear of Positive Evaluation (FPE) has also gained importance recently and is known to influence social anxiety through different pathways than FNE. In this context, Acceptance and Commitment Therapy (ACT) is sometimes used to treat social anxiety and the treatment process is assumed to include experiential avoidance and cognitive fusion. This study examined whether experiential avoidance and cognitive fusion mediate FNE and FPE, and influence social anxiety and depressive symptoms in adolescents.

### METHODS

A total of 379 Japanese young adults (123 males, 251 females, 1 other, and 4 who did not identify) aged 18 to 30 years were surveyed through an online questionnaire and included in the analysis. The mean age was 24.34 years ( $SD = 4.07$ ). The questionnaire scales included: (1) Acceptance and Action Questionnaire-II, (2) Cognitive Fusion Questionnaire, (3) Fear of Negative Evaluation Scale, (4) Fear of Positive Evaluation Scale, (5) Quick Inventory of Depressive Symptomatology, and (6) Social Interaction Anxiety Scale. Next, covariance structural equation modeling was conducted with a hypothetical model assuming the effects of experiential avoidance and cognitive fusion on social anxiety and depressive symptoms mediated by the FPE and FNE. Then, the modeling was performed again using an adjusted model where paths that were not significant in the hypothetical model were removed.

### RESULTS

The goodness of fit of the model was  $\chi^2(2) = 0.527$ ,  $GFI = 0.999$ ,  $AGFI = 0.988$ ,  $CFI = 1.000$ ,  $RMSEA = 0.000$ . In the modified model, experiential avoidance influenced FNE and FPE, while cognitive fusion influenced FNE. Finally, social anxiety symptoms were influenced by experiential avoidance, cognitive fusion, FNE, and FPE. Depressive symptoms were influenced by experiential avoidance, cognitive fusion, and FPE.

### DISCUSSION

The results suggest that both experiential avoidance and cognitive fusion influenced FNE, while only experiential avoidance influenced FPE. As both FNE and FPE influence social anxiety symptoms, acceptance may be important when focusing interventions on FPE. Next, while FNE did not influence depression, FPE did influence it. This may be related to Anhedonia as a downregulation of positive valence. Future research should consider other core processes in the ACT, and examine causal relationships from both negative and positive valence aspects.

# POSTER SESSION 02

Abstract No.: 0641

## Web-Based Survey for Parents with Adolescents with Internet Addiction and Study Design of a Pilot RCT of Remote Cognitive Behavioral Therapy for Parents

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### OBJECTIVE

In recent years, various studies about Internet addiction among adolescents have been reported. Attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) have been implicated in the risk of Internet addiction (So et al.,2017; De Vries et al.,2018; Murray et al., 2021) We conducted web-based survey for parents to examine the relationship between their parenting styles and the degree of Internet addiction and emotional/behavioral problems in their children. On the other hand, we hypothesize that CBT, especially Community Reinforcement Approach and Family Training (CRAFT), can be used to assist parents struggling with the child with Internet addiction. We have designed and conducted a pilot randomized controlled trial (RCT) of remote cognitive behavioral therapy (CBT) via videoconferencing systems for parents of adolescents with Internet addiction.

### METHODS

Study 1: After obtaining informed consents, an anonymous web-based survey was conducted among 600 parents with children aged 12 to 17 in Japan. The survey respondents were asked, "Do you think your child is dependent on the Internet?" 300 parents who answered "yes" to the question and 300 parents who answered "no" to the question were included. They completed the questionnaires including (1) the Parent-Child Internet Addiction Test (PCIAT), (2) the daily time spent using the internet, (3) the Strengths and Difficulties Questionnaire (SDQ), (4) the Parenting Style and Dimensions Questionnaire (PSDQ). Study 2: We have designed and conducted a pilot RCT of remote CBT via videoconferencing systems for parents of adolescents with Internet addiction, aged 12 to 20 years, compared to a wait-list control group. The research ethics committee of Chiba University Hospital was approved and the participants gave their written informed consent. The trial registration number is UMIN000032483.

### RESULTS

Study 1: PCIAT scores and average daily Internet use were significantly higher in the group with probable Internet addiction than in the group without probable Internet addiction. The total difficulty score (TDS) of SDQ in the group with probable Internet addiction was significantly higher than that in the group without probable Internet addiction. The score of authoritarian parenting on the PSDQ in the group with probable Internet addiction was significantly higher than that in the group without probable Internet addiction. Study 2: 13 parents were included. 6 parents were remote CBT group and 5 parents were wait-list control group. We are doing the statistical analyses.

### DISCUSSION

The findings of the web-based survey suggested that the children in the probable Internet addiction group may have more emotional/behavioral problems and the parents have authoritarian parenting tendencies. This may indicate that simply scolding or punishing the child with Internet addiction is not good, authoritarian parental communication can exacerbate the Internet addiction, leading to a vicious cycle. Wartberg et al., (2017) found that family functioning and family conflict are related to problematic Internet use. Kawabe et al., (2019) also state that ADHD symptoms are strongly associated with Internet addiction in adolescents with ASD and require more intensive prevention and intervention. Because parenting a child with ASD, ADHD, or both, as well as Internet addiction, can be a difficult and challenging experience, we believe that a parent's perspective on their child's Internet addiction is important. The CBT for parents can improve the parent-child relationship and stem the vicious cycle of Internet addiction.

# POSTER SESSION 02

Abstract No.: 0642

## Perception of Feedback and Feedback-givers in Individuals with Social Anxiety

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### INTRODUCTION

Social anxiety disorder is characterized by fear of evaluation in social situations. Individuals with social anxiety (SA) exaggerate their interpretation of the negative consequences of social situations and develop a negative self-image; this is related to the tendency to devalue positive feedback and overestimate negative feedback. Previous studies have shown that individuals with high social anxiety (HSA) accept negative feedback and prefer it over positive feedback. These results suggest that HSA in individuals may influence not only their perception of momentary feedback but also their perception of the evaluator. While previous studies have measured such individuals' perception and reactivity to feedback, no study has measured their perception of evaluators. Consequently, this study aimed to examine the perception of oneself and others in individuals with SA.

### METHOD

A total of 100 college students participated in an experiment and completed a survey measuring SA symptoms. The participants rated future evaluators' trustworthiness and likability after looking at their photographs. Subsequently, they participated in an object recognition task online. They were presented positive/negative feedback based on an arbitrary ratio rather than their answers' actual correctness. To prevent participants from noticing this, they were presented a complex stimulus for an extremely short time. A photo of an evaluator with a facial expression depicting positive or negative emotions was presented as feedback. The experiment consisted of two blocks—evaluators presenting positive and negative feedback in a different ratio. When an evaluator in the first block presented positive feedback in a 7:3 ratio, the other evaluator in the second block presented negative feedback in a 7:3 ratio, with the two conditions being counterbalanced. At the end of each block, the participants were requested to rate discomfort. Additionally, at the end of the experiment, they re-rated evaluators' trustworthiness and likability.

### RESULTS

The participants were divided into HSA and low social anxiety (LSA) groups based on the median of SA measures; a repeated measures ANOVA was conducted to investigate differences in discomfort, trustworthiness, and likability ratings of the two groups toward evaluators in positive and negative conditions. No significant effect of condition or the extent of SA was observed regarding the discomfort. An interaction effect between pre- and post-measurements was observed for the ratings of trustworthiness of positive evaluators: the HSA group showed higher post-measurement ratings than pre-measurement, while the LSA group showed lower ratings in the post-measurement. Similarly, a significant interaction was found for the likability of positive evaluators, with the HSA group showing an increase in post-measurement and the LSA group showing a decrease. Under the negative evaluator condition, likability showed a significant main effect of SA, with the HSA group maintaining a higher level of likability toward negative evaluators than the LSA group.

### DISCUSSION

The HSA group maintained a higher level of likability toward negative evaluators and showed an increase in both likability and trustworthiness toward positive evaluators compared to the LSA group. In contrast, the LSA group perceived negative evaluators negatively and showed a decrease in both likability and trustworthiness toward positive evaluators. The self-verification theory, that suggests that people with a negative self-image feel more comfortable with negative feedback and have a greater likability for those who give such feedback, can partially explain these results. However, despite having a negative self-image, individuals with HSA perceived positive feedback-givers also as trustworthy and likable. This suggests that individuals with HSA perceive themselves inferior to an extent that they may judge any evaluator to be more superior to themselves. Nonetheless, since the likability for negative feedback-givers was generally higher as compared to that for positive feedback-givers among the HSA group, it is necessary to conduct further research on the long-term interpersonal effects of positive and negative evaluations of evaluators in the HSA group.

# POSTER SESSION 02

Abstract No.: 0651

## Association of Self-Compassion and Mindfulness for PTSD Symptoms in Sexually Victimized Women

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### INTRODUCTION

Interventions using mindfulness and self-compassion as support for trauma have attracted attention. While mindfulness interventions for sexual assault victims have been criticized for exacerbating symptoms, such as encouraging flashbacks, some studies find applications of mindfulness interventions for survivors of sexual trauma (Gallegos, 2015). In addition, interventions using self-compassion are expected to affect PTSD symptoms in terms of self-compassion's ability to mitigate self-criticism (e.g., Hamrick & Owens, 2018). Mindfulness and self-compassion are said to have unique explanatory rates for PTSD symptoms, although there is conceptual overlap (Dahm, 2015). However, whether mindfulness and self-compassion have a similar unique explanatory rate among sexual victims has not been examined. This study will provide insight into whether interventions focused on mindfulness or self-compassion are more effective in reducing PTSD symptoms in sexual victims.

### METHODS

The survey was conducted with the approval of the ethics review committee of the author's institution. Three hundred eighteen adults who met the A criteria for PTSD were screened using the Life Events Checklist for DSM-5 (LEC-5; National Center for PTSD; Weathers et al. 2013; Japanese version by Asukai & Tsutsui), and an online survey was administered to 318 adults who consented to participate. Of these, 35 (8 males and 27 females) who reported having experienced an unintended unpleasant sexual experience were selected. The following questionnaire scales were used for the survey: A Japanese version of the self-compassion scale (SCS-J; Arimitsu, 2014), Mindful Attention Awareness Scale (MAAS; Fujino et al. The SCS-J consists of 26 five-item items, the PCL-5 consists of 20 five-item items, and the MAAS consists of 15 six-item items.

### RESULTS

Multiple regression analysis was conducted with the SCS-J and MAAS as independent variables and the PCL-5 as the dependent variable. Specifically, hierarchical multiple regression analysis was conducted with the MAAS in step 1 and the MAAS and SCS-J in step 2. The results showed that the increment of the coefficient of determination in step 2 was significant at the 1% level ( $\Delta R^2 = .19, p = .002$ ). The adjusted multiple regression coefficient of determination was significant in both step1 and step2, but the standardized partial regression coefficient of MAAS was not significant in step2.

### CONCLUSION

The results of this study indicate that the SCS-J has a unique explanatory rate for PTSD symptoms and contributes more strongly to PTSD symptoms than the MAAS. This suggests that when providing support to sexual victims, focusing on improving self-compassion as well as mindfulness can reduce PTSD symptoms.

# POSTER SESSION 02

Abstract No.: 0652

## Development of the Japanese Version of the Rape Excusing Attitudes and Language Scale

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### INTRODUCTION

Despite the large number of sexual crimes that occur worldwide, few people report them to the police. Failure to report rape can inhibit victims from receiving support and psychological care they need. In the case that victims did not report their rape victimization, the perpetrator cannot be punished, which leads to repeated recidivism and a vicious cycle that to increase victims. Therefore, to reduce the number who did not report their rape victimization to the police (the dark figure of rape), it is essential to create an environment where people feel safe reporting their rape victimization to someone, even someone close to them, to realize a secure society.

One of the reasons for not reporting sexual crimes is due to false beliefs about rape. Rape myths are defined as "attitudes and beliefs that are generally false but widely and persistently held, justifying sexual aggression, including rape, by men against women (Burt 1980). Studies in the United States. have shown that people who are more accepting of the rape myths tend to feel that they are largely responsible for sex crime victimization and who did not report to anyone about their criminal victimization for fear that they would be blamed for it. It has also been shown that men have higher levels of rape myth acceptance than women (Lichty and Gowen 2021, Byrne, Petri and Oh 2021, Burt 1980).

In the United States, the Illinois Rape Myth Acceptance Scale (IRMA) (Payne et al., 1999; McMahon & Farmer, 2011) has been the major questionnaire on rape myths in the past. Recently, the Rape Excusing Attitudes and Language (REAL) Scale (Hahnel-Peeters and Goetz, 2022), an updated version of the IRMA, was developed in the United States.

However, the Japanese version of the REAL scale has not been developed. Therefore, as the first step in examining the relationship between whether to report sexual assault and rape myths, our aim of this study is to develop the Japanese version of the REAL Scale with the original authors' permission.

### METHODS

The study was conducted after approval from the Ethical Review Board of Chiba University Graduate School of Medicine. The REAL Scale translated into Japanese was back-translated (by a translation company). The Japanese version was then checked several times with the original author to ensure that the content was the same in the English version while adjusting for differences in language nuances.

We conducted Web-based anonymous survey about the scale survey. No personal information from the participants were collected.

We recruited the participants through an Internet research company. Before answering the web-survey, the participants read the research information sheet for the consent just and were requested to select an "I agree" or "I do not agree" checkbox. Responses to the questionnaires for the study were obtained only from those who gave their informed consent anonymously. There were 20 questions (5-case method ranging from 1 completely disagree to 5 completely agree), and the survey participants were men and women between the ages of 18 and 65. The personal attributes of the survey respondents were taken from a pre-existing database held by the survey company. The only gender items in that database were male and female. Therefore, we had no choice but to conduct this survey only for men and women.

### RESULTS

1,000 individuals returned the questionnaires. Cronbach's alpha coefficient was calculated to confirm reliability ( $\alpha=0.94$ ). An exploratory factor analysis (maximum likelihood, promax rotation) was conducted to confirm the factor structure, resulting in two factors. t-tests were conducted on the total scores of the 20 items, resulting in higher scores for females than for males ( $t=6.71$ ,  $df=989$ ,  $p<.001$ ).

# POSTER SESSION 02

## DISCUSSION

Like previous studies, men were more accepting of rape myths than women, which was also evident in this study. The factor structure of this study differed from that of the original REAL. The original REAL found four factors, "Exaggeration of harm," "Confusion of consent," "Lack of defense against rape," and "Lied about the event," while our study found only two factors. This result might imply differences in beliefs about rape in Japan and the U.S.



# POSTER SESSION 02

Abstract No.: 0657

## Reliability and Validity of the Cognitive Attentional Syndrome Scale 1 Revised Japanese version: Study on an Analog Generalized Anxiety Disorder Sample

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### INTRODUCTION

Generalized anxiety disorder (GAD) is a psychiatric disorder characterized by excessive anxiety and significant social dysfunction. Cognitive Attention Syndrome (CAS) and metacognitive beliefs are predictors of both anxiety and social dysfunction (e.g., Machida et al., 2023a). Although the Cognitive Attentional Syndrome 1 Scale Revised (CAS-1R; Wells, 2015) has been developed as a measurement to measure these components, the reliability and validity of CAS-1R in GAD have not been examined. Therefore, the present study examined the reliability and validity of the Japanese version of the CAS-1R (CAS-1R-J; Machida et al., 2023b) in an analogue GAD sample.

### METHODS

An online survey consisting of the CAS-1R-J, Penn State Worry Questionnaire (PSWQ), Generalized Anxiety Disorder Scale (GAD-7), Patient Health Questionnaire (PHQ-9), Sheehan Disability Scale (SDS), and Metacognition Questionnaire short form (MCQ-30) was administered to 847 adults (407 Men, 440 Women, Mage=38.21±11.72y.o.). All analyses, except t-tests, were performed using only the analogue GAD sample, which was divided into 170 analogue GADs (PSWQ≥62; 59 Men, 111 Women, Mage=35.28±10.92y.o.) and 677 others.

### RESULTS

Results of confirmatory factor analysis showed a generally favourable factor structure ( $\chi^2(32) = 55.618, p < .01, CFI = .966, AGFI = .888, RMSEA = .066$ ). Hierarchical logistic regression analysis was conducted using the GAD-7, PHQ-9, and SDS cutoffs as dummy variables as dependent variables and the CAS-1R-J subscales as independent variables. The results of the hierarchical logistic regression analysis showed that for all variables, only the CAS factor was significantly predictive, and its increment was significant. Finally, t-tests of the CAS-1R-J subscale scores for the analog GAD and other samples showed that both indices were significantly higher in the analog GAD. Acceptable internal consistency was also demonstrated for each subscale (coping strategies:  $\alpha = .862, \omega = .876$ ; negative beliefs:  $\alpha = .774, \omega = .774$ ; positive beliefs:  $\alpha = .679, \omega = .765$ ). Hierarchical logistic regression analysis with the GAD-7, PHQ-9, and SDS cut-offs dummy variables as dependent variables and the CAS-1R-J subscales as independent variables revealed that only the coping strategies factor (i.e., CAS) was significantly predictive for all variables, with significant increments. Hierarchical logistic regression analysis showed that only the coping strategies factor significantly predicted the anxiety and depression variables, and the increments were significant (anxiety:  $R^2 = .180, \Delta R^2 = .115, Odds\ ratio\ (OR) = 1.008, p < .01$ ; depression:  $R^2 = .093, \Delta R^2 = .066, OR = 1.005, p < .01$ ). When social dysfunction was examined as the dependent variable, controlling for anxiety and depression, only the predictive power of the coping strategies factor showed marginally significant ( $R^2 = .316, \Delta R^2 = .044, OR = 1.006, p < .10$ ). Finally, t-tests of the CAS-1R-J subscale scores for the analogue GAD sample and the other samples showed that both indices were significantly higher in the analogue GAD (coping strategies:  $t(845) = 11.21, p < .001$ ; negative beliefs:  $t(845) = 12.06, p < .001$ ; positive beliefs:  $t(845) = 6.52, p < .001$ ). A t-test was also conducted for each item of the CAS-1R-J. The group difference was non-significant only for the "substance use" item of the coping strategies factor ( $t(845) = 1.57, p = .117$ ).

### CONCLUSION

The results of this study suggest the reliability and validity of the CAS-1R-J in GAD. They also indicate the need to focus on the CAS in understanding the clinical manifestations of GAD and social dysfunction.

# POSTER SESSION 02

Abstract No.: 0659

## **The Effect of Positive Reappraisal and Detached Reappraisal on the Reactive Aggression and Positive and Negative Emotions of Persons Experienced in Interpersonal Trauma**

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This study attempted to examine the reactive aggression, positive emotions, and negative emotions of people who have experienced interpersonal trauma according to two strategies of cognitive reappraisal. To this end, 46 subjects who experienced interpersonal trauma were selected through interpersonal trauma questionnaire and the Korean version of the event shock scale (IES-R-K), and 23 people were wirelessly assigned to the detached reappraisal group and the positive reappraisal group. Three people were eliminated from each group, and the data were analyzed after one training session and seven days of Daily Diary to 20 people in the detached reappraisal group and 20 people in the positive reappraisal group. As a result of the study, reactive aggression significantly decreased in positive reappraisal and detached reappraisal. In addition, the positive reappraisal showed a significant decrease in negative emotions and an increase in positive emotions, and the detached reappraisal showed a significant decrease in negative emotions, but no significant change in positive emotions. Through the results of this study, it can be predicted that both cognitive reappraisal measures can be used for those who have experienced interpersonal trauma who show reactive aggression. In addition, positive reappraisal for those with low positive emotions, and those with high negative emotions can intervene to reduce negative emotions by using positive reappraisal and detached reappraisal measures. The significance and limitations of this study were presented in the discussion.

# POSTER SESSION 02

Abstract No.: 0666

## Effects of Positive Psychology-Based Program in Older People Exposed to Jeju 4·3 Incident

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The Jeju 4·3 incident (1948–1954) is one of the most destructive episodes in modern Korean history, and an estimated 14,000–30,000 innocent people were massacred, and hundreds of villages were destroyed. Recent studies have explored the long-term psychological outcomes of the Jeju 4·3 incident and found that older people suffered from psychological sequelae attributable to the extreme stress experienced as children or adolescents. Positive psychotherapy is based on the premise that positive thoughts and satisfaction with life are determinants for improving the psychological sequelae of traumatic events. This study aimed to examine the effectiveness of a positive psychology-based program in older people exposed to the Jeju 4·3 incident. A total of 23 participants were recruited from 4·3 trauma center in Jeju and participated in a positive psychology-based program. All participants completed self-report questionnaires, including the positive Resources Test (POREST) and Quality of Life-Alzheimer's Disease (QOL-AD) before and after the group positive psychology-based program. This program significantly increased the total score ( $p < 0.001$ ) of the POREST. The program also exhibited a significant effect on improving the POREST subscale scores, including satisfaction with life ( $p = 0.004$ ), positive affect ( $p = 0.017$ ), gratitude ( $p < 0.001$ ), growth ( $p = 0.028$ ), resilience ( $p < 0.001$ ), purpose in life ( $p = 0.040$ ), and hope ( $p = 0.007$ ). The program also exhibited a significant effect on improving the QOL-AD subscale scores, including physical health ( $p = 0.022$ ), memory ( $p = 0.005$ ), friends ( $p = 0.018$ ), and money ( $p = 0.005$ ). Based on the results, this positive psychology-based program effectively improves positive psychological resources and quality of life in older people exposed to the Jeju 4·3 incident.

# POSTER SESSION 02

Abstract No.: 0670

## Characteristics of Developmental Coordinated Motor Syndrome in Adolescents and Its Relation to Self-Perception

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### PROBLEM

Secondary disorders associated with Developmental Coordination Disorder (DCD) have been shown to have a relationship with self-perception of motor skills (Piek et al., 2006). Additionally, cases of physical injury and maladjustment due to discrepancies between DCD symptoms and self-perception in adolescents have been reported (Tsuji and Miyahara, 2020). While studies on DCD symptoms and self-perceptions have assessed overall self-perceptions of motor skills, they have not considered the subtypes of DCD symptoms. This lack of consideration may result in an inadequate measurement of discrepancies between symptoms and self-perceptions. Therefore, it is crucial to measure symptom subtypes and their corresponding self-perceptions to comprehensively understand the relationship between DCD symptoms and self-perception, specifically in terms of DCD subtypes.

### METHODS

154 college students were surveyed using (a) demographic questions; (b) Movement Assessment (Iwanaga, 2021) to assess DCD symptoms, rated by a friend, who had prior knowledge of the subject; and (c) the Adolescent Version of the Current Clumsiness Self-Perception Scale (Hayashi et al., 2017) to assess self-perception of clumsiness. Out of these, 124 were included in the final analysis. The local ethics committee approved this study (Approval number: 2022-239). RESULTS: To examine the differences in DCD symptoms and self-perception of these symptoms, a paired t-test was performed with the three groups (high, medium, and low) classified by subtype. Symptom intensity was used as the independent variable, and each subscale score of self-perception of clumsiness was the dependent variable. The results indicated a significant difference between the means of the high and low groups regarding gross motor control. The high group had a higher self-perception of motor skills than actual symptoms, while the low group had a lower self-perception than actual symptoms (high group:  $t(42) = -4.481, p < .001$ ; low group:  $t(54) = 5.910, p < .001$ ). A significant difference between the means of the high and low groups in fine motor function was observed, indicating that the high group had a higher self-perception than actual symptoms, and the low group had a lower self-perception than actual symptoms (high group:  $t(35) = -5.281, p < .001$ ; low group:  $t(39) = 6.852, p < .001$ ). Furthermore, a significant difference between the means of the high and low groups for inattention was observed, indicating that the high group had higher a self-perception than actual symptoms, and the low group had lower self-perception than actual symptoms (high group:  $t(31) = -5.300, p < .001$ ; low group:  $t(39) = 5.970, p < .001$ ). For writing and hyperactivity, the difference between the means of the high and low groups was significant, indicating that the high group had a higher self-perception than actual symptoms, and the low group had a lower self-perception than actual symptoms (high group:  $t(32) = -5.041, p < .001$ ; low group:  $t(38) = 5.861, p < .001$ ).

### DISCUSSION

These results suggest that, with respect to all coordinated movements, individuals with higher levels of DCD symptoms may perceive their symptoms as less severe than they actually are, while those with lower levels of DCD symptoms may perceive their symptoms as more severe than they actually are. This result differs from previous studies (Piek et al., 2006), and highlights the importance of further examining not only the overall motor skills of adolescents but also the subtypes of DCD symptoms and the corresponding degree of discrepancy in self-perception. This would provide a clearer understanding of the true situation in the future.

## POSTER SESSION 02

Abstract No.: 0679

### **Post-Traumatic Stress Disorder (PTSD), Depression, and Anxiety Experienced by Bereaved Families of Military Deaths in Korea**

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The experience of bereaved families of military deaths in Korea is distinguished from that of general bereaved families. As Korea adopts the conscription system, bereaved families of military deaths can experience more serious psychological pain in addition to the shock and sorrow towards the deceased, as well as resentment against the military. In addition, in that suicide was the most common cause of military deaths in Korea as of 2021 (e-National Index, December 30, 2022), the bereaved families of military deaths are likely to experience sudden bereavement (Fisher et al., 2020). The bereaved families who have experienced sudden bereavement, including suicide, have a slower rate of recovery from psychological distress and are more likely to experience Post-Traumatic Stress Disorder (PTSD), depression, and anxiety disorders than those caused by natural death (Kristensen et al., 2012; Erlangsen & Pitman, 2017). In addition, suicide in the military is often recognized as a disgraceful death, increasing the anguish, isolation, and shame of the bereaved family (Harrington-LaMorie, 2013), so the psychological distress of the bereaved family can be maximized. As such, there is a need to pay attention to their psychological distress in that the bereaved families of military deaths are experiencing characteristic bereavement that is distinct from an ordinary one. However, the reality is that there is currently a lack of research on the psychological distress of the bereaved families of military deaths in Korea. Accordingly, this study intended to examine the level of post-traumatic stress and symptoms that they have been experiencing since the sudden bereavement of the deceased for the bereaved families of military deaths in Korea, and to identify their psychological difficulties by examining their depression, anxiety levels, and symptoms that showed high comorbidity with PTSD. To this end, 17 participants were recruited in contact with organizations for the bereaved family, and 12 of them (2 of them were a couple) were bereaved by suicide, while the rest were bereaved by illness, physical abuse, etc.. As a result of conducting the survey using the Korean version of Impact of Event Scale-Revised (IES-RK) to evaluate the level and symptoms of PTSD, 94.18% exceeded the cut-point of clinical diagnose of PTSD, and all exceeded the cut-point of partial PTSD with tendencies. . As a result of conducting the survey using the Mental Health Screening Tool for Depressive Disorder (MHS:D) to measure the degree of depression with a high comorbidity with PTSD (O'Donnell et al., 2004), 82.35% exceeded the cut-point of clinical diagnose of Major Depressive Disorder (MDD), and 64.7% were experiencing a very severe level of depression. As a result of conducting the survey using the Mental Health Screening Tool for Anxiety Disorder (MHS:A) to measure the degree of anxiety with a high comorbidity with PTSD (Spinhoven et al., 2014), 70.59% exceeded the cut-point of clinical diagnose of Generalized Anxiety Disorder (GAD), and 47.05% were experiencing a very severe level of anxiety. Also, 10 out of 17 participants exceeded all of the cut-point of clinical diagnosis of PTSD, MDD, and GAD, indicating that their psychological health is endangered at high risk. The level of PTSD, depression, and anxiety experienced by the bereaved families of military deaths is significantly higher compared to the lifetime prevalence rate of adults in Korea (PTSD:1.5%, depression:7.7%, anxiety disorders:9.3%; National Center for Mental Health, 2021; Ministry of Health and Welfare, 2017), indicating that they are experiencing a serious level of psychological distress. In future studies, through more in-depth research, including qualitative research, it will be necessary to take a closer look at the psychological difficulties the bereaved families of the military are experiencing. It is also suggested that the need for active and systematic psychological intervention for them will be necessary, and it is expected to expand to research on specific psychological intervention for the bereaved families of the military in the future.

# POSTER SESSION 02

Abstract No.: 0680

## Mental Health Status and Challenges of Refugee Parents in Korea

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### INTRODUCTION

This abstract discusses the challenges faced by refugees in South Korea, particularly regarding mental health and discrimination. Despite an increasing number of applications for refugee status, South Korea has a low acceptance rate, partly due to negative attitudes towards refugees. Previous research has shown that refugees often suffer from various difficulties including psychological trauma, discrimination, and economic hardship. These challenges can be passed onto their children, which may lead to family conflicts and affect children's development. The abstract calls for more attention to be given to the mental health needs of refugees and the need for cultural-specific interventions, as well as educational programs to reduce prejudice and discrimination against refugees.

### METHOD

This study focuses on the psychological difficulties faced by refugee parents and seeks implications for psychosocial interventions. The study used a mixed-method approach, recruiting 41 parents for quantitative research and 5 for qualitative research in Korea. The recruitment was carried out through non-profit agencies, and participants were contacted via phone and interviewed face-to-face with the help of a translator. The study was conducted from December 2021 to May 2022, and the researchers obtained IRB approval from a university in Seoul.

### RESULTS

Out of 41 participants, 14 participants experienced forced separation from families. Eight participants were forced evacuation from the motherland. Seven participants went to refugee camps, six were in a separate facility in the refugee recognition process. Three were arrested by Korean officials due to undocumented status. Eight had discrimination and violence experiences by people from the same nationality, and thirteen by Koreans.

We used Impact of Event Scale-Revised (IES-R) to measure self-reported stress related to traumas. For the purpose of the study, we only used 14 items from the original 22 items. The items with the highest scores are: 'I try not to remember the event' 3.67 (SD=1.36), 'I remember the incident even though I did not intend it' 3.60 (SD=1.20), 'I feel strong feelings about the event' 3.57 (SD)=1.12). The whole mean score was 3.07 (sd = .85), and this mean score was slightly higher than that (mean = 1.53, sd = .71) of Koreans who has disaster experiences.

To measure the level of participants' depression, we used 6 items from the Center for Epidemiologic Studies - Depression Scale (CES-D). The items with the highest scores are: 'It was difficult because I was worried about things' 1.93 (SD=0.87), 'I couldn't sleep well because I was depressed' 1.80 (SD=0.84), 'I couldn't do anything because I was anxious.' 1.63 (SD=0.89) in order. This scale measures each item from 0 to 3, 3 being more depressed. The overall mean score was 1.67 (sd = .56), which was slightly higher than that (mean = 1.54, sd = .46) of Korean general population.

The results of the qualitative study were found in a total of four sub-categories. The contents are as follows. 1. threats to life, 2. fear of exile, 3. discrimination, 4. continued unstable conditions in the motherland.

### DISCUSSION

This study examines the psychological difficulties experienced by refugee parents in Korea using quantitative and qualitative methods. Results show that they experience higher levels of PTSD and depression compared to Koreans with disaster experience and general Koreans, and fear exile due to unstable visa status in Korea and uncertainty in their motherland. Implications for psychological interventions include the need for counseling services with culture-specific intervention methods, educational programs to reduce prejudice and discrimination targeting the general Korean population, and culture-specific intervention training for human service workers and professionals in counseling and mental health sectors. Finally, it is necessary to discuss ways to apply CBT to refugees conducted abroad in Korea.

# POSTER SESSION 02

Abstract No.: 0684

## **Relationship between Cognitive Fusion and Social Anxiety in Korean College Students: The Moderated Mediating Effects of Committed Action through Negative Self-Concept**

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### INTRODUCTION

As the non-face-to-face situation due to the impact of the COVID-19 pandemic has ended and face-to-face encounters have increased at colleges, students' social anxiety is reportedly increasing. Recently, acceptance and commitment therapy (ACT), which is called the third wave of cognitive behavioral therapy, has been getting more attention as one of the intervention strategies for social anxiety. ACT is an acceptance-oriented approach which emphasizes the awareness of thoughts and feelings without avoiding or controlling negative inner experiences such as anxiety. The ultimate goal of ACT is to help clients focus on their life values by increasing their psychological flexibility. Several studies using ACT for the treatment of social anxiety have reported its effectiveness (Caletti et al., 2022; Garcia-Perez & Valdivia-Salas, 2018). As a result of reviewing several studies on the relationship among cognitive fusion, negative self-concept, and social anxiety, researchers revealed that cognitive fusion may be a factor that reinforces negative self-concept, which can be the main cause of social anxiety (Farshad, & Samoavi, 2022; Ok, & Kim, 2015; Soltani, et al., 2018). It is important to explore the relationships among these variables. This study aims to examine the moderated mediating effect of committed action through negative self-concept in the relationship between cognitive fusion and social anxiety in Korean college students.

### METHOD

Participants of the study were 252(76 male, 176 female) Korean college students. Measures included The Korean version of Social Interaction Anxiety Scale (SIAS; Kim, 2001), Experiences Questionnaire (EQ; Kim et al., 2010), Engaged Living Scale (ELS; Park, 2020) and Short Version of the Dysfunctional Beliefs Test (SDBT; Hong & Cho, 2006). SPSS 27 software and PROCESS macro models 4 and 8(Hayes, 2013) were used for the analysis of the moderated mediating effects.

### RESULTS

The relationship between cognitive fusion and social anxiety was mediated by negative self-concept ( $B=.4025$ ,  $95\%CI=.3062, .5041$ ). The relationship between cognitive fusion and negative self-concept was moderated by committed action ( $B=-.4209$ ,  $95\%CI=-.6169, -.2249$ ). The relationship between cognitive fusion and social anxiety was also moderated by committed action ( $B=.1456$ ,  $95\%CI=.0307, .2605$ ). In the relationship between cognitive fusion and social anxiety, the moderated mediating effects of committed action through negative self-concept were confirmed ( $B=-.1722$ ,  $95\%CI = -.2532, -.0895$ ). The indirect effect of cognitive fusion on social anxiety through negative self-concept decreased as committed action increased.

### CONCLUSIONS

In the present study, it was confirmed that negative self-concept, which is an important cause of social anxiety, can be strengthened by cognitive fusion. The moderated mediating effects of committed action suggests that it can be effective to help college students who experience social anxiety due to fusion with negative thoughts to focus on their values and act accordingly. The aspect was different when committed action moderated the relationship between cognitive fusion and negative self-concept and when it moderated the relationship between cognitive fusion and social anxiety. These results suggest that when meeting a client with high cognitive fusion, the goal is to first reduce fusion with negative self-concept by doing value exploration and committed action work, and then parallelize defusion work and value work, which is effective in treating social anxiety.

# POSTER SESSION 02

Abstract No.: 0685

## Relationship between Impulsivity and Social Pressure on Excessive Use of Loot Boxes

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### PROBLEM

Excessive use of "loot boxes," which randomly produce items of unknown value, is a risk factor for gambling dependence (Zendle & Cairns, 2018). It has been suggested that high impulsivity may be an influential factor contributing to the development from excessive use of the loot box to gambling dependence and causing more serious problems (Spicer et al., 2022). However, in addition to the lack of a clear association between impulsivity and the amount charged in the loot box, it has been reported that a certain number of individuals use the loot box to acquire items that would be acceptable to their peers (Zendle et al., 2019). Therefore, although social pressure from peers, in addition to impulsivity, may influence loot box use, there have been no empirical studies on loot box use and social pressure. Therefore, this study aimed to examine the effects of social pressure, as well as impulsivity, on excessive loot box use.

### METHODS

Of 235 Japanese private undergraduate and graduate students and working adults aged 18 years or older, 121 (48 males, 72 females, and 1 other; mean age, 23.3±4.6 years) who reported having charged before were included in the analysis. The survey materials included (a) demographic items (age, gender, game time, and game type); (b) monthly charges as a percentage of income; (c) impulsivity (BIS-11; Kobashi & Ida, 2013, monetary 5-trial delay task; Koffarnus & Bickel, 2014), and (d) social pressure motivation to use the loot box (RAFFLE; translated in this study from Lloyd et al., 2021), and social pressure. This study was approved by the Ethics Review Committee for Research Involving Human Subjects of Waseda University.

### RESULTS

Multiple regression analysis was conducted to examine the effect of motivation for loot box use on the percentage of charges in income, with the RAFFLE subscale as the independent variable and the percentage of charges as the dependent variable. The results showed that only social pressure significantly explained the percentage of charges ( $\beta = .344, p = .007, R^2 = .105$ ). In addition, Pearson's correlation coefficient was calculated to examine the relationship between impulsivity and the percentage of charges. The results showed a weak positive correlation between BIS-11 and the percentage of charges ( $r = .224, p = .014$ ). However, there was no significant correlation with the percentage of charges for the 5-trial delay task ( $r = .083, p = .369$ ). A hierarchical multiple regression analysis was conducted to examine the effects of impulsivity and motivation to use the loot box on the percentage of charges to income. The results showed a significant interaction between social pressure and BIS-11 ( $\beta = 1.146, p < .001, R^2 = .094$ ) among the RAFFLE subscales. Simple slope analysis revealed a significant effect of impulsivity ( $b = .524, \beta = .37, p < .001$ ) when social pressure was stronger (+1 SD).

### DISCUSSION

These results indicate that those with high impulsivity increase their billing compared to those with low impulsivity. One factor that may have contributed to the significant relationship between impulsivity and the amount charged for loot boxes is that Zendle et al. (2019) targeted 17.2 ± 0.8 years of age, whereas this study targeted 23.4 ± 4.9 years of age, and the fact that there is some discretion in the amount charged for loot boxes. This may have been influenced by the fact that there was some discretion in the amount charged in the loot box. In addition, those who used the loot box due to social pressure increased their charges. Furthermore, those with high impulsivity paid more than those with low impulsivity. In other words, the relationship between social pressure and the amount charged for loot boxes was demonstrated, as suggested by Zendle et al. (2019).



# POSTER SESSION 02

Abstract No.: 0687

## Effects of a Mental Health Program for Adolescents with Intellectual Disabilities in a High School for Special Needs Education

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### INTRODUCTION

While more than half of adolescents with intellectual disability (ID) experience mental health problems in Japan (Obata & Takeda, 2017), effective treatments for this population is unclear. There are no CBT programs for individuals with ID in Japan, however, several school-based mental health prevention programs have been developed for children and adolescents in regular class. The Universal Unified Prevention Program for Diverse Disorders (Up2-D2, Ishikawa et al., 2019) is developed for mainly 4th to 6th grade and its effectiveness has been supported in improving the overall mental health of children and adolescents (Oka et al., 2021, Kishida et al., 2022). This study examined preliminary effects of the Up2-D2 with modification for adolescents with ID (e.g., division of units, extension of reviewing, sharing ideas with peers) and the applicability for special needs school.

### METHODS

Up2-D2 consists of cognitive-behavioral (psychoeducation, behavioral activation, social skills training, relaxation, cognitive restructuring, exposure, problem solving training) and positive psychological (strength work) interventions. Although the twelve 45-minute sessions were provided as the original program, the content to be learned in a single session was divided into 2-3 parts and extended time for review at each session as modifications for adolescents with ID. Moreover, the teacher added examples of situations and presented them using visual materials that were created originally so that students can understand. Participants were eight students who had mild to moderate ID in a high school for special needs education. Two teachers implemented the program as self-supporting activity curricula about once a week from April 2021 to March 2022. Assessments were carried out before and after the program based on participants responses to a questionnaire incorporating five scales to measure indicators (depression, anxiety, anger, self-effectiveness, and behavioral problems).

### RESULTS

Five students (age: 15-16, male: 1, female: 4, IQ: 42-77) out of eight participants were included in the analysis. They scored higher on depression, anxiety and behavioral problems than their age-matched normal high school students (male: 88, female: 108). After the participants received the 30 sessions of the Up2-D2, their depression was significantly decreased ( $Z = -2.04$ ,  $p < .05$ ) and moderate effect size ( $g = .66$ ) was obtained. In addition, a small effect size ( $g = .45$ ) was found in anger. While there were no clear effects on anxiety, self-effectiveness and total behavior problems, variability was observed in individual changes.

### DISCUSSION

Participants in this study showed highly depressed and anxious, indicating a high need for psychological treatment for students with mild to moderate ID. This study suggested that learning cognitive-behavioral skills was effective to decrease depression in students with ID and the Up2-D2 with adaption for students with ID is feasible in a high school for special needs education. On the other hand, the reason why there was no effect in anxiety was that some students had difficulty to understand therapeutic mechanisms of exposure given their cognitive impairment. In the future implementation for students with ID, further modifications, such as development of supplemental teaching materials and provision of additional sessions for exposure are needed.

# POSTER SESSION 02

Abstract No.: 0689

## Understanding Traumatic Experience and Obsessive-Compulsive Disorder: A Qualitative Study among Patients in Outpatient Clinic in Jakarta, Indonesia

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### INTRODUCTION

The comorbidity of OCD and PTSD has received much attention in the last 20 years. One earlier study among treatment-resistant OCD patients found comorbid PTSD hindered therapy progress, such that patients showed no improvements or worsened symptoms (Gershuny et al., 2002). Meanwhile, a working model of post-traumatic OCD subtype had been proposed (Fontenelle et al., 2012) in light of distinct clinical features that characterize OCD patients whose onset occurred before or after PTSD. Symptoms overlap in OCD and PTSD had also been reported in previous research (Franklin & Raines, 2019). Despite such breakthroughs, there is little progress in the literature about the phenomenology of PTSD or traumatic experience and OCD in naturalistic outpatient clinic settings. Consequently, this has limited our understanding of patients' experience and how clinicians should approach and treat OCD patients who may have possible PTSD comorbidity or history of a significant trauma. We believe one of the first steps is to uncover patients' understanding of their traumatic experience and its relations with OCD symptoms, as well as understanding the clinicians' view when working with patients.

### METHOD

This study was conducted in an outpatient psychological clinic in Jakarta, Indonesia. The data were obtained from case notes of three adult female patients (Patient A, 35 years old; Patient B, 32 years old; Patient C, 31 years old) based on clinical interviews with registered clinical psychologists during routine sessions. As part of the clinical procedures, the patients were assessed for PTSD and Complex PTSD diagnosis using the International Trauma Questionnaire (ITQ; Cloitre et al., 2018) and completed assessment for OCD using the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman et al., 1989). Three registered clinical psychologists (NID, TA, ESJ) conducted the clinical interviews and treated the patients in this study. Data were analyzed by the first author with in-depth discussions with ESJ.

### FINDINGS

All patients had traumatic experience and post-traumatic stress symptoms prior to OCD diagnosis. The traumatic experiences reported were sexual abuse, violence, and birth trauma. Two patients (B and C) were later diagnosed with OCD and were categorised between moderate to severe OCD according to Y-BOCS, and one patient (A) was undergoing assessment for OCD symptoms. Despite reporting traumatic experience as a primary reason to seek treatment, one patient did not meet criteria for PTSD according to ITQ (C). One patient (B) who did meet criteria for PTSD reported that she was no longer concerned about the traumatic experience. Traumatic experience was described by the patients as an experience that changed me as a person. Patients also described worry of not feeling better, and the need to redeem the situation. These phenomenological descriptions were then reflected as obsessive thoughts and compulsive behaviors, as observed by the clinicians during assessment procedures. For example, patients would obsessively think about re-experiencing their traumatic experience, or the consequences and guilt if they have not managed to 'deal' with the trauma. Patients would also engage in compulsive behaviors as attempts to redeem for what happened to them and to prevent the traumatic experience from reoccurring. For instance, in the case of violence (B) the patient would be awakened repeatedly at night to check for potential explosive sounds, whilst in the case of birth trauma the patient (C) would read a great number of medical articles to understand her experience and prepare for a second pregnancy but would never feel satisfied with the information.

# POSTER SESSION 02

## CONCLUSION

Though intrusive memories, re-experiencing and hypervigilance were common in post-traumatic stress symptoms and PTSD, clinicians should be aware when these symptoms present as features of obsessive thoughts and compulsive behaviours. This study provided some clarity about the phenomenology of PTSD and OCD, and may contribute to further insights on how PTSD and OCD comorbidity may occur among patients in naturalistic clinical settings.

Keywords: OCD; PTSD; trauma; phenomenology; qualitative

# POSTER SESSION 02

Abstract No.: 0692

## **Sustained Effectiveness of a Psychoeducational Program Focused on Traumatic Memory Recall for Non-Professionals: A 12-Month Follow-Up Study**

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### INTRODUCTION

Osawa (2019) developed a psychoeducational program aimed at non-professionals to improve their understanding and response towards trauma survivors, with a focus on cognitions and coping towards "traumatic memory recall" as a possible maintaining factor of posttraumatic stress disorder (PTSD) symptoms and an obstructive factor in behavior receiving treatment, and examined its effectiveness. This study aimed to verify the sustainability of the psychoeducational program's effectiveness by conducting a follow-up study for up to 12 months after the program completion.

### METHODS

This study was approved by the research ethics committee of the presenter's institution. Of the participants in the psychoeducational program (three group sessions) who agreed to participate in the study, 36 in the intervention group (mean age 60.19 years, SD = 13.44) and 12 in the WLC group (mean age 19.17 years, SD = 0.58) cooperated in the effectiveness measurements until 12 months after program completion. Effectiveness measurements were conducted before and after the program, and at follow-up assessments (1, 3, 6, and 12 months after) using items created to measure anxiety (3 items;  $\alpha = .87$ ) and self-efficacy (SE; 4 items;  $\alpha = .82$ ) about responding to trauma survivors and preparedness for initial responses to trauma survivors (11 items). Factor analysis confirmed that the preparedness for initial response to trauma survivors consisted of two factors: "preparedness for one's own initial response" (6 items;  $\alpha = .83$ ) and "preparedness for response to connect to professional support" (5 items;  $\alpha = .78$ ) (Osawa, 2019). The cognitive appraisals of individuals in relation to traumatic memory recall were assessed using the "appraisal of threat" and "appraisal of controllability" items of the CARS (Suzuki & Sakano, 1998). The appropriateness of coping strategies for traumatic memory recall was evaluated using the "distancing from thoughts and emotions" and "positive cognitive coping" items of the Japanese version of the WCCL-R (Osawa & Sakano, 2007).

### RESULTS

A repeated-measures ANOVA with groups and assessment time points (pre-program, post-program, and 1-month, 6-month, and 12-month follow-ups) as factors was conducted for each outcome measure. Data at the 3-month follow-up were excluded from the analysis because of insufficient data collection. The results showed a significant effect of assessment time points on "preparedness for one's own initial response" ( $F(4, 184) = 10.77, p = .000, \eta^2 = .19$ ) and "preparedness for response to connect to professional support" ( $F(4, 184) = 3.65, p = .014, \eta^2 = .07$ ). Multiple comparison results revealed that awareness of preparedness for responding to trauma survivors was higher than pre-program, and remained high until 12 months after the program. There was no significant main or interaction effect of groups and assessment time points on anxiety about responding to trauma survivors. In terms of SE, there were significant main effects of group ( $F(1, 46) = 5.51, p = .023, \eta^2 = .11$ ) and assessment time ( $F(4, 184) = 5.25, p = .001, \eta^2 = .10$ ). One-way ANOVA with assessment time points was conducted for each group, and the effect of assessment time points was significant only for the intervention group. The results of multiple comparisons showed that the SE of the intervention group was higher than pre-program and remained high until 12 months after the program. There was a significant main effect of assessment time points on the "appraisals of controllability" of the CARS ( $F(4, 184) = 8.83, p = .000, \eta^2 = .16$ ). Multiple comparisons showed that both groups rated their controllability towards traumatic memory recall higher than before the program, which remained high until 12 months after the program.

# POSTER SESSION 02

## CONCLUSIONS

The psychoeducational program of this study may be effective in altering non-professionals' cognitive appraisals of trauma memory recall and increasing their awareness of preparedness to respond to trauma survivors, and these effects may persist for at least one year after the program completion. However, the program was not effective in reducing anxiety related to responding to trauma survivors. Additionally, the intervention group, which was older than the WLC group, showed higher effects on self-efficacy in terms of being able to respond appropriately to trauma survivors. Based on the results of this study, the role of psychoeducation not only in the prevention of chronicity and severity of traumatic stress, but also as a bridge to appropriate treatment was discussed, with a view to its dissemination and implementation. Acknowledgement: This work was supported by JSPS KAKENHI Grant Number JP16K21520.

# POSTER SESSION 02

Abstract No.: 0701

## Development of an Assessment Tool Focusing on Functional Aspects of Internet Dependence

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### INTRODUCTION

With the widespread use of the Internet, Internet dependence has become an obstacle in daily life (Chen et al., 2014). Although the severity of Internet dependence has conventionally been judged based on duration of use as an important indicator, it is difficult to discriminate between appropriate use at work or school and dependent use (Van Rooij & Prause, 2014). Regarding the above, the perspective of functioning in cognitive-behavioral therapy (CBT), that is, the outcome expected to maintain the behavior, is considered important. However, assessment tools have not been developed. Therefore, the purpose of this study is to develop an assessment tool that focuses on functions related to Internet dependence.

### METHODS

Two hundred university students and working adults (mean age:  $49.20 \pm 11.52$  years) were administered an assessment tool focusing on functions related to Internet dependence: (a) demographic items, (b) severity of Internet dependence: IAT (Young, 1998; National Hospital Organization Kurihama Medical Center, Japanese translation), (c) degree of workaholism: DUWAS (Schaufeli et al., 2009), (d) avoidance: AAQ-II (Kinoshita et al., 2008), (e) reward perception: EROS (Kunisato et al., 2011), (f) need for approval: MLAM (Ueda & Yoshimori, 1990), and (g) functions of Internet use. The assessment tool (developed in the preliminary study) was used in the survey. In the preliminary survey, items were created by considering the reasons for Internet use as its functions from the viewpoint of what kind of results are expected to maintain the behavior. This study was conducted with the approval of the Ethics Review Committee on Research Involving Human Subjects at Waseda University (approval numbers: 2022-009, 2022-380).

### RESULTS

To examine the factor structure of the scale focusing on functions related to Internet dependence, a factor analysis using the main factor method, Promax rotation, was conducted. Subsequently, the function of Internet use could be captured by 24 items with five factors: "anxiety/stress," "practice," "relaxation and online shopping," "excitement," and "interaction." Reliability was examined using the 50/50 method, and Pearson's correlation coefficient was  $r = .81, p < .001$ . Regarding construct validity, "anxiety/stress" showed a significant moderate positive correlation with the AAQ-II ( $r = .57, p < .001$ ). In "interaction," there was a significant weak positive correlation with the MLAM ( $r = .25, p < .001$ ) and a significant weak positive correlation with the MLAM subscale "social skills" ( $r = .20, p < .01$ ). Additionally, a significant weak positive correlation was found for "practical work" with the DUWAS ( $r = .23, p < .05$ ). Furthermore, a significant weak negative correlation was found between "anxiety/stress" and EROS ( $r = -.38, p < .001$ ), as well as a significant moderate positive correlation ( $r = .52, p < .001$ ) with the IAT.

### DISCUSSION

The assessment tool developed in this study, which focuses on functions related to Internet dependence, has an appropriately high level of reliability and construct validity. This assessment tool will allow us to examine assessments and approaches to Internet dependence from the perspective of functions in addition to conventional indicators. However, in this study, Internet use was a substitute for function. Therefore, we believe that there are still issues with measuring functions using the assessment tool created in this study. In the future, it will be necessary to conduct further studies based on behavioral analyses.

# POSTER SESSION 02

Abstract No.: 0706

## Development of Juvenile Cannabis Relapse Prevention Program (F-Can) Focusing on Communication Skills with Familiar People

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### INTRODUCTION

Since cannabis use at a young age increases the risk of addiction, it is important to support relapse prevention, but there is no relapse prevention program for juvenile cannabis users in Japan. In "Cannabis use among high school students and psychosocial characteristics of juvenile cannabis users: National survey of high school students on drug use and life 2018" (Representative researcher: Shimane), close friends and acquaintances, suggesting the effectiveness of interventions that emphasize the development of communication skills with family members (especially mothers). The purpose of this study was to develop a cannabis relapse prevention program for juveniles with a focus on communication skills with familiar people.

### METHODS

- Method of creating a program: The juvenile cannabis relapse prevention program (F-CAN) is based on OPEN (a program for young people created by the Tokyo Metropolitan Chubu Mental Health and Welfare Center). It was created in cooperation with the Fukuoka Prefectural Pharmaceutical Affairs Division, Department of Public Health and Medical Affairs, Juvenile Division, Community Safety Department, Fukuoka Prefectural Police, and related organizations.
- Juvenile cannabis relapse prevention program: Using a workbook (15 sessions in total) based on the concept of cognitive behavioral therapy, staff members of the juvenile support center will conduct one-on-one sessions with boys for about 50 minutes, approximately once every two weeks.
- Procedure: From September 2021, we conducted a questionnaire survey of juveniles under the age of 20 with a history of cannabis abuse who were encouraged to participate in the program by the police station or probation office, and who consented to the program and their guardians. This study was approved by the Ethics Committee of Hizen Psychiatric Medical Center (approval number 2021-13).
- Outcome: intimacy with parents and friends, global help-seeking scale (GHSQ), and a number of days of cannabis use in the last month.

### RESULTS & DISCUSSION

Sample Characteristics: Of the 17 study subjects, the average age of 16 who agreed to the study was 16.75 (SD = 2.21) years old, and the gender ratio was 8 males (50.0%), 7 females (43.8%), and 1 other. (6.3%). Ten juveniles (62.5%) were employed, of whom 7 (43.8%) were in school and employed. The average age at which cannabis use began was 14.4 years old. Intimacy in interpersonal relationships was higher in the order of friend, mother, and father, and overall intimacy was low compared to the delinquent group in Obokata (2005). Friends (75.0%) and dating partners (50.0%) were the most common people to turn to for help when they had troubles related to cannabis, in that order. It will be important to disseminate knowledge about this and to acquire communication skills, mainly including consultation with mothers.

### PROGRAM EFFECT

Of the 17 juveniles who applied for the course, 11 were still taking the course, 3 completed the course, and 3 were discontinued due to re-use of drugs or relocation. To date, three people have completed the program, both of which were men and the average age was 18.7 years. The intervention study is ongoing, and additional data will be collected up to the day of the presentation.

# POSTER SESSION 02

Abstract No.: 0712

## The Spider Distress Scale: A New Tool to Differentially Assess Spider Fear and Disgust

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### INTRODUCTION

Spider fear is an excellent model to experimentally study processes in the maintenance and treatment of long-lasting fears. While there are evidence-based treatments for anxiety disorders, such as exposure therapy, many individuals relapse. One reason for this may be because current interventions primarily focus on reducing fear, even though disgust also plays an important role in several anxiety disorders and some studies suggest that disgust may be more resistant to extinction than fear. To better understand individual differences in disgust and fear, and to tailor treatments accordingly, we need a valid, reliable, and practical tool to assess spider-related distress dimensionally, and to differentiate between spider-related fear and disgust in a time-sensitive manner. To this end, we developed a concise self-report questionnaire, the Spider Distress Scale, that combines the strengths of established spider fear questionnaires and addresses their shortcomings (Peters, Visser, & Kindt, 2022).

### METHODS

We conducted exploratory factor analyses to explore the structure of the Spider Distress Scale (study 1 and 2), which we confirmed with a confirmatory factor analysis (study 3) in samples from the general population ( $n = 370$ ;  $n = 360$ ;  $n = 423$ ), recruited online via Prolific Academic from the United Kingdom, the Netherlands, and the United States. In a fourth on-site sample, recruited via the University of Amsterdam's laboratory portal, we assessed the concurrent, convergent, and discriminant validity of the new Spider Distress Scale based on related self-report measures, a structured clinical interview for DSM-5 specific phobias (modified to screen for spider phobia), and avoidance behaviour, measured with spider behavioural approach tasks (study 4,  $n = 75$ ).

### RESULTS

Exploratory factor analyses indicated a two-factor structure for the Spider Distress Scale with good model fit (study 1 and 2), which was confirmed in study 3 with moderate to excellent fit. The fear and disgust factors of the Spider Distress Scale are highly internally consistent across studies and the Spider Distress Scale has excellent test-retest reliability (study 3). We found good convergent and discriminant validity, based on self-report measures and spider behavioural approach tasks, and the Spider Distress Scale successfully differentiated between individuals with and without spider fear (study 4).

### DISCUSSION

In our series of studies, we developed the Spider Distress Scale, a reliable and valid questionnaire that measures spider fear and disgust. Our study series suggests that fear and disgust are functionally related, but that disgust towards spiders can be differentially assessed when targeting unique elements of disgust-related information.

### Reference

Peters, J., Visser, R. M., & Kindt, M. (2022). More than just fear: Development and psychometric evaluation of the Spider Distress Scale to assess spider fear and spider-related disgust. *Journal of Anxiety Disorders*, 90, 102602.

The anonymised data and R code for exploratory and confirmatory analyses (study 1-3) and results of study 4 can be found at the Open Science Framework web page for this study series: <https://osf.io/4fsvy/>



# POSTER SESSION 02

Abstract No.: 0715

## **Procrastination among University Students: Identifying and Understanding Severe Cases in Need of Support**

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### INTRODUCTION

Procrastination is defined as the voluntarily delay of an intended course of action despite expecting to be worse off for this delay. University students are considered to be particularly affected by such dilatory behavior. According to research, at least half of all university students believe procrastination impacts their academic achievements and well-being. However, evidence-based ideas on how to identify severe cases and differentiate these from less severe cases of procrastination in this population do not exist, but are important in order to find those in need of support.

### METHOD

The current study recruited participants from different universities in Sweden to participate in an anonymous online survey investigating self-rated levels of procrastination, impulsivity, perfectionism, anxiety, depression, stress, and quality of life. In addition, Pathological Delay Criteria (PDC) as well as self-report items and open-ended questions were used to determine the severity of procrastination and its negative physical and psychological consequences.

### RESULTS

In total, 732 participants completed the survey. A median-split on the Pure Procrastination Scale (PPS) and the responses to the PDC were used to differentiate two groups; "less severe procrastination" ( $PPS \leq 2.99$ ;  $n = 344$ ; 67.7% female;  $M \text{ age} = 30.03$ ;  $SD \text{ age} = 9.35$ ), and "severe procrastination" ( $PPS \geq 3.00$ ;  $n = 388$ ; 66.2% female;  $M \text{ age} = 27.76$ ;  $SD \text{ age} = 7.08$ ). For participants in the severe group, 96-97% considered procrastination to a problem, compared to 42-48% in the less severe group. The two groups also differed in terms of considering to seek help for procrastination, 35-38% compared to 5-7%. Participants in the severe group also reported more problems of procrastination in various life domains, greater symptoms of psychological issues, and lower quality of life. A thematic analysis of the responses on what negative physical consequences were related to procrastination revealed that these were characterized by stress and anxiety, e.g., tension, pain, and sleep and rest, while the negative psychological consequences were related to stress and anxiety, but also depression, e.g., self-criticism, remorse, and self-esteem.

### DISCUSSION

The current study recommends that the PPS can be used as an initial screening tool, while the PDC can more accurately determine the severity level of procrastination for a specific individual. It also reveals a number of negative consequences of procrastination that speaks to the importance of providing support for university students, who may otherwise experience poorer academic performance and worse well-being.

# POSTER SESSION 02

Abstract No.: 0725

## **Cognitive Load Modulates Psychophysiological Responses to Different Facets of Threat Unpredictability: Distinguishing between Arousal and Valence**

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### INTRODUCTION

Exaggerated response to uncertainty of a future threat plays a key role in anxiety and related disorders, underscoring the need for a better understanding of the underlying mechanisms. Prior work suggests that cognitive control is involved in processing and handling uncertainty in the environment, yet little is known about how it modulates responses to different facets of uncertainty.

### METHOD

The present study (N = 54, 75.9% female, mean age = 22.5) explored how cognitive load manipulates the effects of two major facets of threat uncertainty, timing and occurrence unpredictability, on psychophysiological responses. This was achieved using an n-back working memory task (i.e., 1-back, 3-back) embedded within a modified threat-of-shock paradigm. Dependent variables included skin conductance response (SCR), electromyography (EMG), and heart rate variability (HRV), which are sensitive to arousal, valence, and parasympathetic activity, respectively. Each dependent variable was entered into a 2 (Occurrence: predictable vs. unpredictable) x 2 (Timing: predictable vs. unpredictable) x 2 (Cognitive Load: low vs. high) repeated measures ANOVA.

### RESULTS

Replicating prior work, the effects of cognitive load and temporal unpredictability of threat were evident in both SCR and EMG responses. A significant three-way interaction emerged on both SCR and EMG response, yet with slightly different patterns. Under low cognitive load, both SCR and EMG response were potentiated when both the occurrence and the timing of threat were predictable. Under high cognitive load, both SCR and EMG responses were significantly reduced when both the occurrence and the timing were unpredictable. However, when the timing was predictable, occurrence unpredictability had no effect on EMG response whereas it significantly reduced SCR. HRV analyses are still underway.

### CONCLUSIONS

The present results demonstrate that facets of threat unpredictability and cognitive load dynamically interact to shape psychophysiological responses to threat and these interactions appear to affect arousal (SCR) and valence (EMG) differently. These observations have the potential to improve our understanding of the etiology of, and the development of more effective interventions for, psychological disorders characterized by maladaptive uncertainty responses.

# POSTER SESSION 02

Abstract No.: 0727

## Applying the Combination of CBT Based Psychotherapy with Multi-Parameter Biofeedback Therapy to Alleviate Alcohol Dependence: A Case Study

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As the public has been focusing more on the mental health of the general population, alcohol addiction has attracted increasing attention. Alcohol addiction has a cumulative and costly effect on society, placing a heavy burden on the families, employers, communities, and the healthcare system of the government. For many patients with alcohol dependence, it is more important to quit the psychological addiction, besides the physical need for alcohol. For this reason, a case study was conducted to explore applying the combination of CBT based psychotherapy with multi-parameter biofeedback therapy to alleviate the dependence on alcohol and the physical symptoms of chronic alcohol using.

The client was a middle-aged man who had been admitted to hospital repeatedly due to severe damaged in social function caused by long-term alcohol consumption. The client reported himself started drinking when he was in university. The highest drinking frequency is about five days a week in 2021. As a result of the prolonged period of day and night, the client has no time and energy to be involved in the management of the company, or in family life, or even to care for his children. The Personal and Social Performance scale (PSP) showed that his social function was moderately impaired.

The client had two-timed hospitalization experiences before this time and returned to drinking. The third-time hospitalization was in 2022 and lasted for three weeks. Prior to the hospitalization, the client had reached a severe dependence on alcohol, and was being assessed using the Alcohol Dependence Scale (ADS), showing obvious withdrawal symptoms. Hamilton Anxiety Rating Scale (HAM-A) and the Hamilton Depression Rating Scale (HAM-D) were used to assess the mood status of the client. HAM-A showed the client was with moderate to severe anxious symptoms; HAM-D showed the client was with severe depressive symptoms, which required for entry into a clinical treatment.

At the beginning of beginning of the inpatient period, medication was used to alleviate the alcohol withdrawal reaction. This was followed by 12 multi-parametric biofeedback sessions and 5 psychotherapy interviews, followed by 13 ongoing psychotherapy interviews in every 2 weeks.

During the first 3 psychotherapy sessions, the psychotherapist established a therapeutic alliance with the client, gathered information about emotions and thoughts related to drinking, and assessed the severity of alcohol dependence. The client showed a high level of cooperation.

In the next 2 sessions, the therapist continued to build rapport, encouraged the motivation, and gathered information related to the problem behavior——drinking. Under the guidance of the therapist, the client tried to find some automatic thoughts related to excessive drinking behavior and discussed them with the therapist. The therapist found that there might be other reasons behind the drinking behavior.

After discharge, the client had bi-weekly psychotherapy sessions. The psychotherapist worked with the client to develop a SMART plan to prevent relapse. The psychotherapist spent 3 sessions working with the client to find out the intermediate believes that led the client to drink. Meanwhile, through the mechanism of reward setting, the therapist applied behavioral extinction and other behavioral therapy approaches to help the client managing the urge to drink. Another 4 sessions had been spent in order to help the client be aware of his core believes, and how it was affecting him. Cognitive methods such as Socratic questioning were used to target core beliefs, especially maladaptive core beliefs. In the last few sessions, the therapist worked with the client to reinforce his achievement, for example by carrying out role plays to help the client refuse the invitation from others to drink.

The Personal and Social Performance scale (PSP) was administrated as well after the treatment. Interviews had been conducted with himself and his spouse to assess his social function level. The results showed that his social function was moderately impaired before the therapy and returned to mild impaired after the therapy.

# POSTER SESSION 02

Abstract No.: 0728

## Interdisciplinary Cognitive Behavioral Therapy for Odontophobia and Dental Anxiety Related to Psychological Trauma – A Pilot Study

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### INTRODUCTION

The Norwegian dental health care system has had inadequate treatment follow-up for patients exposed to torture, sexual abuse, violence in close relations and/or who have odontophobia (The Norwegian Directorate of Health, 2010). To meet the needs of these patients, the Norwegian Directorate of Health has established county-wide and interdisciplinary «TADA (Torture, Abuse and Dental Anxiety) - teams» consisting of psychologists and dental health personnel. The TADA teams offer targeted anxiety treatment and adapted dental treatment based on a cognitive-behavioral approach with the main purpose of enabling these patients to establish a satisfying oral status and to follow ordinary dental treatment.

Aims: The pilot study sets out to evaluate the treatment effect of a new way of implementing integrated psychological and dental treatment for vulnerable patient groups. Furthermore, the study tests if the protocol is feasible for a future larger scale study.

### METHODS

The study used a naturalistic design and included 13 consecutively referred patients at an outpatient TADA public dental clinic. Patients were treated with up to 12 sessions of interdisciplinary cognitive behavioral therapy (CBT), administered by a team consisting of dental care personnel and a psychologist, before being referred to active dental treatment. Premedication were not offered as part of the treatment intervention. All patients went through a psychological assessment pre treatment, as well as a psychological self-assessment at pre and post CBT treatment. Degree of dental fear and anxiety as well as the extent of trauma experiences and trauma symptom severity were assessed. Furthermore, patients completed a panoramic X-ray for dental status prior to CBT and dental treatment. After CBT treatment, the patients additionally completed a dental health examination before starting dental treatment and rehabilitation.

### RESULTS

Dental fear and anxiety symptoms showed significant reduction at post treatment, measured by the Dental Fear Survey (DFS; pre: 82.23, post: 46.92,  $p=.01$ ,  $d=2.761$ ), the Index of Dental Anxiety and Fear (IDAF-4C; pre: 37.08, post: 16.69,  $p=.01$ ,  $d=3.476$ ) and the Dental Belief Survey (DBS; pre: 48.31, post: 27.31,  $p=.01$ ,  $d=1.694$ ). We found no evidence of worsening of post traumatic symptom severity post treatment (PTSD Checklist for DSM-5; pre 43.78, post: 36.00  $p=.23$ ) and had no drop-out during interdisciplinary CBT treatment, indicating that the treatment approach for dental anxiety and odontophobia were well tolerated for patients with a history of sexual abuse and/or violence. All patients were referred to further TADA dental treatment.

### CONCLUSION

This study offers preliminary evidence for the effectiveness of CBT treatment when given interdisciplinary for odontophobia and dental anxiety related to sexual abuse and violence. The results indicate that the protocol is feasible for use in larger scale studies.

Practitioners' points: Mental health professionals could be important allies for dental health professionals when caring for patients with severe dental anxiety and odontophobia. System oriented interventions should benefit from interdisciplinary collaboration, striving to offer seamless and effective treatment options to vulnerable patient populations.

Ethics and dissemination: This is a pilot study for a planned larger scale study, and the study protocol has been approved by the Regional Committee for Medical and Health Research Ethics in Norway (Reference number 488462).

# POSTER SESSION 02

Abstract No.: 0729

## The Relationship between Gaming Time and Time Management Skills in Japanese Adolescents with Internet Gaming Disorder Trends

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### PROBLEM

Internet gaming disorder (IGD) is a problem among Japanese adolescents, characterized by social problems and an incessant need to play Internet games (Masuda et al., 2022). The characteristics of individuals with IGD include poor time management skills (Chen et al., 2020) and low social support resources (Jeong et al., 2020). While game-playing time is a conventional predictor of IGD (Jeong et al., 2020), extended game-playing time does not necessarily lead to social life problems due to the presence of time management skills. Although external support may strongly influence IGD, especially during adolescence, no empirical studies have been conducted. Therefore, this study examined the relationship between gaming time, time management skills, social support, and IGD tendencies among Japanese adolescents.

### METHODS

A total of 334 Japanese junior high and high school students participated in the present study. The following factors were measured: (a) demographic items; (b) IGD tendency using IGDS-J (Sumi et al., 2018); (c) time management skills using the Time Management Scale (Imura et al., 2016); (d) social support using the Japanese version of the Social Support Scale (Iwasa et al., 2007); and (e) quality of life using the GHQ-12 (Nakagawa and Ohbou, 2013). The analysis included 184 high school students (mean  $16.51 \pm 0.68$  years old) and 120 junior high school students (mean  $12.69 \pm 1.18$  years old) who play Internet games. This study was approved by the Ethics Review Committee for Research Involving Human Subjects of Waseda University (approval number: 2021-260). These data have been added to Kobayashi et al. (2022) and reanalyzed.

### RESULTS

Hierarchical multiple regression analysis was conducted to examine the effects of each variable on IGD tendencies and quality of life. Results showed a significant interaction ( $\Delta R^2 = .03$ ,  $p = .04$ ) between game-time and "estimation" of time management skills for IGD in middle school students; the main effect was found for time management skills ( $\beta = -.53$ ,  $p < .01$ ) and social support ( $\beta = -.53$ ,  $p < .01$ ). Significant interactions were found in high school students with IGD between game time and time management skills "on the day" ( $\Delta R^2 = .03$ ,  $p < .05$ ) and social support ( $\Delta R^2 = .03$ ,  $p < .05$ ); the main effect of "on the day" on quality of life was found ( $\beta = -.53$ ,  $p < .01$ ). Furthermore, there was a significant interaction between game time and family social support ( $\Delta R^2 = .03$ ,  $p < .05$ ).

### DISCUSSION

These results indicate that junior high school students have more support resources and better time management skills, such as estimating their time. Moreover, high school students can engage in Internet games for a long time and a set schedule for the day, while continuing to enjoy their social life with help from others. It is possible for high school students to be happy without any hindrance to their social life, even if they play Internet games for a long time; they have good time-management skills due to their free time and a set daily schedule. However, the necessary skills and support differ depending on the developmental stage; it is necessary to consider the developmental stage when understanding and supporting adolescents with IGD.

# POSTER SESSION 02

Abstract No.: 0731

## Investigating the Efficacy of Blended Therapy for Social Anxiety Disorder Utilizing Self-Guided Digital Therapeutic Applications

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### INTRODUCTION

In recent years, new technologies were developed to aid in the treatment of psychological disorders like social anxiety disorder (SAD). Despite the high individual, social and economic costs associated with SAD, access to first-line treatment (cognitive behavioral therapy, CBT) is often limited by long waiting times. Blended care approaches combining traditional therapy with mobile app interventions may bridge waiting times and contribute to faster and more effective treatment. This study aims to investigate the efficacy of a self-guided digital therapeutic application with exposure-based behavioral experiments in virtual reality as part of blended therapy for SAD. Our hypothesis is that patients who receive blended therapy will experience a greater reduction in SAD symptoms compared to the active control group.

### METHOD

Patients diagnosed with SAD are randomly assigned to one of two groups. The experimental group receives blended therapy through a self-guided digital therapeutic application that includes exposure-based behavioral experiments in virtual reality and four therapeutic appointments. The active control group, on the other hand, receives disorder-unspecific appointments focused on relaxation and stress reduction.

In both groups, SAD symptoms and various clinical measures are assessed at baseline, during treatment, post-treatment, and six weeks following treatment completion. The primary outcome will be changes in SAD symptoms measured by the Social Anxiety and Social Competence Deficits Questionnaire (SASKO) between baseline and post-assessment. The study has been preregistered (ISRCTN18013983), and a study protocol can be found at <https://doi.org/10.1186/s13063-022-06320-x> for more information.

### RESULTS

Preliminary results on SAD symptom reduction, compared between the experimental and the active control group, will be reported.

### DISCUSSION

Overall, this study may shed light on the potential of mobile app interventions in CBT blended care. Findings may inform the development of more accessible and effective interventions.

# POSTER SESSION 02

Abstract No.: 0735

## **Childhood Adversity and Food Addiction: The Mediating Role of Negative Urgency**

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Food addiction means being addicted to consuming high-calorie foods such as high sugar, high fat, and high carbohydrate foods. Food addiction symptoms have been found to increase with experiences of childhood adversity. Yet, there is a lack of understanding of the psychological mechanism of how childhood adversity affects food addiction. We first sought to understand the current status of food addiction in Korea and to examine whether the relationship between childhood adversity and food addiction is mediated by negative urgency, a tendency to act impulsively in the face of negative affect. To this end, the levels of food addiction, childhood adversity, and negative urgency were measured in 509 adults (391 women). Participants reported an average of 2 symptoms out of 11 food addiction symptoms, and withdrawal was the most commonly reported symptom. About 11% of the total participants met the diagnostic criteria of food addiction, with no gender difference. The results of the correlation analyses showed that childhood adversity and food addiction, childhood adversity and negative urgency, and negative urgency and food addiction were all positively correlated.

Results from regression analyses indicated that, while controlling for demographic variables, childhood adversity predicted food addiction symptoms. Further, negative urgency partially mediated the relationship between childhood adversity and food addiction symptoms. Thus, the more the childhood adversity experiences, the higher the tendency to act impulsively during negative emotional states, and this increased negative urgency increases the risk for food addiction. This study is the first to systematically explore food addiction in a wide range of age groups in Korea, and has clinical implications such that an intervention focusing on reducing negative urgency can be effective for those who have an increased risk of food addiction due to childhood adversity.

# POSTER SESSION 02

Abstract No.: 0737

## Research Trends in the Association between Parental Psychological Control and Social Anxiety

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### BACKGROUND

Children with high levels of social anxiety can experience various problems in their psychosocial development, such as emotional disorders, depression, somatization disorders, interpersonal problems, and refusal to attend school (Oh & Yang, 2003; Kelly et al., 2008). Research suggests that parental psychological control can intensify children's anxiety (Nanda et al., 2012) and hinder their ability to form social relationships, which can ultimately lead to social anxiety (Wei & Kendall, 2014). However, because previous studies have shown that parental psychological control does not directly affect social anxiety (Cho, 2016; Lee & Kim, 2018), it is important to consider mediating variables that might explain this relationship. Barlow (2002) identified biological vulnerability, environmental factors, and psychological factors as the three main causes of social anxiety. In this study, we review Korean literature to explore the mediating variables that may be involved in the relationship between parental psychological control and social anxiety. We also discuss the implications and limitations of our findings.

### METHODS

We used search engines such as Research Information Sharing Service (RISS), National Assembly Library of Korea (NANET), Korea Institute of Science and Technology Information (ScienceON), Nurimedia (DBpia), and Koreanstudies Information Service System (KISS), with keywords as both 'psychological control' and 'social anxiety.' A total of 298 papers were retrieved (RISS, 87; NANET, 75; ScienceON, 67; DBPIA, 58; KISS, 11) and 16 papers were finally selected for analysis, after including studies to examine psychological control as predictor and social anxiety as outcome variables and excluding duplicate papers and no mediating variables explored.

### RESULTS

The 21 selected papers were analyzed about publication year, participants, measurement tools and variable classification according to Barlow's categories. Most papers were published in 2021 (6 papers), followed by 2018 (5) and 2022 (4) with the first appearance of 2015. The participants were mainly adults including college students (12 papers) followed by adolescents (8) and children (1). The Psychological Control Scale-Youth Self-report (PCS-YSR) and the Social Interaction Anxiety Scale (SIAS) were used in most papers for measuring parental psychological control and social anxiety, respectively (15 papers and 10 papers). As for the mediating variables, psychological factors (sub-factors: cognitive, emotional and motivational factors) were the most commonly used and environmental factor and dispositional factor were investigated in each of single articles.

### DISCUSSION

This study investigated the association between parental psychological control and social anxiety in Korea. The results showed that the participants were not diverse and that the cognitive aspect of psychological variables was the most frequently explored. Future research should consider a more diverse range of participants and explore additional mediating factors.



# POSTER SESSION 02

Abstract No.: 0741

## **Tonic Immobility and Complex Posttraumatic Stress: The Mediating Role of Trauma-Related Shame**

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Tonic immobility is a defensive response that occurs in the form of body paralysis in life-threatening situations or extreme fear. Tonic immobility is particularly likely to be expressed in complex trauma characterized by experiences of repetitive interpersonal trauma and is known to predict pathologies such as posttraumatic stress. However, studies of tonic immobility have been conducted primarily on sexual violence, and there is a lack of understanding of the psychological mechanisms that tonic immobility causes posttraumatic stress. In this study, tonic immobility was measured in various complex traumas, and aimed to investigate whether shame increases with the severity of tonic immobility and thereby increases complex posttraumatic stress. To this end, experiences of tonic immobility after complex trauma, trauma-related shame, and complex posttraumatic stress symptoms were measured in 457 adults (296 women) who had experienced complex trauma. The findings are as follows. First, approximately 88% of those who suffered complex trauma reported having experienced tonic immobility. Second, tonic immobility positively predicted complex posttraumatic stress symptoms. Third, trauma-related shame partially mediated the relationship between tonic immobility and complex posttraumatic stress symptoms. These results show that not only does tonic immobility occur widely in complex trauma, but the stronger the experience of tonic immobility, the higher the trauma-related shame and the more severe the complex posttraumatic stress symptoms. This study was the first to systematically explore tonic immobility in Korea, and revealed the role of trauma-related shame in tonic immobility leading to posttraumatic stress. It also underscores the importance of understanding tonic immobility and reducing the level of shame for the treatment of complex trauma victims.

# POSTER SESSION 02

Abstract No.: 0742

## Effects of Self-Images on Videoconferencing Screens to Self-Focused Attention in Social Anxiety Disorder

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### INTRODUCTION

Social anxiety disorder (SAD) is a disorder that causes excessive anxiety in social situations (APA, 2013). Self-focused attention is its major maintaining factor (Clark & Wells, 1995). It is paying too much attention to one's internal aspects. When we are self-focused, we take the observer perspective (O perspective), in which we see ourselves from the perspective of others. Self-focused attention is reduced by increasing the detached mindfulness perspective (DM perspective) on the whole situation (Tomita et al., 2018). Videoconferencing psychotherapy (VCP) could be a practical new approach to treating SAD. This is because socially anxious individuals prefer online to face-to-face treatment (Reynolds et al., 2013). However, presenting self-images to SAD patients has positive and negative effects on self-attention (Yanagida, 2022); therefore, the image of the self on the videoconferencing screen may affect an individual with SAD in various ways. In this study, we will examine the effects of videoconferencing and the presentation of self-images compared to the face-to-face method on self-focused attention in treating SAD patients.

### METHODS

The subjects were 37 university students (10 men, 27 women, with a mean age  $\pm$  SD 20.7 $\pm$ 1.84) with LSAS-J (the Japanese version of the Liebowitz Social Anxiety Scale [Asakura et al., 2002]) scores of 30 or higher. The measures used were (i) the Self-Focused Attention Scale (Wells, 2009) and (ii) the Mental Perspective Scale for Social Anxiety Disorder (MPS) (Tomita et al., 2018). Participants were randomly allocated to four groups: (i) face-to-face style with presenting self-image, (ii) face-to-face style without presenting self-image, (iii) videoconferencing style with presenting self-image, and (iv) videoconferencing style without presenting self-image. This was a one-time experiment. After preparing a speech, the participants were asked to answer a questionnaire, followed by completing the speech. After completing the speech, the participants were asked to answer the questionnaire again. The group with presenting self-image was instructed to watch themselves moderately.

### RESULTS

A three-factor ANOVA was conducted with conversation style (face-to-face and videoconferencing), self-image (no self-image presentation and self-image presentation), and time (pre- and post-speech) as the independent variables and the Self-Focused Attention Scale as the dependent variable. It showed a significant interaction between time and self-image ( $p < .10$ ). The results of the simple main effect within the self-image group showed a significant decrease in the Self-focused Scale between groups with and without self-image at post ( $p < .05$ ). A two-factor ANOVA was conducted with conversation style and self-image as the independent variables and the MPS including "O perspective" and "DM perspective." The results of the main effects significantly differed: in the O perspective (videoconferencing  $>$  face-to-face,  $p < .05$ ) and DM perspective (with self-image  $>$  without self-image,  $p < .10$ ).

### DISCUSSION

The group with self-image had higher DM scores and had a better overview of the self-image during speech. Moreover, self-focused attention was relatively lower in the group with self-image. The presentation of the self-image made it difficult to pay attention to one's internal aspects and allowed for an overview of the communication situation. The higher O scores indicated that the video call group was more self-attentive than the face-to-face group. It is possible that videoconferencing was easier to take the O perspective because of the sense of constant eye contact (Ballison, 2021). Consequently, the most helpful condition for reducing self-focused attention was

## POSTER SESSION 02

the face-to-face style with presenting a self-image group. The results also suggest that when VCP is administered to socially anxious individuals, videoconferencing style with presenting self-image may be more helpful in reducing the self-focused attention scale and taking a DM perspective. Prospects for advancing VCP research appropriate for SAD patients are as follows. This study was a short speech task. Therefore, future research should be conducted with longer, interactive social situations to examine whether trait social anxiety symptoms are altered in ongoing social cases.

# POSTER SESSION 02

Abstract No.: 0744

## Management of Generalized Chronic Periodontitis in Patient with Type 1 and Type 4 Dental Phobia Patient: A Case Report

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### PRESENTING PROBLEM

A 34-year-old male, systemically healthy, non-smoker patient presented himself to the dental office with a chief complaint of gum bleeding, bad breath and teeth sensitivity since four months ago. He was aware of the traditional general recommendation for a regular dental check up every six months (Fee et al., 2020), but the last time he visited a dentist was three years ago and before that, five years ago. The reason was because of his stated dislike of dental procedures. He associated pain with dentistry. Whenever he visited a dentist, he always felt immense pain in many of the dental procedures. He reported that he felt immense pain in most dental procedures that he experienced whenever he visited a dentist which made him reluctant to visit a dentist and avoid dental care.

### CASE CONCEPTUALIZATION AND INTERVENTION

Clinical oral examination revealed significant accumulation of dental plaque, calculus, and external tooth staining as well as gingival inflammation and horizontal bone loss. Dental caries, tooth attrition, gum recession, and teeth malposition were observed. Deposition of plaque, gingival inflammation and external tooth staining were found across both dental arches. The clinical examination also revealed a Plaque Index (PI) = 1,57, Calculus Index (CI) = 1,05, Papilla Bleeding Index (PBI) = 0,85, Oral Hygiene Index Simplified (OHI-S) = 2,62. He was diagnosed for moderate generalized chronic periodontitis according to the American Academy of Periodontology classification 1999. According to the Seattle system criteria of dental phobia, the case met Type 1 Fear of Dental Procedures and Type 4 Distrusts of Dentists criteria (Locker et al., 1999). This was supported by the score from the Modified Dental Anxiety Scale (MDAS) with a score of 22, cut-off score of >19 (Humphris et al., 1995). He was anxious before treatment, in the waiting room, and during treatment. He meets the criteria for specific phobia according to the ICD-11 (6B03), particularly odontophobia and blood phobia (World Health Organization, 2022). His fear of dental procedures may be due to conditioning and traumatic dental experiences (Locker et al., 1999), as he reported to have only had painful dental visits since 16-year-old.

To overcome his dental problems, we followed the recommendation of Minimum Intervention Oral Healthcare (MIOH, Heidari et al., 2022) in delivering the treatment for his periodontitis, scaling and root planing. Rotary drill was not used during the procedure as recommended.

### OUTCOME

Upon questioning after treatment the patient stated that it was painful but it was not as bad as his previous experience. Importantly, the patient felt pain when scaling was conducted at supragingiva in which it is quite rare that people felt pain there. The patient also felt more pain with the ultrasonic scaler, but not so much with the manual scaler. He felt more at ease with the manual scaler. It seemed that vibration in the teeth triggered his anxiety, and he reported that his anxiety increased whenever he heard the ultrasonic scaler even before it touched him. After the dental procedures were completed, the patient felt relieved. While this was a success and the patient agreed that it was a success, the patient was still anxious for the next appointment for control and seemed to avoid scheduling an appointment.

### REVIEW AND EVALUATION

MIOH is beneficial in delivering dental procedures to patients with dental phobia, particularly scaling and root planing. The positive experience distorted his previous beliefs about dentists and dental procedure, and prompted him to correct his beliefs. However, this does not generalize to other dentists and dental procedures. Therefore, MIOH helps in ensuring the success of dental procedures in patients with dental phobia on the day, but does not seem to have a meaningful impact on the dental phobia itself, and a referral to CBT psychotherapists seems to play a key role in the management of dental health of people with dental phobia.

# POSTER SESSION 02

Abstract No.: 0751

## Event Centrality and Bereavement Outcomes among Chinese Shidu Parents: The Mediating Role of Dual Coping Processes

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### INTRODUCTION

Losing the only child (labelled as Shidu in China) is one of the most traumatic lifelong events for parents. Shidu parents are at high risk for developing mental health problems. Prolonged grief (PG) symptoms and posttraumatic stress (PTS) symptoms are common post-bereavement outcomes. Event centrality refers to how central a traumatic event is to one's identity and life story. The higher the centrality of loss, the harder it is for the bereaved to gain a different perspective on the negative event. For Shidu parents, the centrality of bereavement event in self-identity may predict higher levels of prolonged grief symptoms and posttraumatic stress symptoms. Based on the Dual Process Model, this study used a longitudinal design to explore the long-term effect of event centrality on post-bereavement symptoms among Shidu parents. Coping processes are one of the most important mediating mechanisms for the development of PG and PTS symptoms. Furthermore, this study explored the mediating role of dual process coping in between.

### METHOD

The study recruited Shidu parents through Shidu parent support organizations and local governmental organizations in the Northeast and Southeast region of China. Participants were asked to fill out the Demographic Information and Bereavement-Related Information Questionnaire, Centrality of Event Scale, Dual-process Coping Inventory, Prolonged Grief Disorder Scale-Revised, and PTSD Checklist for DSM-5. 260 valid questionnaires were collected in T1. The second assessment took place 5 months later, and 247 valid questionnaires were collected. T tests and correlation analyses were used to explore the characteristics and factors of event centrality of Shidu parents. Structural equation models were conducted to explore the direct effect of event centrality on post-bereavement symptoms and the mediating role of dual process coping in between.

### RESULT

The results of t tests found that the event centrality was relatively stable. The results of direct effect analyses suggested that although event centrality was significantly correlated with PGD and PTSD symptoms at the same time, neither significantly predicted PGD ( $\beta = 0.05$ ,  $p = 0.449$ ) and PTSD symptoms ( $\beta = 0.06$ ,  $p = 0.369$ ) across time, after controlling for baseline symptoms. The results of mediation analyses showed that restoration-oriented coping played a significant mediating role in the effect of event centrality on PGD (95% CI = [0.001,0.05]) and PTSD (95% CI = [0.00,0.07]) symptoms, i.e., event centrality may influence post-bereavement symptoms by affecting restoration-oriented coping. However, the mediating role of loss-oriented coping was not significant.

### CONCLUSION

Although event centrality was found not to have significant direct effect on long-term post-bereavement symptoms among Shidu parents, it could predict prolonged grief and posttraumatic symptoms cross time through restoration-oriented coping. In addition, the study identified that restoration-oriented coping may deserve attention in bereavement research and clinical settings. Establishing positive coping oriented to the present and future may be of more value in psychological interventions for Shidu parents. By focusing on continuing roles, relations, and life goals, Shidu parents may develop a more adaptive approach to life after loss, and thus gradually regain social functioning.

# POSTER SESSION 02

Abstract No.: 0755

## Individuals with Anxious and Autistic Traits Use the Body to Identify Emotions in Others

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Identifying emotions is crucial to navigate our social surroundings. To identify the emotions of others, a range of non-verbal cues can be used. One of the most salient cues is facial expressions. When viewing an emotional face, the gaze typically gravitates towards the eyes- and mouth regions most often, with the eyes being the dominant factor. However, numerous patient groups seem to have aberrant gaze patterns when viewing an emotional face. When presented with emotional facial expressions, individuals with autistic traits and socially anxious individuals tend to spend less time looking at the face when presented with (emotional) faces. In some studies, they find that these groups are purposefully directing the gaze to the background, and in other studies they only avoid the eyes and mouth region. One of the core symptoms in social anxiety disorder is a fear of negative evaluation of others. Therefore, not looking at the emotional faces of others is regarded as an avoidance strategy. However, for individuals with autistic traits, it is thought that they are not interested in the emotions of others and therefore do not tend to look at emotional expressions in faces. However, we want to argue that individuals with autistic traits might not look at the face for the same reason as socially anxious individuals. When these groups were asked why they were not looking at the face, both groups recall avoiding the face because the face is a "judging" indicator of emotions. In a study by Kret et al. (2017), they found that socially anxious individuals spend more time looking at the hands of others than the typical population. We want to argue that even though both these groups avoid the face, they might compensate by looking at emotional expressions of the body. In a new eye-tracking study, individuals are presented with 50 genuine emotional bodily expressions containing the entire body and face collected from social media, with 5 different categories: happy, angry, sad, neutral, fear. We chose to collect videos from the internet as posed bodily expressions often tend to be static or exaggerated. In the first part of the task, participants watch the videos. In the second part, they see the same videos and are asked in a forced choice design which emotion they see in each video. Lastly, participants fill in the Liebowitz Social Anxiety Scale (LSAS) and Autism Quotient (AQ) questionnaire to assess for socially anxious and autistic traits. Data collection is currently still running, but we expect to see higher levels of gaze fixations to body parts for individuals scoring high on the LSAS and/or AQ. Additionally, we will investigate whether more fixations to the body relative to the face results in lower recognition accuracy. The results could indicate whether these groups indeed compensate their avoidance of the face by looking at the body and how effective this strategy is by looking at the recognition accuracy.

Data collection is expected to be finished before June and I therefore expect to present the Results and Discussion during the Congress.

# POSTER SESSION 02

Abstract No.: 0772

## Group Therapy for Patients with Post-Traumatic Stress Disorder

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The current poster presents the results of the follow-up of a therapy group of 8 people suffering from post-traumatic stress disorder.

The group followed theoretical model proposed by Janoff and Bulman, Foa, Ehlers and Clark.

The eight participants were victims of at least one traumatic situation that occurred during their professional activity in a public transport company. The traumatic situation occurred between six months and two years before the beginning of the group.

Among these people, four are bus drivers, two are security agents, and two are station agents.

Three people no longer work, four had taken another job while waiting for the end of the group therapy in the hope they could reintegrate their previous professional activity, only one continues at the same job.

Before group commencement, all participants undergo a clinical interview with a psychiatrist to identify all diagnoses as well as completing a protocol of psychometric scales (PCL 5, BDI, Spielberger STAI).

Group sessions were organized as follows:

- four successive sessions that create group dynamics. These sessions provide trauma psychoeducation, presents the CBT approach, and helps to understand negative reinforcement (avoidance).
- six days are scheduled to focus on work-related conflict situations, self-affirmation, security techniques, relaxation, exposure to feared situations.
- five days are devoted to progressive exposure to the traumatic situation.

During the group sessions and when carrying out the exercises, cognitive restructuring work is systematically put in place.

Exposure exercises to the traumatic situation are carried out in small groups of two to three people with an anxiety evaluation before and during the exercise. Exercises are ceased when anxiety reduction is assessed as adequate and of acceptable duration. The exercises follow progressive exposure techniques that strive for habituation.

This therapy group is carried out over a period of four months.

Psychometric evaluations are completed at therapy initiation, two months, four month, with final assessment at seven months.

The poster provides detailed results on the therapeutic evolution of this group therapy: psychometric evaluation, clinical intervention, and the outcome in terms of return to previous professional activity.

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Foa, E. B., Steketee G, et Rothbaum, B. O. (1989), « Behavioral/cognitive conceptualization of post-traumatic stress disorder », *Behavior Therapy*, 20: 155-176

Janoff-Bulman, R. (1989), « Assumptive world and the stress of traumatic events ; applications of the schema construct », *Social cognition*, 7, 113-136.

# POSTER SESSION 02

Abstract No.: 0773

## **A Randomized Controlled Trial on the Effects of High Intensity Interval Training (HIIT) on Sleep Disorders in Patients with Post-Traumatic Stress Disorder (PTSD)**

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### INTRODUCTION

Sleep disturbances are a central feature of PTSD and preliminary data suggests that sleep disturbances respond to physical activity. High intensity interval training (HIIT) has proven to be effective in reducing a range of mental health symptoms, but little is known about whether a short term HIIT intervention can reduce sleep disturbances in patients with PTSD.

Objective: This study aims to investigate whether a 12-day HIIT intervention reduces objective and subjective sleep disturbances compared to a control condition of low intensity training (LIT) in patients with PTSD.

### METHOD

40 patients with PTSD were randomized to a 12-day training of either HIIT or a control group consisting of LIT. HIIT was implemented on a bicycle ergometer consisting of 20 min training sessions, whereas LIT consisted of mobilization and stability aerobic exercises inspired by yoga. Sleep disturbances were assessed over a 24-day period, from one week before until one week after the exercise program. Measurements were obtained through a standardized sleep log and a waist worn activity monitor (ActiGraph wGT3X-BT) to contrast subjective and objective data. Changes in sleep disturbances were assessed regarding sleep latency, sleep efficiency, wake after sleep onset (WASO), total sleep time (TST) and number of awakenings (NoA). PTSD and depression symptom severity were acquired using clinical interviews and questionnaires.

### RESULTS

results indicate no significant changes in actigraphy or sleep log measures and no significant differences between groups. Estimates of sleep disturbances differ between actigraphy and sleep log regarding sleep latency, NoA, WASO and sleep efficiency. We will further report data regarding the effect of HIIT on PTSD symptom severity and depression symptom severity, overall and between groups.

### DISCUSSION

the hypothesis, that a short term HIIT intervention reduces sleep disturbances in patients with PTSD could not be confirmed. Patients with PTSD seem to overestimate sleep latency and underestimate NoA, WASO and sleep efficiency, when actigraphy data is compared to sleep log. HIIT seems to have no or little effect on overall sleep disturbances in patients with PTSD. HIIT may have an effect on PTSD and depression symptom severity. As it is a low-cost and low risk intervention, it may be useful complementary to other treatments.

Study accepted by the ethics committee of the Charité Universitätsmedizin Berlin (registration number: EA1/200/20) and registered at the German register of clinical trials (DRKS; DRKS00023643; <https://drks.de/search/de/trial/DRKS00023643>). The present project is supported through a Ph.D. scholarship by the Friedrich Ebert Stiftung.



# POSTER SESSION 02

Abstract No.: 0774

## Stability and Prediction of Test Anxiety in University Students – Results of a Longitudinal Study of Freshmen

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### INTRODUCTION

Although test anxiety is a common concern in university psychological counseling, we know little about its time course and about risk factors for high test anxiety shortly before exams. The present study investigates whether test anxiety intensity changes over the course of a semester and how to early identify students' reports of high test anxiety shortly before their exams.

### METHOD

At the beginning and again at the end (shortly before the exams) of the winter semester 2014/2015, we gathered questionnaire data on the test anxiety, depressiveness, and procrastination of 427 university students (several fields of study, 88.3% freshmen, 68.4% female, average age 20.0 years).

### RESULTS

On average, test anxiety increased slightly, but significantly between the beginning and the end of the semester ( $d = 0.28$ ). However, analyses of individual subjects (Reliable Change Indices) revealed that most students' (81.3%) test anxiety levels did not change significantly. 13.8% showed an increase in test anxiety, 4.9% showed a decrease. Before the exams, 26.4% of the female and 23.7% of the male students experienced high or very high test anxiety. Test anxiety and depressiveness at the beginning of the semester predicted test anxiety just prior to the exams. We corroborated the predictors via crossvalidation by deriving the predictors from 80% of the sample and then applying them to the other 20%.

### DISCUSSION

Among most of the students, the intensity of test anxiety remains relatively stable over the course of a semester. Therefore, there is no indication for universal prevention strategies. Higher test anxiety and depressiveness at the beginning of a semester serve as indicators for the early identification of students with higher test anxiety shortly before exams.

This is the reference of the published paper: Sommer, K., Odenwald, M. & Fehm, L. (2022). Stabilität und Prädiktion von Prüfungsangst bei Studierenden: Ergebnisse einer Längsschnitterhebung mit Erstsemestern. *Zeitschrift für Klinische Psychologie und Psychotherapie*, 51 (2), 87-95.

You can find the published paper here: <https://econtent.hogrefe.com/doi/full/10.1026/1616-3443/a000660>

# POSTER SESSION 02

Abstract No.: 0776

## Case Report: Cognitive-Behavioral Therapy for IBS Exacerbated by Inappropriate Opioid Use

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We report cases of patients with chronic IBS who had worsened and prolonged symptoms due to an easy and inappropriate prescription of opioid analgesics and who successfully responded to multidisciplinary treatment, including cognitive-behavioral therapy.

Case 1, 66-year-old female, housewife

She had a history of anxiety disorder and suicide attempts. She uses Bz sleeping pills and SSRIs. She had chronic constipation and used laxatives daily. Three years ago, she visited the emergency room due to sudden severe lower abdominal pain, but gastrointestinal endoscopy revealed no abnormality. Six months later, she was found to have internal hemorrhoids and underwent resection. Her pain worsened after the surgery, and her use of analgesics and anticholinergics increased. Her physician started her on intravenous opioid analgesics, but the opioids had a transient and limited effect, and her symptoms persisted.

The physician then prescribed buprenorphine suppositories instead of intravenous morphine. After being diagnosed with IBS with anxiety at the University Hospital, she was referred to our multidisciplinary pain center and visited the outpatient clinic with her husband. She was able to perform household and daily activities generally in the morning. However, At 7:00 p.m., she suddenly developed severe lower abdominal pain and used buprenorphine suppositories twice a day and then went back to bed. She was anxious and fearful of pain attacks and had an obsession with the thought, "Opioids only have a temporary effect, but I cannot live without opioid suppositories," and her quality of life was deteriorating due to a vicious cycle of these symptoms. Our chronic pain team conducted a 10-week group cognitive-behavioral therapy intervention once a week. We provided a multidisciplinary approach that included pain neuro-education, psycho-education, life monitoring, autonomy training, mindfulness meditation, exercise, cognitive reframing, and behavioral activation. At the end of the program, her pain was still persistent, but opioid use decreased to once a day, and her self-efficacy improved. We continued monthly follow-up medication adjustments, outpatient psycho-education, and mindfulness sessions with the couple. The pain disappeared one year after our intervention, and she was free from opioid use.

Case 2, male, about 70 years old. Pharmacist.

Six years ago, he had rectal cancer and underwent a laparoscopic low anterior resection. A small bowel stoma was constructed for complications of suture failure the day after surgery.

Two years later, she got the stoma closure and balloon dilation for anastomotic stricture. One year ago, lower abdominal pain appeared, but endoscopy, CT, and PET showed no recurrence. A physician prescribed opioids for the pain without improvement.

At another hospital, amitriptyline and Chinese herbal medicine did not show improvement. The patient was referred to our pain center with abdominal pain, constipation, anorexia, weight loss of 10 kg, and worsened fatigue. He was obsessed with the fear that a pain attack might occur at any moment, and he used his judgment to adjust the dosage of opioid medication despite the lack of efficacy of the drugs. We presented a case report of case 1 and recommended tapering off opioids and a multidisciplinary approach. We provided approximately one month for individualized treatment. At discharge, his appetite improved, and he quit opioid use. After one year of outpatient follow-up, his symptoms of pain and constipation resolved, and he returned to a healthy lifestyle.

### DISCUSSION

Anticholinergics and opioids were inappropriately and continuously used by the physician to treat the pain of an anxious IBS patient, forming a vicious cycle of bowel dysfunction-physical and psychological dependence.

Although they did not show a high degree of improvement immediately after the cognitive-behavioral therapy program, their behavior

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was changed, and they became free from opioid dependence, leading to a complete recovery.

The relationship strengthened through psycho-education with the couple, discovering a new purpose in life and social role increased resilience and led to complete recovery.

## CONCLUSION

Appropriate psychological and pharmacological support, a multidisciplinary approach with cognitive-behavioral therapy, and ongoing follow-up are considered vital to IBS. Education on the proper use of analgesics and pain education for the general public and healthcare professionals is essential.

# POSTER SESSION 02

Abstract No.: 0782

## **Relationship between Alcohol Abstinence Efficacy and Relapse Warning Symptoms in Patients with Alcohol Use Disorder: The Moderating Effect of Self-Compassion**

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The purpose of this study was to examine the relationship between alcohol abstinence efficacy, relapse warning symptoms, and self-compassion in patients with alcohol use disorder, and to verify the moderating effect of self-compassion. The subjects of the survey were 214 inpatients with alcohol use disorder (male: 182, female: 32) currently undergoing hospitalization. The scales are the abstinence efficacy scale (Kim Seong-jae, 1996), relapse warning symptom scale (Chae Sook-hee, 2005), and the compassion scale (Cho Hyun-joo et al., 2018).

The main findings of this study are as follows. As a result of correlation analysis, there was a negative correlation between abstinence efficacy and relapse warning symptoms, a positive correlation between abstinence efficacy and self-esteem, and a negative correlation between relapse warning symptoms and self-compassion. As a result of the moderating effect analysis, the moderating effect of benevolence was significant in the relationship between abstinence efficacy and relapse warning symptoms. In addition, in the case of low self-compassion, although abstinence efficacy increased, there was no significant effect on relapse warning symptoms. However, in the case of high self-compassion, as abstinence efficacy increased, relapse warning symptoms significantly decreased. The interaction effect was significant even after controlling for gender, age, education, job status, religion, depression, anxiety, and stress. The results of this study suggest that self-compassion-enhancing treatment is important to increase abstinence efficacy and reduce relapse warning symptoms in alcoholics.

# POSTER SESSION 02

Abstract No.: 0790

## **Choose Your Own Adventure: Volitional Choice Drives the Impact of Exposure to Information about Future Events on Anxiety-Linked Expectancies and Emotion**

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### INTRODUCTION

It is well-established that individuals with elevated anxiety vulnerability experience greater negative expectancies and emotions in the lead up to events, and that these negative expectancies play a critical role in maintaining elevated anxiety vulnerability. Research examining mechanisms underlying anxiety-linked expectancies and emotions has focused on how information about future events is processed, neglecting the mechanisms determining what information is available to be processed. Importantly, the information we are exposed to about future events guides how we expect to feel during the event and the emotions we feel in the lead up to the event. Hence, the current study examined the role of choice bias, a volitional choice to disproportionately access negative, relative to positive information, in the impact of exposure to information about future events on anxiety-linked expectancies and emotion.

### METHOD

US participants varying in anxiety vulnerability were recruited via Amazon's Mechanical Turk (N = 286). Participants were informed the testing session may involve viewing a short video, which could evoke a strong emotional response. Participants were then provided the opportunity to access negative and positive information about the video. However, participants were only permitted to choose half the accessible information. The proportion of negative information chosen provided an index of choice bias. To measure the impact of exposure to information about the video on expectancies and emotions, participants reported how they expected to feel while viewing the video and the emotions they felt prior, during, and post exposure.

### RESULTS

A serial mediation analysis revealed choice bias mediated the association between anxiety vulnerability and emotion, via expectancies (indirect effect  $\beta = .03$ ,  $SE = .01$ ,  $z = 3.07$ ,  $p = .002$ ). As observed, (1) anxiety vulnerability was positively associated with choice bias, (2) choice bias was positively associated with elevations of negative, relative to positive, expectancies, and (3) elevations of negative expectancies were positively associated with elevations of negative, relative to positive, emotion.

### CONCLUSIONS

Elevated anxiety vulnerability is often associated with disruptions to behavioural and cognitive functioning putting individuals at risk of deficits across the domains of psychological, social, and physical wellbeing. To reduce these impacts, it is important to understand the cognitive mechanisms underlying anxiety vulnerability. To the best of our knowledge, the current study is the first to investigate the role of volitional choice in information processing in the lead up to events and illustrated how this choice bias serves to maintain elevated anxiety vulnerability through driving core features of anxiety vulnerability, i.e., expectancies and emotion, in the lead up to events. The findings of the current study have important theoretical and clinical implications for treating elevated anxiety vulnerability.

# POSTER SESSION 02

Abstract No.: 0804

## Development and Preliminary Validation of Socio-Sexual Intervention Program for Adolescents with Developmental Disorders

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Sex is a basic human need, considered a natural component of life and a significant development aspect. Research has shown that people with developmental disorders are not different from people without disabilities in their interests in sex and dating and regard sexual relationships as essential to life. Therefore, they need to be recognized as social and sexual beings as people without disabilities and learn to relate healthily and engage in appropriate sexual behavior. However, in South Korea, most intervention programs for the sexual development of individuals with developmental disorders still focus on sex education that deals with sex-related knowledge and attitudes. In this study, we developed a socio-sexual intervention program based on cognitive behavioral therapy for adolescents with developmental disorders. The program consists of 10 sessions, and the treatment effect will be confirmed by examining the level of attitude, cognitive and behavioral change in terms of sexual and social aspects. The program aimed to help understand the changes in one's body and mind during adolescence, recognize social boundaries, and learn appropriate ways to express intimacy. The program was conducted by two therapists once a week for 50 minutes and composed of multi-modules, including education, presentation, modeling, and role-play. The main content of the program comprises understanding oneself (self-identity, emotions and desires, emotional regulation, changes in the body and mind of puberty) and social relationships (recognition of interpersonal distance, setting appropriate boundaries, desirable social and sexual behaviors). The program was conducted with 5 adolescents aged 11-17 (age M = 14, 3 males, 2 females) with mild intellectual disability or borderline intelligence. At session 1, measure for psychosocial variables were administered. The measures were Youth Self Report (YSR; Achenbach, 1991, M = 57.6, SD = 8.34), Concise Measure of Subjective Well-Being (COMOSWB; Suh & Koo, 2011, M = 23.2, SD = 7.29), Rosenberg Self-Esteem Scale (RSES, Rosenberg, 1965, M = 21.4, SD = 3.91), Friendship Quality Scale (FQS, Bukowski, Hoza and Boivin, 1994, M = 45.8, SD = 12.39), Sexual Knowledge (SK, Lee, 2012, M = 44.6, SD = 8.29) for adolescents and the Child Behavior Checklist (CBCL, Achenbach and Edelbrock, 1983, M = 63, SD = 5.74) for their parents. In addition, a 15-minute interview was conducted using the Socio-Sexual Knowledge & Attitude Test (SSKA, Wish & Fiechtel, 1980) to ask adolescents about their sexual knowledge and attitudes. The questionnaires and interviews were to be implemented at session 1 (pre), session 10 (post), and follow-up session (1 month after session 10). A control group of adolescents with developmental disorders was recruited, and same scales and interviews were conducted online during the same period. The study is still in progress, and the data collection will be completed in May 2023. It is expected that the results of this study will provide implications for effective interventions for the social and sexual development of adolescents with developmental disorders.

# POSTER SESSION 02

Abstract No.: 0814

## The Effect of Autism Spectrum Disorder Characteristics Combinations on Self-Esteem in Japanese University Students

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### INTRODUCTION

In recent years, autism spectrum disorder (ASD) has been presented as a background factor for various problems in individuals with higher education such as universities (Maeda & Sato, 2018). The relationship between self-esteem and mental health has been examined as a factor for improving the mental health of individuals with ASD. Overseas studies have shown that individuals with ASD have lower self-esteem than those without ASD (van er Cruijnsen R, Boyer BE, 2021; Sunagawa, 2015). However, autism is understood to be a spectrum, any individuals with autism are likely to exhibit some of the characteristics associated with it. Furthermore, it is unclear which combinations of ASD characteristics affect self-esteem. This study aimed to classify ASD characteristics and compare the self-esteem of college students in each group.

### METHOD

A questionnaire survey was administered to 102 students (43 males and 59 females) at a University in Japan, using a web-based survey with Microsoft Form and a questionnaire distributed in face-to-face classes. The Autism-Spectrum Quotient Japanese version (AQ-J; Wakabayashi, Tojo, Baron-Cohen, S. & Wheelwright, S. 2004) and the Rosenberg Self-Esteem Scale Japanese version (RSES-J; Sakurai, 2000) were used as assessment instruments. The AQ-J consists of 10 questions each on social skills, switching attention, attention to detail, communication, and imagination, for a total of 50 items. The RSES-J consists of 10 items that measure degree of self-esteem. Hierarchical cluster analysis was conducted to typify the survey participants. After cluster analysis, one-way analysis of variance was performed for self-esteem scores to examine the differences among the clusters.

### RESULTS

Hierarchical cluster analysis (Euclidean distance with raw data, Ward's method) was performed to classify AQ-J scores. Four cluster solutions were extracted with reference to dendrogram. The first cluster was characterized by low social skills, attention switching, and communication. The second cluster was characterized by low attention to detail. The third cluster was characterized by high attention to detail. Finally, the fourth cluster was characterized by high social and communication skills. Based on the characteristics of each cluster, the first cluster was named the mild ASD characteristic group, the second cluster was named the indifferent group, the third cluster was named the neurotic group, and the fourth cluster was named the ASD-like group. A one-factor, four-level analysis of variance showed a significant main effect of group ( $F(3, 98) = 5.54, p = .001, \eta^2 = .145$ ). Multiple comparisons showed significant differences between the mild ASD characteristic group and the indifferent group ( $t(98) = 3.10, p = .013$ ), the mild ASD characteristic group and the ASD-like group ( $t(98) = 3.47, p = .005$ ).

### DISCUSSION

The purpose of this study was to classify ASD characteristics in university students and to compare self-esteem across the groups. The results of the analysis showed that the main effect of group was significant. Multiple comparisons revealed significant differences in self-esteem between the mild ASD characteristic group and the indifferent group, and between the mild ASD characteristic group and the ASD-like group. The difference in self-esteem between the mild ASD characteristic group and the indifferent group is because the indifferent group does not pay attention to details and is prone to making careless mistakes, resulting in lower self-esteem. The difference in self-esteem between the mild ASD characteristic group and the ASD-like group can be attributed to the fact that the ASD-like group has poor communication skills and is not good at building amicable relationships, which results in low self-esteem.

# POSTER SESSION 02

Abstract No.: 0815

## The Relations between Covert Narcissism and Smartphone Overdependence for KMA Cadets: The Mediating Effect of Anger-in and Self-Control

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### INTRODUCTION

The purpose of this study was to examine the relationships among the 4 variables (covert narcissism, smartphone overdependence, anger-in and self-control) and to verify the mediating effect of anger-in and self-control in the relationship between covert narcissism and smartphone overdependence in KMA cadets.

### METHODS

The self-report questionnaires were administered to 1,054 cadets (934 men and 120 women) in KMA. The questionnaires used in this study were the Covert Narcissism Scale (CNS; Akhtar and Thompson, 1982), the State-Trait Anger Expression Inventory-Korean version (STAXI-K; Spielberger et al., 1988), the Korean version of the Brief Self-Control Scale (K-BSCS; Tangney et al., 2004), and the Smartphone Overdependence Scale (SOS; Korean National Information Society Agency, 2022). The CNS, a 45-item scale rated on a 5-point Likert scale, consists of covert narcissism factors (hypersensitive/vulnerable, unstable goal-seeking, and timid/lacking confidence subscales) and common factors of narcissism (grandiose/exhibitionistic and exploitative subscales). The STAXI-K, a 24-item scale rated on a 5-point Likert scale, consists of three subscales of eight items each, namely, anger in, anger out, and anger control. The K-BSCS, which is a 5-point scale of 11 items and is composed of self-discipline and concentration. The SOS is designed to measure the level of smartphone overdependence using a 4 point scale of 10-item questionnaire composed of failure of accommodation, salience, and problematic outcome. SPSS 27.0, AMOS 24.0 and Mplus 7.0 were used for data analysis. To verify the research model results, Structural Equation Modeling (SEM) was used. Also, to identify the indirect effects, the bootstrapping method was used. To analyse and compare the data, two Structural Equation Models that were anger-in and self-control as mediating variables in the relationship between covert narcissism and smartphone overdependence were established.

### RESULTS

The results of this study were as follows: First, smartphone overdependence showed a significant positive correlation with covert narcissism and anger-in, whereas it showed a significant negative correlation with self-control. Second, the research model results indicated good fit indices ( $\chi^2(54)=419.07, p<.001, CFI=.95, TLI=.926, RMSEA=.08$ ). Third, covert narcissism led to lower self-control,  $\beta=-.51, p<.001$ , and higher anger-in,  $\beta=.80, p<.001$ , which in turn contributed to smartphone overdependence,  $\beta=-.69, p<.001$ , and  $\beta=.14, p<.05$ , respectively. Moreover, higher levels of anger-in were associated with lower self-control,  $\beta=-.23, p<.001$ . Fourth, there were two significant indirect effects, namely, covert narcissism on smartphone overdependence through self-control,  $\beta=.35, p<.01$ ; anger-in and self-control,  $\beta=.13, p<.01$ .

### CONCLUSIONS

The mediating effect implies that a higher level of covert narcissism causes lower levels of self-control and a higher tendency towards smartphone overdependence. Additionally, the sequential mediating effect suggests that a higher level of covert narcissism leads to higher levels of anger-in and smartphone overdependence due to lower self-control. In terms of counseling practice, the results of this study will be useful for understanding covert narcissistic KMA cadets who has high level of anger-in and low level of self-control, by understanding better how their emotional and cognitive processes unfold. In addition, the implications of this study will help counselors to plan treatment interventions in order to control smartphone overdependence of covert narcissistic cadets. Limitations of this study and suggestions for the future were discussed.



# POSTER SESSION 02

Abstract No.: 0817

## Effect of Masks on Facial Expression Recognition to College Students with Interpersonal Trauma

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### INTRODUCTION

Depending on the type of emotion, the importance of facial areas (e.g., the eyes and the mouth) contributing to the recognition of each emotion may differ. The role of the mouth area is significant for happy facial expressions (Fraser et al., 1990; Wegrzyn et al., 2017), and eye areas play an essential role in anger, fear, and sadness (Wegrzyn et al., 2017). Since the COVID-19 pandemic, we have worn masks, which could interfere with recognizing positive facial expressions by blocking information at the bottom of the face. People who have experienced interpersonal trauma are sensitive to the facial expressions of others and can recognize subtle negative cues from others' facial expressions and interpret them as excessively threatening. In the present study, we investigated the effect of masks and types of emotions (e.g., happy, angry, afraid, and sad) on the recognition of morphed facial expressions and ratings of interpersonal perception for college students who have experienced interpersonal trauma.

### METHOD

A screening questionnaire consisting of an interpersonal trauma checklist, Impact Event Scale-Revised (IES-R-K), and Patient Health Questionnaire-9 (PHQ-9) was conducted on a total of 104 undergraduates. A total of 42 participants who met the screening criteria were assigned to the experimental group ( $n = 22$ ) who experienced interpersonal trauma and the control group ( $n = 20$ ) to participate in the experiment. Excluding 8 participants that did not meet ideal experimental criteria, data from 34 participants from the experimental ( $n = 14$ ) and control groups ( $n = 20$ ) were used for the statistical analysis. All participants performed an emotional evaluation task measuring emotional recognition accuracy and sensitivity, and rated trustworthiness, warmth, obedience, and accessibility about models with or without masks in interpersonal perception tasks.

### RESULTS

First, the emotional recognition accuracy was lower for morphed facial expressions wearing masks compared to those not wearing masks ( $p = .001$ ), and this result was particularly significant for the sad expression ( $p < .001$ ). The experimental group showed lower emotional recognition accuracy than the control group ( $p = .021$ ), but the three-way interaction of the mask  $\times$  emotion  $\times$  group for accuracy was not significant. Second, the control group showed that the emotional recognition sensitivity was lower for morphed facial expressions wearing masks compared to those not wearing masks ( $p = 0.01$ ), but the effects of the mask on emotional recognition sensitivity were not significant in the experimental group. The effects of the mask on emotional recognition sensitivity were shown for sad ( $p < .01$ ) and happy facial expressions ( $p < .01$ ), but not for anger and fear facial expressions. The three-way interaction of the mask  $\times$  emotion  $\times$  group for sensitivity was not significant. Third, models wearing masks in comparison to those not wearing masks were rated more negatively in terms of trustworthiness ( $p < .001$ ), warmth ( $p < .001$ ), obedience ( $p < .001$ ), and accessibility ( $p < .001$ ), but the interaction of the mask  $\times$  group for interpersonal perception was not significant.

### CONCLUSIONS

Wearing a mask reduced the accuracy and sensitivity of emotional perception to facial expressions compared to not wearing them. Still, those who experienced interpersonal trauma did not show decreased sensitivity to emotional perception related to wearing masks observed in the control group. In addition, there were differences in the accuracy and sensitivity of emotional recognition according to mask-wearing, and types of emotions, especially the tendency to perceive masked sadness more inaccurately and slowly, and the delay in response speed in happiness and sadness expressions did not appear in anger and fear. Finally, we found that people want to be more trustworthy, warmer, obedient, and closer to their unmasked counterparts than their masked counterparts.

# POSTER SESSION 02

Abstract No.: 0818

## The Effects of Shifting Imagery Perspective of Past and Future Events on Emotions in Trauma-Exposed Adults

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### INTRODUCTION

Mental time travel is defined by the capacity to mentally reconstruct personal events from the past and imagine possible future scenarios (Suddendorf & Corballis, 1997). Imagining the future is not only related to memory from the past, but can actually be a representation of memory. Individuals with posttraumatic stress disorder (PTSD) get stuck in trauma memory from the past and often cannot imagine their future. Mental imagery can induce both stronger affective responses and greater sensory involvement than verbal processing of equivalent material (Holmes et al. 2006, 2008, 2009; Nelis et al. 2012), and intrusive images in PTSD are vivid and distressing (Brewin et al., 2010). The visual perspective such as a first-person (field) or a third-person (observer) perspective is not fixed, and it can be intentionally shifted for a special purpose (e.g., emotion regulation). The purpose of this study was to examine whether shifting a visual perspective could provide benefits as an emotion regulation strategy.

### METHOD

Participants were categorized by trauma group (n=16) or control group (n=17) according to their scores in the Impact of Event Scale-Revised (Weiss & Marmar, 1997) and the Patient Health Questionnaire (Kroenke, Spitzer, & Williams, 2001). Participants were asked to visit two times at one week intervals and recall an event that occurred for the past one year or to imagine an event that will occur within one year. For each participant, the order of recalling or imagining the positive, negative, past, and future imagery was randomized. This study was designed as a mixed design of tense (2: past, future) × imagery perspective (2: observer, field) × group (2: trauma, control), in which tense and imagery perspective were within-subject variables, and group was a between-subject variable. Outcome variables were positive and negative affect, the vividness of imagery, and psychological distance.

### RESULT

The analysis results are as follows. First, there were no significant differences between groups and tense in positive and negative affect, vividness, and psychological distance in the negative imagery condition. Second, the trauma group reported more negative affect ( $t = -2.17, p < .05$ ), less vividness ( $t = 4.00, p < .01$ ), and more distance ( $t = 3.28, p < .01$ ) in the positive past imagery condition, and less vividness ( $t = 2.05, p < .05$ ) in the positive future imagery condition, compared to the control group. Third, the negative imagery condition showed that the three-way interactions of tense × perspective × group for positive and negative affect, vividness, and psychological distance were not significant. Fourth, the tendency of the three-way interaction of the tense × perspective × group for psychological distance was suggested in the positive imagery condition [ $F(1,31) = 2.95, p = .096$ ]. Compared to the control group, the trauma group perceived a positive past event as more distant from the observer perspective, but there was no significant difference between groups when having shifted from observer to field perspective.

### DISCUSSION

The result of this study suggests that the shifting perspective in the case of positive past imagery from an observer perspective to a field perspective can be effective as an emotion regulation strategy for trauma exposed individuals. Although the potential effects of focusing on positive memory or future thinking were relatively unexplored compared to intervening in traumatic memory, this study suggests that training of positive and/or future imagery can be useful as an emotion regulation and therapeutic strategy for individuals with PTSD.

# POSTER SESSION 02

Abstract No.: 0820

## A Three-Wave Longitudinal Survey to Examine How Self-Focused Attention and Metacognitive Beliefs Affect Social Anxiety

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### INTRODUCTION

Self-focused attention (SFA), in which attention is focused on negative inner cues such as thoughts, self-imagery by observer perspective, and bodily sensations, is a central maintenance factor of social anxiety. According to the theory of metacognitive therapy (Wells & Matthews, 1994), SFA is caused or aggravated by psychological strategies or appraisals expressed in individuals' metacognitive beliefs (e.g., "SFA is beneficial for preventing failure", "I cannot help attending to my body even if I do not intend to do so"). However, the causal relationship between SFA and metacognition on social anxiety symptoms is not clear. We conducted a three-wave longitudinal survey to examine how SFA and metacognitive beliefs affect social anxiety (social fear, avoidance, fear of negative evaluation).

### METHOD

A total of 319 individuals completed these questionnaires three times, three months apart: a Japanese version of the Liebowitz Social Anxiety Scale (LSAS; Asakura et al., 2002) to measure social fear and avoidance (LSAS-F and LSAS-A); the Short Fear of Negative Evaluation Scale (SFNE; Sasagawa et al., 2004) to measure the fear of negative evaluation; the Mental Perspective Scale for SAD (MPS; Tomita et al., 2018) to measure the observer's perspective of SFA (MPS-O); the Focused Attention Scale (FAS; Yamada et al., 2002) to measure SFA for body sensation (FAS-self); and the Metacognition about Focused Attention in Social Anxiety Questionnaire (MFAQ; Tomita et al., 2020) to measure positive and negative metacognitive beliefs about SFA (P-SFA and N-SFA). For variables that showed a significant association in the correlation analysis, mediation analysis was performed using longitudinal data from three time points.

### RESULTS

Since P-SFA (T1 and T2) was not related to LSAS or SFNE (T3), mediation analysis was not conducted. The predictors were FAS-self, MPS-O, and N-SFA (each T1); the outcomes were LSAS-F, LSAS-A, and SFNE (each T3); and the mediators were FAS-self, MPS-O, and N-SFA (each T2). The relationship between FAS-self and SFNE was fully mediated by N-SFA, whereas the relationship between N-SFA and SFNE was partly mediated by FAS-self. N-SFA fully mediated the relationships between FAS-self and LSAS-F and between FAS-self and LSAS-A. However, FAS-self did not mediate the relationships between N-SFA and LSAS-F and between N-SFA and LSAS-A. MPS-O partly mediated the relationships between N-SFA and SFNE and between N-SFA and LSAS-F. Then, N-SFA partly mediated the relationships between MPS-O and SFNE and between MPS-O and LSAS-F. Although N-SFA fully mediated the relationship between MPS-O and LSAS-A, MPS-O did not mediate between N-SFA and LSAS-A.

### DISCUSSION

It was suggested that the causal direction and strength of SFA and negative metacognitive belief differed depending on whether the outcome was fear of social situations, avoidance, or fear of negative evaluation. Although SFA and negative metacognitive belief affects social anxiety symptoms in both directions, it is supposed that the increase in negative metacognitive beliefs affects symptoms more than SFA, based on the size of the partial regression coefficient and the test results of the indirect effect. In particular, it was suggested that the degree of avoidance of social situations was more influenced by negative metacognitive beliefs about SFA than SFA itself. Avoidance might be strengthened by the belief that one is unable to control their own attention, rather than by actually focusing on oneself.

# POSTER SESSION 02

Abstract No.: 0821

## A Latent Profile Analysis of the Health Locus of Control and Subjective Health Status during the Early COVID-19 Pandemic

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### INTRODUCTION

Our beliefs about the connection between our actions and health outcomes (Skinner, 1996) can be classified into three categories, i.e., internal control, control by powerful others, and chance control. There might be differences in the levels of anxiety, COVID-19 infection fear and perceived risk as a function of subjective health status and perceived control over COVID-19 situations. The purposes of this study were to identify the unique response patterns (latent profiles) that underlie health locus of control (HLC) and subjective health status during the early days of the COVID-19 pandemic, assess the demographic characteristics that predict latent group membership and compare anxiety, infection fear and perceived risk between latent groups.

### METHOD

Participants were 255 healthy adults who had not been tested positive for COVID-19 (including their family members or close friends) and had no experience of self-quarantine. The period of survey was November 10th-17th, 2020, when the number of confirmed COVID-19 cases in Korea increased again after the second wave of infections. This study applied latent profile analysis to identify types of health-related attitude using the Internal Powerful Others and Chance (IPC) scale and subjective health status. The higher the subjective health status score, the poorer the individual's health. Participants completed a series of self-report questionnaires including the Perceived Risk of the COVID-19 (Zhao, Leiserowitz, Maibach, Roser-Renouf, 2011), Fear of the COVID-19 (Hyun et al., 2021), and Generalized Anxiety Disorder 7-item scale (GAD-7; Spitzer et al., 2006).

### RESULTS

Participants were classified into three latent classes; 1) healthy group with high internal and low external control (class 1, 25%), 2) less healthy group with similar internal and external controls (class 2, 68%), and 3) less healthy group with low internal and high external control (class 3, 7%). None of the demographic characteristics (e.g., gender, age, the number of household members and living with older family members) predicted latent group membership. The highest level of the perceived risk was class 3, followed by class 1 and class 2. And the highest levels of the infection fear and anxiety were class 3, followed by class 2 and class 1.

### CONCLUSIONS

This study investigated types of health-related attitudes focusing on locus of control and subjective health status. The results suggest that individuals with an internal locus of control and low subjective health status can usually manage stressful events such as the COVID-19 pandemic and regulate their negative emotion while individuals with an external locus of control can perceive excessive danger and experience high level of fear and anxiety. These results suggest that preventive approaches that increase internal control (e.g., cognitive-behavioral therapy) can help decrease fear, anxiety and catastrophic thoughts in the early stages of the pandemic.

# POSTER SESSION 02

Abstract No.: 0823

## Respiratory Stress Response as a Criterion for Personalizing Transdiagnostic Treatment of Affective Disorders

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### BACKGROUND

Respiratory adjustments have long been recognized as concomitants of the psychobiological stress response. Anxiety disorders and panic in particular have been linked to excessive ventilation in confrontation with feared stimuli, with a potential role of these responses in maintaining the disorder through generation of feared symptoms. On the other hand, depression has been linked to a general hyporesponsiveness to stressful challenges. In this proof-of-concept study, we sought to study a possible use of ventilatory adjustments to a laboratory stress task for predicting success in treatment specialized to target negative versus positive affect.

### METHODS

Patients from the community seeking help for emotional distress participated in a clinical trial of two forms of transdiagnostic cognitive behavioral treatment (CBT), positive affect treatment (PAT, including behavioral activation, focus of positive cognitions, compassion training) or negative affect treatment (NAT, including cognitive restructuring, exposure, breathing training). Initially, patients were administered a mental arithmetic test with noise distraction and fictive performance norm. Respiratory inductive plethysmography captured timing and volume parameters of breathing during baseline, mental arithmetic challenge, and recovery. Response to challenge and recovery, as well as outcomes of the subsequent 15-week treatment were studied in their association with the Depression Anxiety Stress Scale (DASS, Lovibond & Lovibond, 1995).

### RESULTS

Higher DASS Stress and Anxiety subscale scores were significantly associated with stronger minute ventilation during and after the mental arithmetic task. Elevations were particularly seen during recovery from the task. Patients who responded with stronger elevations of minute ventilation showed more favorable improvement during therapy with NAT than PAT, demonstrating more rapid reductions in negative affect, anxiety, and stress.

### CONCLUSION

Respiratory stress responses, especially those that indicate overbreathing, can identify patients that profit from a treatment targeting negative affect, and may therefore be useful in determining differential suitability of transdiagnostic CBT.

# POSTER SESSION 02

Abstract No.: 0824

## Examination of the Clinical Picture of Social Isolation Using Network Analysis

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Social isolation can adversely affect the mind and body (Tanaka et al., 2020). However, although it has been mainly studied in the elderly, the concept of social isolation has not yet been fully established. The prolonged 2019 coronavirus disease (COVID-19) pandemic made maintaining human connections difficult, and social isolation has become an increasingly serious problem and a widely [AU1] recognized social issue (Fujimori, 2022). Though the importance of reducing social isolation has been recognized, efforts to address this issue have been limited to providing individual support, and preventive interventions have not been widely implemented. Therefore, this study aimed to explore effective support methods for socially isolated individuals by examining their clinical profiles through network analysis. The analysis included 3,473 Japanese individuals [AU2] (1,906 men, 1,551 women, and 16 others; mean age:  $50.13 \pm 10.73$  years) who responded to the survey questionnaire without incomplete or fraudulent answers. The present study used some data from the large-scale "Questionnaire on Socially Isolated Persons" survey. The survey items used in the analysis were the Brief Inventory of Social Support Exchange Network [AU3] (BISSEN), the Lubben Social Network Scale (short version) (LSNS-6), perceptions of support services, the Scale for Measuring Help-Seeking Styles, the Interpersonal Needs Questionnaire-15 (short version)(INQ-15), the Rosenberg Self Esteem Scale, the Rating Hypersensitivity – Grandiosity narcissism scale, the Satisfaction With Life Scale (SWLS), the Fear of COVID-19 Scale (FCV-19), and the 25-item Hikikomori Questionnaire (HQ-25)[AU4].

Hierarchical multiple regression analysis using the stepwise method suggested that the variables predicting social isolation were, in descending order of predictive power, social support from others, withdrawal, social support for others, diminished sense of belonging, perceived burden, hyper-evaluative narcissism, and subjective well-being. The network analysis also suggested that a diminished sense of belonging and withdrawal were central to the social isolation network and that relationships with friends predicted social isolation better than relationships with family and relatives. Furthermore, the results of a network analysis using LSNS-6 scores, where participants were divided into two groups according to their social isolation status, showed that the high social isolation group showed a stronger negative association between a diminished sense of belonging and subjective well-being and a stronger negative association between social withdrawal and relationships with friends.

The study results suggest that a weak sense of community belonging is linked to withdrawal and low subjective well-being and that relationships with friends are more predictive of social isolation than relationships with family and relatives. Therefore, it is possible that increasing socially isolated individuals' sense of belonging to a community and improving their relationships with friends may be important for supporting them.

# POSTER SESSION 02

Abstract No.: 0826

## A Study on the Process of Panic Disorder in an Adolescent Client

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### INTRODUCTION

This study examined a family case for a client with panic disorder to explore family, school, and individual factors associated with the developmental stages of the disorder.

### METHOD

This study conceptualized the meanings revealed through therapy video recordings, transcripts, and notes to understand the contents related to the research question. In addition, by continuously comparing these concepts, we classified the concepts into categories by grouping similar concepts, and visualized the findings using a network (Miles et al., 2020).

### RESULTS

The factors associated with panic disorder by developmental stages of panic disorder were as follows. First, the factors from the infancy and toddlerhood included: (1) the client's individual factors including such as insecure attachment and fear of abandonment, and (2) family factors including parental insecure attachment, parental conflict, mother's emotional instability, and conditional parenting attitudes. Second, factors from the school age included: (1) individual factors including emotional repression, the good child complex, loss of relationships, (2) family factors, including increased maternal stress, dismissive mother, maternal coercion and interference, sibling rivalry, and (3) school factors including loss of friends due to forced school transfer. Third, factors from the adolescence were: (1) individual factors including helplessness and over-inhibition, loss of friends, re-experiencing of the fear of abandonment, (2) family factor including deterioration of maternal health, and (3) school factors including maladjustment in peer relationships, unwanted transfer, and a friend's lies. In particular, family factors and school factors were found to have influenced the individual factors of the client.

### CONCLUSION

This explored the individual, family, and school factors associated with the onset of panic disorder in an adolescent client according the developmental stages. Based on our findings, we suggest that family therapists to examine the factors associated with different developmental stages when working with clients patients with panic disorder.

# POSTER SESSION 02

Abstract No.: 0830

## Effect of Visual Search Training on Gaze Behavior during Public Speaking in Socially Anxious Individuals

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### OBJECTIVE

The efficacy of attentional bias modification (ABM) has been widely examined in anxious individuals although the results were mixed and inconclusive. Most ABM studies aimed at training participants to avoid threat. However, the efficacy of ABM that aims to facilitate attentional allocation to positive stimuli has been less investigated. This study aimed to investigate whether visual search training can facilitate socially anxious individuals to voluntarily allocate more attention towards positive social feedback during a public speaking situation.

### METHOD

Fifty-eight socially anxious individuals (with a score of 21 or more on the Social Interaction Phobia Scale) were randomly assigned to either the searching for positive (SP) group ( $n = 29$ ,  $M_{age} = 20.45$ ,  $SD = 1.24$ ) or the control training (CT) group ( $n = 29$ ,  $M_{age} = 20.48$ ,  $SD = 1.64$ ). The visual search training program contained four training sessions (two sessions per week). Participants were asked to search for a target among distractors in the visual search training task. For the SP group, participants were instructed to search for a happy target face among neutral distractor faces. For the CT group, participants were instructed to search for a target face with unique emotional expression that was different from which of distractors (e.g., an angry target face among happy faces). Before and after the completion of the visual search training program, participants completed a battery of questionnaires including the Social Interaction Anxiety Scale, Social Phobia Scale, Brief Fear of Negative Evaluation Scale, State Trait Anxiety Inventory-Trait, and Beck Depression Inventory II. They also completed a public speaking task in which participants' eye movement were recorded before and after the training program.

### RESULTS

Fourteen participants' eye movement data were excluded because their percentages of valid fixations was below 50%. Therefore, eye movement data obtained from only 44 participants (SP group,  $n = 22$ ; CT group,  $n = 22$ ) were included in the data analysis. The SP group demonstrated a significant increase in the proportion of fixations for positive audience feedback ( $t(21) = 3.56$ ,  $p = .002$ ;  $M_{pre} = 27.14\%$ ,  $M_{post} = 45.15\%$ ) and a significant reduction in the proportion of fixations for negative audience feedback ( $t(21) = -2.96$ ,  $p = .008$ ;  $M_{pre} = 30.36\%$ ,  $M_{post} = 18.45\%$ ) after the visual search training. On the contrary, the CT group showed no significant change in the proportion of fixations for audience feedback after the visual search training. However, participants in both groups showed no significant changes in levels of social anxiety, trait anxiety, and depressive symptoms after the visual search training.

### DISCUSSION

This study suggests that training socially anxious individuals to actively search for positive stimuli can increase their fixations on positive feedback and decrease fixations on negative feedback during a public speaking situation. Unexpectedly, visual search training had no significant impacts on levels of social anxiety.



# POSTER SESSION 02

Abstract No.: 0831

## Comparing Symptom Structure of Panic Disorder before and during the COVID-19 Pandemic: A Network Analysis

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### BACKGROUND

The coronavirus disease 2019 (COVID-19) pandemic situation has posed a tremendous risk of anxiety disorder, especially for panic disorder (PD) (Georgieva et al., 2021; Kim et al., 2022). In fact, evidence showed that PD has increased by 46.7% in South Korea after COVID-19 (Health Insurance Review & Assessment Service of Korea, 2022). Despite the growing risk of PD, to our knowledge, there is only a limited body of literature which addresses the relationship between COVID-19 and PD. However, since both COVID-19 and PD are commonly associated with respiratory symptoms there might be a unique relationship between them (Javelot & Weiner, 2021). Furthermore, since fear of COVID-19 has widely been associated with general health anxiety (Akbari et al., 2021), it may interact with or elevate individuals' pre-existing fear of physical symptoms, one of the key mechanisms of PD. To shed light on PD symptoms in the context of COVID-19, we examined the network consisting of panic symptom severity, and the risk factors, namely, trait and state anxiety, and anxiety sensitivity using network analysis. Also, to examine the relationship between PD and COVID-19, we compared the network structures composed of the aforementioned variables before and during the COVID-19 pandemic.

### METHODS

This study included patients who were diagnosed with PD according to DSM-5 from the psychiatric outpatient clinic of the Gangnam Severance Hospital. A total of 425 patients (287 before COVID-19 with 138 during COVID-19) met eligibility with a completed collection of variables of interest. The Panic Disorder Severity Scale (PDSS; Shear et al., 1997), Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007), and State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983) were conducted on all patients. The polychoric network in all nodes was calculated based on the Graphical Gaussian Model with the graphic least absolute shrinkage and selection operator and Extended Bayesian Information Criterion model using qgraph packages. The Exploratory Graph Analysis using the Walktrap algorithm was conducted to detect communities. To quantify the importance of individual nodes in the network, two-step and bridge expected influence (EI), which represent promising treatment targets in psychopathology, was computed using qgraph and networktools package respectively. A case-dropping bootstrap procedure was implemented using the bootnet package to further ensure the validity of the centrality. The stability of all centrality was estimated by calculating the correlation stability (CS) coefficient. Lastly, The Network Comparison Test was performed to investigate differences in network structure between groups using NetworkComparisonTest package.

### RESULTS

No significant differences were found in demographic and clinical comorbidity status of patients between the pre-COVID-19 and COVID-19 periods. Both networks showed that 17 of 66 possible edges (25.7%) were not zero, however, significant differences in overall network structure ( $M = 0.49$ ,  $p = .000$ ) and global strength ( $S = 3.34$ ,  $p = .017$ ) were found. STAI-S and T (State and trait anxiety) and PDSS7 (Impairment in social functioning) were identified as key bridge symptoms in pre-COVID-19, whereas, ASI-3-1 (Fear of physical concerns) and ASI-3-3 (Fear of cognitive concerns) were found to bridge symptoms in the COVID-19 network.

### CONCLUSIONS

Given the role of anxiety in the etiology of PD and fear of COVID-19-related physical symptoms among PD patients, findings may indicate that COVID-19 has changed the patterns and structure of PD symptoms in a more complex way. Future research in the post-COVID-19 era should consider the psychiatric sequelae of the current pandemic on the diagnosis and treatment.

# POSTER SESSION 02

Abstract No.: 0833

## Unraveling the Complex Interplay between Maladaptive Emotion Regulation and Alcohol Use in Social Anxiety Disorder: Application of Dynamic Structural Equation Modeling (DSEM)

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### INTRODUCTION

Social anxiety disorder (SAD) and alcohol-related problems are closely related to one another. The lifetime prevalence of alcohol use disorder among SAD patients is more than twice as high as that of the general population. The co-occurrence of SAD and alcohol use problems is linked to various negative outcomes of SAD, such as greater resistance to treatment, and a decreased likelihood of recovery. Recent evidence suggests that maladaptive emotion regulation strategies may contribute to the development of co-occurring alcohol use symptoms in SAD. Furthermore, studies have shown that problematic alcohol use can also disrupt the regulation of mood. However, previous studies have primarily focused on assessing only one direction of the relationship. This makes it difficult to determine which symptom serves as a precursor to the other. The present study to the best of our knowledge was the first to examine the bidirectional relationships between maladaptive emotion regulation and alcohol use in individuals with SAD.

### METHOD

We collected data from 66 South Korean students (45 women and 21 men) who underwent diagnostic screening for SAD. Using a smartphone-based ecological momentary assessment, participants reported the frequency of their usage of maladaptive emotion regulation strategies (i.e., avoidance, rumination, and suppression), attention/awareness and clarity of their emotions, and drinking behaviors, four times a day, for 14 days. We utilized dynamic structural equation modeling (DSEM) to analyze cross-lagged effects between maladaptive emotion regulation strategies and alcohol use behaviors. Parameters were estimated using a first-order multilevel vector autoregressive model with Bayesian Markov Chain Monte Carlo (MCMC) estimation.

### RESULTS

The study indicated that participants who exhibited higher levels of attention or awareness of their emotions were more likely to report subsequent drinking,  $\beta = .05$ , 95% CI[.02, .08], but not the other way around,  $\beta = -.01$ , 95% CI[-.05, .02]. Emotional clarity, on the other hand, did not show any significant bidirectional effects with drinking. Furthermore, the study findings revealed that drinking behavior predicted subsequent avoidance behavior,  $\beta = .03$ , 95% CI[.00, .07], but not vice versa,  $\beta = .01$ , 95% CI[-.03, .05]. The cross-lagged effects of rumination and suppression were not statistically significant. In all models, both maladaptive emotion regulation strategies and alcohol use showed significant autoregressive effects and high variability over time.

### DISCUSSION

Our findings suggest that heightened attention to one's internal state can lead to drinking behavior in SAD. In individuals with SAD, this heightened self-focused attention is often directed toward negative self-evaluation and perceived social failures. As a result, socially anxious individuals may turn to alcohol use as a means of alleviating their preoccupation with negative internal experiences. However, our study showed that drinking is not a healthy coping mechanism. In the present study, drinking made socially anxious people's avoidance even worse. Taken together, these findings suggest that interventions aimed at reducing excessive self-focused attention, such as attention training in cognitive-behavioral therapy (CBT) or mindfulness training, can be effective treatment modalities for SAD. In addition, increasing awareness of the harmful effects of alcohol through psychoeducation and helping them learn alternative emotion regulation strategies could be crucial in improving avoidance symptoms among individuals with SAD. Given the dynamic nature of emotions, digital CBT therapeutics such as ecological momentary intervention via smartphone can be particularly effective in delivering these treatment modalities.

# POSTER SESSION 02

Abstract No.: 0847

## A Validity Study of the Korean Version of the Tonic Immobility Scale (K-TIS)

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### INTRODUCTION

According to the defense cascade model (Schauer & Elbert, 2010), facing a threatening situation activates the sympathetic nervous system (e.g., fight-or-flight response) as well as the parasympathetic nervous system (e.g., dissociation), which are regarded as evolutionary defence responses. Tonic immobility is an adaptive, reflexive and involuntary defense response that occurs when a threat is extremely close and fight-or-flight is impossible. Peri-traumatic tonic immobility, such as perceptual impairment, sensory deprivation, paralysis, and heightened physical experience, contributes to the development, maintenance and deterioration of post-traumatic stress disorder (PTSD). The purpose of this study was to examine the reliability and validity of the Korean version of the Tonic Immobility Scale (K-TIS) developed by Forsyth, Marx, Fuse, Heidt, and Gallup (2000), which consists of two subscales, fear and tonic immobility.

### METHOD

Participants were 78 adults (15 men and 63 women) who had experienced traumatic events and visited a trauma-related mental health centre for treatment in the community. They completed a series of self-report questionnaires including Life Events Checklist (LEC), the International Trauma Questionnaire (ITQ), Dissociative Experiences Scale (DES) and Somatoform Dissociation Questionnaire (SDQ-20). A principal axis analysis approach with oblimin rotation and a correlation analysis were conducted to examine construct validity. Participants were divided into three groups (non-PTSD, PTSD, or complex PTSD) based on their ITQ score, and an ANOVA was conducted to compare the TIS scores between groups.

### RESULT

The Cronbach's alpha of K-TIS was .90. Exploratory factor analysis via the principal axis **METHOD**, with oblimin rotation, revealed a 1-factor structure that accounted for 60.489% of the total variance. The total score on the K-TIS was positively correlated with dissociation measured by DES ( $r=.656, p<.001$ ) and somatoform dissociation measured by SDQ-20 ( $r=.615, p<.001$ ). Fear and tonic immobility subscale scores on the K-TIS showed positive correlations with dissociation ( $r=.607, p<.001$ ;  $r=.653, p<.001$ ) and somatoform dissociation ( $r=.541, p<.001$ ;  $r=.627, p<.001$ ), respectively. The result of the ANOVA showed that differences between groups were significant in K-TIS total score ( $F(2, 72)=17.214, p<.001$ ), fear and tonic immobility subscale scores ( $F(2, 72)=14.053, p<.001$ ;  $F(2, 72)=17.119, p<.001$ ). As a result of 'Duncan's post-hoc analysis, K-TIS total score and tonic immobility subscale score were non-PTSD < PTSD < complex PTSD, and PTSD and complex PTSD groups showed higher fear subscale scores than the non-PTSD group.

### DISCUSSION/CONCLUSION

This study attempted to translate the Tonic Immobility Scale into Korean and examine reliability and validity. The results suggest that the internal consistency of K-TIS is good and K-TIS measured tonic immobility symptoms after traumatic events reliably and appropriately. Also, the K-TIS is thought to reflect the severity of PTSD and complex PTSD symptoms well after a traumatic event. Unlike the original authors of TIS, who proposed a two-factor model, a one-factor internal structure was derived in this study. This suggests that it is necessary to conduct a confirmatory factor analysis on a sufficient number of samples.

# POSTER SESSION 02

Abstract No.: 0858

## **A Case Study on Factors Affecting Insomnia and Depression in a Newlywed Husband**

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*Soongsil University, Korea*

### OBJECTIVES

The purpose of this study was to explore the factors that influenced insomnia and depression in a newlywed husband.

### METHODS

The study participants were father (60), mother (60), identified client (31), and wife (28). A total of 14 therapy sessions were conducted, including individual sessions as well as sessions for the parents and the newlywed couple. We used thematic analysis to continuously compare concepts in therapy transcripts and notes to categorize similar concepts into broader categories.

### RESULTS

The identified factors that affected insomnia and depression in the newlywed client included personal factors, family of origin factors, wife factors, and family cultural factors of husband's and wife's families. First, individual factors were low self-esteem, inferiority complex, reserved and introverted temperament, victim mentality, and inability to refuse. Second, the factors of family of origin included as follows. Paternal factors were infidelity, violence, underfunctioning in the family, delusional jealousy, lack of communication and emotional neglect. Maternal factors were overfunctioning in the family, excessive interference, coercion of faith, dysfunctional communication patterns, and family triangles with children. Third, the wife's factors included a direct communication style and her inability to express her opinion clearly. Fourth, the cultural factors of the two families included economic gap between the two families and differences in upbringings.

### CONCLUSION

This study examined factors affecting insomnia and depression in a newlywed husband from a family systemic perspective. We explored individual factors, family of origin factors, and wife factors, as well as couples' family cultural factors. Therefore, based on the family systemic perspective, family therapists are recommended to explore such various factors when working with clients with insomnia and depression.

# POSTER SESSION 02

Abstract No.: 0869

## **A Study on Personality Traits of People Who Recall Nightmares: A Comparison of Japanese and Chinese Undergraduates in Relation to the Big Five**

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### **PURPOSE**

Several studies have been conducted in Japan and China on the effects of nightmare disorder on mental health and the relationship between dream recall and personality traits. This study aims to improve the situation of nightmare disorder by examining the relationship between nightmares with and without awakenings and personality traits based on the Big Five (extraversion, agreeableness, openness, conscientiousness, and neuroticism). It is also a comparative study between Japanese and Chinese.

### **METHODS**

Web-based questionnaires including the TIPI-C (Li, 2013), TIPI-J (Oshio, Abe, & Carotoni, 2012), Nightmare Scale (DSM-5), and questions on average sleep duration were developed. Eight hundred and fifty Japanese and Chinese university students participated voluntarily.

### **RESULTS**

Nightmares with midterm awakening were recalled by 363 (92.4%) of the Japanese university students, 19 (7.6%) of them frequently recalled them; 388 (84.9%) of the Chinese university students recalled nightmares with midterm awakening, 6 (1.3%) of them frequently recalled them. Nightmares without mid-wake were recalled by 382 (97.2%) of the Japanese university students and 37 (2.8%) of them frequently them; 400 (87.5%) of the Chinese university students recalled nightmares without mid-wake and by 32 (7.0%) of them. Multiple regression analysis of all data showed that neuroticism and extraversion had a significant positive effect on both nightmares with and without mid-sleep awakenings. Agreeableness had a negative effect on lucid dreaming with self-awareness. Sleep duration had a significant negative effect on nightmares without awakenings. In data from Chinese university students, industriousness had a negative effect on nightmares without mid-wake. In data from Japanese university students, openness had a negative effect on nightmares with mid-wakefulness.

### **DISCUSSION**

In summary, the most significant factors influencing nightmares were neurotic tendencies and extraversion for both Japanese and Chinese university students. Neuroticism indicates a strong tendency toward emotional instability. It is considered to be a factor strongly associated with nightmare recall. Extraversion indicates a high ability to express emotions actively toward others. Extraverts tend to be sensitive to the evaluations and attitudes of those around them and are more likely to have nightmares. Japanese students with higher openness experienced lucid dreaming more frequently, supporting Matsuda's study (2021), but not Chinese students. **CONCLUSION:** This study could be a primary resource for understanding personality traits, sleep, and dream research among Chinese and Japanese university students. In addition, lucid dreaming is listed as a treatment for nightmares in the American Academy of Sleep Medicine Guidelines. This study may lead to the prevention of nightmares and the promotion of lucid dreaming experiences by studying those who are more likely to have nightmares and those who are more likely to have lucid dreams.

# POSTER SESSION 02

Abstract No.: 0872

## Effects of Image Rescripting on Nightmare Reduction in Japanese Elementary School Students Using a Web-Based Experiment

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### PURPOSE

Nightmares are a psychophysiological phenomenon during sleep that occurs at all developmental stages and reports are especially high in young children. This study focused on positive rescripting of unpleasant imagery (Image Rescript: IR), a form of cognitive-behavioral therapy regarding nightmares. The purpose of this study was to examine the effect of IR on fear reduction in children's nonclinical nightmarish dreams.

### METHODS

Thirty-five upper grade elementary school students participated in a web-based experiment called "how to calm down after a scary dream." The children were asked to rewrite and manipulate typical nightmare themes (such as killing, bereavement, separation or being cornered) into any plot they could think of (such as fighting back, escaping, asserting, being helped or reconciliation) in order to make the endings positive.

### RESULTS

A two-factor analysis of variance revealed that the IR experimental group's fear from nightmarish dreams was significantly reduced compared to the control group.

### DISCUSSION/CONCLUSIONS

The results suggest that IR may be effective not only for adult nightmares but also for nightmarish dreams in children in general. Future work is needed to typify IR of nightmares and to examine health psychological support that make it easier for children to engage in IR.

# POSTER SESSION 02

Abstract No.: 0874

## **GET A GRIP on Anxiety: Dissemination of a Self-help CBT Program for Anxious Children in Municipalities with Scarce Therapist Resources**

Sonja Breinholst\*, Monika Walczak

*University of Copenhagen, Denmark*

While the prevalence of anxious children in Denmark is increasing, and the waiting lists for psychiatric and psychological interventions are growing rapidly, resources given to early intervention and treatment of childhood anxiety have never been scarcer. The Danish municipalities have more treatment responsibilities, yet fewer resources to provide the required services. Interventions towards children at risk are therefore often postponed until further problems have developed. Because early intervention is essential to prevent detrimental effects of untreated anxiety for the child, the family and the society in general, a new way of disseminating evidence-based CBT for children with anxiety disorders is called for. There is a need for interventions that can reach many children at risk, and help alleviate the burden on the public system, by preventing the development of a serious problem and reducing the number of future referrals. Such interventions could facilitate equal access to evidence-based treatment for anxious children and their families across Denmark.

**Intervention:** The self-help program "GET A GRIP ON anxiety" was developed to meet the needs of municipalities in Denmark. It is a 10-week parent-delivered self-help intervention based on CBT for children aged 7–12 years. The program targets families with children having up to moderate levels of separation-, generalized-, social anxiety and specific phobia. The program focuses on the parental and child mechanisms maintaining anxiety and provides parents with strategies to help treat anxiety in their children.

The program is being carried out in municipality settings. The parents attend two 2-hours workshops lead by certified school therapists (at week 1 and 6), and the rest of the time they work at home with their child using workbooks. Therapist time per family including recruitment and assessment is only 2,5 hours.

**Outcome:** Since 2018 training in disseminating GET A GRIP ON anxiety for municipalities in Denmark have been offered. It involves a 3-day workshop on anxiety, CBT and the program. In addition, the participants attend a one-day training in how to conduct the two workshops, and receive 10 hours of ongoing supervision. Currently approximately 20% of all municipalities in Denmark offer GET A GRIP ON anxiety. There is a growing interest and registration for the training. GET A GRIP ON anxiety has been recommended by both the Danish ministries of education, health, finance and social affairs, as well as the Danish National Board of Social Affairs in different projects regarding dissemination of low- resource evidence-based treatment across Denmark.

# POSTER SESSION 02

Abstract No.: 0882

## **Can Parents Help Their Anxious Children Using CBT Principles without Therapist Support? Reporting the Results of a Randomized Clinical Trial Investigating the Effects of a Parent-delivered “GET A GRIP ON anxiety” Program with and without Therapist-led Workshops**

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*University of Copenhagen, Denmark*

### INTRODUCTION

Anxiety disorders in children are most commonly occurring psychological problems in youth. Early intervention is crucial to prevent detrimental long-term effects of untreated anxiety. To aid access to low intensity treatments, we developed and tested a self-help intervention called “GET A GRIP ON anxiety”. The intervention is parent-delivered and is based on a 10-week manualized program for families of children with anxiety, aged 7–12 years. It builds on cognitive behavior therapy, and targets families with children with up to moderate levels of separation anxiety disorder, generalized anxiety disorder, social anxiety disorder or specific phobia. The program focuses on the parental and child mechanisms maintaining anxiety. The present study reports the results of a randomized clinical trial testing the effects of the “GET A GRIP ON anxiety” intervention with and without therapist-led workshops.

### METHODS

The participating families were randomly assigned to two active intervention arms. In the first arm, the parents worked with their children for 10 weeks, using provided “GET A GRIP ON anxiety” workbooks and both parents participated in two 2-hour therapist-led workshops (at week 1 and week 6) in groups of eight families. In the second arm, the parents only received the workbooks, and were asked to follow the program without attending the workshops. The families were assessed before, immediately after, and 6 months after the intervention using semi-structured interviews and multiple online self-report questionnaires measuring child symptomatology and parental psychopathology levels, as well as parental cognitions and behaviors. A total of 327 families showed interest in participating in the study, and 270 participated in at least the diagnostic assessment at intake. In the current study only children who met diagnostic criteria for anxiety disorder were included. Out of 254 children with anxiety disorders, 129 were randomized to the self-help group, and 125 were randomized to the workshop group.

### RESULTS

A total of 85 families (65.9% of the original sample) from the self-help group, and 89 families (71.2% of the original sample) from the workshop group completed post intervention assessment. At 6-months follow-up, 50 (38.8%) of the families from self-help, and 67 (53.6%) from the workshop group completed the final diagnostic assessment. In the self-help group, 30 children (35.3% completers, and 23.3% ITT) of children did not meet diagnostic criteria for any anxiety disorder at post-test. In the workshop group 36 children (40.4% completers, and 28.8% ITT) did not meet diagnostic criteria for any anxiety disorder. Pearson’s Chi square test showed no significant difference between the groups.

### DISCUSSION

The results of the present study indicate that “GET A GRIP ON anxiety” program can be offered to families with anxious children with and without support from professionals. The conservative intent to treatment analyses indicated that 23% of children were free of all anxiety diagnoses after receiving help from their parents alone. It is a promising intervention that can be used without therapist support, as a first step, in a stepped care treatment for families with anxious children. However, further moderation and prediction analyses are necessary to investigate which families can benefit from this form of intervention.



# POSTER SESSION 02

Abstract No.: 0883

## Comparing the Effectiveness of Face-To-Face and Online Parent Training for Children with Developmental Disabilities: A Retrospective Pilot Study

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Several studies have reported that parent training (PT) for parents of children with developmental disabilities improves parents' mental health and children's adaptive skills and behavioral problems. Additionally, numerous studies have demonstrated the effectiveness of online PT. This study aimed to compare the relative effectiveness of traditional face-to-face and online PT. Data from 40 parents who had participated in a PT program and data concerning 40 children aged 3–8 years with a wide range of developmental disabilities—namely, autism spectrum disorder, attention deficit hyperactivity disorder, and other developmental disabilities—generated through parental reports were used to retrospectively assess the impact of PT on parents and their children. Specifically, changes in children's problem behaviors (ECBI), parents' depression (BDI-II), and parenting stress (PSI) were analyzed. This program was designed to help parents teach their children adaptive skills at home using applied behavioral analysis techniques. The program comprised eight sessions, once every two weeks for two hours. In the first half of each session, a lecture was delivered, and the second half involved group work. Online PT was delivered using the online videoconferencing software Zoom. The results of a two-way analysis of variance revealed that the ECBI total score had significantly decreased at the end of PT in online PT groups, indicating a significant interaction between group and time (interaction:  $F(1, 38) = 6.705, p = 0.014, \eta^2 = 0.150$ ). A simple main effects test revealed that among the pre scores, remote PT was significantly higher than face-to-face PT ( $F(1, 41) = 8.732, p = 0.005, \eta^2 = 0.176$ ), and post scores were significantly lower than pre scores ( $F(1, 41) = 11.673, p = 0.002, \eta^2 = 0.287$ ). Moreover, online PT had a total score higher than the cutoff at the beginning of PT. Additionally, the total BDI and PSI scores significantly decreased at the end of PT in all groups, indicating a significant main effect of time and group (BDI — group:  $F(1, 38) = 4.142, p = 0.049, \eta^2 = 0.098$ ; time:  $F(1, 38) = 9.471, p = 0.004, \eta^2 = 0.200$ ; and PSI — group:  $F(1, 38) = 13.790, p = 0.000, \eta^2 = 0.266$ ; time:  $F(1, 38) = 6.774, p = 0.013, \eta^2 = 0.266$ ). This study's main finding was that parents' depression (BDI-II) and PSI improved significantly after they completed PT, irrespective of the PT type. Conversely, improvement in ECBI was observed in online PT but not in face-to-face PT. For the face-to-face PT group, the pre-intervention scores were below the cut-off, which may explain the insignificant improvement. Future studies should compare and examine the effectiveness of online and face-to-face PT through randomized controlled trials.

# POSTER SESSION 02

Abstract No.: 0890

## Examination of the Factor Structure and Psychometric Properties of the Social Interaction Phobia Scale in Taiwanese Undergraduates

Chi-Wen Liang\*, Chung-Han Liu

*Chung Yuan Christian University, Taiwan*

### INTRODUCTION

The Social Interaction Anxiety Scale (SIAS) and the Social Phobia Scale (SPS; Mattick & Clarke, 1998) were widely used to measure anxiety during social interaction and performance situations. The Taiwanese version of the SIAS and SPS (Yang, 2003) have demonstrated good internal consistency and acceptable validity (Liang, 2021; Yang, 2003). The Social Interaction Phobia Scale (SIPS; Carleton et al., 2009) is a short form of the SIAS and SPS consisting of 5 items from the SIAS and 9 items from the SPS. The SIPS was assumed to contain three subscales: fear of overt evaluation, fear of attracting attention, and fear of attracting attention. The English version of the SIPS has excellent internal consistency and good construct validity (Carleton et al., 2009, 2014). This study aimed to investigate the factor structure and psychometric properties of the Taiwanese version of the SIPS.

### METHOD

A total of 1103 undergraduates (Mage = 20.08, SD = 2.04) recruited from the Chung Yuan Christian University at Taiwan completed the SIPS online at Time 1. Then 499 of these participants completed a battery of questionnaires including the SIAS, SPS, Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983), Fear of Positive Evaluation Scale (FPES; Weeks et al., 2008) and Beck Depression Inventory-II (BDI-II; Beck et al., 1996) online at Time 2.

### RESULTS

We implemented CFA using maximum likelihood estimation to compare the fit of possible factor structure models (one-factor, two-factor, and three-factor models). The three-factor SIPS model ( $\chi^2/df = 4.79$ , CFI = .96, RMSEA = .06, ECVI = .38) demonstrated best fit indices than the two-factor and one-factor model. The SIPS had excellent reliability (Cronbach's  $\alpha = .92$ ) in the present study. The three subscales also showed acceptable reliability (Cronbach's  $\alpha = .79 \sim .90$ ). The SIPS was positively correlated with the SIAS, SPS, BFNE, and FPES ( $ps < .05$ ,  $r = .58 \sim .91$ ) after controlling for the BDI-II. The SIPS was positively correlated with the BDI-II ( $ps < .05$ ,  $r = .21 \sim .29$ ) after controlling for the SIAS, BFNE, or FPES. The SIPS was not correlated with the BDI-II after controlling for the SPS. Moreover, the correlation coefficients between the SIPS and social anxiety-related scales (i.e., the SIAS, SPS, BFNE, and FPES) were significantly greater than which between the SIPS and BDI-II (all  $z_s > 3.99$ , all  $ps < .001$ ).

### DISCUSSION

This study suggests that the SIPS shows good psychometric properties in Taiwanese undergraduates. Our results supported a three-factor model for the Taiwanese version of the SIPS. The SIPS was significantly more strongly associated with social anxiety symptoms than with depressive symptoms.

# POSTER SESSION 02

Abstract No.: 0896

## **Caffeine Effects on Anxiety, Emotion-Related Physiological Reactivity and Interoceptive Awareness in Panic Disorder**

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### INTRODUCTION

Caffeine is a psychoactive substance consumed worldwide for its positive effects on alertness and wakefulness. Yet, caffeine has also been observed to have anxiogenic and panicogenic properties, particularly in individuals with panic disorder (PD). Supporting this notion, we recently showed in a meta-analysis of placebo-controlled studies that about half of the individuals with PD experienced a panic attack after oral caffeine intake corresponding to roughly 5 cups of coffee (400–750 mg). These doses also increased subjective anxiety. However, studies investigating the anxiogenic effects of caffeine in PD are few and have methodological limitations. First, caffeine effects in PD have typically been examined with high caffeine doses, and studies using more realistic doses consumed in everyday life are lacking. Secondly, the anxiogenic effects of caffeine have previously only been assessed at rest. Thus, no studies have explored how caffeine affects emotional responses when confronted with an emotional task. Moreover, the role of physiological arousal and interoceptive awareness in the anxiogenic and panicogenic effects of caffeine in PD has not been investigated.

The aim of this ongoing study is to examine the anxiogenic and panicogenic effects of 150 mg caffeine (1.5–2 cups of coffee) after 30 minutes of rest and in response to two different emotional tasks in individuals with PD compared to healthy controls. The study also aims to explore if caffeine-induced changes in physiological arousal and/or interoceptive awareness mediate the potential anxiogenic effects of 150 mg caffeine in PD.

### METHODS

The study is a double-blind, randomized placebo-controlled study with a cross-over design with an estimated sample size of 30 individuals with PD and 50 healthy controls (age > 18 years; caffeine intake maximum 300 mg/week). The experimental procedure includes two sessions in which participants receive identical capsules containing either 150 mg of caffeine or a placebo substance in randomized order. Anxiety ratings are assessed four times: before capsule intake, after 30 minutes of rest after capsule intake, and after each emotional task. Task 1 involves exposure to fearful, happy, and neutral faces and sounds (scream, laughter, humming). Task 2 is an approach-avoidance conflict task including aversive, neutral, and panic-related visual and auditory stimuli. The occurrence of panic attacks is assessed using self-report and experimenter observations. Skin conductance (physiological) responses and self-reported interoceptive awareness are measured during the emotional tasks. The study is preregistered at ClinicalTrials.gov [NCT05261594].

### RESULTS

Data collection will be completed in March 2023.

Results will be presented and discussed.

### DISCUSSION

A better understanding of the anxiogenic effects of caffeine in PD could potentially help elucidate the psychological and biological mechanisms underlying this condition.

# POSTER SESSION 02

Abstract No.: 0902

## All about Shame: Phenomenology of Social Anxiety Disorder Triggers and Symptoms among Psychology Clinic Outpatients in Jakarta, Indonesia

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### INTRODUCTION

Social anxiety disorder (SAD) is characterised by the fear of negative evaluation by others (APA, 2022), which makes SAD directly linked to social standard and role expectations that is highly influenced by culture (Hofmann, Asnaani, & Hinton, 2010). Amongst Indonesians, shame plays a prominent role in social relations (Heider, 1991). Shame is internalized in many different social situations and a child is taught to recognize the feelings of shame and to experience this feeling when engaging in improper behaviors (Subandi & Good, 2018). Indonesian society perceives a lost sense of shame as an indication of one being mentally ill. This study aims to explore whether shame affects the manifestation of social anxiety disorder within the clinical population in Indonesia.

### METHOD

We included data of seven patients from 535 medical records from an outpatient clinic in Jakarta, Indonesia who have a social anxiety disorder diagnosis from six clinical psychologists. Four of them were females (57%), and all were 19 to 32 years old at the time of the assessment. All patients completed the Liebowitz Social Anxiety Scale - Self Report (LSAS-SR) and four patients completed the Social Phobia Inventory (SPIN). The LSAS-SR consisted of 24 items with a fear and avoidance subscale that were answered with Likert scale from 0 to 3. We recoded an answer of 1 to 3 as endorsed, 0 to 1 as non-pathological, and 2 to 3 as pathological. The SPIN consisted of 17 items that were answered with Likert scale from 0 to 4. Here an answer of 0 to 1 was recoded as non-pathological, and an answer of 2 to 4 was recoded as pathological. The mean and standard deviation were also computed. When needed, we also analysed the clinical notes. Findings: We found an overarching theme of fear of shame across notable items in the LSAS-SR, SPIN, and clinical notes. There were 14 items that were endorsed completely by our patients, and all were related to shame. Most patients reported feeling extremely afraid of these 14 potentially shaming situations ( $M = 76.5\%$ ) compared to other social situations ( $n = 10$ ;  $M = 24.3\%$ ). Furthermore, these were also avoided the most,  $M = 88.8\%$ , compared to the others,  $M = 51.4\%$ . Notably, patients reported the situation of performing or giving a talk in front of an audience to induce moderate to severe social anxiety ( $M = 2.71$ ), the highest scoring item and quite higher than the average sum score of the scale ( $M = 1.70$ ). One participant reported that this was a very irritable item that got in the way of his work as he cannot help but keep on avoiding any work involving presenting in front of any audience. His automatic thoughts were that he would get ridiculed, appear stupid, get criticized, and underestimated, which would be shameful - a condition that was unbearable. Expressing disagreement and approaching someone romantically were also notable situations that were mentioned to be shameful, which were often or usually avoided by 71.4% to 85.7% of the patients and triggered moderate to severe anxiety in 71.4% of the patients. The general theme of fear of shame was also found in the response pattern to the SPIN. All had a pathological level of anxiety when talking to strangers, doing certain things or speaking to people, doing things when being watched, and when showing physical symptoms of anxiety in front of people, of which all were due to fear of shame.

### CONCLUSION

We found that fear of shame is a prominent theme in SAD manifestation in Indonesian outpatient settings. This is different from the current popular view of SAD that emphasises negative evaluation from others as something that people with SAD are afraid of the most and hence avoided, rather than fear of shame. However, the relation between shame and SAD had been recognized since the 80s by Beck et al., (1985), who proposed shame as an important aspect of social anxiety. This is in line with a recent systematic review finding that shame and social anxiety disorder do share common behavioral manifestations in the general and clinical population across 22 countries

## POSTER SESSION 02

(Swee, Hudson & Heimberg, 2021). The theme of shame also supports the thesis from Subandi and Good (2018) who proposed shame as Indonesia's cultural index of illness. This theme of fear of shame shows how social norms and culture in Indonesia influence the SAD manifestations, such that shame might prevent people from performing or giving talks in front of an audience. It is also important for clinicians in Indonesia to regard shame as not just a normal behaviour but instead as a sign of a possible SAD that needs to be assessed further.

Keywords: Social Anxiety Disorder; Liebowitz Social Anxiety Scale, Social Phobia Inventory, Shame

# POSTER SESSION 02

Abstract No.: 0903

## Exploring the Relationship between Pattern Separation and Fear Extinction among a Sample of Healthy Adults

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### INTRODUCTION

Anxiety disorders (ADs) are characterized by excessive fear and worry, afflicting approximately 300 million individuals worldwide (World Health Organization, 2019). Though exposure-based cognitive behavioural therapy (ET) is the gold standard treatment for ADs, approximately 50% of patients do not benefit from this intervention long-term (Loerinc et al. 2015). A better understanding of the factors associated with successful ET is key to improving treatment outcomes for individuals with ADs. Neurobiological research indicates that hippocampal function impacts response to ET, which may be due in part to the role of the hippocampus in pattern separation, a process that allows individuals to store similar representations of stimuli in a discrete manner without overlap (Yassa et al. 2011). Individuals with ADs show deficits in pattern separation, which results in compromised recognition of differences between threatening and non-threatening stimuli (Balderston et al. 2017). Furthermore, impaired pattern separation may be linked to generalization of threat expectancies and reduced recruitment of fear inhibition mechanisms in the ventromedial prefrontal cortex (Lange et al. 2017), which could impact response to ET. Researchers have leveraged the fear extinction paradigm as a lab-based analogue for ET, where extinction occurs when a learned fear response is diminished due to a threatening stimulus being encountered without the feared outcome (Craske et al. 2018). Previous work suggests that this paradigm may have predictive utility for response to ET (Forcadell et al. 2017). As both pattern separation and fear extinction have been related to factors relevant for successful ET, our aim is to investigate the relationship between pattern separation and fear extinction in a sample of healthy individuals.

### METHODS

We are recruiting 100 individuals aged 18 to 50 years who are non- or light-smokers (<5 cigarettes a day), have no past or present DSM-5 axis I diagnosis, and have not taken central nervous system-active medication in the last 6 weeks. Participants complete self-report questionnaires assessing personality traits, anxiety, and depression, and various computer tasks, including a fear extinction task and the Mnemonic Similarity Test (MST). In the fear task, participants view two geometric shapes on a computer screen in two phases: a) an acquisition phase, where fear is elicited through pairing one of the two shapes with a loud noise, and b) an extinction phase, where both stimuli appear without the noise pairing. The MST is a behavioural computer task which assesses pattern separation ability through two phases: an encoding phase, where participants categorize objects as indoor or outdoor, and a recognition phase, where participants categorize objects as old, similar, or new with reference to phase one. The outcome measures are valence ratings, with lower ratings indicating greater "fear" toward the conditioned stimulus, and lure discrimination performance, reflecting the ability to remember details and categorize a similar stimulus as "similar" instead of "old".

### IMPACT

By exploring the relationship between pattern separation functioning and fear extinction, we can understand the relevance of hippocampal function as a predictor of response to ET. If greater pattern separation is associated with improved fear extinction, there may be further reason to investigate pattern separation in a clinical study, to determine whether hippocampal function is a useful target for enhancing response to ET among individuals with ADs.

# POSTER SESSION 02

Abstract No.: 0919

## Research on Emotional Schemas: A Cognitive Perspective for PTSD

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### INTRODUCTION

Recent research reveals that emotional schemas comprise people's core beliefs about emotions and emotional experiences (Leahy, 2022). The schemas may change dramatically after the trauma. But there is no systematic discussion about the changing mechanism of the trauma emotional schemas (Bomyea, Johnson, & Lang, 2017; Beck, John, & Beck, J. 2021; De Gelder et al., 2014).

### METHOD

A literature review (based on hundreds of papers until the February of 2023).

### RESULTS

A person suffering trauma will have a different bias on attention, explanation, and memory, which result in a negative emotional schema.

### DISCUSSION

Bias on attention, explanation, and memory have different mechanisms (Chan, Raine, & Lee, 2010; Pradhan, Sharpe, & Butow, 2021). Positive change for individuals can be caused by increasing the attention bias to neutral or positive emotion (Chan, Ho, Tedeschi, & Leung, 2011; Irie, Shiwaku, Taku, Suzuki, & Inoue, 2021) and more positive explanation of emotion (Goldberg, McDonald, & Perrin, 2019). But the mechanism of emotion switch for people in trauma is not clear (Bomyea, Johnson, & Lang, 2017). It suggests that a person may adjust these cognitive bias and focus on belief interventions about the causality of emotion through cognitive strategies like cognitive testing, behavior activation, and problem-solving (Leahy, 2022).

# POSTER SESSION 02

Abstract No.: 0922

## **Anger Response as a Moderator in the Relationship between Posttraumatic Negative Cognitions and Posttraumatic Stress Symptoms, Depressive Symptoms, and Impairment in Daily Functioning in a Sample of Korean Adults Exposed to the Pohang Earthquake**

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There has been increasing interest in the role of anger response of trauma/disaster survivors in understanding and treating posttraumatic stress disorder (PTSD) and related psychopathological symptoms. In this study, we aimed to examine the impact of posttraumatic negative cognitions and anger response on posttraumatic stress symptoms (PTSS), depressive symptoms, and impairment in daily functioning among earthquake survivors, and to assess the moderating role of anger response in the relationship. Data on posttraumatic negative cognitions, anger response, PTSS, depressive symptoms, and impairment in daily functioning were collected from a total of 253 Korean adults who experienced the 2017 Pohang earthquake. Correlational analyses revealed that posttraumatic negative cognitions and anger response were highly positively correlated with PTSS ( $r = .807, p < .001$ ;  $r = .748, p < .001$ ), depressive symptoms ( $r = .715, p < .001$ ;  $r = .755, p < .001$ ), and impairment in daily functioning ( $r = .696, p < .001$ ;  $r = .639, p < .001$ ), respectively, in the expected direction. PTSS were significantly positively correlated with frequency of disaster experiences ( $r = .243, p < .001$ ), human casualties ( $r = .482, p < .001$ ), material damage ( $r = .385, p < .001$ ), and participation in rescue or recovery assistance ( $r = .184, p < .001$ ), and depressive symptoms were significantly positively associated with human casualties ( $r = .365, p < .001$ ), material damage ( $r = .371, p < .001$ ), and participation in rescue or recovery assistance ( $r = .137, p = .035$ ). Impairment in daily functioning were significantly positively related to frequency of disaster experiences ( $r = .124, p = .050$ ), human casualties ( $r = .358, p < .001$ ), and material damage ( $r = .250, p < .001$ ). Hierarchical multiple regression analyses revealed that, after controlling for the variables that were correlated with each dependent variable, posttraumatic negative cognitions and anger response each uniquely contributed to posttraumatic stress symptoms,  $\beta = .547, p < .001$ ;  $\beta = .274, p < .001$ , respectively, and impairment in daily functioning,  $\beta = .502, p < .001$ ;  $\beta = .237, p < .001$ , respectively. Anger response moderated the relationship between posttraumatic negative cognitions and the two dependent variables,  $\Delta R^2 = .008, \beta = 0.105, p = .004$ ;  $\Delta R^2 = .020, \beta = 3.40, p = .0001$ , respectively. Post-traumatic negative cognitions more strongly contributed to the two dependent variables among individuals reporting high anger response than those with low anger response. Also, both posttraumatic negative cognitions and anger response uniquely contributed to depressive symptoms,  $\beta = .407, p < .001$ ;  $\beta = .429, p < .001$ , respectively, above and beyond human casualties, material damage, and participation in rescue or recovery assistance. In addition, anger response marginally significantly moderated the relationship between posttraumatic negative cognitions and depressive symptoms,  $\Delta R^2 = 0.005, \beta = .078, p = .066$ . In conclusion, these results provide support for the moderating role of anger response in the relationship between posttraumatic negative cognitions and PTSS, depressive symptoms, and impairment in daily functioning. Furthermore, our findings suggest the importance of considering the roles of both posttraumatic negative cognitions and anger response in order to alleviate PTSS, depressive symptoms, and impairment in daily functioning among the survivors of the Pohang earthquake and prevent related mental disorders effectively.

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# POSTER SESSION 02

Abstract No.: 0923

## Development and Examination of ICT-Based Teacher Training for Autism with Behavioral Problems

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### INTRODUCTION

In Japan, the link between problem behavior and abuse in developmental disabilities has been noted, and early intervention for problem behavior in children with developmental disabilities is needed. As one approach to problem behavior, functional analysis and functional communication have been shown to be effective approaches to socially maintained problem behavior (Derby et al., 1997). Therefore, this study created and implemented an online teacher training program for teachers that incorporates functional analysis and focuses specifically on problem behaviors.

### METHOD

Twenty teachers working in kindergartens participated in the study. However, due to a series of absences of children and teachers because of coronavirus infection, 12 participants were included in the analysis. The program consisted of lectures, practice assignments, and homework. The lectures and practice assignments were delivered on demand and in a self-study format. The homework was done in a practical format. The students selected the behaviors they wanted to increase and decrease for the children in their charge, practiced each task during childcare hours, and recorded the results. Later in the program they created a strategy sheet. They set up alternative behaviors to replace the behaviors we wanted to reduce. Follow-up during the program was conducted on line. Assessments were made using the ABA Behavior Analysis Checklist for Teachers, the SRS-18, the SDQ, and changes in the child's behavior.

### RESULTS

The results showed significant differences between the Applied Behavior Analysis Checklist for Teachers ( $p=0.0045, P<0.05$ ) and the SRS-18 ( $p=0.0011, P<0.05$ ), and the online program also improved ABA knowledge and reduced teacher stress. On the other hand, although no significant difference in SDQ could be confirmed, each child's goal achievement and behavioral changes were observed, confirming a certain level of effectiveness of the program.

### CONCLUSIONS

In this study, an online teacher training program specific to problem behavior was implemented, and a certain level of effectiveness was achieved, confirming the program's effectiveness. In the future, we would like to increase the number of subjects and conduct further analysis.

## Reactivity of Heart Rate Variability during a Cognitive Task with Facial Distractor in Patients with Social Anxiety Disorder

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### INTRODUCTION

To investigate the heart rate variability (HRV) reactivity during a cognitive task involving social threat in patients with social anxiety disorder (SAD).

### METHOD

Thirty-two patients with SAD and thirty-eight healthy controls participated a continuous performance task in which face pictures expressing negative emotions unexpectedly appeared as distractors. We measured heart rate using photoplethysmography during the task. HRV was analyzed in terms of time domain and ApEn which is a statistic quantifying regularity and complexity. HRV changes in the process of the task performance from the resting state was analyzed through repeated measures ANOVA.

### RESULTS

The 2 (group: SAD vs controls) X 2 (condition: resting vs early phase of the task) repeated measures ANOVA of SDNN and RMSSD showed a significant main result of the condition [ $F(1,68)=4.901$ ,  $p=0.30$  in SDNN,  $F(1,68)=4.691$ ,  $p=0.34$  in RMSSD] and a significant interaction effect of group and condition [ $F(1,68)=5.419$ ,  $p=0.23$  in SDNN,  $F(1,68)=4.497$ ,  $p=0.38$  in RMSSD]. Post-hoc paired t-test of the SDNN and RMSSD showed that the resting phase was higher than the early phase in control group ( $p=0.001$  in SDNN,  $p=0.005$  in RMSSD) but no significant differences in SAD group ( $p=0.942$  in SDNN,  $p=0.974$  in RMSSD).

An Independent T test showed significant differences in ApEn between the control group and the SAD group at early phase ( $p=0.030$ ), but no significant differences in SDNN, RMSSD and apHF between the groups at resting and early phase. There were no significant differences in ApEn between the groups at resting phase.

### DISCUSSION

The results showed that there was no significant difference in SDNN and RMSSD between the control group and the SAD group at the baseline. The control group showed significant decrease in RMSSD, SDNN and during the early phase of the task, but there was no significant difference in the SAD group. This outcome seems to be related to comorbidity of SAD and the SAD patients had anxiety due to the social situation with a stranger researcher. According to generalized unsafety theory of stress (GUTS), chronic anxiety individuals fails to inhibit default stress response regardless of the stressor. SAD patients who experience a fear response due to social stimuli undergo fear conditioning and preservative cognition for both previous and subsequent social stimuli, and if avoidance persists, safety learning for safe contexts does not occur, resulting in no difference in response to stressor-conditioned context and actual stressor. To treat SAD patients, it is important to not only help them overcome their specific social stressor, but also help them recognize the associated social stressor-conditioned context as a safe context.

# POSTER SESSION 02

Abstract No.: 0935

## Effect of Resilience on Burnout in Online Learning Environment

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The COVID-19 virus outbreak has affected all aspects of human life. The challenges of education during the pandemic could have an impact on coping with stress. The aim of the current study was to explore the effects of people's resilience to stress on burnout symptoms. We used The Maslach Burnout Inventory (Maslach, 1982), while the capacity to cope with stress and recover was measured with the Connor-Davidson Resilience Scale (2003). There were 375 participants, 235 women and 140 men, between the ages of 18 and 48 years old ( $M = 21.43$ ;  $SD = 3.93$ ), studying in higher education institutions. We performed several regression analyses using a stepwise method. Adaptability ( $\beta = -.38$ ,  $p < .01$ ), external control ( $\beta = .23$ ,  $p < .01$ ), seeking social support ( $\beta = -.26$ ,  $p < .01$ ), and decisiveness ( $\beta = .17$ ,  $p < .01$ ) were found to be significant predictors of emotional exhaustion ( $R^2_{adj} = .175$ ). When it comes to personal accomplishments significant predictors were purposefulness ( $\beta = .29$ ,  $p < .01$ ), decisiveness ( $\beta = .19$ ,  $p < .01$ ), and adaptability ( $\beta = .13$ ,  $p < .01$ ) ( $R^2_{adj} = .304$ ). Social support ( $\beta = -.36$ ,  $p = .00$ ), external control ( $\beta = .24$ ,  $p < .01$ ) and purposefulness ( $\beta = -.18$ ,  $p < .01$ ) were significant predictors of depersonalization ( $R^2_{adj} = .186$ ). The findings from the present study show that high levels of resilience to stress have a protective effect on the manifestations of burnout symptoms. These results have implications for proposing theoretical foundations for burnout prevention strategies in an online learning context. They further enrich intervention techniques connected with achieving higher adaptability.

# POSTER SESSION 02

Abstract No.: 0936

## **Cognitive-Behavioral Intervention for a Woman Whose Life Was Hindered by Low Self-Esteem and an Inflated Responsibility**

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### PRESENTING PROBLEM

The client is a 38 year old female. Home-visiting nurse. She worry that she might make a mistake in treatment and make the patient's disease worse, and she can't do anything about it. Anxiety, sweating and heart palpitations. Some patients sometimes point out that the connection of the IV tube is loose, and I feel sorry if I do not check the connection five times. She can't sleep because she is wondering if she has definitely done what she has finished. Answering phone calls from anxious patients, sometimes spending hours with them. She blame herself for all complaints from her patients. Ever since she was a child, she often went home feeling uneasy about whether she locked the door after leaving the house. After she turned 30 and realized her limits, she came to think that she was a useless person and that she would do things that would make people unhappy.

### CASE CONCEPTUALIZATION AND INTERVENTION

Low self-esteem and an "inflated responsibility" make her try to meet all of the patient's needs, so her patients wanted to keep some interest and Low self-esteem was preserved. Because of the high anxiety of failure, confirmation was repeated. The intervention was initiated with the goal of increasing self-esteem and reducing anxiety by correcting the inflated responsibility to an appropriate level. She was asked to record and report three achievements per day to increase their self-esteem. In order to correct the inflated responsibility, the following psychoeducation was conducted. "Accept what I can't help but do your best." "You will check only the necessary number of times. Even if you get worried, you won't go back to check. Your anxiety will go away." "The scope of liability is determined by the content of the contract. You are not responsible for meeting all patient expectations." And then, we discussed the appropriate scope of responsibility for requests from patients in each session, and asked her not to respond to requests that exceed the scope of responsibility. The exposure-response prevention method was applied for repetitive checking behavior. And we practiced deep breathing to manage her anxiety.

### OUTCOME

STAI-2 59(#3) → 42(#6), SDS 51(#3) → 34(#6), Y-BOCS 22(#1) → 6(#8)

### REVIEW AND EVALUATION

Cognitive restructuring was successfully attempted on a client who had low self-esteem, increased anxiety due to the inflated responsibility, and was exhausted from trying to meet all of the patient's expectations with compulsive checking. One possible reason for the short-term improvement was that the client had a flexible behavioral pattern that allowed him to implement new ideas immediately.

# POSTER SESSION 02

Abstract No.: 0940

## Neurophysiological Changes of Psychotherapy in Polydrug Users of Psychoactive Substances: A Study of Event-related Potentials

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Drug users share alterations in affect processing and comorbidities with psychiatric disorders, especially depressive symptoms, anxiety, increased negative affect, alterations in reward processing and high rates of impulsivity. These changes in emotional assessment and response can be identified by changes in event-related potentials (ERPs). Although advances in neuroscientific research have helped describe the neurobiological changes that occur during substance use disorder, few studies have attempted to examine variations in functional brain activity that may accompany behavioral changes before and after treatment. This study aims to evaluate the neurophysiological changes of psychotherapy in polyconsumers of psychoactive substances through the assessment of affective images. Twenty-three Colombian polydrug users between 18 and 55 who voluntarily started inpatient psychotherapeutic treatment participated. ERPs were obtained from electroencephalographic data recorded before and after the psychotherapeutic process while the participants assessed a set of visual stimuli from the International Affective Picture System (IAPS). We found that polyconsumers showed higher P1-P2 positive amplitude to unpleasant pictures before-treatment. Likewise, polyconsumers had greater N3 negativity to pleasant images after treatment in the anterior-central regions. For late latencies, polyconsumers expressed an LPP potential with greater negativity in the posterior region but greater positivity in the anterior one to aversive pictures before-treatment. These results may suggest that psychotherapy modifies the neural components involved in cognitive, behavioral, and affective control, facilitating the reduction of cravings in polyconsumers. This interpretation helps to demonstrate the need for studies with ERPs that show the changes in neural activity associated with affective processing before and after psychotherapy and thus contribute to better practices and effective treatments.

# POSTER SESSION 02

Abstract No.: 0941

## The Relationship between Health Anxiety, Coping Mechanisms and Quality of Life in Bulgarian Context

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Anxiety disorders are the most common of mental disorders and have a direct impact on quality of life. Researches indicated that COVID-19 pandemic triggered an increase of prevalence of anxiety and depression in people worldwide. Health anxiety is known to affect some 4% to 5% of people and it is expected that levels could increase during a global pandemic. Health anxiety leads to excessive worries about health in general and can deteriorate the functioning of people. This study aimed to test the impact of health anxiety, perceived stress and coping mechanisms on quality of life. The survey was conducted in the period of February 4-12, 2022 with a representative sample of 1000 respondents. People completed self-report questionnaires, including Health Anxiety Questionnaire; Depressive, Anxiety and Stress Scale (DASS), Coping Questionnaire and Quality of life Questionnaire. A questionnaire based on the Cognitive Behavioral Model Of Health Anxiety was developed and standardized for the screening and diagnosis of health anxiety in the Bulgarian sociocultural context. Based on an exploratory factor analysis using the **METHOD** of principal components three factors with high internal consistency were derived. The general indicator of health anxiety has high reliability ( $\alpha=0.81$ ). Correlations revealed that health anxiety was positively related with greater levels of depression, anxiety and stress and with emotional-focused coping strategies. Health anxiety was negatively related with quality of life. A multiple regression was conducted and the results revealed that both health anxiety, stress and problem-focused coping strategies uniquely contributed to the prediction of the total score on quality of life. These results could be used in the field of prevention of mental health and mental disorders, recommendations for health specialists are discussed.

# POSTER SESSION 02

Abstract No.: 0972

## Verbalization; A Possible CBT Component to Increase Social Ability of Adolescents with Autism Spectrum Disorder

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### INTRODUCTION

Effectiveness of Cognitive Behavioral Therapy (CBT) for persons with Autism Spectrum Disorder (ASD) has been accumulated. Yet, needs for identifying treatment components which could facilitate social ability of this population have also been emphasized. Recently, strategies to modify perceptual processing of face were introduced, upon the hypothesis that social deficits in ASD are related to their abnormal perceptual processing of information, which is called the weak central coherence(WCC) hypothesis. According to the WCC, the persons with ASD tend to process information locally, leaving necessary information unprocessed. Verbalization has been suggested as a strategy to improve face perception of ASD, but little studies have been conducted to test its effectiveness, especially using objective measure such as eye-tracking data, which could provide stronger evidence to interpret the results. This study aimed to determine the effect of verbalization on face perception in adolescents with ASD using eye-tracking technology.

### METHODS

19 adolescents with ASD (19 males with mean age $\pm$ SD of 14.44 $\pm$ 1.03) were randomly assigned to a verbalization group (n=10) or a control group (n=9). At first, a face recognition task were administered. Next, 10 pictures of faces were presented for 3 seconds each and verbalization of a face was practiced for 1 minute for each face for the verbalization condition. For the control condition, the same procedure was administered except that verbalization was asked for other part of the body. The face recognition task was repeated. During the face recognition task, time spent gazing at the face stimulus was measured with the eye tracker. The dependent variable was variance of gaze time across different part of face, which was calculated in the following order: 1) the variance of the gaze time according to the face area per face stimulus, 2) then the average of the variance for a total of 10 face stimulus, then 3) the difference between before and after the task.

### RESULTS

The results of the Mann-Whitney U test showed a significant difference between groups ( $Z=-3.97$ ,  $p=.00$ ) in the variance of the gaze time. Compared to the verbalization group, the variance of the gaze time in the control group increased over time. The results showed that verbalization has a preserving effect on the overall perceptual processing capacity instead of having an enhancing effect on it.

### CONCLUSION

This study showed that verbalization is an effective strategy to maintain the facial perception ability of adolescents with ASD. This suggests the possibility of including verbalization into the CBT protocol for persons with ASD to enhance their social ability. Verbalization can be practiced during sessions or as homework to promote generalization during conversation in real-life settings. However, follow up studies should be warranted, since the sample size was small, and no control group was included in this study. Also, additional efforts to compare the perceptual processing ability of TD and ASD by facial area should be made prior to the use of verbalization.

# POSTER SESSION 02

Abstract No.: 0974

## Prosocial Cyberball Game as an Outcome Measure of CBT for Adolescents with ASD

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### INTRODUCTION

CBT (Cognitive Behavioral Therapy) is an evidence-based treatment that is effective for ASD (Autism Spectrum Disorder) that has been shown to enhance social skills. However, evaluating its effectiveness using subjective measures, such as self-report scales or parents and teachers reports, can be biased, and may produce inaccurate responses from ASD adolescents with language impairments. Therefore, additional objective measures such as behavioral tasks are necessary.

CBT focusing on improving social skills for ASD evaluates various prosocial behaviors, including helping behaviors in response to perceiving other's ostracism, which could be a key indicator of prosocial behavior among adolescents. Prosocial behaviors are often evaluated using self-report scales, which have been criticized for their subjectivity. Recently, the PCG (Prosocial Cyberball Game) has been proposed as a computerized behavioral task for measuring helping behavior towards socially excluded individuals. Prior to adopting the PCG as an outcome measure for evaluating prosocial behaviors among adolescents with ASD, differences in ostracism perception and following helping behaviors between ASD and Typically Developing (TD) adolescents need to be investigated.

### METHOD

16 adolescents with ASD (mean age = 14.46 years; SD = 0.64; males = 16) and 20 TD adolescents (mean age = 15 years; males = 20) were participated. A 2x2 design study was used with ostracism witnessing (witnessed, non-witnessed) as the within-group factor and disability status (ASD, TD) as the between-group factor. Participants were randomly assigned to either the witnessed group (ASD: 9, TD: 10) or the non-witnessed group (ASD: 6, TD: 10).

The PCG was used to measure helping behavior. It involves four players, with three pre-programmed computer players, and the participant always as Player 2. In the witnessed condition, Player 1 and 3 had more interactions, while socially excluded Player 4 received the ball less frequently. In the non-witnessed condition, all players interacted with each other equally. The effectiveness of the experimental manipulation was assessed. Participants rated whether the players got along well in the game and identified socially excluded player. The dependent variable was helping behavior, which was calculated by ratio of balls thrown to Player 4 to the total number of balls thrown.

### RESULT

To determine whether the experimental manipulation was properly conducted, a nonparametric Mann-Whitney U test was conducted on the level of ostracism awareness of all participants (non-normal distribution). The results showed that the witnessed group reported more ostracism than the non-witnessed group ( $U = 54.00, p < .01$ ). Furthermore, 87.5% of the witnessed group accurately identified the Player 4 as the most ostracized player. The data implies that the experimental manipulation was properly conducted.

Statistical analyses were followed to compare the ratio of helping behaviors between ASD and TD groups across witnessing status conditions using a 2-way ANOVA. As a result, the interaction effect was significant ( $F = 14.40, p < .01$ ), showed that the ratio of helping behaviors exhibited by the ASD group after witnessing ostracism was significantly less than that of TD group.

### CONCLUSION

The results of this study show that a behavioral task, PCG, can be used as an objective measure for helping behavior. PCG has high social validity, short testing time, and a game-like format that could engage the participants. Therefore, it is expected that PCG can be used to examine the effectiveness of CBT programs for enhancing social skills. However, this study is limited by the small sample size and the investigation of only helping behavior among prosocial behaviors. Future research can develop a behavioral task as an objective evaluation tool to examine sub-concepts of social skills beyond helping behavior.



# POSTER SESSION 02

Abstract No.: 0980

## **A Qualitative Study with Grounded Theory on the Trauma Experiences of State Violence Victims**

Seok Woong Kim\*

*KCPA, Korea*

This study sought to understand the traumatic experiences of state violence victims through the lens of grounded theory, while exploring the differences between state violence trauma and general trauma. The study also evaluated which methods are most effective in helping victims of state violence heal and recover from the trauma.

Participants were composed of state violence victims and their families. The total number of interviewees were 28: 11 from the Jeju 4-3 Incident, 11 from the Yeosu-Suncheon Incident, and 6 from the 5-18 Democratization Movement. As to not influence the participants' responses, a semi-structured interview method was conducted. No leading questions were used, only general subject matters were asked about.

In accordance with Strauss and Corbin's analysis process, open coding, axis coding, and selective coding were conducted. Open coding derived 170 concepts, 57 subcategories, and 20 categories. In the field of axial coding, the paradigm model was followed which came from the open coding. The open category concepts and the categories were reconfigured through the consistent attribute. These included causal condition, central phenomenon, contextual condition, arbitrary condition, activation/interactivity, and result. The central phenomena of the paradigm model are the direct damages received by the participants after experiencing state violence. These damages include posttraumatic stress, social stigma, isolation from the community, social/economic problems, and family disintegration. Causal condition was the reason for the central phenomenon This included personal and family damage, secondary damage of the state violence, and community damage.

Contextual conditions influenced the central phenomenon, including state violence victims' physical and psychological aftereffects, the inability to speak the truth, and the suffering experienced by the subsequent generations. These collective phenomenon led to continued, deepened suffering.

Activation and interactivity strategy comprise the intentional behaviors, including personal efforts to find the truth, forgive the assailants, and the desire to heal.

And the helpful factors and obstacle factors for healing of trauma worked as the arbitrary condition.

The result: victims feared experiencing state violence again. While they sought the truth of what really happened, they also struggled with abandonment issues. This often led to feelings of hope, ambivalence, and reluctant acceptance.

As a result of process analysis, the participants' experiences were divided into 6 steps. These steps include the 'trauma phase', 'isolation phase', 'resistance phase', 'recovery phase', 'resignation phase', and 'growth phase'. Each step creates sequential effects and mutual effects.

Using selective coding, the core category resulted in an integrated concept that represented all concepts and categories. The core category was named 'State violence confuses the individual identity, but the individual and community can be healed by personal and communal efforts'. The story line was provided to elaborate on the core category.

Based on the result of the study, the differences between state violence trauma and general trauma were analyzed. It was concluded that social and cultural factors, like the support of the community, are important factors for healing state violence trauma.

The study, despite being made of multiple stories, became one cohesive idea.

Key Words: state violence, general trauma, community trauma, grounded theory

# POSTER SESSION 02

Abstract No.: 1013

## Open Trial of a Brief Imagery-Based Stabilization Psychotherapy for Adults with Acute Posttraumatic Stress Disorder

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### OBJECTIVE

Early intervention after trauma has been recognized to decrease clinical distress and to prevent further development of chronic posttraumatic stress disorder (PTSD). This study describes findings from an open pilot trial of a brief stabilization psychotherapy based on imagery techniques for adults with acute PTSD (i.e., within three months of onset).

### METHODS

Four sessions of 60-minute individual psychotherapy were delivered to 18 participants with civilian trauma and 15 completed the treatment. The clinician-administered PTSD scale for DSM-5, the Hamilton Depression and Anxiety Rating Scales, and self-questionnaires were administered at pre-treatment, post-treatment and 6-month follow up.

### RESULTS

Eight (53.3%) patients did not meet the DSM-5 criteria for PTSD at post-treatment and 8 of 9 participants at 6-month follow up. Reliable change of PTSD symptoms after treatment (12 or more CAPS-5 score reduction) was seen in 6 of 15 (45.0%) post-treatment and in 4 of 9 (45%) after six months. There was significant decrease in PTSD, depression, anxiety, and impaired quality of life scores after treatment and these gains were maintained after six months.

### CONCLUSION

Our findings suggest that brief stabilization sessions can be a promising treatment option for acute PTSD.

Keywords: posttraumatic stress disorder, psychotherapy, psychological trauma, psychotherapy, stabilization

# POSTER SESSION 02

Abstract No.: 1016

## **Systematic Review of Interventions for Partial and Non-response to Treatment for Children and Adolescents with Obsessive Compulsive Disorder or Anxiety Disorders**

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Current guidelines recommend cognitive behavioral therapy (CBT) with exposure and response prevention and selective serotonergic reuptake inhibitors (SSRI's) as first line evidence-based treatments for children and adolescents with anxiety and obsessive compulsive disorder (OCD) (Geller & March, 2012; National Collaborating Centre for Mental Health, 2020; National Institute for Health and Care Excellence, 2005, 2014; Walter et al., 2020). Most patients show an improvement of their symptoms with these treatments, either alone or in combination (Piacentini et al., 2014; POTS, 2004; Walkup et al., 2008). However, non-responsiveness to treatment occurs in approximately half of the children with an anxiety disorder and OCD (James, Reardon, Soler, James, & Creswell, 2020; Kodish, Rockhill, & Varley, 2011; Uhre et al., 2020). Currently, little is known about the best second line treatment options for these children. Possible augmentation strategies include anti-psychotic augmentation of SSRI's, adding CBT to pharmacotherapy, adding pharmacotherapy to CBT, or more intensive treatment programs. The objective of this systematic review was to synthesize the knowledge on interventions for nonresponse to previous evidence-based treatment for children and adolescents with anxiety disorders or obsessive compulsive disorder, by a) examine how studies define partial or non-response, b) assess which treatments are offered to these children and, c) evaluate the efficacy of these second line treatments. This systematic review was registered at PROSPERO ([https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=341577](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=341577)) and conducted following PRISMA guidelines. The EMBASE, PubMed, PsycINFO, CINAHL, and Web of Science databases were searched up until June 2022. Currently, we have included 59 studies, and data-extraction and synthesis is still ongoing. We will present the results of this systematic review and will discuss our findings in the light of the current knowledge and guidelines about second line treatments.

# POSTER SESSION 02

Abstract No.: 1024

## What Challenges Do Siblings of Children with Neurodevelopmental Disorders Express to Their Parents? A Thematic Analysis of 73 Sibling-Parent Dialogues

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### BACKGROUND

Chronic childhood disorders affect the entire family. We explored challenges and emotions expressed by siblings in parent-child dialogues as part of the cognitive behavioral therapy-inspired intervention program "SIBS".

### METHOD

This is a qualitative study of 73 transcribed parent-child dialogues conducted as part of the SIBS group intervention for siblings and parents of children with chronic disorders. The data are from session 5 in the intervention, in which the siblings are to express their wishes about family-related challenges (e.g., desired changes) to their parents. The parents are instructed to listen, explore, and validate the child's perspective before suggesting solutions. The mean duration of the dialogues was 27 minutes. The siblings were 8 to 14 years, and had brothers and sisters with autism spectrum disorders, ADHD, rare disorders, cerebral palsy, or severe mental health disorders. The dialogues were analysed using thematic analysis.

### RESULTS

Most of the family-oriented wishes siblings expressed were related to the diagnosis of the brother or sister with a disorder. We identified our main themes: (1) Family life (e.g., limitations in family activities); (2) The diagnosis (e.g., concerns about the future); (3) Violence; and (4) Important relationships. Siblings expressed a wide range of emotions, many of them conflicting, related to these themes.

### CONCLUSION

The siblings experienced challenges and difficult emotions in interactional processes in which the diagnosis affected family life and relationships. The study adds a new dimension to the field by identifying siblings' expressed challenges based on parent-child dialogues. Future research should investigate how parents explore and respond to the siblings' emotions and challenges.

# POSTER SESSION 02

Abstract No.: 1029

## **A Focus-Group with Singaporean Special Educators: Increasing Accessibility on Understanding the Factors Required for Teaching Comprehensive Sexuality Education to Students with an Intellectual Disability**

Magdalene Lim, Willie Tan, Hazel Chua, Kayleen Wong, Michelle Loo, [Lohsnah Jeevanandam\\*](#)

*National University of Singapore, Singapore*

The development of healthy sexuality is essential for one's well-being, as affirmed by the World Health Organization and United Nations. Comprehensive sexuality education (CSE) has been argued to be a human right, yet, young persons with Intellectual Disability (ID) are historically provided with inadequate CSE. CSE for persons with ID has been typically approached with a risk-based perspective, leading to an overemphasis on personal safety, while neglecting/overlooking the rights and empowerment of persons with ID. Special educators are one of the key stakeholders responsible for delivering CSE, thus their needs and perceptions about what is required for teaching CSE is paramount. Particularly, the teaching of CSE is influenced by several factors, such as attitudes, knowledge, skills and sexuality comfort. To date, no formal study of special educators' perceptions of factors required for teaching CSE to students with ID has been conducted in Singapore. Therefore, a focus-group study was conducted with 47 special educators across seven unique discussions, with each group comprising four to eight participants. Participants were special educators of students aged 7 to 15 with ID. Two main themes emerged from special educators' views on teaching CSE: (1) the need for CSE-related training and (2) clear CSE infrastructure. Within the theme of training, participants consistently reported that relevant skills, knowledge and positive attitudes about CSE were essential. For infrastructure, participants mostly endorsed the need for clear guidelines on managing sexuality issues, sexuality-related resources, and the presence of diverse and well-experienced multidisciplinary teams and parental support. Implications will be discussed in terms of how these findings can be disseminated and utilised in Singapore, and potentially, in other Asian countries.

# POSTER SESSION 02

Abstract No.: 1034

## **Core Belief Challenge and Posttraumatic Growth in COVID-19 Pandemic: Deliberate Rumination as a Mediator in a Three-Wave Prospective Study of Taiwanese Adults**

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*National Taiwan University, Taiwan*

### INTRODUCTION

The COVID-19 pandemic is a global trauma. Unprecedented stress may challenge the basic assumption about the world, and then may promote the possibility of posttraumatic growth. However, few studies have explored the possible positive psychological changes after COVID-19. Deliberate rumination has been found to allow impacted individuals to rebuild basic beliefs after a traumatic event. In the present study, we examined the mediating role of deliberate rumination between core belief challenges and posttraumatic growth amid the COVID-19 pandemic among Taiwanese adults.

### METHOD

The Belief Violation Questionnaire (BVQ), Chinese version of the Post-Traumatic Growth Inventory-short form (C\_PTGI-SF) and Chinese version of the Event Related Rumination Inventory (C\_ERRI) were administered to 370 participants (115 men and 255 women with mean ages  $29.8 \pm 9.0$ ) in a three-wave prospective study, i.e., T1: 10.2020~02.2021; T2: 05~06.2021; T3: 07.2022. Both core belief violation (BVQ) and posttraumatic growth (C\_PTGI-SF) were assessed in three waves, while deliberate rumination (subscales of C\_ERRI) was only assessed in the second and third waves. Hierarchical multiple regression and the PROCESS macro were employed.

### RESULTS

The mediating effect of deliberate rumination between core belief violation and posttraumatic growth was examined, and showed that T2 deliberate rumination yielded a total mediation effect both in the relationships between T1 core belief challenges and T2 posttraumatic growth as well as T1 core belief challenge and T3 posttraumatic growth.

### CONCLUSIONS

The findings of this study indicate that core belief challenges could contribute to posttraumatic growth via deliberate rumination. In clinical work with pandemic impacted individuals, it may be beneficial to help individuals to adapt a new assumption about the world or to assimilate traumatic events into their original cognitive structures through modify their intentional, meditative repetitive thinking style. Moreover, based on the results that the effect of core belief challenges on posttraumatic growth could endure, it is positive that, although the traumatic stress caused by COVID-19 is tremendous, the psychological growth gained can be preserved in the pandemic era in Taiwanese adults.

# POSTER SESSION 02

Abstract No.: 1036

## **A Case Study of Cognitive-Behavioral Family Therapy for an Across Addict Experiencing Attachment Trauma**

Hyeongbeom Kim\*, Cheol-hoon Jo, Nansil Kang, Taiyoung Park

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### OBJECTIVE

This study aimed to investigate a family therapy case for a client with cross addiction transitioning from game addiction to sex addiction. This study specifically focused on the symptoms of cross-addiction, factors affecting cross-addiction, positive resources of the client, family therapeutic interventions, and the effectiveness of family therapy.

### METHOD

The study participants included the identified client, father, mother, and younger sister, and a total of 12 sessions of family therapy sessions were conducted. This study employed thematic analysis to perform coding and pattern coding by using therapy transcripts, video recordings, and notes, and presented the findings in a network.

### RESULT

The study findings revealed that symptoms of cross-addiction included addiction transfer, drug use, group sex, negative emotional experiences, self-harm, lack of self-control, internal working model of conditional love, somatization symptoms, and psychopathological symptoms. Factors influencing cross-addiction were physical abuse, psychological and social neglect, parental conflict, parental anxiety, collapsed family systems, different family cultures, significant career barriers, economic crises, and re-experiencing of trauma. In addition, the positive resources of the client included a supportive relationship with the partner and a stable remarriage of the father. On the other hand, family therapy interventions included recognition of communication patterns, trial of new behavior, recognition of transference and insight of internal working model. The effectiveness of family therapeutic interventions included recovery of a sense of self, change of family behavior, change of communication skills, change of internal working model and improvement of symptoms.

### CONCLUSION

This study demonstrated how an across addict experiencing attachment trauma recovered from addiction through cognitive-behavioral family therapeutic interventions based on the systemic perspective.

# POSTER SESSION 02

Abstract No.: 1045

## **Mobile Phone-Based Approach Bias Retraining for Smokers Seeking Abstinence: A Randomized-Controlled Study**

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*University of Siegen, Germany*

Approach-Bias-Modification (ApBM) has shown promise in addiction treatment, but effects are small and ecological validity suffers from completing trainings in laboratory settings that do not match real-life smoking situations. Hence, providing app-based training sessions via mobile phones could be a promising approach to increase training efficacy and dissemination. One-hundred-and-thirty-one smokers seeking abstinence attended a smoking cessation intervention and were thereafter randomized to one of three conditions: a) app-based ApBM-training; b) app-based sham-training; c) no-training. App-trainings were performed on 14 consecutive days at home. Behavioral and self-report data was assessed at pretest, posttest, and a 6-weeks follow-up. App-based ApBM led to stronger reductions in cigarette smoking as compared to no-training. However, both training variants led to stronger declines in nicotine dependence and the sham-training was superior in reducing alcohol consumption. Although approach biases for positive cues increased following ApBM-training, this effect did not mediate treatment outcome. Other smoking-related cognitive biases did not change after training. Our results can inform future research in the optimisation and advancement of ApBM treatment for addiction.



# POSTER SESSION 02

Abstract No.: 1052

## Four-Session Program of Mindfulness and Cognitive Behavioral Therapy for Social Anxiety Disorder: Pilot Study

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### INTRODUCTION

Social anxiety disorder (SAD) is a marked and intense fear of social situations in which one may be scrutinized by others (American Psychiatric Association, 2013). Noda, Shirotaki, & Nakao (2021) developed a four-session program of mindfulness and cognitive behavioral therapy (M-CBT) as a low-intensity treatment module for individuals with social anxiety. Furthermore, Noda (2020) tested its effectiveness on cost bias and social anxiety with individuals who have high social anxiety in a randomized controlled trial. The results showed that the group receiving M-CBT, compared to the control group, improved significantly in cost/probability bias in the negative cognition generated when paying attention to others; fear of negative evaluation from others; depressive symptoms; trait mindfulness; and happiness. The purpose of this study was to assess the feasibility and initial effectiveness of the four-session program in M-CBT for SAD in a single-arm trial.

### METHODS

The participants were outpatients who suffered mainly from social anxiety attending an outpatient clinic in Tokyo, specializing in treating depression and anxiety. The inclusion criteria was: having SAD (based on the criteria from the Diagnostic and Statistical Manual of Mental Disorders, 5th ed, DSM-5; American Psychiatric Association, 2013 assessed by the Mini-International Neuropsychiatric Interview for DSM-5 (MINI; Sheehan et al., 1998) and being 18 years and older. The exclusion criteria was: having a current psychotic disorder, current manic episode, high suicide risk, severe physical illness, or significant cognitive impairment. The patients (N=23) completed a set of questionnaires that evaluated social anxiety symptoms, cost/probability bias, fear of negative evaluation from others, self-focused attention, trait mindfulness, depressive symptoms, cognitive reappraisal, and suppression at pretreatment, the time before each session of treatment, posttreatment, and follow-up. This study was registered in the UMIN Clinical Trial Registration System (UMIN: 000043720) and conducted with the approval of the Research Ethics Committee of the Faculty of Human Sciences, Musashino University (Approval Number: 202013).

### RESULTS

Linear mixed-effects models showed that the M-CBT was effective for social anxiety symptoms, cost/probability bias, fear of negative evaluation from others, trait mindfulness, depressive symptoms, and cognitive reappraisal. The M-CBT also produced significant pre-post improvements in these outcomes with moderate to high effect sizes (social anxiety symptoms:  $d = 1.04$ , cost bias:  $d = 0.88-1.02$ , probability bias:  $d = 1.14-1.32$ , fear of negative evaluation from others:  $d = 0.94$ , trait mindfulness:  $d = -0.82$ , depressive symptoms:  $d = 0.75$ , and cognitive reappraisal:  $d = -0.62$ ).

### DISCUSSION

These results suggest that M-CBT is effective for treating social anxiety symptoms, cost/probability bias, fear of negative evaluation from others, and depressive symptoms. This study demonstrates that M-CBT is feasible and acceptable for social anxiety disorder. It may comprise a treatment module for those who do not respond to traditional cognitive behavioral therapy.

# POSTER SESSION 02

Abstract No.: 1063

## **The Impact of Event Centrality on Posttraumatic Stress Symptoms and Posttraumatic Growth in Early Adults Who Experienced Interpersonal Trauma: The Mediation Effect of Experiential Avoidance and Emotional Clarity**

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*Seoul Women's University, Korea*

The purpose of this study was to examine the mediating effects of experiential avoidance and emotional clarity on the relationship between centrality of event, posttraumatic stress symptoms, and posttraumatic growth.

In this study, data were collected from 455 early adults (254 males and 201 females) who experienced interpersonal trauma using the Interpersonal Traumatic Experience Questionnaire, Impact of Event Scale-Revised Korean Version(IES-R-K), The Posttraumatic Growth Inventory-Expanded(PTGI-X), Centrality of Event Scale(CES), Multidimensional Experiential Avoidance Questionnaire(K-MEAQ-24), and Trait Meta-Mood Scale(TMMS). The collected data were statistically analyzed by SPSS 21.0 and AMOS 21.0 to confirm the relationship between variables and mediating effects.

The results of this study are as follows: First, event centrality, posttraumatic stress symptoms, posttraumatic growth, experiential avoidance and emotional clarity had statistically significant correlations. Second, event centrality significantly predicted posttraumatic stress symptoms and posttraumatic growth through experiential avoidance and emotional clarity. In other words, the higher the event centrality, the higher the experiential avoidance, which leads to a lower level of emotional clarity, which positively predicts posttraumatic stress symptoms and negatively predicts posttraumatic growth.

This study is significant in that it improved the understanding of the mechanisms that lead to post-traumatic stress symptoms and post-traumatic growth among those who experienced interpersonal trauma. In addition, this study suggests that experiential avoidance and emotional clarity can be considered as intervention targets to minimize stress symptoms and lead to high levels of growth.

Keywords: event centrality, posttraumatic stress symptoms, posttraumatic growth, experiential avoidance, emotional clarity

## Comparison of Symptom Structure of Panic Disorder with and without Depression by Using Network Analysis

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Panic disorder with comorbid depression (DPD) has been reported to be a severe complication of independent panic disorder (PD); greater psychiatric comorbidities, suicide attempts, and impairment in psychosocial functioning (Batinic et al., 2017; Hofmeijer-Sevink et al., 2012). However, there is a limited studies have been conducted to examine the difference between PD and DPD. According to previous studies, anxiety sensitivity is shared risk factors for overlapping psychiatric symptoms between PD and depression (Cox et al., 2001). To shed light on the above relationships, we examined the network consisting of panic symptom severity, anxiety sensitivity, and depression symptoms using network analysis. Also, we compared which dimension of anxiety-related fear is strongly related to each network to figure out the differences of network characteristics between two groups. This study included patients who were diagnosed with PD according to DSM-5 in the psychiatric outpatient clinic of the Gangnam Severance Hospital. A total of 426 patients (115 DPD, 311 PD) met eligibility with a completed collection of variables of interest. The Panic Disorder Severity Scale (PDSS; Shear et al., 1997), Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007), and Quick Inventory of Depressive Symptomatology (QIDS; Rush et al., 2003) were conducted on all patients. Significant differences were found in the demographic and clinical status of patients between PD and DPD. PD networks showed that 48 of 190 possible edges (25.2%) were not zero, and DPD networks showed that 36 of 190 possible edges (18.9%) were not zero. Significant differences in overall network structure ( $M = 0.48$ ,  $p = .025$ ) and non-significant differences in global strength ( $S = 8.02$ ,  $p = .121$ ) were found. ASI-R4 (fear of cognitive dyscontrol) was identified as a key bridge symptom in Panic-disorder without comorbid depression group, whereas ASI-R1 (fear of respiratory symptom) and ASI-R4 (fear of cognitive dyscontrol), QIDS-2 (sad mood), and PDSS-7 (Impairment in social functioning) were found as bridge symptoms in the DPD network. In both groups, fear of cognitive dyscontrol was the key variable in both networks. This result is consistent with the previous studies reporting that fear of cognitive dyscontrol is a transdiagnostic factor affecting both PD and depression (Boswell et al., 2013), indicating that CBT (cognitive and behavior therapy) plays an important role in preventing and reducing depression symptoms in PD. In the DPD network, ASI-R1 (fear of respiratory symptom) and QIDS-2 (sad mood) appeared as bridge symptoms with high centrality. This result is consistent with the previous study, which suggests that the context of depression in panic disorder is 'learned helplessness', indicating that the chronic dyscontrol state of their somatic symptoms associated with panic attacks is the important mechanism for their depression (Clum et al., 1991). Thus, network analysis of DPD showed well that the relationship between somatic symptoms related fear and depression is important in the symptom structure of DPD. Also, interventions in somatic symptoms and related fear, such as an interoceptive exposure and breathing training that intervene in the fear of respiratory symptoms, are important in reducing depression in the DPD group. Future studies should investigate whether interventions for catastrophic thinking and dysfunctional emotion regulation coping strategies underlying anxiety sensitivity effectively reduce depression symptoms.

# POSTER SESSION 02

Abstract No.: 1086

## Factors Affecting the Effect of Group Cognitive Behavioral Therapy for Adults with Attention Deficit/Hyperactivity Disorder

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### INTRODUCTION

In individual cognitive-behavioral therapy, homework implementation has been shown to promote efficacy in depressed patients (Kazantzis, Whittington, & Dattilio, 2010), but it is not known whether this applies to adult patients with Attention deficit Hyperactivity Disorder (ADHD). However, it is not known whether this applies to adult patients with Attention deficit Hyperactivity Disorder (ADHD). In the present study, we investigated the factors that influence the effects of group cognitive behavioral therapy on ADHD patients in adulthood.

### METHODS

The subjects were 53 ADHD patients who participated in group cognitive-behavioral therapy. The quality of the treatment was measured by the total score of the Group-Cognitive therapy scale (G-CTS), which was graded based on the therapist's video of the group cognitive behavioral therapy session. The G-CTS score, age of the participants, participants' homework performance score, ADHD severity before the intervention, medication, autism Multiple regression analysis was conducted with G-CTS scores, participant's age, participant's homework performance scores, pre-intervention ADHD severity, medication, and autism spectrum index as explanatory variables and CAARS item A T scores 6 months after the end of the intervention as the objective variable.

### RESULTS

The standardized beta coefficients of each explanatory variable on the program effect in the inattention/memory problem items of the CAARS were higher for homework performance (.38), medication (.23), severity of ADHD symptoms before intervention (.28), AQ index (.21), participant age (.18), and G-CTS total score (.04), in that order. The explanatory rate by these variables was 59.8%.

### DISCUSSION

The factor that had the greatest impact on the program effects on inattention/memory symptoms of ADHD was homework performance status. The higher the medication dose, the milder the ADHD severity, and the lower the autism spectrum index, the greater the effect. The age of the participants had little effect on the effectiveness of the intervention.

# POSTER SESSION 02

Abstract No.: 1087

## **Sexual Orientation-Based Microaggressions and Cannabis Use Outcomes among Sexual Minority Individuals: The Serial Impact of Negative Affect and Coping-Motivated Cannabis Use**

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*Louisiana State University, USA*

### INTRODUCTION

Sexual minority individuals report significantly more cannabis use and problems than their heterosexual peers, possibly due to their frequent experiences with sexual orientation-based microaggressions. As a result, sexual minority individuals may turn to cannabis use in an effort to cope with the negative affect associated with these experiences. No known studies have tested this hypothesis; therefore, the current study tested if sexual orientation microaggressions are positively associated with negative affect (anxiety and depression), cannabis coping motives, and cannabis-related outcomes (frequency, quantity, problems); if coping motives are positively associated with cannabis-related outcomes; and if negative affect and cannabis use to cope with negative affect serially mediate the relation between sexual orientation microaggressions and cannabis-related outcomes.

### METHOD

Sexual minority undergraduate students who reported cannabis use in the past three months (N = 328) completed an online survey via Qualtrics and were compensated with research credits.

### RESULTS

Microaggressions were significantly positively correlated with anxiety ( $r = .37, p < .01$ ), depression ( $r = .39, p < .01$ ), coping-motivated cannabis use ( $r = .21, p < .01$ ), cannabis-related problems ( $r = .14, p < .05$ ), non-sexual orientation-related stress ( $r = .27, p < .01$ ), and overt sexual orientation-based discrimination ( $r = .34, p < .01$ ). Thus, non-sexual orientation-related stress and overt sexual orientation-based discrimination were included as covariates in subsequent analyses. Microaggressions were indirectly positively related to cannabis use frequency via the sequential effects of anxiety  $b = .006, SE = .002, 95\% CI: [.003, .012]$ , or depression,  $b = .009, SE = .003, 95\% CI: [.004, .015]$ , and coping motives. Also, microaggressions were indirectly positively related to cannabis problems via the sequential effects of anxiety,  $b = .004, SE = .002, 95\% CI: [.002, .009]$ , or depression,  $b = .006, SE = .002, 95\% CI: [.002, .011]$ , and coping motives. Effects remained significant when examining negative affect specific to the experience of sexual orientation microaggressions and cannabis use to cope with microaggression-specific negative affect for cannabis frequency,  $b = .012, SE = .003, 95\% CI: [.006, .019]$ , and problems,  $b = .007, SE = .002, 95\% CI: [.003, .012]$ . Given the limitations of testing serial mediation with cross-sectional data, we tested whether sexual orientation-based microaggressions were related to negative affect via the sequential effects of cannabis use outcomes and coping motives; these indirect effects were not significant for anxiety (e.g.,  $b = -.004, SE = .004, 95\% CI: [-.013, .003]$ ), or depression, (e.g.,  $b = -.005, SE = .005, 95\% CI: [-.016, .004]$ ).

### DISCUSSION

Results highlight the negative impact of sexual orientation-based microaggressions in terms of both negative affect and negative cannabis-related outcomes. Microaggressions remained indirectly related to negative cannabis outcomes even after accounting for variance attributable to overt discrimination and non-sexual orientation-based stress, highlighting the robust nature of these relations. Clinical implications will be discussed.

# POSTER SESSION 02

Abstract No.: 1091

## **A Descriptive Study on the Actual Condition of ADHD Masking in Japan**

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Attention Deficit Hyperactivity Disorder (ADHD) is a disorder with behavioral disturbances such as inattention, hyperactivity, and impulsivity. Therefore, many people with ADHD experience difficulties in school, in a company and so on. And many people with ADHD who have had such difficult experiences try to hide or engage in behaviours to hide ADHD traits that are considered socially undesirable. And such behavior is called "ADHD masking". ADHD masking can be used as a strategy to adapt to the environment and as a function to protect one's physical and mental health. However, hiding symptoms may delay the diagnosis of ADHD and prevent the patient from receiving appropriate support. And ADHD masking suppresses emotions and behaviors. That often causes emotional distress and fatigue. However, there are very few studies on ADHD masking, especially in Japan. For this reason, this study was conducted to expose ADHD masking in Japan. Twelve people with ADHD and one of their parents participated in this study. Interviews revealed that they had experienced many difficulties due to their traits. And they had been doing ADHD masking since junior high school or high school when they began to be aware of these problems. ADHD masking was also used for those with whom the relationship did not work well, such as friends and people at work, while it was not used for those with whom the relationship was good, such as family members. And then, ADHD masking was then divided into two major categories: coping with oneself and coping with others. While these effects were positive, such as facilitating one's asks and improving one's relationships with others, they also had negative effects, such as mental fatigue caused by paying attention to various things. This negative effect needs to be reduced in frequency or replaced with more adaptive masking because it may be a risk factor for psychiatric disorders in ADHD patients, who are considered to be more prone to comorbid depression and anxiety disorders.

# POSTER SESSION 02

Abstract No.: 1115

## Exploring the Effects of a Single-Session Mindset Intervention for Social Anxiety in Female College Students

Jungeun Kim\*, Hansaem Kim, Eun Been Song, Daeun Jung, Sujin Yang

*Ewha Womans University, Korea*

In the post-pandemic era, it is essential to study social anxiety as individuals are apprehensive about reentering the social realm and embracing offline routines. Social anxiety, which is characterized by excessive dread and avoidance of social situations, is a prevalent and debilitating problem among college students. College students approaching emerging adulthood have a developmental task of broadening their interpersonal social world, but social anxiety can have a negative impact on their academic success, social interactions, and mental health if left untreated. Furthermore, research has shown that females are more susceptible to certain mental health issues, such as anxiety disorders (McLean et al., 2011). Therefore, it is crucial to address their unique challenges as they navigate the post-pandemic world. The present study set out to investigate the effects of a single-session mindset intervention for social anxiety in female college students.

A total of 65 Korean female college students ( $M=20.38$ ,  $SD=1.442$ ) participated in a single-session mindset intervention. Prior to random assignment to the intervention and active control condition, the severity of social anxiety (i.e., middle to high levels according to the K-SAD; Lee & Choi, 1997) and socio-demographics were matched between the conditions. Changes in social anxiety, as well as depression/anxiety (Derogatis, 2001) and anxiety mindset (Schroder et al., 2015), were assessed at three intervals [T1 (pre-test); T2 (post-test); T3 (follow-up; only 58 students)]. Each interval was separated by roughly one month. The single-session mindset intervention was designed in accordance with Schleider and Weisz (2019), whereas the corresponding active control was designed in accordance with neurobiological and neuroscience findings on the brain. Both conditions were administered online using identical procedures: (i) viewing a 30-minutes multimedia video and (ii) typing reflective writing on the video.

Using mixed-effects modeling, we examined the main effects of the mindset intervention (intervention vs. control) and time on social anxiety over a 10-week period, while accounting for individual differences in depression, anxiety, and anxiety mindset as random effects. The fixed-effects estimates indicated significant main effects of time at post-test ( $\beta = 9.537$ ,  $SE = 2.27$ ,  $p < 0.001$ ) and at follow-up ( $\beta = 4.67$ ,  $SE = 2.21$ ,  $p < 0.036$ ), indicating a decline in social anxiety over time. Nonetheless, there was no main effect of intervention ( $\beta = 6.56$ ,  $SE = 4.08$ ,  $p = ns$ ), indicating that participants in both conditions experienced a reduction in social anxiety. Interestingly, we identified a marginally significant interaction between intervention and time at post-test ( $\beta = -6.03$ ,  $SE = 3.29$ ,  $p = 0.068$ ), indicating that the intervention group demonstrated a greater reduction in social anxiety immediately after the intervention than the control group. The random effects of anxiety, depression, and anxiety mindset were all significant in the mixed effects model, indicating that these factors contributed to individual variation in social anxiety levels over time.

Consistent with recent research, the findings of this study suggest that a single-session mindset intervention may be a promising method for reducing social anxiety levels in female college students in the aftermath of a pandemic. Future research should investigate further the specific mechanisms of the mindset intervention that may contribute to the reduction of social anxiety in order to maximize the intervention for individuals with different baseline characteristics.

# POSTER SESSION 02

Abstract No.: 1119

## Complicated Grief, Post-Traumatic Stress and Post-Traumatic Growth in Surviving Families of Military Loss

Shin-Hyang Kim\*, Jihee Jang, Surin Cho, Kee-Hong Choi

*Korea University, Korea*

The death of a loved one is a serious emotional stress event, especially sudden and unexpected traumatic deaths cause more intense grief and psychological, physical, and social distress. Loss and grief have long been associated with military communities, and violent forms of death such as combat, suicide, training accidents, and abuse are closely related to military deaths. For this reason, it is known that military death survivors are more likely to experience complicated grief (CG) and post-traumatic stress disorder (PTSD) even if the cause of death is not combat exposure (Seamon-Lahiff et al., 2021). However, bereavement does not always cause only negative change. Some people who have experienced traumatic bereavement experience positive changes known as post-traumatic growth (PTG), such as strengthening religious beliefs, improving relationships with friends and family, and changing life goals and priorities (Bogensperger & Lueger-Schuster, 2014). Although the results of previous studies on the relationship between CG, PTSD, and PTG after bereavement are not consistent, studies have recently reported that all loss experiences can be accompanied by a certain level of PTG even if they suffer psychological and social distress (Zhou et al., 2018).

In this study, 17 bereaved military families (age mean $\pm$ SD = 55.94 $\pm$ 9.56; time since loss [within 12 months]=3, [1-4 year]=8, [greater than 5 years]=6) were subjected to semi-structured in-depth interviews along with the Korean version of Inventory of Complicated Grief (K-ICG; Prigerson et al., 1995; Kim & Song, 2020), the Impact of Event Scale-Revised Korean version (IES-R-K; Weiss & Marmar, 1997; Eun et al., 2005) and the Korean Posttraumatic Growth Inventory (K-PTGI; Tedeschi & Calhoun, 1996; Song et al., 2009). As a result, the mean scores were very high at 77.41 (SD=13.32) on the K-ICG, 50.12 (SD=16.64) on the IES-R-K, especially, 94.1% were above the screening level of PTSD for the IES-R-K. On the other hand, it was reported that the K-PTGI mean score was at 35.47 (SD=18.68), so the experience of positive post-traumatic change was not significant. However, in-depth interviews, many of survivors reported changes such as wanting to help other bereaved military families or paying attention to marginalized social problems.

These results suggest that most military bereaved families, regardless of the bereavement period, experience high levels of CG and post-traumatic stress after loss. In the case of post-traumatic growth, although K-PTGI showed low mean scores, positive changes were reported in in-depth interviews. Given some previous studies suggesting that PTGI is more suitable for non-traumatic studies than severe trauma studies (Anderson & Lopez-Baez, 2008), future research through qualitative analysis might help to investigate the relationship between long-term grief and PTG. Furthermore, qualitative studies based on in-depth interviews could help understand bereavement processes involving both psychological distress and positive changes in military survivors, which could provide valuable information for developing customized interventions.



# POSTER SESSION 02

Abstract No.: 1124

## **The Effect of Anxiety Sensitivity on Repeated Suicide Attempts: The Serial Mediation Effects of Rumination and Hopelessness and the Moderated Mediation Effect of Gender**

Yemin Jin<sup>1\*</sup>, Sungbum Woo<sup>2</sup>, Kawon Kim<sup>1</sup>, Seok Hyeon Kim<sup>1</sup>, Sungwon Roh<sup>1</sup>, Sojung Kim<sup>1,3</sup>

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Repeated suicide attempts is a cardinal risk factor for suicide, and anxiety sensitivity has been suggested as one of the temperamental vulnerability that increases the rate of suicide attempts. However, few studies have explored the underlying mechanisms of anxiety sensitivity in predicting suicidal attempts. Individuals who attempt suicide frequently experience a sense of hopelessness, believing that highly desired outcomes will not occur or that highly aversive consequences will occur. In addition, rumination, one of the maladaptive emotion regulation strategies, is known to cause hopelessness by letting individuals dwell on symptoms of distress and negative events. Meanwhile, previous studies have demonstrated that the effect of hopelessness on suicidal ideation was only significant in women but not men. This study aimed to examine the sequential mediation effect of rumination and hopelessness in the relationship between anxiety sensitivity and repeated suicide attempts in psychiatric patients. The moderation effect of gender was also investigated in the mediating paths. A self-report questionnaire packet was administered to 229 adult psychiatric patients at a university medical center in Seoul, South Korea. All participants provided demographic information and completed measures on anxiety sensitivity (ASI-3), rumination (RRS), and hopelessness (BHS). The presence and frequency of suicide attempts were identified through structured clinical interviews (SCID-5-CV). The data were analyzed using the PROCESS Macro in SPSS 25.0.

Results showed that rumination and hopelessness sequentially mediated the relationship between anxiety sensitivity and repeated suicide attempts. Furthermore, the moderation effect of gender in the mediating paths was significant. Specifically, the mediating effect of hopelessness (direct effect=0.008, Boot SE=0.003, 95% CI [0.003, 0.016]) and the sequential mediating effect of ruminating and hopelessness (0.006, Boot SE=0.003, 95% CI, 0.12] were significant in women. In contrast, the mediating effects were not significant in men. And the effect of hopelessness on suicide attempts was significant only in women (interaction effect=0.081, SE=0.033, 95% CI [0.015, 0.146]). The results of this study indicate that anxiety sensitivity may be a significant predictor of suicide in psychiatric patients. Moreover, it suggests that rumination and hopelessness should be examined together to understand repeated suicide attempts in this population better. Lastly, this study provides clinical implications that differential interventions need to be provided by gender.

# POSTER SESSION 02

Abstract No.: 1133

## Psychometric Development of the Problematic Stock Trading Scale

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### BACKGROUND AND AIMS

Stock investment, which has been mostly considered only as a part of normal economic activity, can be classified as another type of gambling or behavioral addiction. Problematic stock trading (PST) has several aspects similar to those of gambling such as inordinate level of sensation seeking or evident ignorance of financial risks. As such, not only can this behavior cause significant damage to an individual's mental health, but it can also cause serious financial loss. As stock trading is not explicitly labeled as one of abnormal behaviors, this started to be a good shelter to avoid boredom and to gain psychological compensation during the post-pandemic era. Despite growing social concerns over addictive stock investment behavior over decades, there are few psychometrically sound means to evaluate individuals who were left floundering after problematic stock trading. The aim of this study is to develop the Problematic Stock Trading Scale (PSTS), a valid and reliable scale that measures problematic stock trading.

### METHODS

The PSTS was developed through two stages; the process was arranged sequentially from the preliminary study, and then to the main study. Participants were recruited and directed to respond via ZINNOS R&C. A sample of 261 individuals agreed to participate in the study, and 50 respondents who completed the questionnaire were included in the analysis. The mean stock trading reported by participants was 3.8 days per week, and 2.0 hours per day. We referred to the substance dependence diagnosis criteria, and existing scales related to gambling addiction including Korean version of the NORC DSM-IV Screen for Gambling Problems (K-NODS), Korean version of the Massachusetts Gambling Screen-DSM (K-MAGS-DSM), and the Irrational Gambling Belief Questionnaire (IBQ). By performing literature review, we generated a pool of items. To determine the final version of the PSTS, participants who did not engaged in the previous study were included. An initial sample of 2,000 individuals received the questionnaire online, and 500 respondents who completed the questionnaire were included in the analysis. In order to examine the reliability and validity of PSTS, internal consistency, external validity, and exploratory factor analysis were implemented.

### RESULTS

As a result of exploratory factor analysis, 3-factor model showed reasonable model fit indices for Problematic Stock Trading Scale (PSTS). Each of the factors were labeled as preoccupation, risky investment, and cognitive distortion. After deleting items which overlapped in meaning with other items or items that hinders in making the best combination within each factor, final version of 12-item PSTS was confirmed. The scale was comprised of 5 items for 'preoccupation' factor, 4 items for 'risky investment' factor, and 3 items for 'cognitive distortion' factor. Reliability and external validity were confirmed.

### DISCUSSION

The present findings highlight the potential use of the PSTS for future research by defining problematic stock trading as a behavioral addiction. We established a valid operational definition in the process of developing the scale, and contributed in promoting understanding of addictive behavior of stock trading. PSTS is expected to have high utility in detecting and screening people suffering from unmanageable stock trading behavior. Moreover, this scale could be practically used for measuring treatment outcome by differentiating the population from those with gambling addiction problems. Thought record activities, education of the cognitive fallacy, which are commonly included in the cognitive behavioral therapy could positively change mood and dysfunctional beliefs. Lastly, another clinical implication lies in identifying the psychological features of individuals at risk of falling into problematic stock investment in advance. As we are pursuing to advance toward a sustainable future, clinicians ought not to overlook on people who are making use of blind spots such as problematic stock trading disguised as financial activity.

# POSTER SESSION 02

Abstract No.: 1134

## The Effect of Focused Attention Meditation on Attention Network in Individuals with High Trait Anxiety

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### INTRODUCTION

Efficient and economical interventions for modulation of attention and emotion have been extensively studied recently. Mindfulness meditation interventions are increasingly becoming a life-style choice and therapeutic adjust for improving attention and relieving low mood. However, the underlying neural mechanisms of mindfulness and how they relate to attention processing have not been explored in depth. Besides, little is known about the dose effect of the mindfulness intervention on the attention progressing. The current study explored whether focused attention meditation could improve the attention networks (alerting, orienting and executive attention network) in the individuals with high trait anxiety. Besides, present study also investigated the different duration effect (single dose and multiple doses) of focused attention on the attention networks.

### METHOD

Fifty-two participants with high trait anxiety were randomly divided into two groups. One group was given 6-day focused meditation training the control group was given 6-day sit-down training. Participants completed an emotional variant of the attention network test (E-ANT) at baseline, one-time intervention and post-intervention.

### RESULTS

The behavioural results showed that the main effect of time was significant. The response time decreased gradually with the length of intervention increasing. Regarding attention network, single intervention can only improve the efficiency of individuals' orientation network, and there is no significant difference between the efficiency of orientation network of single and multiple meditations. The ERP results showed that in the early stage of attention, there were interaction between groups, time and electrode points in N2. In the experimental group, there was no significant difference in N2 at three time points, but the trend of N2 in three time points was gradually increasing. In the control group, N2 increased significantly in the middle time point, and then decreased significantly in the last time point. P3b also showed the same trend. Among them, the relationship between N2 and P3b is synergistic, which shows that with the increase of intervention time, the ability of individual executive control and resource allocation gradually increases.

### CONCLUSION

Our results suggest that short-term (single dose and multiple doses) focused attention meditation might usefully enhance certain component of attention in the individuals with high trait anxiety.

# POSTER SESSION 02

Abstract No.: 1139

## An Exploratory Study of the Nightmare Experience in Firefighters

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### INTRODUCTIONS

Recurrent nightmares are one of the major symptoms of post-traumatic stress disorder (PTSD), which is known to occur in 60% of people diagnosed with PTSD. Firefighters who frequently exposed to traumatic incidents are at a higher risk of experiencing post-traumatic stress and the rate of experiencing nightmares is reported to be higher than other occupations. Therefore, this study aims to examine the frequency and severity of nightmare of Korean firefighters and investigate the effect of nightmare severity on clinical indices.

### METHODS

This study was conducted in 166 firefighters in South Korea (mean age 38.9±9.4, male 85.5%). All participants completed the following questionnaires: the Disturbing Dreams and Nightmare Severity Index (DDNSI), the PTSD Checklist (PCL), the Insomnia Severity Index (ISI), the Patient Health Questionnaire-9 (PHQ-9), the Depressive Symptom Inventory-Suicidality Subscale (DSI-SS), and the Epworth Sleepiness Scale (ESS). Descriptive statistics were conducted to examine the level of nightmare severity and frequency, and hierarchical regression analysis was conducted to examine the effects of nightmare severity on clinical indices, independent of insomnia.

### RESULTS

In this study, 18.1% (n=30) of the participants were found to have clinical levels of nightmare disorder (DDNSI ≥ 10; nightmare group). Among the sample, 10.2% (n=17) reported experiencing frequent nightmares (more than once a week). Among the nightmare group, 70% (n=21) met criteria for PTSD (PCL ≥ 33). Regression analysis showed that the effects of nightmare severity on depression ( $\beta=.349$ ,  $t=3.670$ ,  $p<.001$ ,  $R^2=.323$ ) and suicidal ideation ( $\beta=.321$ ,  $t=3.063$ ,  $p<.01$ ,  $R^2=.178$ ) were significant, controlling for gender, age, and insomnia severity.

### CONCLUSION

This study examined the severity and frequency of nightmare experiences among currently working firefighters in Korea. Considering the strong association between nightmares and mental health, especially PTSD, interventions for nightmares could be an important target for improving mental health of firefighters.

This research was supported by the Emergency Response to Disaster sites Research and Development Program funded by National Fire Agency(20013968).

# POSTER SESSION 02

Abstract No.: 1144

## **Affective Responses to Stress Can Modulate the Stress-Induced Smoking Behaviors Following a Quit Attempt**

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Smoking has a high mortality rate and is related to various health problems, and quitting smoking is difficult with a high relapse rate. Stress is a significant trigger for smoking behavior, and a risk factor for its relapse. Stress is measured in various ways, often experimentally in laboratory settings or with surveys, and affective responses to stress can be measured in multiple ways (e.g., surveys, behavioral responses, and facial expressions). However, the link between responses to stress in a laboratory setting and daily stress levels and how they are related to smoking cessation remain unclear. Ample evidence suggests that facial expressions contain information regarding individuals' emotions, but they have been rarely used for measuring stress responses. In the current study, we decoded participants' emotional responses to a stressor in a laboratory setting from their facial expressions using computer vision techniques. We postulated that negative emotions are associated with stress-induced smoking behavior in daily situations.

We recruited 47 smokers who participated in a 5-week smoking cessation clinic. Participants completed the socially evaluated cold-pressor test (SECPT), during which their facial expressions were recorded and their level of fear was calculated using an emotion recognition tool. Subjective ratings for the stress level before and after the SECPT were also collected. Participants' daily stress level and smoking amount were collected during the clinic using a smartphone app.

Regression results showed that daily stress level significantly predicted the number of cigarettes smoked. However, the effect of daily stress on smoking behavior was modulated according to their fear level decoded from facial expressions and computer vision to the SECPT. In contrast, self-reported affective rating failed to demonstrate the modulating effect. Specifically, the influence of daily stress on smoking behavior was reduced when the fear level was high. In addition, tolerance for stress captured during SECPT also significantly modulated the effect of stress and fear on smoking behavior.

These findings suggest that fear response contained in facial expressions is associated with stress-induced smoking behavior, and highlight the utility of facial expressions and computer vision techniques for the assessment and intervention to smoking behaviors.

# POSTER SESSION 02

Abstract No.: 1149

## Multimodal Deep Neural Network for Behavior Recognition with FOS-R for Children with ASD

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### INTRODUCTION

The prevalence of Autism Spectrum Disorder (ASD) has been steadily increasing over the past decades, becoming a significant global concern [Chiarotti and Venerosi, 2020], [World Health Organization, ], [Hertz-Picciotto and Delwiche, 2009]. Current statistics in the United States indicate that 1 in 36 children is diagnosed with ASD [Maenner et al., 2023]. Children with autism often experience symptoms such as somatosensory disturbances and atypical developmental patterns, which greatly impact daily social functioning [Mayes and Calboun, 1999]. The Family Observation Schedule (FOS) serves as a comprehensive tool for assessing family interactions across various contexts. Within the realm of autism research, FOS plays a crucial role in identifying and evaluating family interactions, offering valuable insights for the diagnosis, treatment, and support of children with autism by examining their social contexts and dynamics [Lee and Chung, 2016]. Presently, FOS data is encoded manually, a time-consuming and labor-intensive process. An automated FOS encoding algorithm could alleviate the burden on clinicians and researchers, ultimately benefiting numerous children with autism. This study proposes an effective multi-modal deep learning model for the automated encoding of FOS data, utilizing videos of children on the autism spectrum engaged in specific tasks as training data for the model. The multi-modal data incorporated in this research includes video, audio, and task information data, among others. While previous studies have primarily overlooked the presence of task information data, our research aims to optimize model input, enabling the deep learning model to analyze task information data more effectively.

### METHOD

A. Dataset description Our dataset includes 216 videos of children with autism or their parents/guardians. There are some variants, but mostly composed 3 sets of 5 minutes. It is designed particularly for research involving children aged between 1 to 12 years of age, but can be modified for use with older children. The children in the videos performed three different tasks: (1) playing with specific types of toys, (2) performing a series of specific instructions, and (3) free playing alone. These videos are encoded every 10 seconds to describe the interaction styles (IS) of the children and their parents. These IS can be used as labels for training deep learning model. There are 23 interaction types, with some describing the IS of parents (Praise (P) and Affection (AF)) and some other the IS of children (Non-compliance (NC) and Oppositional (OP)). And a part of IS presents a positive or negative symbol behind it describing the emotion of IS, such as SA+ for the positive social attention and SA- for the adverse social attention. B. Data preprocessing and model training Initially, we segmented the original video into 10-second intervals for each encoding and performed data augmentation to address any dataset imbalance. Our model training comprised of three sequential steps based on the respective modalities: vision, language, and a combined vision-language modality. The vision modality labels were primarily identified by action-based information, such as Physical Negative (PN), while the language modality was identified through language-based information, such as Praise (P). For the combined modality, both vision and language information were utilized to predict the target variable.

### INITIAL RESULT

Currently, we have accomplished the data preprocessing with their respective labels and developed an initial visual information classification prediction model, utilizing the fast slow ResNet architecture (Feichtenhofer et al. 2019), attaining an overall accuracy exceeding 70%. Additionally, we have initiated the construction of a language model and a multi-modal model. However, the issue of model prediction bias caused by imbalanced data distribution still persists and requires further attention. As part of our future research, we aim to address this issue and enhance the overall accuracy of the model.

# POSTER SESSION 02

Abstract No.: 1154

## Reliability and Validity of the Japanese Version of the Attitudes Towards Emotional Expression Scale

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### INTRODUCTION

Negative attitudes toward emotional expression are associated with emotional suppression and can increase social anxiety. In our previous study, we created a Japanese version of the Attitudes toward Emotional Expression Scale developed by Joseph et al. (1994) and examined its factor structure and internal consistency (AEES-J: Shinmoto & Minosaki, 2022). The results of exploratory factor analysis confirmed that the AEES-J consists of 17 items in 4 subscales and has high internal consistency. However, the temporal stability of the AEES-J and its validity were not fully examined. Therefore, this study examined the retest reliability, convergent validity, and discriminant validity of the AEES-J.

### METHOD

The survey was administered to adults aged 18 years and older, and 716 respondents were obtained (299 males, 393 females, and 15 non-respondents; mean age  $22.00 \pm 6.13$  years). Of these respondents, 153 participated in the AEES-J retest (about 4 weeks later). For convergent validity, we used the BIS of the Japanese version of the BIS/BAS scale (Takahashi et al., 2007), the Emotion Regulation Questionnaire (ERQ: Yoshizu et al., 2013), and the Japanese version of the SIAS (Kanai et al., 2004). The BAS of the BIS/BAS scale was used to verify the discriminant validity.

### RESULTS

To validate retest reliability, intraclass correlation coefficients (ICC) were calculated from the first and second AEES-J data, and the ICCs for each subscale ranged from 0.59-0.75. To verify convergent and discriminant validity, correlation coefficients between the AEES-J, BIS/BAS scales, ERQ, and SIAS were calculated. AEES-J has positive correlations with BIS ( $r = 0.26, p < 0.01$ ), ERQ ( $r = 0.57, p < 0.01$ ), and SIAS ( $r = 0.38, p < 0.01$ ). Conversely, BAS was not significantly correlated with the AEES-J ( $r = 0.03$ ).

### CONCLUSIONS

In this study, The ICC results indicate that the AEES-J has a certain degree of temporal stability. The AEES-J was shown to have certain convergent validity, as significant positive correlations were found with the BIS, ERQ, and SIAS. Additionally, the AEES-J was not significantly correlated with the BAS, indicating that it has a certain discriminant validity. Note. The study was granted ethics approval by the Research Ethics Committee at HSU (2022-0002).

# POSTER SESSION 02

Abstract No.: 1178

## **The Double Mediation Effect of Cognitive Emotion Regulation Strategies and Perceived Social Support in the Relationship between Vicarious Trauma and Post-Traumatic Growth of Counselors**

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### INTRODUCTION

The objective of this study is to examine the relationship between vicarious trauma and post-traumatic growth of counselees. In addition, it attempts to analyze the impact on post-traumatic growth as well as the structural relationship via cognitive emotion regulation strategies and perceived social support. Thus, the study is to increase counselors' understanding and awareness of vicarious trauma, and to find out whether cognitive emotional regulation strategies and perceived social support have significant positive effects on the relationship between vicarious trauma and post-traumatic growth.

### METHOD

The study examined the dual mediating effect between cognitive emotional regulation strategy and perceived social support in relation to surrogate trauma and post-traumatic growth of 273 counselors nationwide. To this end, SPSS 21.0 was used to examine both the demographic and basic characteristics of each variable and the satisfaction regarding the assumption of normal distribution in the measurement variable was confirmed. To examine whether cognitive emotion regulation strategy and perceived social support are mediated in the relationship between surrogate trauma and post-traumatic growth, PROCESS Macro and AMOS 21.0 was used, through confirmatory factor analysis, to verify the measurement model.

### RESULTS

As a result, it was confirmed that surrogate trauma had a negative effect ( $\beta = -.571, p < .001$ ) on post-traumatic growth, and that cognitive emotional regulation strategy and perceived social support had a relevant effect ( $\beta = -.173, p < .001$ ) on post-traumatic growth through the dual mediation effect. Thus, it was established that an increase in cognitive emotional regulation strategy and perceived social support decreases the negative effect of surrogate trauma on post-traumatic growth.

### CONCLUSION

By confirming that counselors' vicarious trauma can promote the post-traumatic growth through cognitive emotional regulation strategies and perceived social support, this research is expected to contribute to the future research about the relationship between vicarious trauma and post-traumatic growth as well as development of programs to help counselors grow in their fields.



# POSTER SESSION 02

Abstract No.: 1179

## Validation of the Japanese Version of the Somatic Symptom Disorder-B Criteria Scale (J-SSD-12) under Psychiatric Outpatient Settings in Japan: A Progress Report

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### BACKGROUND

The purpose of the current research is to develop a Japanese version of the Somatic Symptom Disorder-B Criteria Scale (J-SSD-12). The SSD-12 devised by Toussaint A. consists of 12 items. This rating scale appears to consist of three components: cognitive, affective, and behavioral components. In this work it was examined whether the Japanese version can be shown to be as reliable and valid as the original.

### METHODS

This study attempted to validate J-SSD-12 in a general hospital providing advanced medical care in Japan. One hundred and sixty patients participated under psychiatric outpatient settings of University Hospital Kyoto Prefectural of Medicine in a cross-sectional study. Item and descriptive characteristics as well as measures of reliability and validity were determined.

### RESULTS

The mean age (standard deviation) of the recruited participants was 50.69 (19.01). 75.0% of them were female. The internal consistency deriving from the sample was acceptable. While two items that should have been associated originally to the cognitive component presented a slightly weaker association, confirmatory factor analyses revealed a high association among the three proposed components interpreted as component I; cognitive, component II; affective, and component III; behavioral facets (GFI=0.857, CFI = 0.927, TLI = 0.905, RMSEA = 0.116, 90% CI: 0.096–0.136). Based on the very high correlations among the three components (component I and II:  $r = 0.94$ ; component I and III:  $r = 0.85$ ; component II and III:  $r = 0.91$ ), this research results showed to be substantial overlap in content between the three components.

The SSD-12 total sum-score was significantly correlated with the 15-item somatization module from the Patient Health Questionnaire (PHQ-15) ( $r = 0.527$ ,  $p < 0.001$ ), Short Health Anxiety Inventory (SHA-I) scale ( $r = 0.70$ ,  $p < 0.001$ ), the General Anxiety Disorder-7 (GAD-7) scale ( $r = 0.58$ ,  $p < 0.001$ ), and the Patient Health Questionnaire-9 ( $r = 0.58$ ,  $p < 0.001$ ). Patients with a higher SSD-12 symptoms reported significantly higher general physical and mental health impairment.

### CONCLUSION

Our results indicate the reliability and validity of the J-SSD-12 as a measure of somatic symptom disorder under psychiatric outpatient settings in a general hospital providing advanced medical care in Japan. Although this result was consistent with the original result, two items that should have been associated to the cognitive component presented a slightly weaker. Our results differed slightly from the original version and were fairly similar to the South Korean version. The two cognitive items in the present study may reflect cultural differences.

The current study is a work in progress and requires further evaluation. Further increase in the number of subjects to improve accuracy as well as study of a different target population, such as primary health care areas in Japan is required in the future.

# POSTER SESSION 02

Abstract No.: 1182

## Smartphone Use and Mental Health: Differentiating Problematic Use, Phone Checking, and Screen Time in Young Adults

Germaine Y. Q. Tng, [Hwajin Yang\\*](#)

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### INTRODUCTION

We examined fine-grained relationships between several smartphone-use indices and facets of psychological distress. Further, in view of some research which suggests that females tend to be more susceptible to psychological distress than males, we probed whether sex modulated the relationships between smartphone-mediated behaviors and distress outcomes.

### METHOD

Using structural equation modelling, we analyzed data from young adults (N = 364) and evaluated the associations of diverse smartphone-related behaviors—problematic smartphone use (PSU), phone checking, and overall smartphone screen time—with depression, anxiety, and stress.

### RESULTS

We found that phone-checking frequency predicted greater depression, anxiety, and stress levels, while PSU predicted anxiety levels above and beyond the effects of other indices. Further, smartphone screen time predicted depression, but not other distress-related outcomes. We also found a significant interaction effect such that the positive relation between PSU and stress was more pronounced for females than males. Our results held true when a host of covariates (age, sex, socioeconomic status, negative affect, and neuroticism) were accounted for.

### DISCUSSION

These findings underscore the importance of delineating distinct indices of smartphone use in relation to maladaptive psychological outcomes. Our findings offer critical insights into the unique associations of distinct smartphone-use indices with psychological distress above and beyond the effects of other smartphone indices, in line with the displacement-interference theoretical framework of smartphone use (Kushlev & Leitao, 2020). Importantly, our study suggests that the disturbance of daily activities (e.g., in-person socializing, academic work) that results from PSU uniquely exacerbates anxiety rather than other facets of distress. In addition, the disturbances to daily activities caused by PSU trigger greater stress levels for females than males. Furthermore, our findings extend theoretical applications of the displacement account to overall screen time, which suggests that general smartphone engagement plays a role in elevating depression levels. Together, this underscores the critical need to distinguish different indices of smartphone use to disentangle their unique associations with psychological distress outcomes. Also, given that the link between PSU and psychological distress is more pronounced in females than males, our findings indicate that prevention and intervention strategies for problematic and addictive smartphone should consider sex-dependent susceptibility. Overall, this study contributes to the understanding of the relationships between specific smartphone-use behaviors and psychological distress, which can inform the development of CBT interventions for individuals struggling with PSU and related psychological distress. Our study highlights the importance of tailoring evidence-based CBT interventions to address the unique challenges and characteristics of different health-related issues.

# POSTER SESSION 03

Abstract No.: 0051

## Examination of Cognitive Behavioral Model for Promoting Diversity among University Students

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### INTRODUCTION

To the best of our knowledge, no studies have examined the media variables of cognitive behavioral therapy for diversity. Further, whether the model of cognitive distortion or mindfulness is appropriate has not been verified. Therefore, this study examined a cognitive behavioral model for promoting diversity among university students.

### METHOD

Survey target: 1880 university students participated in the study. Survey method: A web-based questionnaire survey was conducted. The web questionnaire used the educational information system. The survey period was from July to December 2021. Survey content: Personal attributes: gender, age, affiliation, and questions about diversity, among others. The questionnaire used: Diversity climate for university students (created by the author). Irrational beliefs (Mori et al., 1994) were used with five factors and 20 items. A mindfulness scale (Maekawa et al., 2015) with six factors and 31 items was used. We used the Diversity Adaptability Evaluation Scale (Tsutsuki et al., 2015) with eight factors and 32 items. A subjective well-being scale (Ito et al., 2003) was used.

Method of analysis We calculated the number and ratio of fundamental attributes of the participants and the ratio of questions about diversity. The following model was examined using covariance structure analysis to explore the cognitive behavioral model. Model 1: "diversity climate"  $\Rightarrow$  "irrational beliefs"  $\Rightarrow$  "subjective well-being." Model 2: "diversity climate"  $\Rightarrow$  "mindfulness"  $\Rightarrow$  "subjective well-being." Model 3: "diversity climate"  $\Rightarrow$  "irrational beliefs"  $\Rightarrow$  "adaptability to diversity." Model 4: "Diversity culture"  $\Rightarrow$  "Mindfulness"  $\Rightarrow$  "Adaptability to diversity." Ethical considerations: Hyogo University Research Ethics Review Committee (No.21006) the study design.

### RESULTS

A web questionnaire was administered to 1880 individuals. Further, questionnaires were collected from 103 individuals. A hypothetical model was examined using structural covariance analysis. First, Model 1: "diversity climate"  $\Rightarrow$  "irrational beliefs"  $\Rightarrow$  "subjective well-being" ( $\chi^2=40.645$ ,  $df=26$ ,  $GFI=0.90$   $AGFI=0.89$   $RMSEA=0.085$ ,  $ACI=98.645$ ), Model 2: "diversity climate"  $\Rightarrow$  "mindfulness"  $\Rightarrow$  "subjective well-being" ( $\chi^2=83.125$ ,  $df=42$ ,  $GFI=0.84$   $AGFI=0.75$   $RMSEA = 0.074$ ,  $ACI=108.065$ ). It was found to be valid as a cognitive behavioral model. Model 3: "diversity climate"  $\Rightarrow$  "irrational beliefs"  $\Rightarrow$  "diversity adaptability" ( $\chi^2 = 124.656$ ,  $df=116$ ,  $GFI=0.81$   $AGFI=0.75$   $RMSEA = 0.031$ ,  $ACI=198.656$ ), Model 4: "diversity climate"  $\Rightarrow$  "mindfulness"  $\Rightarrow$  "diversity adaptability" ( $\chi^2=164.325$ ,  $df=132$ ,  $GFI=0.77$   $AGFI=0.70$   $RMSEA=0.056$ ,  $ACI=242.325$ ). It was found to be suitable as a model.

### DISCUSSION

We examined a cognitive behavioral model for promoting diversity among university students. Consequently, the fit of the "irrational belief" model was high. Specifically, interventions, such as cognitive restructuring **METHODS** that correct cognitive distortions, may be effective in cognitive behavioral therapy for promoting diversity. Additionally, as an outcome, the degree of fit was high for models that improved the "subjective well-being" of university students.

# POSTER SESSION 03

Abstract No.: 0070

## **The Personalized Psychological Flexibility Index (PPFI): An Item Response Theory Analysis with Racially Diverse College Students**

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### OBJECTIVE

Using factor analysis and a polytomous item response theory approach, the present study preliminarily investigated the psychometric properties of the Personalized Psychological Flexibility Index (PPFI) in a racially diverse sample of college students.

### METHOD

Seven hundred twenty-three undergraduate students were recruited from a four-year public university in Hawai'i, USA. Confirmatory factor analyses were initially conducted to examine whether the theory-driven three-factor structure (i.e., Avoidance, Acceptance, and Harnessing) found in previous studies was identified in the current sample. Generalized Partial Credit Model (GPCM) was then used to explore the adequacy and accuracy of items and their response categories.

### RESULTS

We found a three-dimensional structure of PPFI with minor modification for correlated error terms allowed between the two items. The GPCM analysis indicated that, while five items in Acceptance reliably measured the intended construct, several items in Harnessing showed suboptimal item information. Furthermore, the findings suggested reducing the 7-point original response categories to 5-point given the probabilities endorsed by items.

### DISCUSSION

Using an item response theory model, this was the first study that preliminarily investigated the psychometric properties of PPFI with a racially diverse sample of college students in Hawai'i. We found that the PPFI is a promising measure of psychological flexibility, and through examination at the item level, we also found the areas of improvement for the current racially diverse sample of college students.

# POSTER SESSION 03

Abstract No.: 0082

## **Application of Acceptance & Commitment Therapy (ACT) to Modulate Emotions in Romantic Relationships in Female Young Adults**

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### INTRODUCTION

Maintaining relationships whether it is with family, friends, or colleagues, has been central to the development of human beings. During the transition from adolescence to young adulthood, individuals' search for a deeper and more meaningful connection with someone becomes paramount and this later might culminate in forming a romantic relationship. Research states that engaging in a healthy romantic relationship forms a stepping stone toward a better quality of life. However, disturbed or conflicted romantic relationships are linked to negative psychosocial outcomes. It can cause distress in social, occupational, and other important domains in a person's life. Also, previous researches as well as our analysis of case histories along with information from therapy sessions with clients show that often times, problems in romantic relationships are a derivative of disturbed family dynamics which the individual might have been a part of from his/her childhood. Different kinds of strategies belonging to various therapeutic schools have been utilized by therapists in the past to deal with romantic relationship problems. In this study, a few key components and strategies from Acceptance & Commitment Therapy (ACT) have been used and found to be suitable for us to deal with conflicts in romantic relationships. ACT and its underlying components have been a part of the larger Cognitive Behavioral Therapy (CBT) family, having sometimes been called third-generation CBT.

### METHODS

Here, we present a consecutive case series (N = 3), comprising female young adults, within the age range of 22 – 28 who presented with emotional problems and conflicts in romantic relationships. A relatively brief ACT intervention comprising 8 – 12 sessions was delivered face to face over the time of 3-4 months in an outpatient mental health clinic in Kolkata, India.

### RESULTS

Pre and post-assessment were done by administering the Acceptance & Action Questionnaire – Second Edition (AAQ – II) and qualitative assessment which revealed improvement in managing emotions in relationships. It was also found that ACT provides a unique approach to developing deeper and more loving relationships.

### DISCUSSION

Strategies of acceptance and cognitive defusion along with exploring core values and maintaining behavioral commitments were specifically incorporated into the therapy sessions. Subsequently, it was observed that all the clients reported significant improvement in romantic relationships. These results warrant future studies on the efficacy of ACT in improving conflicts and alleviating distressful emotions associated with romantic relationships.

Keywords: Acceptance & Commitment therapy; Romantic relationships; Young adults; Conflicts

# POSTER SESSION 03

Abstract No.: 0088

## Relationships of Cognitive Stress Appraisals to Coronary-Prone Psychological Symptoms and Blood Pressure

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### INTRODUCTION

While considerable research has supported the theory that psychological factors such as hostility, anger, and depression can increase risk for coronary heart disease (coronary-proneness), there has been relatively little examination of the specific cognitive stress appraisals that may be involved in such relationships. A better understanding of the cognitive appraisals that are associated with coronary-prone psychological profiles and/or cardiovascular risk factors may assist in advancing cognitive behavioral interventions to lower cardiovascular risk. The purpose of the present pilot study was to examine the relationships of cognitive stress appraisals to three coronary-prone psychological constructs (hostility, anger, depression) and blood pressure levels.

### METHOD

The participants were 34 adults (18 women, 16 men) with a mean age of 57 (SD  $\pm$  6.7), at varying degrees of cardiac risk. Cognitive appraisals were assessed via self-report responses to a personal stressor that occurred in the week prior to the study visit. Participants rated the stressfulness of the situation, as well as how threatening the situation was and how well they were able to cope. In addition, a ratio of threat to ability to cope was calculated. Standardized self-report measures of depressive symptoms (BDI-II), anger (Spielberger State Anger), and hostility (Cook-Medley Hostility Inventory) were completed. Standard manual sphygmomanometer measurement was conducted for determination of resting systolic blood pressure (SBP) and diastolic blood pressure (DBP).

### RESULTS

The cognitive appraisal of ability to cope was negatively associated with anger ( $r = -.34, p < .05$ ). The ratio of threat to ability to cope was positively associated with hostility ( $r = .38, p < .05$ ). Non-significant trends were observed for positive associations of perceived stressfulness with depressive symptoms ( $r = .31, p = .09$ ) and hostility ( $r = .31, p = .09$ ). The ratio of threat to ability to cope was significantly associated with SBP ( $r = .50, p < .01$ ), and a non-significant trend was observed for the negative association of ability to cope with SBP ( $r = -.38, p = .06$ ). Hostility was significantly associated with both SBP ( $r = .41, p < .05$ ) and DBP ( $r = .42, p < .05$ ). The other psychological constructs were not associated with blood pressure. Given the significant associations of the threat/ability to cope ratio with both hostility and SBP, a partial correlation analysis was conducted to explore mediation by this cognitive appraisal variable. Controlling for the ratio of threat to ability to cope, the association of hostility with SBP was reduced to  $r = .29$  and was no longer significant.

### DISCUSSION

The preset findings provide partial support for the hypothesis that cognitive appraisals of threat and ability to cope may play a role in the psychological constructs that have been shown to increase coronary proneness. Further, the evidence indicates that cognitive appraisal may partially mediate the association between hostility and SBP. Additional research with larger samples is needed to further evaluate these effects and examine the application of these appraisal variables to cardiac stress management and risk reduction.

# POSTER SESSION 03

Abstract No.: 0117

## **A Phenomenological Analysis of the Effects of Suicide among Bereaved Family Members**

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With the growing number of suicide cases, suicide is a serious global concern. Compared with previous years, there has been an increased number of reported deaths in the Philippines due to intentional self-harm. Numerous studies found that suicide-bereaved family members described common psychological and emotional distress. These include re-experience of suicide scene imagery (Pompili et al., 2013), referring to suicide as a personal "choice" (Hagstrom, 2018) and "surreal" and "chaos in mind" (Gall et al., 2014), feelings of shock and bewilderment (Ross et al., 2018), and had been "failed" in their duties (Lee et al., 2017a). Inevitably, suicide-bereaved individuals were unexempted from social stigma. Due to the impending fear of prejudice and discrimination, their idiographic experiences were rarely given an avenue to be heard.

This research was anchored on the concepts of the Kübler-Ross Model of Grief, The Tripartite Model of Suicide Grief, and Post-traumatic growth (PTG) theory. The five stages of grief, known as the "Kübler-Ross model," comprised Denial, Anger, Bargaining, Depression, and Acceptance. However, this model purports that these stages do not necessarily occur in a particular sequence (Wang & Wang, 2021). On the other hand, the Tripartite Model of Suicide Grief was one of the foundations for understanding the effects of suicide among suicide-bereaved. It involves three phrases Trying on the shoes: Understanding the relationship, Walking in the shoes: Reconstructing relationship, and Taking off the shoes: Repositioning relationship. These are used as metaphors to explain various aspects of the grieving process (Sands et al., 2011). Moreover, the Post-traumatic Growth (PTG) Theory argues that individuals experiencing psychological adversity could also often achieve positive growth (Collier, 2016).

Using a qualitative research approach, Interpretative Phenomenological Analysis (IPA) provides the best possibility to comprehend the innermost deliberations of the lived experiences among research subjects (Alase, 2017). This study primarily focused on five suicide-bereaved family members. Data was gathered using semi-structured interviews (n=4 online interviews, n=1 face-to-face interview) from participants living in the Philippines. This study found that suicides could occur impulsively in a moment of crisis. Various factors that contributed to their loved one's death include relationship problems, work-related stressors, the negative influence of peers, or existing comorbidity issues. Four themes emerged from the present study's findings: (a) Living as a Suicide Survivor, b) the Life Impact of Suicide loss, (c) Challenges and Prevention of Suicide, (d) Coping Strategies and Message for the Deceased.

Several studies suggest that integrating Cognitive-Behavioral Therapy (CBT) with other therapies could be an effective intervention to provide necessary support among these underserved populations. In the Philippines, there was a limited understanding of the nature and effects of the aftermath of suicide. The findings of this research could serve as a bridge to the gap in the literature. Also, to effectuate a greater awareness among suicide-bereaved individuals to promote more effective and culturally-sensitive postvention strategies.

# POSTER SESSION 03

Abstract No.: 0125

## From Isolation to Connection: Understanding the Psychosocial Characteristics of NEET/Hikikomori Youth

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### INTRODUCTION

Due to the rising unemployment rate and enforced lockdown policies during the COVID-19 pandemic, there has been a significant increase in the number of individuals who exhibit characteristics of NEET/Hikikomori (occupational/social withdrawal) spectrum condition. Contrary to the common stigma that often portrays NEET/Hikikomori as a condition with a lack of motivation, accumulating evidence suggests that this may result from socioeconomic and psychological disadvantages. Further research is needed to better understand the psychosocial characteristics associated with this spectrum and to develop evidence-based interventions.

### METHODS

Among a total of 838 individuals (age range = 19-34) who participated in this study, 98 individuals were in the NEET-Hikikomori spectrum group and 740 in the control group. Participants in the NEET/Hikikomori group were individuals who were not participating in any job-seeking behaviors or attending school for at least six months and reported a subjective perception of social isolation. All participants completed an online survey to assess the psychosocial characteristics that have been proposed to be associated with NEET-Hikikomori spectrum. A hierarchical logistic regression analysis was conducted to investigate the influence of socioeconomic and psychological factors on the NEET/Hikikomori condition.

### RESULTS

Lower socioeconomic status (OR = 3.86, 95% CI [1.49, 10.01]) was associated with higher odds of being on the NEET-Hikikomori spectrum. History of mental disorders (OR = 6.75, 95% CI [3.51, 12.96]) and exposure to interpersonal trauma (OR = 1.81, 95% CI [1.29, 2.55]) were also found to be significant factors associated with NEET/Hikikomori condition. In addition, individuals who were in the NEET/Hikikomori group reported higher levels of depressive symptoms (OR = 2.00, 95% CI [1.26, 3.19]), experiential avoidance (OR = 2.12, 95% CI [1.05, 4.3]) and loneliness (OR = 2.56, 95% CI [1.37, 4.78]). Assigned gender, sexual orientation, dysfunctional attitude, and intolerance of uncertainty were not significantly associated with the NEET/Hikikomori condition.

### CONCLUSION

The current study shows that experiencing NEET/Hikikomori status may be related to a complex interaction of socioeconomic disadvantages (e.g., low income), a history of interpersonal trauma (e.g., being bullied, sexually harassed), and psychological disorders (e.g., depression). In order to accurately target at-risk individuals experiencing NEET/hikikomori status, multiple factors, including both sociodemographic and psychological characteristics, should be considered. This comprehensive approach will allow for a better understanding of an individual's risk level and facilitate the implementation of targeted interventions.



# POSTER SESSION 03

Abstract No.: 0131

## Effectiveness of a Single Session Rhythmic Intervention on Adults with Depression and Anxiety in Selangor, Malaysia

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### INTRODUCTION

Music has been long established as an effective tool with therapeutic benefits. Percussion especially the djembe has been used as part of the intervention and has shown to address many therapeutic needs specifically through drum circles or group drumming (Bittman et al, 2001; Plastow et al, 2018; Tee et al, 2021). However, research showing its evidence especially with clinical populations is scarce. Therefore, the aim of this study was to investigate the therapeutic benefits of a single session rhythmic intervention, which is based on the drum circle, on adults with depression and anxiety.

### METHOD

The participants consisted of eight outpatients from the Psychiatry Clinic, Universiti Putra Malaysia Teaching Hospital (HPUPM). The patients were either diagnosed with a depressive or anxiety disorder and they were between the ages of 18 and 34. All the patients were seeing a clinical psychologist for Cognitive Behaviour Therapy (CBT) and have learnt to be aware of their thoughts or have at least the initial exposure to the Dysfunctional Thought Record (DTR). The rhythmic intervention session was conducted for 1.5 hours by a clinical psychologist who is also a certified drum circle facilitator, a community drum circle facilitator and assisted by a clinical psychology trainee. Activities during the session include drum circle (group drumming), introduction to the djembe and other percussions, learning the three basic djembe notes, rhythmic activities and a relaxation session. The patients completed the Positive and Negative Affect Schedule (PANAS) scale and a questionnaire that was adapted from Snow and D'Ámico (2010). The PANAS was completed before and after the rhythmic intervention while the adapted questionnaire was completed only after the session.

### RESULTS

There was a significant increase in the positive affect scores pre and post session ( $p < .01$ ) while there was a significant decrease in the negative affect scores pre and post session ( $p < .05$ ). The patients also reported that they liked the teamwork most about the session and they would like to come back for more sessions. More than half of the patients reported that the rhythmic intervention session helped with their stress and lack of motivation. In addition, more than half of the patients reported that the group made them feel better about themselves, made them happier, and made them feel more energetic.

### DISCUSSION

This study showed that the patients with depression and anxiety did experience therapeutic effects of the rhythmic intervention, specifically the drum circle. In particular, the patients felt better after the session plus there was a reduction in their negative affect. Future studies can examine the long-term effects or the effects of the rhythmic intervention after a few sessions.

# POSTER SESSION 03

Abstract No.: 0140

## **Digital Cognitive Behavioural Therapy for Insomnia Compared with Digital Sleep Hygiene Education About Insomnia among Medical Students in Klang Valley, Malaysia: Protocol for Randomised Controlled Trial**

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### BACKGROUND

Insomnia is common sleep disorder among medical students and presents significant consequences such as executive functioning degradation, poor physical and mental health. There is limited number of research examining the effectiveness of cognitive behavioural therapy for insomnia (CBT-I) in improving executive functioning among medical students with insomnia symptoms. With limited resources for face-to-face CBT-I, there is potential and an unprecedented need for internet or digital delivery of treatment program for medical students.

The aims of this trial are to investigate the impact digital cognitive behavioural therapy for insomnia (dCBT-I) in medical students versus digital sleep hygiene education (dSHE) in improving executive functioning and insomnia severity (primary outcomes), as well as improving sleep efficiency, sleep cognition and presleep arousal (secondary outcomes). This trial will be approved by the Medical Research and Ethics Committee (MREC) of University Putra Malaysia (UPM). The trial will be registered with ClinicalTrials.gov

### METHODS

A three-arm, single-blinded, parallel, non-inferior group randomised controlled trial (RCT) design with repeated measures will be used to evaluate the impact of dCBT-I compared to dSHE and waitlist among a sample of 216 medical students, enrolled in undergraduate public and private medical schools in Klang Valley, Malaysia, who self-reported insomnia symptoms based on the Insomnia Severity Index (ISI). Six weekly group dCBT-I sessions (n = 72) or dSHE (n = 72) sessions or waitlist (n = 72) will be delivered via internet in person. At week 7, all participants allocated to the wait-list group be offered either dCBT-I or dSHE after randomisation process. Assessment of executive functioning via digital Trail Making Test (dTMT), insomnia diagnosis by online structured interview, self-reported insomnia symptom severity, sleep efficiency as measured by a daily, sleep cognition as measured by a DBAS-16, and presleep arousal as measured by a PSAS will occur at baseline (week 0), mid-treatment (Week 3), post-treatment (Week 6), 1-month follow-up (Week 10), 3-month follow-up (Week 22) and 6-month follow-up (Week 34).

### CONCLUSION

dTMT, insomnia severity, sleep efficiency, sleep cognition and presleep arousal will be analysed using generalized estimated equations (GEE) and an intent-to-treat (ITT) approach. dCBT-I delivered in medical students have the potential to improve executive functioning and reduce symptoms of insomnia could lead to poor academic performance in medical school and minimise the risk of developing depression cardiovascular disease and type 2 diabetes. This RCT aims to provide evaluation of a novel evidence-based treatment on improving executive functioning with medical students with insomnia, which can be widely disseminated and used to treat individuals that are most in need of intervention. Findings will enhance understanding of sleep cognition, sleep efficiency, and presleep arousal, as well as means by which to improve the overall health and sleep of medical students.

# POSTER SESSION 03

Abstract No.: 0146

## New Psycho-Educational Model for Religious-Moral Intrusions

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### INTRODUCTION

Obsessive phenomena are also in the field of interest of clergy, and various suggestions have been developed for religious people who have problems in this regard. For example, in the text titled "Treaties of Scrupulosity", with a psycho-educational approach, a framework compatible with the cognitive model is drawn on the cognitive structure and functioning, the formation of obsession, the way it increases and decreases, and how to achieve normalization of thought (Nursi, 1926). Although cognition is explained with two concepts and without hierarchy as "image" and "thought" in cognitive therapy; Nursi explains it as "images", "definition-design", "thought" and "belief-faith" as four concepts with hierarchical differences and defines cognitive functioning in terms of non-voluntariness and proximity to the action.

Moreover, in the text, the area in which the individuals' non-voluntary cognitive activities occur is defined as "mind" and the area consisting of voluntary activities is defined as "heart". Thus, it is pointed out that the "faith / belief" in God, the Prophet, and other scriptures are cognitively at the top of the hierarchy, that only 'confirmed' thoughts can access it, and the place of these 'confirmed' thoughts is no longer the 'mind' but the 'heart'. Therefore, the mind's imagination, definition, and thinking activities are independent of the faith in the heart of the person and do not affect this place because they are separate from the act of confirmation. Faith belief is a cognitive product that is revealed only after the confirmation. So, the crucial point is that there is a hierarchy between one's imagination, defining, reasoning, and believing in something.

This current model is a new psychoeducational model, which is developed by Toprak based on works of Islamic scholar's conceptualizations, which was called the 4T Model (the first letters of the four cognitive levels in Turkish), has been transformed into psychoeducation and operationalized by testing with OCD patients during treatment (Toprak and Emül, 2016).

### METHOD

This study follows up on 4 OCD patients who had previously obtained positive quantitative and qualitative results in a previous 4T study. The effects of the 4T psycho-education model on preventing the recurrence of OCD were assessed by evaluating post-recovery relapses. For this, Beck Depression Inventory, Beck Anxiety Inventory, Yale-Brown Obsessive Compulsive, and Padua Inventory were repeated, and qualitative data were obtained with a structured follow-up form.

### RESULTS

Slight changes in the resulting scale scores did not indicate clear and significant differences compared to the former measurements, and overall, the patients' recovery was maintained. Some of the patients' comments indicate what they learned through the 4T model: "It made me think freely about my thoughts.", "I learned that the brain does not do what it does not confirm.", "It is good to know that thoughts before confirmation are not sinful nor my responsibility.", and "I know that there is no harm to my faith unless these thoughts are confirmed."

### DISCUSSION – CONCLUSION

All patients mentioned that the logic they learned during 4T psychoeducation had important implications for their lives. By receiving this psychoeducation, patients gained the ability to distinguish between image/imagination, definition, thought, and belief/faith.

# POSTER SESSION 03

Abstract No.: 0148

## The HALO-Trial: High, Medium and Low Intensity Psychotherapy Interventions for Binge Eating Disorder

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### BACKGROUND

binge eating disorder (BED) is a psychological disorder characterized by frequent binge eating episodes and psychological distress. Individuals with BED suffer from eating disorder pathology, psychiatric- and physical comorbidities. There are vast financial, societal, and personal costs associated with BED and the disorder has the highest prevalence of any eating disorder. With the uptake of the BED diagnosis in both DSM-5 and ICD-11, evidence-based treatments are needed. There are few high quality effect studies directly comparing different psychotherapy methods and intensities for BED. Therefore we aim to assess the efficacy of four different psychotherapies of different methods and intensities on BED symptoms. The four interventions are; individual cognitive behavioral therapy (CBT), group CBT (CBTg), systemic-narrative group therapy (SNGT) and CBT guided self help (CBTgsh). CBT, CBTg and SNGT will consist of 20 weekly sessions, whilst CBTgsh consists of access to an online platform and 10 brief therapist meetings, delivered over 20 weeks. We hypothesize that there will be a significant pre-post effect for all interventions. We further hypothesize that the high intensity CBT will be superior to the medium intensity CBTg, SNGT and the low intensity CBTgsh.

### METHODS/DESIGN

The study is a four-armed, single-blinded, superiority randomized controlled trial (RCT). We will include 328 participants with a primary diagnosis of BED. Patients with a primary DSM-5 BED diagnosis will be included in the study. The primary outcome is 'binge eating frequency'. Secondary outcomes include overall binge eating symptoms, well-being, level of functioning, and emotion-regulation. Exploratory outcomes include self-esteem, attachment, personality, and metabolic outcomes amongst others. Patients are assessed at baseline, post-treatment, follow up assessments are collected at 6 and 12 months.

### DISCUSSION

This will be the first RCT to directly compare multiple psychotherapy intensities and methods for BED. This is also the first trial to assess SNGT as a novel treatment for BED. The trial will provide new insights into the efficacy of high, medium and low intensity treatments for BED. This can help inform treatment guidelines and recommendations.

# POSTER SESSION 03

Abstract No.: 0160

## **The Course of Attentional Bias in People Prone to Eating Disorders: Eye Tracking Research**

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### INTRODUCTION

Studies have shown that patients with eating disorders have similar core pathological mechanisms, that is, the maladaptive cognitive schemas affect their attitudes toward eating, weight, and body/shape. Attentional bias toward food-related information plays a crucial role in the development and maintenance of the disease. However, research has yet to reach a consensus on results regarding the course of attentional bias among people with eating disorders. This study expects to provide more information about attention allocation by individuals who potentially has an eating disorders in response to food stimuli through eye tracking, thereby verifying whether a vigilance–avoidance pattern for food stimuli exists among patients with eating disorders.

### METHOD

The dot-probe tasks with food images as the target stimuli for two stimulus display time(500 ms and 2000 ms) was used to measure the attentional bias of 29 individuals without eating disorders (i.e., the control group) and 26 individuals with subclinical eating disorders (i.e., the experimental group) by tracking their eye movements during the task. Attentional bias was calculated by collecting data on the participants' responses (pressing a key on a keyboard) and eye movements.

### RESULTS

Through the dot-probe task with a shorter stimulus display time (500 ms), the first gaze of the experimental group mostly landed on food images, particularly those of high-calorie food. However, the two groups showed no significant difference in attentional engagement or difficulty in disengaging. On the other hand, the dot-probe task with a longer stimulus display time (2000 ms) results showed that the mean dwell time on high-calorie and low-calorie food images was significantly longer for both groups of participants. Moreover, the experimental group was significantly slower in disengaging from stimuli of high-calorie and low-calorie food images compared with the control group.

### CONCLUSIONS

The attentional bias of the experimental group may be manifested in vigilance toward high-calorie food images at an early stage of attention allocation and followed by the slow disengagement from high-calorie and low-calorie food image stimuli at a later stage. However, the time allocated by the experimental group to the high-calorie and low-calorie food image stimuli during the task is no different from that by the control group.

# POSTER SESSION 03

Abstract No.: 0171

## The Development of a Vignette Based Gratitude Assessment: An Analysis of a Thanks Journal Task

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### INTRODUCTION

Conceptually, gratitude has positive attributes. Studies on gratitude largely focus on variables related to gratitude traits and ways to improve gratitude behavioural tendencies. So far, studies have shown that high gratitude tendencies are related to positive mental health. The most representative way to promote gratitude tendency is to write down a list of events or things one is thankful for, that is, a thanks journal. Positive health outcomes of gratitude journals has also been confirmed in many studies. However, less is known about whether gratitude has similar positive effects across various types of events, i.e., positive, neutral or negative. Specifically, it is common to be thankful in a thanks journal in response to positive events. The current study investigated the effects of gratitude in the face of neutral and negative events in addition to positive events. Although counterintuitive at first glance, but it is hypothesized that people with a high gratitude tendencies will be more likely to express gratitude/thanks across various situations, despite the valence of events (positive, neutral or negative).

### METHOD

To test this hypothesis, we first developed a gratitude vignette to record responses in a thanks journal and then examined specific gratitude responses across positive, neutral and negative situations. The vignette is as follows: "It rained this morning (neutral). I got up late and was in a hurry (negative). After getting ready, I ran to the bus stop (neutral). Luckily, the bus was on time (positive). I was 10 minutes late when I arrived at the office (negative). The manager smiled at me as I hurried into my seat (positive). I couldn't finish the work that was due today during work time (negative). I kept working past the get-off time and ended up finishing it (positive). I had a late dinner at a snack bar near my workplace (neutral). I met an old friend there (positive)." The vignette consisted of four positive event lines, three negative event lines, and three neutral event lines. 133 Korean participants were asked to read the vignette through a Google survey and write down at least six lists to a maximum of eight lists in the thanks journal. For every list, we have matched them to the lines of the vignette.

### RESULTS

The results are as follows: 46 participants (34%) commented 'rained in the morning' in their thanks lists. 36 participants (27%) commented 'got up late'. 25 participants (19%) commented 'getting ready and run'[1]. 127 participants (95%) commented 'bus on time'. 49 participants (37%) commented '10 min late at office'. 121 participants (91%) commented 'smiled at me'. 19 participants (14%) commented 'couldn't finish work'. 107 participants (80%) commented 'ended up finishing'. 107 participants (80%) commented 'late dinner'. 129 participants (97%) commented 'old friend'.

### CONCLUSIONS

Results indicated that although common for participants to list thanks for positive events, participants also consistently offered thanks for both neutral and negative events.. Examples of thanks lists for negative events were "I got up late, but I am awake. I have more sleep", "I was late but not so late", "I couldn't finish my work but thankful for the work itself", and "I am glad it didn't get worse". This study provides evidence that people can be grateful in a variety of different situations.

**RESULTS** are discussed in relation to clinical assessment of gratitude and clinical applications of gratitude journaling.

# POSTER SESSION 03

Abstract No.: 0178

## **Do Fears about Losing Control Explain the Relationship between Fear of Self and Obsessive-Compulsive Symptoms: A Mediation Analysis**

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Feared possible selves (i.e., fear of being or becoming a dangerous, immoral or insane person) are commonly reported in individuals with obsessive compulsive disorder (OCD), particularly those suffering from aggressive and/or sexual obsession themes (Melli et al., 2016; Moulding et al., 2014). There is a need for more research elucidating how feared possible selves may contribute to the development of repugnant obsessions. One maladaptive belief domain that may partially account for the relationship between feared possible selves and OCD symptoms is beliefs related to control, namely those about losing control of one's thoughts, emotions, and/or behaviours (Radomsky, 2022). That is, stronger beliefs that one could lose control may activate fears of becoming someone who thinks and behaves in ways congruent with repugnant intrusive thoughts – consequently leading to OCD symptoms. This study aimed to analyze the potential mediating effect of beliefs about losing control on the association between feared possible selves and repugnant obsessions using parallel mediation analysis. A sample of 148 undergraduate students completed the Vancouver Obsessional Compulsive Inventory - Obsessions (VOCI-OBS), the Fear of Self Questionnaire (FSQ), and the Beliefs About Losing Control Inventory (BALCI). It was found that beliefs about losing control were a statistically significant partial mediator in the association between the total score of the FSQ and the VOCI-OBS (indirect effect  $\beta$  coefficient = .27; 95% CI = .167 to .387). Furthermore, beliefs about losing control also acted as a partial mediator in the association between specific fears of a corrupted self (indirect effect  $\beta$  coefficient = .21; 95% CI = .124 to .311) and culpable self (indirect effect  $\beta$  coefficient = .32; 95% CI = .211 to .433) and the VOCI-OBS. These findings suggest that feared possible selves may lead to the development of repugnant obsessions especially when individuals also hold maladaptive beliefs about losing control. Additionally, this study highlights how cognitive-behavioural approaches that target maladaptive beliefs about losing control may weaken the impact of vulnerable self-themes and in turn alleviate OCD symptoms.

# POSTER SESSION 03

Abstract No.: 0186

## A Case Report of Caregiver Whose Family Has Aphasia for Low-Intensity Cognitive Behavioral Therapy

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### INTRODUCTION

Family caregivers have tendency for poor physical and mental health, The effects of psychological interventions for caregivers are not well documented. We report a case study of caregiver whose family has aphasia for low-intensity cognitive behavioral therapy (CBT). We proposed the low-intensity CBT for a woman in her 50s whose mother had a stroke and suffered from aphasia for 8 years ago. Her demand was not to get irritated and to spend time calmly with her mother. This report had obtained informed consent for from her and her mother.

### CONCEPTUALIZATION AND INTERVENTION

Mental health and burden of family caregiver were assessed with four tests namely, Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Kessler Psychological Distress Scale (K6) and Zarit Burden Interview (ZBI).

Result of initial assessment indicated mild to moderate depressive tendencies. Low-intensity CBT intervention using the self-help workbook was planned for the caregivers' emotional, cognitive, and behavioral issues. The intervention was delivered once a month, 40 minutes each for 12 consecutive months.

### OUTCOME

The most important factor contributing to the care burden was the stress caused by the inability to communicate due to patients' aphasia. The lack of social resources for aphasia also had negative influence on burden. After identifying the caregivers' automatic thought which was "Who is going to take care of my family? only me.", the caregiver was able to incorporate techniques such as relying on others and behavioral activation to relieve stress. As a result of the intervention, scores of all depression and anxiety test improved.

### REVIEW AND EVOLUTION

In accordance with the biopsychosocial (BPS) model, this case showed issues in psychological and social factors and interactions between these factors had impact on burden. The low intensity CBT contributed to the improvement in caregivers' psychological aspects, while the burden remained unchanged. It was supposed that low intensity CBT is effective to reduce depressive tendencies caused by the stress of caregiving to people with aphasia. Moreover, early intervention with early identification of the cause plays a vital role in relieving the burden itself.



# POSTER SESSION 03

Abstract No.: 0189

## **The Relationship between Perceived Parenting Attitude and Suicide Ideation in Young Adults: The Moderated Mediation Effect of Emotional Schema through Acceptance Behavior and Self-Compassion**

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### INTRODUCTION

According to the statistics on causes of death announced by the National Statistical Office of Korea in 2020, suicide is the number one cause of death among teenagers, 20s, and 30s. As of 2020, the suicide rate was 21.7 per 100,000 people in their 20s and 27.1 in their 30s. These results suggest that the risk of suicide is very high in young adults (20s to 30s). In order to come up with effective measures for the suicide problem, it is necessary to establish an intervention plan to reduce suicide through sufficient exploration and research on reliable predictors. This study explored parental parenting attitudes, psychological acceptance, self-compassion, and emotional schema to predict suicidal ideation.

### METHOD

Data of 330 young people (male 175, female 155, mean age  $28.14 \pm 5.52$ ) were verified using Parental Bonding Instrument (PBI), Acceptance-Action Questionnaire-2 (AAQ-II), Korean version of Self-compassion (K-SCS), Leahy Emotional Schema Scale 2 (LESS II) and Scale for Suicide Ideation (SSI). IBM SPSS Statistics and Hayes' PROCESS Macro were used for statistical analysis.

### RESULTS

First, correlation coefficient between parenting attitude, acceptance behavior, self-compassion, emotional schema, and suicidal ideation were examined. Parenting attitude was positively correlated with acceptance behavior ( $r = .43, p < .001$ ) and self-compassion ( $r = .43, p < .001$ ), and negatively correlated with emotional schema ( $r = -.39, p < .001$ ) and suicidal ideation ( $r = -.49, p < .001$ ). Suicidal ideation was negatively correlated with acceptance behavior ( $r = -.53, p < .001$ ) and self-compassion ( $r = -.50, p < .001$ ).

Second, acceptance behavior mediated the effect of parenting attitude on suicidal ideation, and the mediating effect through acceptance behavior was moderated by emotional schema. In addition, the mediating effect through self-compassion between parenting attitude and suicidal ideation was moderated by emotional schema.

### DISCUSSION

As revealed in this study, parenting attitude perceived by young adults positively influenced the acceptance behavior and self-compassion. Furthermore, acceptance behavior and self-compassion negatively affected suicidal ideation. These mediating effects varied according to the level of emotional schema. In other words, even if the level of acceptance behavior and self-compassion were high, suicidal ideation would increase if the perceived negative emotion could not be controlled. Therefore, it is necessary to identify emotional schema simultaneously when considering parenting attitude, acceptance behavior, and self-compassion, in the treatment of young adults with suicidal ideation.

# POSTER SESSION 03

Abstract No.: 0200

## Randomized Controlled Trial of Cognitive Remediation Therapy in Adolescent Inpatients with Anorexia Nervosa: Neuropsychological and Psychopathological Outcomes

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### INTRODUCTION

Over recent years, neuropsychological difficulties have been repeatedly found in anorexia nervosa (AN). Cognitive remediation therapy (CRT), mainly evaluated in adults with AN, targets these particular cognitive impairments. Aim of the current study is to evaluate the efficacy of CRT in adolescent inpatients with AN with regard to neuropsychological outcomes as well as its effects on psychopathology.

### METHODS

Adolescent inpatients (age=11 to 17 years) with AN were randomized to either 10 sessions of individually delivered CRT or non-specific cognitive-training (NSCT). Co-primary outcomes included the cognitive domain 'flexibility' [composite score of the Wisconsin Card Sorting Test (WCST) and the Trail Making Test (TMT-4)] and the cognitive domain 'central coherence' [composite score of the Central Coherence Index (CCI) and the Group Embedded Figures Test (GEFT)] at end of treatment (FU1). Secondary outcomes included the individual test scores and psychopathology scores [sum score of the Eating Disorder Inventory-2 (EDI-2) and sum score of the Beck Depression Inventory-II (BDI-II)] at FU1 and at 6-months post-treatment (FU2). Independent sample t-tests, Pearson chi-square-tests and mixed models for repeated measures (MMRM) analyses were conducted.

### RESULTS

In 56 females (Mage = 15.1±1.5 years), CRT was not superior to NSCT at FU1 regarding 'flexibility' ( $p = 0.768$ ) or 'central coherence' ( $p = 0.354$ ), nor at FU2 ( $p = 0.507$ ;  $p = 0.624$ ) (effect sizes = 0.02–0.26). Both groups improved over time in central coherence (CCI  $p = 0.001$ ; GEFT  $p < 0.001$ ), and WCST ( $p = 0.18$ ), but not TMT-4 ( $p = 0.286$ ). Self-reported eating disorder pathology and depression scores improved over time in both groups.

### DISCUSSION

CRT was not superior to NSCT in adolescent inpatients with AN. These results suggest that CRT might not be as effective for adolescents with AN.

# POSTER SESSION 03

Abstract No.: 0231

## Development and Effectiveness Verification of Individual CBT for Insomnia in Substance Addicts

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Individuals with substance use disorders (SUD) have a higher prevalence of insomnia than that of the general population. Insomnia symptoms need to be treated because they have been identified as a risk factor for relapse in patients with SUD. Nonpharmacological treatments may be particularly suited to this population because those patients have the potential to abuse or overdose some pharmacological agents when mixed with alcohol or other substances. Cognitive-behavioral therapy for insomnia (CBT-I) has already been proven effective and safe for insomnia. For this reason, the researcher developed individual cognitive-behavioral therapy for insomnia in patients with SUD and evaluated its efficacy. Cognitive-behavioral therapy for insomnia is a multi-component treatment that incorporates behavioral, cognitive, and educational components. Thus, the researcher developed a five-session program including sleep restriction, stimulus control, sleep hygiene, cognitive therapy and relaxation techniques. Participants were recruited from Drug Addiction Rehabilitation Center of National Forensic Hospital. Qualified participants (n=26) were randomized to five sessions of Individual Cognitive-Behavioral Therapy for Insomnia-Substance Use Disorder (CBT-I-SUD, n=13) for trial or Individual Cognitive-Behavioral Therapy for Depression-Substance Use Disorder (CBT-D-SUD, n=13) for control. The sleep related outcome measures (Insomnia Severity Index: ISI, Pittsburgh Sleep Quality Index: PSQI, Korean Version of Dysfunctional Beliefs About Sleep Scale; K-DBAS-16, and Sleep diary), the substance abuse related outcome measures (Visual Analogue Scale: VAS, Stages of Change Readiness and Treatment Eagerness Scale: SOCRATES), and the emotion related outcome measures (Korean Beck Depression Inventory: K-BDI-II, Korean Beck Anxiety Inventory: K-BAI, Scale for suicidal Ideation: SSI) were used for the evaluation of the therapy. Wilcoxon signed-ranks Test, Mann-Whitney U test, and Friedman Test were conducted to evaluate differences in outcomes between the groups. The results show that CBT-I-SUD produced a significant improvement in ISI, PSQI, K-DBAS-16, and daytime nap and craving for substance, depression, and anxiety were also reduced. CBT-I-SUD, a nonpharmacological sleep treatment is needed for the SUD for practical reasons, and demonstrates substantial efficacy in reducing insomnia, craving for substance, depression, and anxiety in patients with the SUD. The findings suggest that CBT-I-SUD is of benefit to treating insomnia, preventing relapse and controlling emotion of those with the SUD.

# POSTER SESSION 03

Abstract No.: 0239

## **Effect of Sexual Minority Stress on Suicidal Ideation in Korean Lesbian, Gay, and Bisexual Individuals: The Roles of Perceived Burdensomeness and Psychological Sense of LGBT Community**

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### INTRODUCTION

In a recent study, the prevalence of suicidal ideation over the past 12 months among lesbian, gay, and bisexual (LGB) individuals in Korea was more than six times higher compared to the general population. On the other hand, there have been few studies on the underlying mechanisms and protective factors for suicidal ideation in Korean LGB samples. This study aimed to examine a moderated mediation model that includes the mediating effect of perceived burdensomeness on the association between sexual minority stress and suicidal ideation and the moderating effect of the psychological sense of LGBT community on the relationship between perceived burdensomeness and suicidal ideation in Korean LGB individuals.

### METHOD

Online self-report responses of 342 LGB individuals (99 lesbians, 124 bisexual women, 86 gay men, and 34 bisexual men) were analyzed in the study. The sexual minority stress score was calculated based on three scales: the Anti-Gay Violence Scale (Dean et al., 1992; Kim, 2001), the Social Stigma Recognition Scale (Harvey, 2001; Kang, 2011), and the Internalized Homophobia Scale (Martin & Dean, 1987; Park, 2012). In addition, we also used the Interpersonal Needs Questionnaire (Jo, 2010; Van Orden, 2009, 2012), the Psychological Sense of LGBT Community Scale (Lee, 2017; Lin & Israel, 2012), and the Scale for Suicide Ideation (Beck, Kovacs, & Weissman, 1979; Park & Shin, 1990).

### RESULTS

Suicidal ideation was positively correlated with sexual minority stress ( $r=.12, p<.05$ ) and perceived burdensomeness ( $r=.37, p<.001$ ). In regression analysis, sexual minority stress had a significant direct effect on suicidal ideation ( $\beta=.12, p<.05$ ), and perceived burdensomeness fully mediated the relationship between sexual minority stress and suicidal ideation. However, the psychological sense of LGBT community did not significantly moderate the indirect relationship.

### DISCUSSION

The fully mediated effect of perceived burdensomeness suggests that stress experienced by sexual minorities in Korea increases suicidal ideation by making them feel their absence would be better for their family, friends, and society. The sense of belonging and reliability to the LGBT community did not mitigate the impact of perceived burdensomeness on suicidal ideation. Some possibilities for this outcome are as follows: (a) a sense of belonging to the LGBT community might not be enough to restore thwarted belongingness experienced in daily life; (b) under the condition of being active only in the online community, a sense of belonging may have limitations in alleviating suicidal ideation; (c) due to the limitation of cross-sectional research. Future research should explore significant protective factors that can reduce suicidal ideation in Korean sexual minorities.

# POSTER SESSION 03

Abstract No.: 0258

## Effect of Choice Theory Reality Therapy-Based Online Support Group Intervention on the Mental Health of Postpartum Mothers

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The study investigated the effects of Choice Theory Reality Therapy- based (CTRT-based) online support group intervention on attributions of control, positive and negative affect, depression, anxiety and stress symptoms experienced by postpartum mothers. Twenty-six mothers aged 20 to 41 (Mean=29.4) who screened positive for postnatal depression participated in the study. Using two-matched comparison group pretest-posttest design, the participants were matched according to their Edinburgh Postnatal Depression (EPDS) scores, and assigned randomly in treatment (n=11) and wait-list control conditions (n=15). They responded to the Levenson Multidimensional Locus of Control Scale (LMLCS), Positive Affect and Negative Affect Schedule (PANAS) and Depression, Anxiety and Stress Scale (DASS-21) at pretest and posttest. The treatment group participated in eight sessions of CTRT- based intervention, while the other group had delayed participation. Data were analyzed using paired samples t-test, independent samples t-test, and Cohen's d estimates of effect sizes. Findings from this study showed that joining a CTRT-based support group intervention increased positive affect ( $t(10) = 2.383, p = 0.038, d = .719$ ), decreased negative affect ( $t(10) = 3.092, p = 0.011, d = .932$ ), and reduced depression ( $t(10) = 2.503, p = 0.031, d = 0.755$ ), anxiety ( $t(10) = 2.625, p = 0.025, d = .791$ ) and stress ( $t(10) = 2.704, p = 0.022, d = .815$ ) symptoms among mothers in the treatment condition. Comparing the mean differences of scores between the two groups showed significant differences and large effect sizes among the variables; depression ( $t(24) = 2.616, p = 0.015, d = 1.039$ ), anxiety ( $t(24) = 2.915, p = 0.008, d = 1.157$ ) and stress ( $t(24) = 2.816, p = 0.010, d = 1.118$ ). The supportive nature of group therapy played a role in the process, as the CTRT-based online support group intervention was observed to be effective in the reduction of depression, anxiety and stress symptoms among mothers with postpartum depression. Implications of this study are further discussed.

# POSTER SESSION 03

Abstract No.: 0270

## **The Qualitative Study of the Therapeutic Processes of the Mindful Lovingkindness-Compassion Program (MLCP) for Highly Self-Critical University Students: A Grounded Theory Study**

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Though clients visit therapists with various chief complaints, they commonly say themselves critically. As the high level of self-criticism can be a common risk factor for many psychopathologies, interventions to improve self-criticism are needed. In a previous study, the effects of the Mindfulness Lovingkindness-Compassion Program (MLCP) on reducing self-criticism were verified in psychological and physiological aspects. As a result of the study, individuals who participated in 8 sessions of MLCP reduced self-criticism and psychological distress and increased self-reassurance and life satisfaction (Noh & Cho, 2020). This study was conducted to investigate the therapeutic processes of MLCP following the previous study.

The sample consists of 18 individuals (aged between 19 to 23, who participated in MLCP) participated in this study. In-depth interviews were conducted based on the four open-ended questions (Would you mind telling me about any difficulties before participating in the MLCP; What is your motivation for participating in the MLCP; What has been changed participating in the MLCP; How come do you think it has changed). The interviews lasted on average 80 minutes with a minimum of 60 minutes and a maximum of 100 minutes. 3 data, fragmentary, were excluded and a total of 15 data were analysed. All the data was used for grounded theory analysis (Chamaz, 2006/2013). Firstly, we analysed the data line-by-line and labelled data with active and vivo codes and selected sub-categories with focused codes. Then we raised focused codes to tentative analytic categories. We repeatedly compared data and codes with analytic categories and construct theoretical concepts from abstract categories. At this point, we tried to seek new theoretical interpretations by interrogating the data and emerging analyses.

The results showed that there were 122 concepts, 58 sub-categories, and 20 of categories within 6 contexts. We found that participants were in a vicious cycle of self-criticism, blaming themselves for their lack of self-worth before participating in the program. Not knowing how to control their self-criticism, they treated themselves harshly and repeated the behavior of sticking to or withdrawing from a given task. In this process, pressure, helplessness, and psychological discomfort were accompanied. However, participants treated themselves differently while participating in the program. At the beginning of the program, even during training, self-criticism was still present, but the important thing was that the training continued. During the training, the participants were able to observe themselves and their disliked selves at a distance and acknowledge their selves as they are. They endured the pain that arises when they faced their lack of self and tried to communicate in a benevolent way. These results imply that training mindfulness and lovingkindness-compassion contribute to changing the virtuous cycle for highly self-critical individuals.

# POSTER SESSION 03

Abstract No.: 0300

## **The Effects of Gender Minority Stress on Suicidal Ideation: The Mediating Effects of Depression and Moderated Mediating Effects of Thwarted Interpersonal Needs**

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Recent literature confirmed suicidal ideation of Transgender and Gender Non-Conforming (TGNC) affected by gender minority stressors and factors related to the Interpersonal-Psychology Theory of Suicidal behavior (IPT). However, there are paucity to examine the relationship between gender minority stress and suicidal ideation in Korea. In particular, there has been no study investigating the effects of depression triggered by gender minority stress and IPT factors. The purpose of this study was to examine the role of depression and thwarted interpersonal needs (e.g., thwarted belongingness and perceived burdensomeness) in the relationship between gender minority stress and suicidal ideation. To this end, an online self-report survey was conducted and a total of 190 participants (Male to Female or MTF= 63, Female to Male or MTF= 34, Nonbinary/Genderqueer= 93, Age= 21.9±0.59) were included in the final analysis. This study used the Gender Minority Stress Scale (GMSR), Depression Scale (CES-D), Suicidal Ideation Scale (SIQ), and Interpersonal Needs Questionnaire (INQ) and SPSS 23.0 and SPSS PROCESS Macro 4.0 were used for the statistical analysis.

The results of this study were as follows. First, gender minority stress showed positive correlations with depression, suicidal ideation, and thwarted interpersonal needs. Depression showed positive correlations with suicidal ideation and thwarted interpersonal needs, and suicidal ideation showed a positive correlation with thwarted interpersonal needs. Second, a partial mediating effect of depression was found in the relationship between gender minority and suicidal ideation. Third, thwarted interpersonal needs showed a moderating effect in the relationship between depression and suicidal ideation. Fourth, thwarted interpersonal needs demonstrated the moderated mediating effect in the effect of gender minority stress and depression on suicidal ideation. The results mean that the effect of depression triggered by gender minority stress of TGNC on suicidal ideation may vary depending on the level of thwarted interpersonal needs. This suggests that both depression and thwarted interpersonal needs as well as its interaction should be considered in light of preventing suicide of TGNC. In addition, future research regarding therapies focusing adaptive and cognitive strategies would be explored.

# POSTER SESSION 03

Abstract No.: 0301

## Mitigating Mental Health Problems Related to Unstable Housing: Part of an Umbrella Review Update

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### INTRODUCTION

Around 62% of people have experienced at least one Adverse Childhood Experience (ACE), and 25% have experienced 3+ ACEs<sup>1</sup>. In addition to being relatively common, there is convincing evidence that ACEs have detrimental impacts across the life course, affecting mental and physical health, educational attainment, and employment opportunities<sup>2,3</sup>.

The present review focused on interventions for people aged 0-25 years who experienced at least one of 10 different ACEs (inc. abuses, neglect, parental separation, parental death, parental mental health problems, parental imprisonment, and unstable housing). This poster presents findings from a sub-set of the review, namely interventions for young people who experience unstable housing including homelessness, foster care and out-of-home care, and conflict-related displacement. This is an important group who may be especially vulnerable to mental health problems, as well as experiencing health inequalities<sup>4</sup>.

### METHODS

To synthesise literature on early intervention and prevention of mental health problems following ACE-exposure, we carried out an umbrella review update (systematic review of systematic reviews), building on the work of another team<sup>5</sup>. We searched six research databases (ASSIA, Cochrane Library, Embase, Medline, NHS Evidence, and PsychINFO), plus grey literature (OATD, EThOS and advanced Google searching), as well as handsearching references. The protocol is registered on PROSPERO (CRD42021252621).

### RESULTS

Searches resulted in ~9500 hits overall; we screened ~9500 titles/abstracts and over 500 full-texts (using EPPI reviewer web), then extracted data from over 160 full-texts (using NVivo 12). Interventions for unstable housing were highly varied, including cognitive behavioural interventions, drop-in centres, kinship care, young mothers programmes, runaway youth programmes, dance and yoga programmes, among others. We present effectiveness for these interventions, data relating to their proposed mechanisms for effectiveness, and any unintended consequences.

### CONCLUSIONS

According to former president of the American Academy of Pediatrics, Dr. Robert Block, "Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today"<sup>6</sup>, a claim which still seems as true in 2023. Unstable housing is a prevalent and often highly detrimental ACE. Yet, on the plus side, and perhaps in contrast to some other ACEs, these young people are often visible and known to society and services, making early intervention feasible prior to the development of mental health problems. This review helps to identify which interventions should be offered to these young people at risk of mental health problems in order to mitigate the impact of ACEs and allow them to fulfil their potential.



## POSTER SESSION 03

Abstract No.: 0314

### **The Effect of Need to Belong on the Disordered Eating Behaviors among Teenage Female Adolescents: Sequential Mediating Effects of SNS Usage and Upward Comparison**

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Recently, the problem related to disordered eating behaviors has been intensified mainly in the teenage female adolescents. According to the KDCA(Korea Disease Control and Prevention Agency) in 2017, 23% of Korean female teenagers have experienced inappropriate weight control such as fasting, taking unprescribed drugs, and vomiting after meals. These disordered eating behaviors are more prominent in female adolescents than in male adolescents. However, COVID-19 frustrated the need to belong in face-to-face situations. This deepened the reliance on SNS to form and maintain social relationships through non-face-to-face platforms, and in the process, female adolescents were exposed to various comparative situations through SNS. SNS makes it easy to experience upward comparison, comparing oneself with someone who is evaluated to be superior. Modern society considers the skinny body more valuable, and the image shared in SNS is biased toward this ideal state. For this reason, SNS usage has been pointed out as a risk factor of disordered eating behaviors of female adolescents. Today, SNS usage has a greater impact on the lives of adolescents, especially female adolescents, than traditional media such as magazines and TV. Therefore, it seems to be meaningful to study the relationship between SNS, which is a means of satisfying the desire to belong to female adolescents, exposure to upward comparison in the process of using it, and abnormal eating behavior. The purpose of this study was to examine whether SNS usage and upward comparison have sequential mediating effects in the relationship between need to belong and disordered eating behaviors among female adolescents. For this purpose, 235 female teenagers in middle schools and high schools participated in an online self-report survey. The results of analysis were as follows. First, there was no significant correlation between need to belong and disordered eating behavior, but there were significant positive correlations among need to belong, SNS usage, and upward comparison. Second, in the relationship between need to belong and disordered eating behavior, SNS usage and upward comparison each showed significant mediating effects respectively. Third, SNS usage and upward comparison had a significant sequential mediating effect in the relationship between need to belong and disordered eating behavior. These results suggest that the female teenagers' need to belong increases their motivation to use SNS, and SNS usage induces more frequent upward comparisons that lead to disordered eating behavior. In order to understand the disordered eating behaviors of teenage female adolescents, it is important to consider the developmental risk factor, need to belong, which leads to upward comparison through SNS usage. This study suggests that it is necessary to improve the quality of social interactions in real world to prevent excessive engagement in SNS and to provide educational interventions to critically accept biased images on SNS for female adolescents.

# POSTER SESSION 03

Abstract No.: 0316

## A Comparison of Cognitive Restructuring and Cognitive Defusion for Resisting Aggression Against Significant Others by University Students

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### INTRODUCTION

Therapeutic approaches for perpetrators of intimate partner violence (IPV) have been implemented in many countries through treatment programs based on Cognitive Behavioral Therapy (CBT). However, the minimal effectiveness of such programs in reducing recidivism has been pointed out as a problem (Babcock et al., 2004). Therefore, a program based on Acceptance and Commitment Therapy (ACT), a "new generation" of CBT, has been developed and found to be highly effective compared to traditional CBT (Zarling et al., 2015). The difference in the effectiveness of the two programs is attributed to differences in their approaches to cognitive aspects, such as automatic thoughts, which is a factor in the maintenance of IPV. Unfortunately, no empirical research on IPV has been conducted to date. Hence, in this study, cognitive defusion (CD), as a technique of ACT, was compared with cognitive restructuring (CR) as a CBT technique for university students struggling with IPV to clarify the effectiveness of the two approaches in terms of cognitive aspects.

### METHODS

The study participants were 15 university students (three males and twelve females) assigned to six CD and nine CR groups. They were asked to watch a guidance video (10 minutes) and an exercise video (30 minutes) on the intervention **METHOD** and complete homework for seven days. Participants were asked to respond to a self-administered questionnaire addressing violence (frequency, BAQ), cognitive fusion (AAQ-II, CFQ), and emotional control (J-DERS, AALS) before watching the video (pre) and after the seven days of homework (post). This study was conducted after obtaining approval (2022-009-2) from the Research Ethics Committee of Kitasato University School of Allied Health Sciences.

### RESULTS

A two-way analysis of variance (two-way ANOVA) was conducted with violence, cognitive fusion, and emotional control as dependent variables; Groups (CR group, CD group) × Time (pre, post) were independent variables. The results showed that the interaction was significant ( $p < .05$ ) in the frequency of verbal aggression and violence, and the value for the CD group post intervention was significantly lower than that for the CD group pre and the CR group post. The main effects of time were also significant in terms of anger (BAQ), difficulty in recognizing feelings (J-DERS), and degree of cognitive fusion (CFQ) (all  $p < .05$ ), and post intervention scores, when compared to pre intervention scores, indicated improvement (all  $p < .05$ ).

### DISCUSSION

The frequency of violence in the CD group post intervention was lower than that in the CD group pre and the CR group post, confirming that ACT was more effective than CBT as an approach for the cognitive aspect. On the other hand, because no difference was observed between the two groups in cognitive changes, there is room for further study regarding the hypothesis that a decrease in the frequency of verbal abuse and violence is a result of cognitive changes by CD.

# POSTER SESSION 03

Abstract No.: 0319

## Role of the Change Agenda in Yips Symptoms in Japanese Professional Baseball Players

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### INTRODUCTION

The yips refer to a psychological and neuromuscular disorder that affects motor skill execution during performance and have been noted to end professional athletes' careers (Clarke et al., 2015). In baseball players, the yips are associated with anxiety (Karakida et al., 2022), and "anxiety sensitivity" (tendency to feel anxiety easily) may be high. Cognitive behavioral therapy, including acceptance and commitment therapy (ACT; Hayes, 2006), may be effective as a support (Aoyama et al., 2021). ACT interventions reduce "experiential avoidance," which inhibits the expansion of behaviors, and maintenance factor of experiential avoidance, the rule-governed behaviors called the "change agenda (if only we could reduce unpleasant thoughts and feelings, the problem would go away and we would have a better life)" (Flaxman et al., 2011), which is an important factor in ACT (Hayes & Wilson, 1994). As the yips tend to be caused by strong rule-governed behaviors such as not making mistakes (Aida et al., 2016), a change agenda such as "if only I could eliminate anxiety, I could pitch perfectly" may have arisen in baseball players. Therefore, this study aimed to clarify the role of change agenda in the yips symptoms of professional baseball players.

### METHOD

Fifty active NPB professional baseball players (1 woman, 47 men, 2 non-respondents, mean age 25.9±4.2 years) participated in the study. The measurements included: (a) demographic items: active professional baseball players' playing history, age, gender, position, and years in the first team; (b) yips tendency: perception of competitive performance (developed in this study); (c) change agenda: Change Agenda Questionnaire (CAQ; Shima et al., 2018); and (d) anxiety sensitivity: Anxiety Sensitivity Index-3 Japanese version (ASI-3; Fukui et al., 2011). The local ethics committee approved this study (approval number: 2020-057).

### RESULTS

The Pearson's product-moment correlation coefficient showed a moderate positive correlation between yips symptoms and change agenda ( $r = 0.50, p = 0.00$ ). Hierarchical multiple regression analysis was conducted to examine the influence of change agenda and anxiety sensitivity on yip symptoms. The yips was the objective variable; anxiety sensitivity, change agenda, and the interaction term were entered as explanatory variables in Steps 1–3, respectively. In Step 2, a significant positive standard partial regression coefficient of the transformational agenda for yips was obtained ( $\beta = 0.50, SE = 0.14, p = 0.00$ ), indicating a moderate effect size ( $R^2 = 0.25$ ). However, no significant values of anxiety sensitivity or the interaction terms were obtained for the yips.

### DISCUSSION

The results indicate that professional baseball players with yips tendencies show a greater change agenda. This suggests that ACT interventions with a focus on "creative hopelessness" that reduce the influence of the change agenda may be effective in reducing the yips. Another explanation for the lack of association between anxiety sensitivity and the yips may be that the current study's results included psychological features specific to top professional baseball players, unlike previous studies that were conducted on club players. Further research is needed to clarify top-notch professional baseball players' yips symptoms by comparing them to those of amateur players, such as those in independent leagues.

## The Mediating Effects of Avoidant Coping between Cognitive Appraisal and Social Functional Impairments among Japanese Trans Men

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### INTRODUCTION

Transgender is a minority group of individuals that is most likely to experience decreased mental health and quality of life (QOL) because of minority stress (Gómez-Gil et al., 2009; Nuttbrock et al., 2010). The minority stress model (Meyer, 2003), which focuses on the interaction between social and interpersonal factors, presumes that conditions in the social environment create stress in individuals from minority groups, thus negatively affecting their mental health and QOL. Minority stress has been described as a specific form of social stressor in which stigmatized social groups are exposed to unique and chronic stressors related to their social status and minority identity. Transgender individuals practice coping with minority stress by concealing their own minority identity from others and by limiting the number of people with whom they interact. However, it should be noted that cognitive appraisal, which is a core factor in the intraindividual stress process, is not considered in approaches aimed at understanding the effects of minority stress (Dohrenwend, 2000; Meyer, 2003). Therefore, it is necessary to consider the effect of cognitive evaluation on minority stress among the transgender individuals. Furthermore, because minority stress occurs mostly among Japanese trans men in interpersonal situations (Ando et al., 2023), it is possible that coping to conceal this minority status alienates interpersonal interactions. Therefore, this study examines the processes of the cognitive appraisal and coping during the minority stress phenomenon using the degree of functional impairments in the interpersonal situations as an outcome, to determine whether the cognitive appraisal mediates and affects avoidance coping of interactions with other people.

### METHOD

Eighty-one trans men (mean age, 27.83 years; standard deviation (SD) = 6.23 years) who were diagnosed with gender dysphoria or complained about gender nonconforming were enrolled in this study. Thirty-one of these men attended a gender-specialized hospital regularly, 21 were receiving cross-hormone therapy, and 29 had received physical surgery. The scales of the cognitive appraisal and reappraisal (affectivity, threat, commitment, and controllability), coping with minority stress (gender-concealment coping and avoidant coping subscales), functional impairment in the social life domain, and the status of gender-affirming surgical procedures (GAS) were included in this survey. R for MacOS (ver. 4.1.2) was used for statistical analysis, and a mediation analysis using GAS as a confounding factor was performed.

### RESULTS

Initial analyses between the variables revealed significant correlations among the functional impairment and controllability of cognitive appraisal ( $r = -0.32$ ; 95% confidence interval (CI), (-0.51, -0.12)), gender-concealment coping ( $r = 0.24$ ; 95% CI, (0.02, 0.44)), and interpersonal avoidant coping ( $r = 0.49$ ; 95% CI, (0.30, 0.64)). Subsequently, a mediation analysis with bootstrapping confirmed the presence of a significant total effect (effect = -0.53; SE = 0.21; 95% CI, (-0.94, -0.12)), a direct effect (cognitive appraisal to functional impairment: effect = -0.29; SE = 0.20; 95% CI, (-0.70, -0.09)), and a mediation effect of the association between the cognitive appraisal and functional impairment via interpersonal avoidant coping (effect = -0.24; SE = 0.01; 95% CI, (-0.46, -0.07)).

### CONCLUSION

The results of this study showed that interpersonal avoidant coping mediated the cognitive appraisal and social functional impairment. As hypothesized, the cognitive appraisal and coping were essential factors in the process of minority stress. Regarding the mediating

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effect, trans men may choose avoidant coping to protect themselves after they perceive that they are unable to cope with minority stress; however, continued avoidant coping may pose a challenge regarding the expansion of support resources and may limit social life, such as the interpersonal interactions and leisure time. Budge et al. (2013) showed that the exploration of support resources and cognitive reframing were beneficial in the lives of the transgender individuals. Although effective psychosocial interventions have not been established to promote the health of the transgender individuals, interventions aimed at modifying the cognitive evaluations and interpersonal avoidant coping will improve social functional impairment. Furthermore, longitudinal studies are desirable to understand the mediating role of coping styles and the predictive role of the cognitive appraisal.

# POSTER SESSION 03

Abstract No.: 0371

## **Understanding Non-suicidal Self Injury of Korean Late Adolescents: A Review of the Research Literature from 2013 to 2022**

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Late adolescence usually means university students who have to adapt and cope with a lot of stress in an autonomous and independent environment. Some of them would experience non-suicidal- self-injury (NSSI) to cope with stress as one of maladaptive ways. The purpose of this study is to analyze the research trends on NSSI of late adolescents including university students in Korean research literature from 2013 to 2022. This could allow to raise the awareness of NSSI of late adolescents and to explore active intervention methods. A total of 232 papers were finally selected from 1,796 papers related to NSSI from 2013 through 2022 when NSSI was included in DSM-5 as a condition for further study: papers with duplicates and year deviations (n=281) were excluded as the first selection process and then papers with inappropriate subjects, qualitative research, and literature review (n=1,483) were excluded as the second selection process. The final papers were analyzed about publication year, NSSI assessment tool, and related research variables including protective and intervention variables. As a result, publication regarding NSSI has been increased significantly since 2019 although there were few related studies until 2018. Second, Functional Assessment of Self-Mutilation (FASM) and Korean version of the Self-Harm Inventory were the most widely used. Third, with regard to related research variables such as biological, psychological, sociocultural and protective/ intervention aspects, psychological variables were the most frequently studied and emotional areas were most actively studied among sub-categories (e.g., cognition/emotion/personality/internal resources, etc.). However, studies were scarce about protective and intervention factors as well as about subject population other than university students as late adolescents. Implications and directions for future research about late adolescents including non-university students and protective and intervention for NSSI were discussed.

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Abstract No.: 0387

## Factors Influencing the Effect of Family Support for Hikikomori (Severe Social Withdrawal)

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Hikikomori is defined as a condition of not working or attending school, not socializing outside one's home, and staying home on most days, except for solitary outings, for more than six months. This phenomenon is known to be comorbid with depression, anxiety disorders, psychotic disorders, autism, and avoidant personality disorder. Hikikomori has attracted the attention of researchers and clinicians in Japan. Recently, its existence and psychopathological characteristics have been reported in various countries, including the United States, China, Spain, Italy, and France. Many hikikomori persons tend to avoid others; therefore, initial support is often provided to their parents. However, the factors that enhance the effect of family support for hikikomori have yet to be identified. This study aimed to identify demographic factors and subjective support components that enhance the effects of family support.

The study included 200 individuals who had used support for their child's hikikomori. Web-based research included the support institutions used by the participants, the professionals who provided support, the support components that the participants expected and received, and the changes in the participants and their children resulting from the support. Participants were 100 mothers and 100 fathers with a mean age of  $58.98 \pm 7.65$  years. One hundred fourteen men and 86 women were hikikomori persons, with a mean age of  $27.98 \pm 6.79$  years and a hikikomori duration of  $56.95 \pm 73.33$  months. Forty-four of them were currently experiencing hikikomori, and 156 had previously experienced it. The support institution most often used by participants for their children's hikikomori was a medical institution (45.0%), followed by a school (42.0%) and a local municipal office (15.0%). The professional whom most participants received help from was a doctor (42.0%), followed by a clinical psychologist (23.5%), a teacher (23.0%), and a mental health social worker (22.0%). As per the results, 8.5–13.5% of the participants reported negative changes in their children, while 42.0–57.0% reported positive changes. In addition, 10.5–15.0% of the participants reported a negative change in participant selves or family relationships, while 47.5–54.0% reported a positive change. Participants who received more support components regarding understanding their children's emotions, objective recognition of the children's problems, and acquiring specific **METHODS** of relating to them reported a more positive change in participant's condition and communication with their children ( $r = .34$  to  $.41$ ). Participants who received more support components related to understanding their children's emotions reported more positive changes in their children's condition ( $r = .32$ ). The study identified certain components that enhance the effect of support for parents of young or middle-aged children with hikikomori. However, this was a retrospective study, and prospective studies are needed to clarify the causal relationship.

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Abstract No.: 0394

## The Eating Disorder Examination Questionnaire for Adults from the Mexican General Population: Reliability and Validity

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### INTRODUCTION

The Eating Disorder Examination Questionnaire (EDE-Q) 6.0 is a widely used self-report questionnaire for eating disorders. An EDE-Q 6.0 model that is not lacking in relevant content has been supported in three different samples, but existing studies on this model present shortcomings regarding generalizations to the general population. Therefore, the general purpose of the current research was to test the reliability and interpretation validity of the EDE-Q 6.0 scores in adults of both sexes from the Mexican general population.

### METHOD

After translating, adapting, and assessing the EDE-Q 6.0 in the target population through three pilot studies, we conducted two independent studies. In Study 1, 684 women and 433 men aged 18–83 participated, whereas in Study 2, 591 women and 382 men aged 18–86 did it. They answered the EDE-Q 6.0 and a measure of either body dissatisfaction (Study 1) or self-esteem (Study 2).

### RESULTS

According to confirmatory factor analyses, the 14-item EDE-Q 6.0 model that we tested, composed of four factors (Dietary Restraint, Eating Concern, Appearance Concern, and Shape and Weight Overevaluation), fit acceptably for the four samples (Study 1: RMSEA = .06, 90% CI [.05, .06], for women, .06 [.05, .07] for men; SRMR = .04, .05; CFI = .96, .92; NNFI = .94, .89; Study 2: RMSEA = .07 [.06, .08], .06 [.05, .07]; SRMR = .05, .06; CFI = .94, .92; NNFI = .92, .90) and showed configural, metric, scalar, and residual invariance across sex. All 14-item EDE-Q 6.0 scores were reliable according to Cronbach's alpha ( $\alpha$  = [.71, .93] for women, [.78, .89] for men) and McDonald's omega ( $\omega$  = [.71, .93] for women, [.78, .88] for men), except for the Eating Concern factor score in men ( $\alpha$  = .64 in Study 1, .67 in Study 2;  $\omega$  = .65, .66). Pearson's correlations of the 14-item EDE-Q 6.0 scores with body dissatisfaction (Study 1;  $r$  = [.41, .84] for women, [.39, .77] for men), positive self-esteem (Study 2;  $r$  = [-.42, -.07] for women, [-.37, -.10] for men) and negative self-esteem (Study 2;  $r$  = [-.01, .28] for women, [.11, .31] for men) were as theoretically expected.

### DISCUSSION

This new Latin American Spanish translation of the EDE-Q 6.0 works broadly as expected and provides evidence to extend the generalization of previous studies to the general population. Thus, the present translation of the EDE-Q 6.0 may be a valuable tool in the field of eating disorders for researchers and practitioners studying or serving Latin American Spanish speakers of either sex from the general population.

### Key Reference

Contreras-Valdez, J. A., Freyre, M.-Á., & Mendoza-Flores, E. (2022). The Eating Disorder Examination Questionnaire for adults from the Mexican general population: Reliability and validity. *PLOS ONE*, 17(4), Article e0266507. <https://doi.org/10.1371/journal.pone.0266507>



# POSTER SESSION 03

Abstract No.: 0397

## How Can Cognitive Appraisals Be Identified and Assessed Within the Context of Cognitive Behavioral Therapy for Irritable Bowel Syndrome?

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### OBJECTIVE

Cognitive Behavioral Therapy (CBT) is the most effective for Irritable Bowel Syndrome (IBS). Cognitive appraisals have emerged as a key factor in maintaining IBS symptoms. The present study aims to clarify how cognitive appraisals are assessed and understood within the context of CBT for IBS.

### METHOD

This study conducted a thorough review of previous research which includes the keywords of cognitive restructuring and cognitive appraisal in CBT not limited to the context of IBS.

### RESULTS

In the context of CBT for IBS, a limited number of types of cognitive appraisals have been examined, such as Catastrophizing. On the other hand, studies on cognitive therapy for depression have explored various forms of dysfunctional appraisals, or cognitive distortions, within their theoretical frameworks, and have proposed a hierarchical structure for them.

### DISCUSSION

IBS symptoms may be associated with cognitive appraisals; however, there has been limited investigation into this area. Therefore, there is a need for detailed data accumulation to clarify cognitive appraisals related to the improvement of IBS symptoms and emotions, along with the development of new measurement tools to assess them. Moreover, the conventional method of evaluating symptom improvement through a reduction in scale scores may not fully capture the extent and complexity of patients' cognitive appraisals; may not always accurately gauge their modification.

# POSTER SESSION 03

Abstract No.: 0398

## Comparative Study on the Effects of Different Therapeutic Components of Cognitive Behavioral Therapy for Insomnia

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### INTRODUCTION

Cognitive behavioral therapy for insomnia (CBT-I) is currently the first-line treatment for insomnia disorders, and its effectiveness has been confirmed by evidence-based medical researches (van der Zweerde, Tanja et al. 2019). The main targets of CBT-I are maladaptive sleep habits, irregular sleep-wake schedule, unhelpful thoughts about sleep, as well as sleep-related anxiety and overexcitation. Although there is a large amount of research evidence that cognitive behavioral therapy is effective for insomnia patients, insomnia and subsequent symptoms such as anxiety are not always completely relieved, still many patients remain residual symptoms after treatment. In order to further optimize the treatment plan, experts are conducting research on the therapeutic components of CBT-I. The component study conducted by Professor Colin A. Espie's team shows that behavioral intervention consisting of stimulation control and sleep restriction is a predictor of improving sleep latency and reducing nocturnal arousal; cognitive intervention can significantly reduce nocturnal arousal; while sleep hygiene and relaxation training cannot predict any improvement (Harvey, Linda et al. 2002; Harvey, Allison G et al. 2014). It is noteworthy to find whether there are differences between cognitive therapeutic components and behavioral therapeutic component in predicting symptom improvement in patients with insomnia. In combination with the psychological characteristics of Chinese patients with insomnia, this study intends to verify the efficacy of CBT-I on Chinese patients with insomnia, and to explore the different therapeutic components of CBT-I and the related factors affecting the efficacy so as to provide a basis for further localization and individualization of CBT-I.

### METHODS

A total of 90 outpatients who met the diagnostic criteria for insomnia disorders in the 5th Edition of the American Handbook for the Diagnosis and Statistics of Mental Disorders (DSM-5) were randomly assigned to one of three groups: (1) cognitive behavioral therapy (CBT; n=30), (2) cognitive therapy (CT; n=30), or (3) behavioral therapy (BT; n=30). All groups received intervention once a week for 8 weeks. Insomnia Severity Index (ISI), Beck Anxiety Scale and the Multidimensional Fatigue Inventory (MFI-20) were evaluated at baseline period, week 4, week 8, week 16 and week 24.

### RESULTS

ISI scores showed that CBT group achieved the most significant decrease compared with CT group and revealed a significant effect at week 8 (posttreatment) for time×group interaction ( $p<0.05$ ), and the improvement of BT group was between CBT and CT group, which is second best to CBT group but not significantly different from CT group. From the perspective of improving trend, the improvement of BT group was faster than CT group but not as sustained as the latter. BAI scores at week 4 showed that CBT group was better than CT group ( $p<0.05$ ). MFI scores decreased within the group, but there was no difference between three groups.

### CONCLUSION

The findings indicate that both CT and BT are effective, as CBT achieves the optimal effect. There were differences in the onset time and maintenance effect among CT and BT, which also shows their different predictive effects on curative effect.

# POSTER SESSION 03

Abstract No.: 0404

## Compassion for Self and Others: Validation of the French Version of the Sussex-Oxford Compassion Scales (SOCS)

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### OBJECTIVES

The Sussex-Oxford Compassion Scales were developed recently and measure compassion for Self (SOCS-S) and Others (SOCS-O). Each scale comprises five dimensions, namely recognizing suffering (REC), understanding the universality of suffering (UNIV), feeling for the person's suffering (FEEL), tolerating uncomfortable feelings (TOL), and the motivation to act/acting to alleviate suffering (ACT). The main aim of this study is to validate the French version of the SOCS. The relations of compassion for self and others with psychological distress and psychological well-being are also explored.

### METHOD

A French translation of the SOCS was performed with a forward and backward independent translation procedure. A first group of participants (919) completed the SOCS in October 2019 and the second (433) in June 2020. Questionnaires measuring psychological distress (perceived stress, symptoms of anxiety, and depression) and psychological well-being were also completed. All participants were students enrolled in their 1st, 2nd, or 3rd year in various health disciplines (medicine, paramedical sciences, psychology, pharmaceutical sciences). Exploratory factor analyses (EFA) were computed on the first sample and confirmatory factor analyses (CFA) on the second. Convergent and discriminant validity were assessed with Spearman correlations.

### RESULTS

Regarding EFA: According to the indices to define the number of factors to be retained, we kept 3 factors. The loadings of the EFA 3-factor solution showed that the original first two factors (REC and UNIV) were clearly identified, whereas the remaining items were merged into the third factor. Regarding the CFA, 3 models were tested (3-factor solution based on the EFA, the original 5-factor model without a higher-order factor, the original 5-factor model with a higher-order factor). SOCS-S and SOCS-O yielded the same results. Standard structural equation modeling fit indices (AGFI, NFI, TLI, and RMSEA) from the CFA were acceptable to good for all 3 models. The model comparison suggested that model 2 (the original 5-factor model without a higher-order factor) was the most appropriate for the data of the second subsample. Moreover, negative significant correlations (small to moderate) emerged between psychological distress and all SOCS-S dimensions, but not between psychological distress and the SOCS-O (with exceptions for the UNIV and FEEL dimensions). We obtained significant positive correlations between psychological well-being and all dimensions of both the SOCS-S and the SOCS-O (small to moderate).

### DISCUSSION

The five-dimension structure of the original English version of the SOCS was confirmed in the French version.

Results also suggest that psychological distress is negatively related to compassion toward oneself but not specifically to others. Well-being, however, is positively related to compassion for self and others. This study offers clinicians and researchers working in a French-speaking context a validated and up-to-date tool to measure compassion for self and others.

# POSTER SESSION 03

Abstract No.: 0412

## The Efficacy of a Transdiagnostic Group Cognitive Behavioral Intervention for Chinese Elderly with Emotional Disorders: A One-Year Follow-Up Randomized Clinical Trial

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### BACKGROUND

With the global aging, geriatric emotional disorders have received more and more attention. Psychotherapy is an effective approach for alleviating the symptoms associated with emotional disorder, but the number of experienced therapists is low. Studies should be conducted to explore a low-cost and efficient treatment method. Previous findings indicate that transdiagnostic cognitive behavior therapy is an effective approach for treatment of emotional disorders. Group therapy is appropriate for the elderly as they are characterized by high levels of loneliness. In this study, we compared and explored the effects of a transdiagnostic group cognitive behavioral intervention (TD-GCBT), a transdiagnostic individual cognitive behavioral intervention (TD-CBT), and treatment as usual (TAU) on treatment of emotional disorders among the elderly.

### METHOD

A total of 120 elderly patients diagnosed with emotional disorders were randomly assigned to the TD-GCBT group (40), TD-CBT group (40), and TAU group (40). Changes in symptoms were assessed using HAMD, PHQ-9, HAMA and GAD-7 scales at baseline, post-treatment (three months), six-month and twelve-months follow-up. The efficacies of the three intervention strategies were compared using linear mixed-effects models. Post-hoc and simple effect analyses were conducted to determine the differences among the three groups.

### RESULTS

The HAMD, PHQ-9, HAMA and GAD-7 scores revealed a significant effect from baseline to 12 months for time ( $p < 0.001$ ), group ( $p < 0.001$ ) and time  $\times$  group interaction ( $p < 0.001$ ) in TD-GCBT group compared with the TD-CBT group and TAU group. The effect of TD-GCBT (HAMD: Cohen's  $d$  (3th month, 6th month, 12th month) = 2.69, 3.98, 4.51; HAMA: Cohen's  $d$  = 2.84, 4.13, 5.20) and TD-CBT (HAMD: Cohen's  $d$  = 2.55, 2.87, 2.63; HAMA: Cohen's  $d$  = 2.43, 2.83, 2.78) group was better relative to that of the TAU group (HAMD: Cohen's  $d$  = 0.41, 1.13, 1.46; HAMA: Cohen's  $d$  = 0.64, 1.22, 1.57) ( $p < 0.001$ ). The scores of the TD-GCBT group showed the most significant decrease compared with the other two groups.

### CONCLUSION

The findings indicate that TD-GCBT method is effective for treatment of emotional disorders among the elderly. TD-GCBT is effective for alleviating depression and anxiety symptoms up to at least nine months after treatment. The results indicate that TD-GCBT is a cost-effective and resource-effective strategy and can be used as an alternative therapy for treatment of mental disorders.

# POSTER SESSION 03

Abstract No.: 0421

## Features of Mind Wandering and Its Relationship with Executive Function in Patient with Obsessive-Compulsive Disorder

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### INTRODUCTION

Abnormality of thought activities and impairment of error monitoring function are considered as important clinical manifestations of patients with obsessive-compulsive disorder. Previous studies have found that abnormal spontaneous thought activities (such as mind wandering) are significantly related to obsessive-compulsive symptoms in non-clinical samples of obsessive-compulsive disorder. However, there is no study using a more objective thought sampling method to investigate the characteristics of mental wandering in patients with obsessive-compulsive disorder and its impact on task performance. For the first time, we used sustained attention to response task (SART) combined with thought probe in clinical patients with obsessive-compulsive disorder to: (1) explore the features of mind wandering in patients with obsessive-compulsive disorder; (2) and explore the relationship between mind wandering and executive function in patients with obsessive-compulsive disorder.

### METHODS

In this study, Mini International Neuropsychiatric Interview, Yale-Brown Obsessive Compulsive Scale, Compulsive Inventory Revised and other tools were used to recruit and evaluate the study subjects. 100 patients meeting the inclusion criteria self-rated Mind Wandering Scale to explore the mind wandering characteristics of the patients in the general state, and 100 healthy controls were recruited for comparison. Secondly, the executive function and sustained attention to response task were used to measure the performance of mind wandering in 50 outpatient patients with obsessive-compulsive disorder in task state and its correlation with executive function, and compared with 47 healthy control subjects.

### RESULTS

(1) The degree and frequency of mind wandering in patients with obsessive-compulsive disorder were significantly higher than those in healthy subjects ( $p < 0.001$ ); (2) The mediating effect analysis of mind wandering on obsessive-compulsive symptoms showed that mind wandering directly predicted obsessive-compulsive symptoms (direct effect = 0.175,  $p = 0.033$ ), and anxiety and rumination partially mediated this relationship (indirect effect = 0.612); (3) The level of mind wandering activity in patients with obsessive-compulsive disorder in sustained attention to response task was significantly higher than that in healthy controls ( $p < 0.001$ ), but there was no significant difference in the variability of mind wandering activity between patients with obsessive-compulsive disorder and healthy controls ( $p = 0.216$ ); (4) In the obsessive-compulsive disorder group, the results of correlation analysis showed that the response accuracy of obsessive-compulsive disorder patients in the stop-signal task under Nogo condition was negatively correlated with the degree of mind wandering in the sustained attention to response task task ( $r = -0.329$ ,  $p = 0.036$ ), and could significantly predict the level of mind wandering. In healthy control group, executive function related indexes had no significant effect on mind wandering level. On the other hand, the working memory capacity ( $r = -0.429$ ,  $p = 0.005$ ) of obsessive-compulsive disorder patients in spatial working memory task was negatively correlated with the mind wandering variability in sustained attention to response task and could significantly predict the mind wandering variability. In healthy control group, the indicators related to executive function had no significant effect on mind wandering variability. The above results were further verified in the sustained attention to response task. (5) The results of abnormal mind wandering activity showed that mind wandering activity was correlated with emotional experience ( $r = -0.621$ ,  $p = 0.000$ ) and task performance ( $r = -0.498$ ,  $p = 0.001$ ). In addition, mind wandering variability could be used as a mediator between executive function and task performance. The mediating effect accounted for 22.33% of the total effect.

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## DISCUSSION

The mind wandering activity of patients with obsessive-compulsive disorder is abnormally elevated in both general state and task state, and the abnormal changes are related to the executive function of patients. The maladaptive changes of mind wandering not only affect their emotional experience, but also affect the performance of patients in task.

# POSTER SESSION 03

Abstract No.: 0448

## **MCBT (Motivational Cognitive Behavioral Therapy): New Conceptualization Incorporating CBT and Its Diverse Derivatives (ACT, DBT, MBCT, etc.)**

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Motivational Cognitive Behavioral Therapy (MCBT) is based on both the concept of Inside-Outside Compatibility (IOC), which explains the dynamic interaction between personal factors (motivation, cognition, emotion, sensation, and behavior) and environmental factors in human information processing and Motivational States Theory (MoST), which integrates the research of stress and well-being. Unlike conventional Cognitive Behavioral Therapy (CBT), MCBT emphasizes the role of motivation in both the causes and management of stress and psychological symptoms (Kim, 2009a, 2009b, 2009c, 2009d, 2015, 2020).

From the perspective of IOC, human life is viewed as a process of constructing information through information processing. When an individual constructs certain information through this process, there is a certain degree of compatibility between the individual (inside) and the environment (outside), which is what IOC represents (Kim, 1986a, 1986b, 1991, 1992). IOC refers to the probability of an individual's construction of specific information in a given environment, and it can be modified by learning and experience. Psychotherapy is a process of modifying a client's IOC to improve their mental health and well-being.

According to MoST, stress and well-being are motivational states that are subjectively experienced as negative and positive emotions, respectively, and manifest as related bodily reactions (Kim, 2006, 2007, 2015, 2020; Kim & Kim, 1998; Kim, Kim, & Kim, 1999). In MCBT based on MoST, psychological symptoms or stress do not arise without motivation. MCBT manages stress and treats psychological symptoms through the management of motivation formation and the change of cognition and behavior that affect motivational states. Moreover, MCBT aims to enhance well-being by changing motivation or motivational states. Consequently, under the umbrella of MCBT are various Positive Psychology Interventions (PPIs), such as Positive Psychotherapy (PPT), which is a recent addition based on positive psychology. CBT traditionally focuses on cognition as the cause of psychological disorders and stress, and aims to treat and manage these issues through cognitive and behavioral management. Recently, however, new trends in CBT such as acceptance and commitment therapy (ACT) have emerged, which suggest that cognitive change is not always necessary for effective treatment. Meanwhile, MCBT places greater emphasis on motivation as the underlying cause of psychological disorders and stress, and considers the change of motivation or motivational states to be central to treatment.

MCBT can integrate various forms of CBT, such as ACT, Dialectical Behavior Therapy (DBT), Integrative Behavior Couple Therapy (IBCT), and Mindfulness-Based Cognitive Therapy (MBCT), among others. These approaches can be combined by placing equal emphasis on motivation, cognition, and behavior to explain and treat stress and psychological symptoms. Furthermore, MCBT broadens the scope of psychological interventions by addressing both the enhancement of well-being and the elimination of stress and psychological symptoms. This is because motivation plays a critical role not only in the development of stress and psychological symptoms but also in the cultivation of well-being.

Abstract No.: 0449

## The Relationship Between Stress Coping Methods and Night Eating Syndrome among Man and Woman College Students

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### INTRODUCTION

Night eating syndrome falls under the other specified feeding and eating disorders in the Classification of Feeding and Eating Disorders. This syndrome is a recent abnormal eating behavior, and studies are being actively conducted by eating disorder experts. However, domestic research is lacking. In addition, the survey results of man and woman college students' stress coping methods are inconsistent, and it was found that stress affects night eating syndrome. However, there is a lack of research on which coping methods causes night eating syndrome, so this study aimed to find out the effect of stress coping methods in man and woman college students on night eating syndrome.

### METHOD

Korean Version of Night Eating Questionnaire(KNEQ; Beomjong Kim et al. 2016) and Based on The way of Stress Coping Checklist developed by Folkman & Lazarus (1985), it is a scale developed by Kim Jung-hee (1987) for factor analysis were administered to 201 university students (82 men and 119 woman with mean age $\pm$ SD of 22.1  $\pm$  2.7). The stress coping methods scale consists of a total of 24 items, and is largely divided into active coping and passive coping, and consists of four sub-factors: problem-focused coping, emotionally relieving coping, wishful thinking, and social support-seeking. The KNEQ consists of a total of 14 items, and each item includes a scale to evaluate loss of appetite in the morning, overeating at night, overeating in the middle of the night, mood/sleep, and perception of late-night snacking. Higher scores mean more severe, and scores up to 24 are average.

### RESULTS

The stress coping methods scale for man and woman college students was investigated in two dimensions and in detail in four dimensions and the correlation coefficient with the severity of KNEQ. The correlation between active stress coping methods and night eating syndrome in man college students was found to be active coping methods ( $r=-0.30$ ,  $p=0.01$ ), problem-focused ( $r=-0.33$ ,  $p=0.01$ ), social support-seeking ( $r=-0.21$ ) and showed a negative relationship. The correlation between passive stress coping methods and night eating syndrome in man college students was passive coping methods ( $r=-0.25$ ,  $p=0.03$ ), emotionally relieving ( $r=-0.25$ ,  $p=0.08$ ), wishful thinking ( $r=-0.23$ ,  $p=0.04$ ) and showed a negative relationship. The correlation between active stress coping methods and night eating syndrome in woman college students was found to be active coping methods ( $r=-0.19$ ,  $p=0.04$ ), problem-focused ( $r=-0.07$ ,  $p=0.50$ ), social support-seeking ( $r=-0.23$ ,  $p=0.01$ ) and showed a negative relationship. The correlation between passive stress coping methods and night eating syndrome in woman college students is passive coping methods ( $r=-0.07$ ,  $p=0.45$ ), emotionally relieving ( $r=-0.01$ ,  $p=0.93$ ), wishful thinking ( $r=-0.11$ ),  $p=0.24$ ) and showed a negative relationship.

### CONCLUSIONS

In this study, college students' active/passive stress coping method, problem-focused, emotionally relieving, social support-seeking, wishful thinking coping method and night eating syndrome were negatively related. In particular, man university students' active and problem-focused coping methods showed the greatest negative correlation with night eating syndrome. As a result of examining college students' stress coping methods, the order of wishful thinking > problem-focused > social support-seeking > emotionally relieving coping was different from previous research results. In particular, woman college students were more likely to social support-seek than man college students. on the other side, night eating syndrome was also higher in woman college students, showing results consistent with previous studies.



# POSTER SESSION 03

Abstract No.: 0485

## **Finding Freedom: Learnings from CBT Sessions Involving Women Undergoing Annulment**

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In the Philippines, amidst a slow and exhausting process of annulment, a growing number of individuals are seeking psychotherapy after experiencing devastating marital problems that were left unaddressed by either one or both partners. These problems over time have affected their self-esteem and general outlook in life that have resulted in the formation of negative cognitive distortions. The purpose of the research was to gain insights and have a better understanding on how these negative distortions came about and how Cognitive Behavioral Therapy (CBT) has helped them start life anew. The case study from which this paper is drawn involves 3 Filipina women, married for at least 9 years, who underwent psychological evaluation as part of their petition for annulment and have the following psychological impressions: Ms. L (49 y.o) with psychological distress, Ms. A (48 y.o) with patterns of anxiety, and Ms. A.G. (37 y.o) with depressive tendencies. From the psychological tests administered and narratives, it revealed that unresolved childhood traumas with family members and their marital problems together created negative cognitive distortions about themselves and their outlook on a happy marriage. Distortions such as Should Statement and Emotional Reasoning may have given rise to their self-evaluation of being worthless as a person and as a wife which made them dissatisfied with life. Through CBT, these distortions were challenged by employing several techniques of goal-setting, thought management, and problem solving.

Seeking therapy during the filing of cases is uncommon practice yet the positive outcomes of the CBT sessions in this study may pave the way for more conversations with regards to the inclusion of therapy in the process of annulment so that either or both partners can be freed from the psychological turmoil brought by their past experiences

# POSTER SESSION 03

Abstract No.: 0492

## Development of the Japanese Version of the Nine Item Avoidant/Restrictive Food Intake Disorder Screen (NIAS)

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### INTRODUCTION

Eating disorders are among the psychiatric disorders with the highest mortality rates and have received increasing attention in terms of early intervention and prevention. While anorexia nervosa and bulimia nervosa with body image distortion are widely recognized as eating disorders, Avoidant/Restrictive Food Intake Disorder (ARFID) has been added to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as an eating disorder without body image distortion. ARFID is characterized by avoidance or restriction of eating due to the sensory characteristics of food, loss of interest in food, or fear of aversive consequences. As such, this disorder is difficult to measure with traditional eating disorder scales. One of the scales that measures ARFID symptoms is the Nine Item Avoidant/Restrictive Food Intake Disorder Screen (NIAS: Zickgraf & Ellis, 2018). NIAS is an effective screening tool for ARFID when used in conjunction with traditional eating disorder scales. A scale for measuring ARFID is needed to understand its epidemiological characteristics and actual status, but such a scale does not exist in Japan. Therefore, this study aimed to develop the Japanese version of the NIAS and examine its reliability and validity.

### METHOD

Participants included 361 Japanese university students (121 males, 217 females, 1 other; 22 non-respondents; mean age 20.08 years, SD = 1.33). Of these, 118 participated in the retest after two weeks.

Participants completed the following scales: (1) Japanese version of the NIAS, (2) Food Neophobia Scale, (3) Simplified Nutritional Appetite Questionnaire, (4) Visceral Sensitivity Index, (5) Eating Disorder Examination Questionnaire (EDE-Q), and (6) Depression Anxiety Stress Scales 21 (DASS-21).

### RESULTS

Confirmatory factor analysis showed a three-factor structure of picky eating, appetite, and fear, suggesting a structure similar to the original version. Cronbach's alpha coefficient was found to be 0.63 for the picky eating subscale, 0.51 for the appetite subscale, 0.77 for the fear subscale, and 0.73 for the total, indicating moderate to good internal consistency except for the appetite subscale. Further, the two-week test-retest reliability was significant, indicating temporal stability of the Japanese version of the NIAS. Regarding validity, the significant correlations among the Japanese version of the NIAS, body mass index (BMI), and DASS-21 showed criterion-related validity. Convergent and discriminant validity were also demonstrated as each subscale of the Japanese version of the NIAS significantly explained each validity criterion when controlling for other eating disorders as measured by the EDE-Q.

### DISCUSSION

Although the results indicate a certain degree of reliability and validity, it is necessary to re-examine the equivalence of each item of the Japanese version of the NIAS with the original version and consider the addition of items for internal consistency. Additionally, the criterion-related validity remains unclear since no scale measuring ARFID was employed. Therefore, it is necessary to compare the scores in clinical and non-clinical populations using clinical diagnosis as the validity criterion. Future studies should examine the cutoff scores unique to the Japanese version of the NIAS and adapt it to younger age groups.

# POSTER SESSION 03

Abstract No.: 0508

## Validation of the Korean Version of Psyflex Scale for Adults

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The present study examined the psychometric properties of the recently developed six-item PsyFlex among community sample in Korea. Using a cross-sectional design, the study collected the data from 1,059 participants. The scale was translated by three bilingual experts for the content validity. Factor analysis was employed to confirm its factor structure and a polytomous item response theory model was used to examine individual items as well as the entire scale. The theory-based single factor structure was confirmed with the representative Korean sample, and the measurement invariances were found across gender and age groups. Also, the scale showed moderate relationship with established measures of interest. Furthermore, item and categorical functioning was investigated with the polytomous IRT model (i.e., GPCM), identifying well-functioning (i.e., item 4, 5, 6) and suboptimal (i.e., item 2) items. Also, the results suggested that the participants might not be able to meaningfully differentiate the the original five response category. To the best of our knowledge, this was the first attempt to validate the PsyFlex in Korea. We believe that the findings are of considerable value to facilitate our understanding in the scale, and more broadly, in the construct of psychological flexibility.

# POSTER SESSION 03

Abstract No.: 0510

## Perfectionistic Concerns and Binge Eating in Mother-Daughter Dyads: Recommendations for Individual and Family-Based CBT Interventions

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Perfectionism is linked to a range of psychopathologies, including binge eating. Binge eating, characterized by rapid overconsumption of food and a subjective loss of control, is a prevalent health problem that is elevated among women, particularly university students. The concordance between mother-daughter pairs on perfectionism and binge eating are both well documented; however, the impact of mothers' perfectionistic concerns (overly negative reactions to perceived failures and nagging doubts about performance abilities) on their daughters' binge eating is unclear. Our study aimed to better understand the role that maternal perfectionistic concerns play in the maintenance of binge eating in daughters.

Our sample consisted of 73 mother-daughter dyads (mean age = 49.51 years for mothers and 19.89 years for daughters). Participants reported on perfectionistic concerns, binge eating, and binge drinking. Perfectionistic concerns were measured using a composite of doubt about actions and concern over mistakes from Frost et al.'s (1990) Multidimensional Perfectionism Scale. Binge eating was measured using Stice et al.'s (2000) 7-item Binge Eating subscale from the Eating Disorder Diagnostic Scale. Binge drinking was assessed using a composite of Kim et al.'s (2022) binge drinking frequency, severity, and perceptions. The data was analyzed using Actor-Partner Interdependence Models, controlling for cohabitation status (yes/no to mother-daughter pairs living in the same household).

We found daughters' perfectionistic concerns were positively associated with their own binge eating,  $\beta = .37$ , 95% CI [.18; .57]; the same was observed for mothers' perfectionistic concerns' associations with their own binge eating,  $\beta = .26$ , 95% CI [.04; .47]. Mothers' perfectionistic concerns were also positively associated with daughters' binge eating (partner effect:  $\beta = .24$ , 95% CI [.04; .44]), but the reverse effect of daughters' perfectionistic concerns on mothers' binge eating was not significant. Lastly, when we tested a comparable model with binge drinking replacing binge eating, no significant actor or partner effects were found. This suggests the positive actor and partner associations between perfectionistic concerns and binge eating do not generalize to binge drinking, indicating the specificity of the perfectionistic concerns-binge eating link.

Our study offers a novel view of mothers high in perfectionistic concerns raising the risk of binge eating both for themselves and their emerging adult daughters. These findings contribute to our understanding of the mechanisms involved in binge eating and have practical implications for CBT practice. For instance, addressing daughters' and mothers' perfectionistic concerns may be a crucial factor in reducing the risk of binge eating in daughters and has important implications for the development of individual and family-based CBT interventions aimed at preventing and treating disorders involving binge eating. Such interventions can target mothers' perfectionistic behaviors toward the daughters and/or target the triggers of binge eating in daughters that are exacerbated by their own and their mothers' perfectionistic concerns, such as interpersonal problems, depressive symptoms, and frequent but unsuccessful attempts at dietary restraint.

# POSTER SESSION 03

Abstract No.: 0511

## Whether 12-Week Online Mindfulness-Based Intervention Program Changes Cognitive Emotion Regulation? a Randomized Controlled Trial

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### INTRODUCTION

Mindfulness is defined as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003). Bishop et al. (2004) proposed a model in which mindfulness consists of self-regulation of attention and orientation to experience. In this way, mindfulness can be understood as a self-regulating process that can help adjust psychological functioning such as emotion (Kaemmerer et al., 2022). Emotion regulation consists of the extrinsic and intrinsic processes sponisible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals (Thompson, 1994), which suggests the concept is very broad. Garnefski et al. (2001) focused on the cognitive part of emotion regulation and defined cognitive emotion regulation (CER) as the conscious, cognitive way of handling the intake of emotionally arousing information. Garnefski et al. (2002) showed that a significant proportion of the variance in depression and anxiety symptoms is explained by the use of CER strategies.

The effect of mindfulness on Emotion Regulation has been shown by self-report questionnaires, behavioral and peripheral physiological findings, and neuroimaging data, and the Cognitive Emotion Regulation Questionnaire (CERQ) is one of the strong candidates as a self-report questionnaire (Hölzel et al., 2011).

However, there is a paucity of studies showing improvement in CERQ with mindfulness-based interventions (MBI). Although online MBI have received a lot of attention in recent years in terms of availability, there are few studies of online MBI. The aim of our study is to show whether online mindfulness-based intervention improves CER strategies.

### METHODS

A total of 81 students in Japanese universities (37 men and 44 women with mean Age±SD of 21.59 ± 3.91) were included in this study. Data was collected in the laboratory from June in 2021 to January in 2022.

The participants were randomly allocated to either a 12-week, self-help and online MBI or a wait-list control. Measures were administered before and after the intervention and waiting period. The Japanese version of Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, 2007; Sakakibara, 2015) were administered. A randomized control trial was conducted with a crossover design. The study protocol was approved by the ethics committee at the University of Tokyo (No. 21-18).

### RESULTS

Using multiple regression analysis, participants in the intervention group demonstrated significant reductions in less adaptive CER strategy ( $p=0.04$ ) and ‘Catastrophizing’ ( $p=0.04$ ) compared to the wait-list control group, after controlling for the baseline values. Participants in the intervention group demonstrated marginally significant increases in more adaptive CER strategy ( $p=0.08$ ), ‘Positive refocusing’ ( $p=0.09$ ) and reductions in ‘Rumination’ ( $p=0.09$ ) compared to the wait-list control group, after controlling for the baseline values. Participants in the intervention group remained significant reductions in ‘Catastrophizing’ ( $p=0.04$ ) compared to the wait-list control group, even after controlling for the baseline values, age and sex.

### DISCUSSION

This study suggested the online MBI had beneficial effects on CER strategies. This finding is consistent with that of Kaemmerer et al. (2022). We found that online MBI is particularly effective in reducing the use of ‘Catastrophizing’ among the strategies. Previous research

## POSTER SESSION 03

reported that 'Catastrophizing' played the most important role in reporting psychopathological symptoms (Garnefski et al., 2002). This study contributed to the understanding of the mechanisms by which mindfulness can benefit mental health.

Limitations of this study were that it did not analyze the association with physiological indicators and the low rate of online MBI engagement. Further should explore the effect of online MBI on mental health, by a combination of psychological and physiological indicators.

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# POSTER SESSION 03

Abstract No.: 0517

## Testing an Experimental Paradigm for Rescripting for Obsessive-Compulsive Prospective Imagery

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### INTRODUCTION

Many people who live with obsessive-compulsive disorder (OCD) experience obsessions in the form of mental imagery about the future. Such imagery elicits strong emotional reactions and may exacerbate compulsive behaviour. Although imaginal exposure is typically used to address mental imagery in OCD, clients who do not respond to imaginal exposure may benefit from alternative approaches. Imagery re-scripting is a cognitive technique used to develop alternative, competing imagery and associated meaning that can reduce the impact of the original mental representation (Arntz & Weertman, 1999). Although imagery re-scripting has historically been used in the context of aversive memories, it may have also therapeutic relevance for episodic future imagery (Morina et al., 2017). To facilitate future research, we tested whether episodic future imagery could be re-scripted in an online, standardised, experimental format.

### METHODS

We pre-screened and recruited Amazon mTurk workers high in OCD traits ( $n = 198$ ). Participants identified future-oriented imagery related to one item they endorsed on an OCD screener (Foa et al., 2002). They engaged in an audio-guided imagery exercise to elicit and elaborate on this idiographic obsessional imagery and provided a written description of their imagery. Participants were then randomised into one of three conditions: an experimental analogue of imagery re-scripting (focused on enhanced coping, values-driven responses, and reduced severity of consequence), an experimental analogue of imaginal exposure (focused on elaborating on the target imagery without alteration), and a distraction control condition (imagery about a non-obsessional daily task). Participants engaged in brief audio-guided imagery exercises relevant to their assigned condition. Imagery vividness and urge to neutralise (visual analogue scales), state emotions (Harmon-Jones et al., 2016), and self-related core beliefs (Fowler et al., 2006) were measured after eliciting target imagery (pre) and after the experimental manipulation (post).

### RESULTS

Participants in the re-scripting condition reported that the vividness of their mental imagery reduced more than those in both the exposure and distraction control conditions. Large reductions in anxiety, fear and disgust were observed in the re-scripting and distraction control conditions, but not in the imaginal exposure condition. There was strong evidence that anxiety and fear reduced the most in the distraction control condition. This same pattern of results was observed in their urge to neutralise the imagery. All participants reported pre-post improvements in self-related core beliefs. However, there was insufficient evidence of between-condition differences in beliefs.

### DISCUSSION

These results tentatively suggest that it is possible to develop an experimental protocol to test self-guided imagery re-scripting for OCD-related imagery. Although the audio-guided exercises were only analogue versions of their respective conditions, the observed changes in imagery experience, emotions, and self-related beliefs emotions and suggest that the tasks engaged and influenced cognition and emotion. Additionally, re-scripting may be a less aversive alternative to imaginal exposure in cases where ambivalence or ethical issues complicate imaginal exposure processes. We are currently conducting additional research to refine this experimental paradigm. Pending refinements, future research may evaluate the efficacy of this paradigm in a clinical OCD sample.

## The Association between Procrastination and Psychological Flexibility: Examination through Self-Administered Scales and Behavioral Indicators

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### INTRODUCTION

Procrastination is voluntarily delaying an intended course of action despite expecting to be worse off for the delay (Steel, 2007). The effects of procrastination have been reported to include stress, anxiety, and poor physical health, and poor academic performance (Tice & Baumeister, 1997; Steel, Brothen, & Wambach, 2001). Various management skills training is available to help people deal with procrastination; however, it has been pointed out that learning skills alone are insufficient to reduce procrastination (Solomon & Rothblum, 1984). Recent studies have examined the effects of psychological interventions on procrastination. Rozentel et al. (2018) conducted a meta-analysis of psychological interventions for procrastination through 12 studies involving 646 participants. Results showed that psychological interventions had a negligible effect on procrastination. Among these, cognitive behavioral therapy (CBT) was the most effective, with a moderate effect. Wang et al. (2017) compared the effects of CBT and acceptance and commitment therapy (ACT) as interventions to reduce academic procrastination. The results showed that the CBT and ACT groups significantly improved procrastination after the intervention. In addition, the ACT group further showed significant improvement in procrastination after the intervention and at the 3-month follow-up. These results indicate that CBT and ACT are both effective interventions for procrastination. However, the treatment mechanisms may differ, and ACT may have a sustained effect on procrastination (Wang et al., 2017). Nevertheless, the rationale for applying ACT as psychotherapy for procrastination is mainly based on practical research. Few studies have investigated the detailed mechanisms of psychological flexibility and procrastination. Therefore, this study examined the relationship between psychological flexibility and procrastination through questionnaires and behavioral indicators.

### METHOD

The Japanese version of the pure procrastination scale (SPS-J) (Kaneko et al., 2022), the active procrastination scale (APS) (Yoshida, 2017), the Japanese version of acceptance and action questionnaire-II (AAQ-II) (Kinoshita, Yamamoto, & Shimada, 2008), the Japanese version of mindful attention awareness scale (MAAS) (Fujino, Kajimura, & Nomura, 2015), and values of younger ages scale (VOYAGE) (Ishizu, Ohtsuki, Shimoda, & Takahashi, 2020) were administered to 41 undergraduate and graduate students (18 men, 22 women, and 1 other with mean age  $\pm$  SD of  $21.3 \pm 1.8$ ). In addition, as a behavioral indicator, the number of times a task was postponed over the course of two weeks was measured.

### RESULTS

Correlation coefficients between the indicators of procrastination (PPS-J, APS, and behavioral indicators) and psychological flexibility (AAQ-II, MAAS, and VOYAGE) were examined. The PPS-J was positively correlated with the AAQ-II ( $r=.34$ ,  $p<.05$ ) and the MAAS ( $r=.42$ ,  $p<.01$ ). APS has negative correlations with AAQ-II ( $r=-.48$ ,  $p<.01$ ). A multiple regression analysis was conducted with psychological flexibility (AAQ-II, MAAS, and VOYAGE) as explanatory variables and procrastination (PPS-J, APS, and behavioral indicators) as objective variables to examine the effect of psychological flexibility on procrastination. MAAS ( $\beta=.34$ ,  $p<.05$ ) significantly predicted PPS-J ( $R^2=.21$ ,  $p<.05$ , Adj.R 2=.15,  $p<.05$ ). PPS-J and AAQ-II ( $\beta=-.82$ ,  $p<.01$ ) significantly predicted APS ( $R^2=.24$ ,  $p<.05$ , Adj.R 2=.18,  $p<.05$ ).

### DISCUSSION

In this study, our results are largely consistent with those of Glick, Millstein, & Orsillo (2014). This finding suggests a significant association between procrastination and psychological flexibility, indicating the applicability of ACT interventions. However, no association was found between the behavioral indicators of procrastination and psychological flexibility, suggesting the need for further investigation.



# POSTER SESSION 03

Abstract No.: 0536

## Effect of Self-Compassion on the Association between Thin-Ideal Internalization and Eating Disorders

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### INTRODUCTION

One of the core characteristics of eating disorders is body image concerns, and one factor that promotes this is the “thin-ideal internalization” (Weissman & Bulik, 2007). Thin-ideal internalization is believed to be facilitated by family, friends, and media, reinforcing women’s thin-ideal body image (Hohlstein, Smith, & Atlas, 1998). Furthermore, it has been noted that thin-ideal internalization is extremely common in contemporary society, where being thin and slim sets the ideal beauty standards (Cheng & Malinckrodt, 2009). It is important to identify the factors that protect those who have thin-ideal internalization from eating disorders (Morton et al, 2019). As previous studies have shown that Self-Compassion is negatively correlated with thin-ideal internalization (Tylka et al., 2015), it may play a role in preventing the occurrence of thin-ideal internalization. However, it has not been clarified whether SC functions as a protective factor against the risk of eating disorders. In this study, we examined the effect of SC on the association between thin-ideal internalization and eating disorders.

### METHODS

The Japanese versions of the Self-Compassion Scale (SCS-J-SF; Arimitsu et al., 2016), Social Attitudes Towards Appearance-4 (SATAQ-4; Yamamiya, 2016), Eating Attitude Test-26 (EAT-26; Mukai, 1994), and Eating Disorder Inventory-91 (EDI-91; Shimura et al., 1994) were administered to 209 Japanese female university students (mean age $\pm$ SD of 20.05 $\pm$ 1.53; mean BMI $\pm$ SD of 19.99 $\pm$ 1.90).

### RESULTS

To examine the first hypothesis, that body dissatisfaction would mediate the relationship between thin-ideal internalization and eating disorders, a mediational analysis was conducted. The total effect of thin-ideal internalization on eating disorders was significantly and positively associated ( $\beta=.53$ ,  $p<.001$ ). Moreover, there was a significant and positive effect of thin-ideal internalization on body dissatisfaction ( $\beta=.57$ ,  $p<.001$ ), and body dissatisfaction on eating disorders ( $\beta=.34$ ,  $p<.001$ ), like the significant indirect effect on the relation between thin-ideal internalization and eating disorders ( $z=4.75$ ,  $p<.001$ ). Despite the significant indirect effect, the direct effect between thin-ideal internalization and eating disorders remained significant ( $\beta=.34$ ,  $p<.001$ ), indicating partial mediation. To examine the second hypothesis, moderated mediation analysis was conducted. When SC was low and average, the indirect effects were significant. However, the indirect effects of high SC values were not significant. (-1SD:  $\beta=.17$ , 95% CI[+.87,+3.13]; M:  $\beta=.11$ , 95% CI[+.53, +1.91]; +1SD:  $\beta=.06$ , 95% CI[-.23,+1.58]).

### DISCUSSION

Our results indicate that the mediating effect of body dissatisfaction was manifested in the relationship between thin-ideal internalization and eating disorders. Therefore, the appearance of three primary sociocultural factors—family, friends, and the media—affects the development of body dissatisfaction, leading to eating disorders. The mediation model was not supported when SC was high in its moderated effect on the supported mediation model. Therefore, even if women with high SC experience body dissatisfaction by internalizing the thin-ideal, they may not be at risk of eating disorders. However, when SC was low, the mediation model was supported. Therefore, it is suggested that women with low SC may feel body dissatisfaction by internalizing the thin-ideal, which may increase the risk of eating disorders. Our findings highlight the clinical importance of nurturing SC among Japanese women.

# POSTER SESSION 03

Abstract No.: 0540

## Examining the Effects of Psychological Flexibility on Binge Eating Mechanisms: Focusing on Body Dissatisfaction

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### INTRODUCTION

Binge eating is one of the symptoms of an eating disorder and can occur due to self-image dissatisfaction via an extraordinary diet (Akagawa, 2016; Kikushima, 2014). Several studies have suggested that Acceptance and Commitment Therapy (ACT), a new generation of cognitive behavioral treatments, is useful for treating binge eating (Hill et al., 2015; Muto et al., 2013). However, the evidence for the use of ACT is mainly based on practical research. In other words, the mechanisms underlying the effect of ACT on binge eating have not yet been clarified. Shimizu (2018) examined the relationship between disordered eating behaviors, body dissatisfaction, and ACT in Japan. However, she did not focus specifically on binge eating but broadly examined disordered eating behaviors. Therefore, this study aimed to examine the effect of psychological flexibility on binge eating caused by body dissatisfaction via an extraordinary diet.

### METHOD

The Body Dissatisfaction Scale (BDS; Matsumoto et al., 1999), Dieting Behavior Scale (DBS; Matsumoto et al., 1997), Eating Disorder Inventory-91 (EDI-91; Shimura et al., 1994), Japanese version of the 7-item Acceptance and Action Questionnaire-II (AAQ-II; Shima et al., 2013) and Japanese version of the 7-item Cognitive Fusion Questionnaire (Shima et al., 2016) were administered to 230 female college students (mean age  $\pm$  SD of  $21.30 \pm 1.09$ ). The BDS consisted of ten items. DBS has two subscales of dieting behavior: the Structured Diet and Extraordinary Diet. Participants were required to complete the Extraordinary Diet subscale, which consisted of eight items. The Japanese version of the EDI-91 has 6 factors, participants were required to complete 12 of the 13 items classified as Factor 1 from mainly, "Drive for Thinness" and, "Bulimia," excluding duplicate items.

### RESULTS

To examine the validity of the hypothesis that body dissatisfaction influences binge eating through an extraordinary diet, a mediation analysis was conducted. This shows that the relationship between BDS and EDI-91 is mediated by DBS. To examine whether experience avoidance moderates the relationship between body dissatisfaction and extraordinary diet, a hierarchical multiple regression analysis was conducted with BDS, AAQ-II, and an interaction term as independent variables and DBS as the dependent variable. The results show that the main effects of BDS and AAQ-II are significant (in order,  $\beta=.32$ ,  $p<.001$ ,  $\beta=.17$ ,  $p<.001$ ). To examine whether experience avoidance moderates the relationship between extraordinary diet and binge eating, a hierarchical multiple regression analysis was conducted with DBS, AAQ-II, and an interaction term as independent variables, and EDI-91 as the dependent variable. The main effects of DBS and AAQ-II are significant (in order,  $\beta=.40$ ,  $p<.001$ ,  $\beta=.25$ ,  $p<.001$ ). The results suggest that experience avoidance may affect all variables in the mediating model of binge eating, which is hypothesized in this study. Therefore, to examine whether it also affects body dissatisfaction, an additional hierarchical multiple regression analysis was conducted with BMI, AAQ-II, and an interaction term as independent variables, and BDS as the dependent variable. The main effects of BMI and AAQ-II are significant (in order,  $\beta=.38$ ,  $p<.001$ ,  $\beta=.23$ ,  $p<.001$ ).

### DISCUSSION

The present study showed that body dissatisfaction positively influenced binge eating through an extraordinary diet. In addition, experiential avoidance had a positive influence on all variables in the mediation model of binge eating. The results are discussed in terms of the possible utility of ACT-based techniques for reducing binge eating.

# POSTER SESSION 03

Abstract No.: 0569

## Validation of the Korean Version of the GSP (Guilt and Shame Proneness, GSP) Scale

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### INTRODUCTION

This study aims to validate the Korean version of the GSP (guilt and shame proneness, GSP) scale. GSP reflects two theoretically and empirically influential theories (behavior evaluation versus self-evaluation, private experience versus public experience) that measure guilt and shame and distinguish the cognitive responses (behavior evaluation versus self-evaluation) and behavioral responses (repair behavior versus withdrawal behavior) of each emotion. Guilt and shame are representative emotions of self-consciousness and share self-consciousness variables preceded by self-reflection and self-awareness. Therefore, to clearly understand the factor structure of GSP, a bi-factor model analysis was needed, assuming that a general factor (self-consciousness) independently affects sub-factors.

### METHOD

Data were collected from 320 adults aged 18 and 69 online. The bi-factor, hierarchical-factor, four-factor, and two-factor models were compared through the CFA (Confirmatory Factor Analysis, CFA). In addition, the Explained Common Variances (ECVs) were calculated to determine whether the Korean version of the GSP was uni-dimensional or multi-dimensional. Afterward, a reliability analysis was performed based on the final Korean version of GSP. In addition, a validity analysis was conducted through a correlation analysis between the final version of the Korean version of the GSP, HEXACO-60 honesty/humility, and the ES (Embarrassability Scale, ES).

### RESULTS

According to the CFA results, the Korean version of the GSP was most suitable for the bi-factor model (self-consciousness as a general factor, guilt-negative behavior evaluation, guilt-repair, shame-negative self-evaluation, and shame-withdraw as a group factor).  $\chi^2 = 287$ , CFI = .87, TLI = .82, SRMR = .05, RMSEA = .08. ECV showed a value of .06. To be specific about the validity analysis results, guilt-negative behavior evaluation, guilt-repair, and shame-negative self-evaluation showed positive correlations with honesty/humility,  $r = .31 \sim .38$ . In contrast, shame-withdraw showed a negative correlation with honesty/humility,  $r = -.22$ . In addition, guilt-negative behavior evaluation, guilt-repair, and shame-negative self-evaluation did not show a statistically significant correlation with ES. Only shame-withdraw showed a positive correlation with ES,  $r = .19$ .

### CONCLUSIONS

the Korean version of the GSP was most suitable for the bi-factor model (self-consciousness as a general factor, guilt-negative behavior evaluation, guilt-repair, shame-negative self-evaluation, and shame-withdraw as a group factor). In addition, it was confirmed that the Korean version of the GSP constitutes a multi-dimensional factor structure that measures self-awareness and four factors rather than a uni-dimension. The reliability, concurrent validity, and divergent validity of the Korean version of the GSP were good. This study is the first validated GSP in the Korean version and improved the conceptual clarity of the GSP scale by investigating the effect of self-consciousness across the scale and verifying the bi-factor model.

# POSTER SESSION 03

Abstract No.: 0592

## The Role of Self-Compassion in Mindfulness-Based Cognitive Therapy for Obsessive Compulsive Disorder

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### INTRODUCTION

Mindfulness-based cognitive therapy (MBCT) has been shown to be efficacious in treating obsessive-compulsive disorder (OCD; Selchen et al., 2018). However, the mechanisms underlying symptom improvement in MBCT are presently unclear. Emerging research suggests that self-compassion (i.e., fostering a kind attitude towards oneself; Neff, 2003) may play a role in OCD symptom severity (Leeuwerik et al., 2020). Thus, the purpose of the study was twofold: (1) determine whether MBCT for OCD impacts self-compassion, and (2) explore whether self-compassion contributes to improved symptoms.

### METHOD

101 participants (51.5% women) completed an 8-week MBCT treatment program at a hospital-based outpatient service for OCD. Sessions took place weekly for two hours and included a home practice component. Participants completed self-report measures such as the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1991) and Self-Compassion Scale (SCS; Neff et al., 2003).

### RESULTS

A series of general linear models (GLMs) were conducted. There was a significant effect of treatment on Y-BOCS scores,  $F(1, 135) = 153.87$ ,  $p < .001$ ; participants reported reduced OCD symptoms from time 1 (baseline;  $M = 20.86$ ;  $SD = 5.97$ ) to time 8 (post-treatment;  $M = 15.60$ ;  $SD = 5.87$ ). There was a significant effect of treatment on three SCS facets: self-kindness (i.e., being gentle and understanding towards oneself), self-judgment (i.e., being harsh and judgmental towards oneself), and mindfulness (i.e., being aware of the present moment). Participants reported increased self-kindness,  $F(1, 100) = 39.17$ ,  $p < .001$ , from time 1 ( $M = 11.35$ ;  $SD = 3.25$ ) to time 8 ( $M = 14.33$ ;  $SD = 4.36$ ); decreased self-judgment,  $F(1, 100) = 23.16$ ,  $p < .001$ , from time 1 ( $M = 18.36$ ;  $SD = 4.65$ ) to time 8 ( $M = 15.29$ ;  $SD = 4.82$ ); and increased mindfulness,  $F(1, 99) = 19.25$ ,  $p < .001$ , from time 1 ( $M = 10.46$ ;  $SD = 3.12$ ) to time 8 ( $M = 12.45$ ;  $SD = 3.47$ ). Separate linear regression analyses revealed an association between three SCS facets that impacted post-treatment symptom scores: self-kindness, self-judgment, and common humanity (i.e., recognizing the shared human experience of vulnerability and experiencing life difficulties). When accounting for Y-BOCS scores at time 1, the standardized residual change score predicted Y-BOCS scores at time 8 for self-kindness:  $B = -1.95$ ,  $\beta = -.33$ ,  $t(98) = -4.75$ ,  $p < .001$ ,  $pr = -.43$ ; self-judgment:  $B = .97$ ,  $\beta = .16$ ,  $t(98) = 2.16$ ,  $p = .03$ ,  $pr = .21$ ; and common humanity:  $B = -1.25$ ,  $\beta = -.21$ ,  $t(98) = -2.85$ ,  $p = .005$ ,  $pr = -.28$ . Next, all SCS facets were entered into three blocks. YBOCS score at time 1 was entered in the first block, and the standardized residual change scores of the six SCS facets were entered in the second block. Self-kindness emerged as the strongest predictor,  $B = -1.96$ ,  $\beta = -.33$ ,  $t(97) = -4.76$ ,  $p < .001$ ,  $pr = -.44$ .

### DISCUSSION

These findings highlight self-compassion as a potential mechanism for symptom improvement among individuals with OCD who engage in an MBCT program. Clinicians should consider integrating self-compassion ideas into treatment protocols to further enhance treatment gains.

# POSTER SESSION 03

Abstract No.: 0595

## Effectiveness of Mindfulness-Based Intervention on Social Cognitive Function in College Students

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### INTRODUCTION

Mindfulness-based interventions (MBIs) have been utilized to reduce negative mood and stress and increase neurocognition (e.g. attention, memory, and cognitive flexibility) and well-being in clinical and nonclinical samples. Recently social cognitive function like empathy has been shown to improve after MBIs in a healthy population. Social cognitive function is defined as the ability to construct mental representations about oneself, others, and one's relationships with others and to use those representations flexibly to guide social behaviours, including social perception (e.g., emotion recognition) and social understanding (e.g. theory of mind and mentalizing). Previous research found that meditators reported higher empathy, higher emotional recognition, and higher theory of mind. The present study thus aimed to investigate the effectiveness of MBIs on the improvement of social cognitive functions in Taiwanese college students.

### METHOD

The present study recruited 29 mindfulness participants (23 female) and 26 control participants (19 female). A complete assessment including dispositional mindfulness, executive function, and social cognitive functions measured using emotion recognition accuracy, theory of mind, and mentalizing was performed before MBI (Time 1), and dispositional mindfulness, emotion recognition, and mentalizing were repeated after a 4-week MBI (Time 2).

### RESULTS

Before MBI (Time 1), there is no group difference in age, gender, dispositional mindfulness, executive function, theory of mind, and prosodic emotion recognition, but the mindfulness group had lower facial emotion recognition and lower mentalizing. After a 4-week MBI (Time 2), the analysis of the generalized estimating equation found that there were significant interactions of group and time on facial emotion recognition and mentalizing. After a 4-week MBI, the mentalizing correct scores were significantly improved in the mindfulness group, and the improvements of sad and fearful facial emotion recognition accuracy in the mindfulness group were greater than in the control group.

### DISCUSSION

Our study demonstrates an endeavor to employ mindfulness-based intervention to promote social cognitive function in college students. The results also suggest that, via influencing nonverbal emotion recognition and mentalizing, mindfulness practice can be a promising way for college students' mental health advancement.

# POSTER SESSION 03

Abstract No.: 0599

## Validation of the Korean Version of the Modest Responding Scale (K-MRS)

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### INTRODUCTION

The concepts of modesty and humility have been confusing in many studies, but they can be differentiated with interpersonal and intrapersonal functions. Intrapersonal function means having an objective view of one's strengths and limitations (Sedikides & Kumashiro, 2008). On the other hand, interpersonal function refers to an attitude to reduce others' interest and jealousy toward oneself in a group (Sedikides, Gregg & Hart, 2007). Modesty is relatively more emphasized in interpersonal functions than humility (Sedikides & Kumashiro, 2008). This study aimed to validate the Korean version of the Modest Response Scale (K-MRS), which assesses modesty, developed by Whetstone, Okun, and Cialdini (1992).

### METHOD

320 Korean adults (18 - 69 years, female 50%) completed the K-MRS, the honesty/humility subscale of the HEXACO-60, and the Fear of Positive Evaluation scale (FPE). We conducted Exploratory Factor Analysis (EFA) with the first 160 participants and Confirmatory Factor Analysis (CFA) with the remaining 160. Internal consistency, convergent, discriminant, and criterion validity were assessed.

### RESULTS

The result of EFA showed that K-MRS had three factors (the inclination toward interpersonal modesty, social desirability, and bragging) with 19 items. As a result of CFA, we found that the three-factor model showed better levels of fit (CFI = 0.870, TLI = 0.851, SRMR = 0.077, RMSEA = 0.089) than the unidimensional model of modesty. The internal consistency was good (Cronbach's  $\alpha = .89$ ), and the discriminant and concurrent validity were acceptable. However, convergent validity was insufficient because the modesty subscale of the HEXACO-60 mainly measures the intrapersonal functions, contrary to the title of the scale.

### DISCUSSION

We suggest that modesty and humility are distinct concepts, although they share some intrapersonal functions. In the future, we need to verify convergent validity using adequate measures. The findings indicate that K-MRS is a reliable and valid scale for assessing modesty in Korean samples.

# POSTER SESSION 03

Abstract No.: 0602

## The Role of Shame and Loneliness in the Development of Compulsive Sexual Behavior Disorder among Survivors of Childhood Sexual Abuse: A Structural Equation Modeling Study

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### INTRODUCTION

Childhood sexual abuse is a significant risk factor for various mental health problems, including Compulsive Sexual Behavior Disorder (CSBD). Although the link between childhood sexual abuse and CSBD has been suggested in many studies, the mechanisms underlying this relationship are not fully understood. Shame and loneliness are closely related factors that have been suggested to result from childhood abuse and may subsequently contribute to the development of CSBD. Thus, we aimed to investigate the mediating roles of shame and loneliness in the relationship between childhood sexual abuse and CSBD using a structural equation modeling approach.

### METHODS

A total of 336 Korean adults (49.7% women) with an age range of 19 to 59 years ( $M = 39.22$ ,  $SD = 10.796$ ) were recruited online for this study. Participants completed self-report questionnaires to measure childhood sexual abuse, shame, loneliness, and CSBD. Three alternative structural equation models were analyzed in this study. Model 1 was a parallel mediation model in which included loneliness and shame were modeled to be distinct mediators in the relationship between childhood sexual abuse and CSBD. Model 2 was a sequential mediation model in which, in addition to individual mediation paths of loneliness and shame, included a path leading to CSBD with loneliness and shame as sequential mediators. Model 3 was another sequential mediation model in which the order of shame and loneliness were changed such that shame became before loneliness in sequential mediation.

### RESULTS

All models showed acceptable fit, but since they were equivalent models, the fit values were the same. In Models 1 and 3, only the mediation path via shame was significant, whereas in Model 2, only the sequential mediation path through loneliness and shame was significant. That is, although there are differences depending on how the paths were set, shame consistently emerged as a major mediator in the relationship between childhood sexual abuse and CSBD, while loneliness had a relatively indirect effect to CSBD by connecting childhood sexual abuse and shame.

### DISCUSSION

These findings suggest that shame is a key factor in the development of CSBD among survivors of childhood sexual abuse. Shame may arise from the experience of abuse itself, and may contribute to the development of CSBD by causing individuals to seek out sexual experiences as a way to cope with shame. Loneliness may also play a role in the relationship between childhood sexual abuse and CSBD, but its effect appears to be more indirect. Specifically, loneliness may exacerbate shame, which in turn lead to the development of CSBD. In conclusion, our study highlights the importance of addressing shame and loneliness in the prevention and treatment of CSBD among survivors of childhood sexual abuse. Interventions that target shame or that aim to address shame and loneliness together may be particularly useful in addressing the risk of CSBD among this group. Our study also underscores the need for continued research on the mechanisms underlying the relationship between childhood sexual abuse and CSBD in order to develop more effective interventions for this vulnerable population.

# POSTER SESSION 03

Abstract No.: 0604

## **A Process-Based Approach to Cognitive Behavioral Therapy for Female University Student with Adjustment Disorder**

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### INTRODUCTION

Process-based therapy (PBT; Hofmann et al., 2022) has been recently proposed as a new theoretical framework for cognitive-behavioral therapy. PBT aims to improve the effectiveness of evidence-based techniques, regardless of school, for clients' well-being and prosperity. It represents a new trend in clinical psychology practice and research that transcends generational divisions. However, there are few intervention studies, especially case reports, that follow PBT's theoretical framework (e.g., Ong et al., 2022). Therefore, this case study describes a case in which eight weeks of interviews and homework were conducted using the PBT theoretical framework. This study was conducted with the approval of the University of Tsukuba Human Ethics Committee[A1], and consent was obtained from the subject for the report.

### OUTLINE OF THE CASE

The subject is a female student in her 20s. She was diagnosed with adjustment disorder after experiencing periods of sleeplessness and continuous mood elevation as a result of problems with a friend. Her main complaints were "I am unable to do what I should because I am preoccupied with unpleasant events that have occurred," and "I wake up early because my sleep rhythm is disrupted."

[Intervention process]

Insomnia symptoms, negative automatic thoughts, and mindfulness trait were assessed before and after the intervention. Ten items with high scores in the completed questionnaires that were related to the main complaints were selected and asked to be reported again after the homework. We worked together during the interview to create a network diagram of symptoms and events based on the client's narrative. The therapist presented treatment options and assigned homework based on the network diagram and the client's preferences (twice a day).

The first session included mindfulness meditation, the second session included loving-kindness meditation, the third session included a well-being diary (in well-being diary), the fourth session included a worry time, the fifth session included a worry vacation, and the seventh session included the creation of a coping list. From the second session onward, focusing on the work that the client had done thus far, selection and implementation were carried out in accordance with the symptoms and goals at the time.

### RESULTS AND DISCUSSION

As homework, mindfulness and loving-kindness meditations increased awareness of physical sensations, as did the physical symptoms described on the network diagram and the types of emotions expressed. Drawing network diagrams repeatedly revealed that rumination was at the root of the symptoms. Although the degree of rumination remained largely unchanged, the distress associated with negative thoughts decreased, and daily behavioral repertoire and activity increased. Moreover, the client's new friends have increased, and changes such as going on trips have occurred. The therapist confirmed that the client was in better health after the intervention and had retained the behaviors she learned during the eight-week sessions in a six-month follow-up. The client's understanding of the symptoms was aided by repeated drawing of the network diagram, and clarifying the treatment kernel resulted in effective intervention.



# POSTER SESSION 03

Abstract No.: 0606

## **Acculturation Discrepancy and Mental Health Issues in Adolescent Zainichi Koreans: A Pilot Interview Survey**

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### OBJECTIVE

The mortality rate of Zainichi Koreans (ethnic Koreans living in Japan) is significantly higher than that of Japanese, and the suicide rate is higher than in their home country. It has been highlighted that most suicide victims suffered from depression or major depressive disorder, indicating that Zainichi Koreans have mental health problems. One of the reasons psychological support for immigrants is difficult is the acculturation discrepancy, which refers to cultural differences between parents and children. Although there is evidence that factors related to this discrepancy can be a clinical risk factor for Zainichi Koreans (Taira et al., 1995), it is difficult for them to seek help from outside owing to the recognition that they must deal with personal problems on their own (Dubow et al., 1990), leading to a difficult situation for support. However, no empirical research has investigated the impact of acculturation discrepancy on mental health. Therefore, we conducted a pilot interview survey to identify the mental health issues faced by adolescent Zainichi Koreans and the intervention variables that can be targeted in the first stage of an intervention study.

### SUBJECTS AND METHODS

A 1-hour semi-structured interview was conducted via Zoom with three adolescent Zainichi Koreans. The challenges that affected their mental health during their growth process were extracted and classified using the Jiro Kawakita method (Kawakita, 1967). The study was conducted after obtaining approval from the "Ethics Committee for Research Involving Human Subjects" at Waseda University.

### RESULTS

A total of 97 challenges faced by adolescent Zainichi Koreans were collected and categorized and integrated into four major categories: identity, acculturation discrepancy between parents and children, cultural differences between Japanese and Zainichi Koreans, and support. There were eight subcategories, including issues related to belonging, identity of self and parents, issues related to being an immigrant, personal characteristics, cultural differences with Japanese, emotional support, and instrumental support, which were further divided into 21 codes (omitted).

### DISCUSSION

Challenges such as identity confusion and the inability to seek help, and cultural discrepancies between parents and children, are consistent with previous studies (cf. Kanazawa, 2012; Boldero & Fallon, 1995; Schwartz et al., 2016). On the other hand, the impact of political issues related to unified Korea on identity was identified as a new challenge. Additionally, variables that have a significant impact on mental health and are expected to be clinically intervened, such as the balance between the sense of belonging to their home country and the adaptation to Japan among parents and children, which is part of the acculturation discrepancy, were identified.

# POSTER SESSION 03

Abstract No.: 0612

## **Patterns of Attachment in Patients and Therapists and Their Importance for the Effectiveness of Psychological Treatments and the Therapeutic Alliance in an Early Stage of the Therapeutic Process at the Outpatient Clinics of Sigmund Freud-University Vienna - First Results**

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### INTRODUCTION

The aim of the study is to determine the importance of attachment-related characteristics of patients and therapists for (1) the therapeutic alliance in an early stage and (2) subsequently for the effectiveness of the treatment. The first analysis focuses the importance of individual attachment patterns for the working alliance. In the second analysis, empirical data is analysed with regard to the significance of patients' and therapists' attachment patterns for the effectiveness of psychological treatments.

### METHODS

The sample of the patients is recruited from the Psychological Outpatient Clinic of Sigmund Freud University Vienna. All professionals participating in the study are (clinical) psychologists at the same institution.

Data collection consists of various standardized measurements that are given at different times of the treatment process. Attachment patterns and characteristics are measured by RQ-2 and ECR-RD. These are given to both patients and therapists before the start of therapy (T1). In the last therapeutic session (T2) both questionnaires are given again, but to the patients only. To evaluate the effectiveness of the treatment the patients are asked to fill out the Symptom-Checklist (SCL-90) before (T1) and at the end of the therapy (T2). In addition patients and therapists are asked for the work-alliance (WAI) after every session. The drop-out-rate is also taken into account.

The first results of the ongoing study will be available in spring 2023.

### DISCUSSION

One innovative feature of the ongoing study refers to the consideration of the attachment patterns not only of the patients but also of those of therapists. Furthermore, the fit of the attachment patterns of patients and therapists is also taken into account. In addition the high frequency of measuring the therapeutic alliance marks a special feature in the research landscape of attachment-related process-outcome research.

The results are intended to provide implications for building sustainable therapeutic alliance, particularly in the early phase of therapeutic treatment. Forming a relationship early on can be an initial point to reduce the high number of dropouts that are usually high in outpatient clinics. Taking the role of attachment into account can optimize the initiation, establishing and strengthening of the working-alliance in an early phase of treatment.

# POSTER SESSION 03

Abstract No.: 0613

## **Patterns of Attachment as a Moderator in the Relationship between Emotion Regulation Strategies and the Therapeutic Alliance -First Results from a Trial at the Outpatient Clinics of Sigmund Freud-University Vienna-**

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### INTRODUCTION

Within the scope of the present research interest, the importance of Emotion Regulation Strategies (ERS) is examined for the Therapeutic Alliance (TA) in the early therapeutic phase. There is the assumption that the significance of emotion regulation strategies for the degree of the therapeutic alliance depends on the level of the different attachment patterns.

This contribution presents the first empirical results of this ongoing study.

### METHOD

The total sample consists of patients from the psychological outpatient clinic of the Sigmund Freud University in Vienna who receive psychological treatments. A longitudinal survey design was used, which explored the attachment patterns (RQ2, ECR), and emotion regulation strategies (H-FERST; eight strategies: rumination, reappraisal, acceptance, problem solving, expressive suppression, experience suppression, avoidance, activity/social support) at the beginning of the trial and after 10 sessions of therapy. The therapeutic alliance (WAI-12) is filled out by therapist and patient after each session.

Separate moderation analysis are carried out to investigate the role of the attachment patterns for the relationships between emotion regulation strategies and the therapeutic alliance, centralizing that the attachment patterns are acting as a moderator variable.

### DISCUSSION

The results of the ongoing survey will take the moderating role of attachment patterns for the relationship between ERS and TA into account, emphasizing their potential for deriving practical implications for relationship formation in the early therapeutic phase.

Concrete recommendations for action are given for the consideration of emotion regulation strategies as well as the individual attachment patterns in the early phase of cognitive-behavioral treatments in the outpatient setting, which serve, among other things, to inhibit therapy discontinuations and to promote treatment efficiency.

## Associations of Clinical Features with Symptom Severity in Adults with Obsessive-Compulsive Disorder: A Study in Outpatient Psychological Clinic in Jakarta, Indonesia

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### INTRODUCTION

Obsessive-compulsive disorder (OCD) in adults often presents with certain features such as excessive avoidance behaviors (Gillan et al., 2014), inflated sense of responsibility (Arntz et al., 2007), and tendency to be ambiguity aversive, leading to pathological doubt and indecisiveness (Pushkarskaya et al., 2015). Although these features do not necessarily reflect core symptoms of OCD, the surrounding literature suggests these may present as early and often more noticeable signs of the disorder. Limited investigation on the extent to which they may predict OCD symptom severity may have questioned the clinical utility of assessing these components.

### METHOD

Data were collected from patient records of 135 adults (Mean age = 27.68, SD age = 7.73) who were diagnosed with OCD and underwent treatment at an outpatient clinic in Jakarta, Indonesia. The sample consisted of 90 males and 44 females, and one person who did not identify as either. Symptom severity was assessed using the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989). The Y-BOCS is a clinician-rated instrument administered via clinical interview. It consists of 10 items measuring symptom severity of obsessions and compulsions, with six additional items labeled as additional enquiries to gain further information namely patient insight, avoidance, degree of indecisiveness, overvalued sense of responsibility, pervasive slowness/disturbance of inertia, and pathological doubting. All items were rated in a 5-point Likert scale. Pearson correlations were performed on symptom severity score with each of the six ancillary items as preliminary analysis. Multivariable linear regression was then conducted to evaluate the predictive value of each item on symptom severity.

### RESULTS

The overall mean score for Y-BOCS was 23.16 (SD = 5.78), suggesting moderate OCD. Y-BOCS score had positive and significant correlations with avoidance ( $r = .38, p = <.001$ ), degree of indecisiveness ( $r = .27, p = .007$ ), overvalued sense of responsibility ( $r = .33, p = .001$ ), pervasive slowness/disturbance of inertia ( $r = .32, p = .001$ ), and pathological doubting ( $r = .39, p < .001$ ). Insight was not significantly correlated with Y-BOCS severity score. Furthermore, multivariable linear regression analysis revealed that only avoidance remained a significant predictor of Y-BOCS score ( $\beta = .23, p = .022$ ).

### DISCUSSION

Research on the relationships between OCD symptoms severity and the additional clinical features have not been conducted in outpatient clinic settings in Indonesia. Patients' level of insight about their disorders may not necessarily be associated with symptom severity in our sample, whereas avoidance might be a crucial feature to the presentation and severity of OCD symptoms. Our findings suggest that clinicians may consider examining habitual avoidance that triggers patients' obsessions and compulsions when assessing and treating OCD.

Keywords: Avoidance; Insight; OCD signs; Obsessive-compulsive disorder.

# POSTER SESSION 03

Abstract No.: 0620

## The Role of Self-Construal and Empathy in Conflict Management: Insights from Romantic Relationships

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### INTRODUCTION

Conflict is an inevitable aspect of intimate relationships and how individuals handle conflicts can significantly impact the quality and stability of their relationships. Self-construal, particularly the relational, individual, and collective self-aspects, results from the broad concept of culture and affect not only how we perceive ourselves, but also how we relate to others. Empathy, which involves the ability to understand and share others' emotions and perspectives, is also an essential factor that may influence how individuals manage conflicts in their relationships. Thus, the study aimed to examine how self-aspects and empathy relate to different conflict activity styles in romantic relationships, with a focus on mediation by empathy.

### METHOD

Total of 333 romantically involved adults completed the Relational, Individual, and Collective Self Aspects Scale, the Interpersonal Reactivity Index, and the Conflict Activity Styles Inventory. We also collected information about the age, gender, as well as about the relationship duration (in months) of the participants (95.2% female, 4.2% male, 6% other; Mage = 28.26, SDage = 6.95, Mrelationshipduration = 47.21, SDrelationshipduration = 61.2).

### RESULTS

Results showed that only the levels of relational and collective types of selves show a positive relationship with the total empathy levels of participants. As the total empathy levels of participants increase, the levels of accommodating, compromising, and collaborating types of conflict activity styles also increase. However, there is no significant relationship between the total empathy scores and the levels of forcing or avoiding types of conflict activity styles. Concordingly, neither of the self types have found to be associated with the avoiding style. When all the subspects of empathy, as well as all the self types are taken into consideration, only the perspective-taking ability and the personal distress, namely the discomfort experienced by observing others in need, predict the level of avoiding conflicts. Mediation analyses show that empathy levels partially mediate the relationship between relational self and compromising and collaborating conflict activity styles, as well as the relationship between relational self and compromising and collaborating conflict activity styles, but the model does not explain the relationship between the individual self and compromising and collaborating conflict activity styles.

### CONCLUSION

The findings of the study have important implications for understanding the factors that contribute to successful conflict management in romantic relationships. The study highlighted the role of self-construal and empathy in predicting different conflict activity styles in romantic relationships. The results showed that relational and collective selves were positively associated with empathy levels, which in turn were associated with more accommodating, compromising, and collaborating conflict activity styles. These findings suggest that individuals who perceive themselves as connected to others and identify with a group are more likely to exhibit empathic behaviors in their relationships, which may facilitate more effective conflict resolution. Furthermore, the study found that perspective-taking ability and personal distress predicted avoiding conflicts, indicating that individuals who take the perspective of others and experience discomfort when others are in need are more likely to avoid conflicts. This finding suggests that interventions aimed at reducing personal

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distress as a result of increased empathy may be effective in promoting healthier conflict management styles. Overall, the findings of the study have practical implications for improving conflict management skills in couples' therapy and interventions, highlighting the importance of promoting empathy and considering different aspects of the self in conflict resolution. Future research may further explore how empathy mediates the relationship between self-aspects and other conflict activity styles and how these factors may affect relationship satisfaction and stability.

# POSTER SESSION 03

Abstract No.: 0627

## **A Study of the Korean Counselors' Perceptions on Counselling Interventions in Working with Older Adults**

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Korea is expected to become superaged society in a few years. The number of Korean counselors with gerontological interest and competence, however, are not enough, compared to rapidly growing aged population. Moreover special programs designed for preparation of working with older adults are scarce. Previous studies indicate that counselors have certain perceptions about not only aged person and aging but also gerontological counselling. Counselling older adults is predicted to be frustrating and feeling helpless(Lee, Volans, & Gregory, 2003). The outcomes in gerontological counselling are expected to be unsatisfactory(laidlaw et al., 2003). These ideas, assumptions, and stereotypes about working with older adults could have impact on counselors' professional practice, even hinder the effectiveness of counselling(Fullen, 2018). To develop the effectual training programs, therefore, counsellors' perception about working with older persons should be investigated. It seems that gerontological counselors consider the various counselling interventions applicable for older persons. The general counselors, however, may differ in the perception about counseling interventions. Therefore, the purpose of this study was to investigate the counsellors' perception about counselling interventions in working with older adults. 115 counsellors and trainees in counselling program participated in the present study. They were asked to answer an open-ended question: which do you think counseling interventions, strategies, approaches are effective or ineffective in working with older adults? The data were analysed using consensual qualitative research-modified(CQR-M). As a result, 34 categories were derived from two domains("effective", "ineffective"). Counselors' attitude such as empathy, listening attentively, and respect for the elderly have been highly evaluated as effective(34%). On the other hand, more than majority of participant have rated cognitive behavioural therapy as ineffective(53%).

Results indicate that counselors have little confidence in CBT practice with older adults although studies have supported that CBT for the aged is effective(Naoko Kishita, Ken Laidlaw, 2017). They may feel need for modification of CBT or age-appropriate CBT. Or they could suppose that older adults are too old to change(webb, chonody, & Owen, 2015), therefore less appropriate for CBT which focuses on 'change' of thought and behaviour. Further research to explore the perceptions of counselors is recommended for gerontological education and training.

# POSTER SESSION 03

Abstract No.: 0634

## Long-Term Effectiveness and Cost-Effectiveness of Guided Internet-Based Cognitive Behavioral Therapy in Obsessive-Compulsive Disorder Treatment: A One-Year Follow-Up Study

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### BACKGROUND

Internet-based cognitive behavioral therapy (ICBT) is a useful approach to treat patients living in rural areas with scarce resources. To date, several clinical trials with the randomized controlled design have demonstrated ICBT's short-term effectiveness in treating obsessive-compulsive disorder (OCD). However, there is only limited evidence for the long-term effectiveness and cost-effectiveness of ICBT in treating OCD.

### OBJECTIVE

The objectives were to examine long-term effectiveness and cost-effectiveness of guided ICBT for OCD at time on one year after the end of the intervention. We analysed the results of a long-term follow-up observation of people who had enrolled a previous randomized controlled trial or an associated rescue trial.

### METHODS

Informed consent was obtained from the 25 people who had completed guided ICBT. Participants were assessed at pre-treatment, post-treatment, 6-month follow-up, and 12-month follow-up. The primary outcome was the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS). Further, the secondary outcomes were EuroQol-5D-5L (EQ-5D-5L), the patient health questionnaire-9 (PHQ-9), and the generalized anxiety disorder 7-item scale (GAD-7). To analyse long-term effectiveness, we used the mixed-model analysis of variance. For cost-effectiveness analysis, we utilized relevant public data and derived data on ICBT implementation costs from Japanese national health insurance data.

### RESULTS

In the follow-up period, 25 participants of age 29.8 (standard deviation, SD = 7.4) years provided data. At one-year long-term follow-up, 68% of the participants (n = 17 of 25) had remission in the criteria defined as Y-BOCS total less than 14. At 12 months, the change in the total of Y-BOCS was -12.4 (F1 = 31.1, P < .001); the changes in the totals of PHQ-9 and GAD-7 were -2.9 (F1 = 4.63, P = .005) and -3.84 (F1 = 9.40, P < .001), respectively. For QALY at 12 months, the change was a significant increase of 0.065 (F1=.276, P = .048). The total cost for providing treatment was JP¥ 99,000 per patient. Finally, the fixed threshold was JP¥ 325,000 (US\$ 2,404, converted at JP¥ 135 per dollar; KR₩ 3,152,500, converted at 9.7 KR₩ per yen), which was calculated based on the willingness to pay in Japan (1 QALY is JP¥ 5,000,000).

### CONCLUSION

Guided ICBT has long-term effectiveness in OCD treatment. In terms of cost-effectiveness, guided ICBT falls below the Japanese threshold and is a treatment approach whose benefits probably exceed the cost of treatment. This is the first report demonstrating the long-term efficacy and cost-effectiveness of guided ICBT for outpatients with OCD in the Japanese medical system.



# POSTER SESSION 03

Abstract No.: 0637

## Effectiveness of Online Supervision in Cognitive Behavioral Therapy (CBT) for Obsessive-Compulsive Disorder (OCD)

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### INTRODUCTION

Cognitive behavioral therapy (CBT), including exposure and response prevention (ERP), is an evidence based psychological treatment for obsessive-compulsive disorder (OCD). In Japan, a substantial number of patients are not given effective treatment for their OC symptoms because of shortage of CBT therapists who can provide effective treatment, which might be caused by the fact that mastering CBT for OCD needs training under experienced supervisors and that the access to these supervisors is very difficult. With this background, we have tried to provide online supervision to CBT therapists. The aim of this study is to investigate the effectiveness of online supervision in CBT for OCD.

### METHOD

The subjects were CBT therapists who applied for recruitment in this study through workshops or the advertisement on our website. Applicants included therapists who understood the objective and the **METHOD** of this study and gave written consent, whose patients gave them consent for supervision of their treatment and recording and sharing of their session with supervisors. The subjects used the CBT manual for OCD written by our group and issued by the Japanese Ministry of Health and Labor. The number of treatment sessions were around 16 and, after each session, the subjects sent voice recording and summary to their supervisor, of a 30-minute online supervision. The Y-BOCS for adults and the Child Y-BOCS for children were used as the primary outcome scales to compare the effectiveness of this online supervision to historical face to face supervision in our institution, matching the numbers of supervision session to the online supervision. The subjects were asked about the change of the level of confidence and when and how the on-line supervision worked through a questionnaire.

### RESULTS

Twenty-six subjects entered this study from June 2019 to March 2022 and completed the questionnaire. The mean years of experience of CBT was 6.3 and mean number of experience of OCD cases was 3.9. The mean Y-BOCS score dropped down from 23.5 (before CBT) to 15.6 (after 16 sessions) (33.6 % improvement), and the level of severity went down from moderate to mild, which is similar to the historical data of the face to face supervision. The subjects' level of confidence for conducting CBT for OCD by themselves improved from 2.6 to 3.8 (1: no confidence ~ 5: very confident) after 16 sessions.

### DISCUSSION

This study suggested that online supervision could help less experienced and confident therapists to step forward and train themselves in real clinical settings in CBT for OCD, which could also help patients with OCD access effective treatment with less waiting time. With the feedbacks from the subjects, the treatment manual could be improved and converted into more useful guidebook for therapists. Further, we should construct a more useful system of providing supervision for patients suffering from this disabling disorder and their family.

# POSTER SESSION 03

Abstract No.: 0643

## The Intervention Focused on Cognitive Approaches After Behavioral Modifications for Obsessive Slowness: A Case Report

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### PRESENTING PROBLEM

Obsessive slowness, a subtype of obsessive-compulsive disorder (OCD), is characterized by significantly slow movements. However, the diagnosis and classification of this condition remain controversial and unclear. Behavioral therapies such as modeling and shaping have been attempted for the management of obsessive slowness. Obsessive slowness is increasingly being reclassified as an ordering and symmetry type of OCD in recent years, and it is often treated in the context of exposure and response prevention (ERP). We report a case of obsessive slowness in which cognitive approaches to perfectionism was used after behavioral modifications.

### CASE CONCEPTUALIZATION AND INTERVENTION

The patient was a 19-year-old woman. At the age of 13, she became slow in movement while she was required to think about the procedure to complete homework. Her daily movements were gradually slowed, and she dropped out of middle school. She was diagnosed with OCD. Although medication and modified electroconvulsive therapy were conducted, she required hospitalization. Her mother assisted her with eating, bathing, and toileting throughout the day. She needed 10–15 minutes to answer questions regarding emotions and thoughts. In month Y of X year, she was admitted to our hospital. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) score was 28. A multidisciplinary team was formed with psychiatrists, nurses, occupational therapists, and therapists for cognitive behavioral therapy (CBT). We formulated a hypothesis that she checked whether she had spoken and moved "correctly" in her mind. We initiated psychoeducation and behavioral modifications by modeling. Although we were unable to conduct a typical ERP, we shared the importance of acting in the face of uncertainty during each session. CBT was continued after discharge. We used behavioral experiments and cognitive restructuring as a therapeutic approach to address her perfectionism. Behavioral experiments were conducted to facilitate proceeding with the next action even in ambiguous situations.

### OUTCOME

During the early period of hospitalization, she recognized that checking and repetitive acts that originated in her mind were necessary. However, she gradually expressed the desire to renounce these behaviors. Although she was able to eat by behavioral modifications, the Y-BOCS score was 31 on day 51 of hospitalization. She admitted to checking in her mind whether she moved correctly and whether she thought of the correct answers to questions asked. After psychoeducation, she gained insight into her symptoms and became aware that she was seeking "correctness" and perfection. She was discharged 3 months later. She continued CBT and gradually realized that routine conversations do not require "correct" movements and responses. Following behavioral experiments, she realized that she could get through without "just right feeling". She moved independently during the daily activities. She was afraid of saying something "wrong" to her family; therefore, we sought evidence and added cognitive restructuring to her therapy. The Y-BOCS score was 20, 2 months after discharge. She was able to participate in group therapies without being accompanied by her mother.

### REVIEW AND EVALUATION

We report a case of obsessive slowness in a patient, in whom we modified our treatment approach based on her treatment stage. Psychoeducation could not be initiated early because she was slow to respond; however, careful subsequent psychoeducation and behavioral analysis deepened her insight. Following behavioral modification via modeling, we used cognitive approaches such as cognitive restructuring and behavioral experiments, which resulted in a favorable therapeutic outcome. Behavioral modifications may initially be useful to patients diagnosed with obsessive slowness; however, it is difficult to generalize and maintain its effectiveness. Cognitive approaches focusing on perfectionism may be useful to generalize and maintain the effectiveness of behavioral modifications for obsessive slowness.

# POSTER SESSION 03

Abstract No.: 0647

## Cognitive-Behavioral Therapy for Patients with Somatoform Disorders: A Randomized Controlled Trial

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### BACKGROUND AND OBJECTIVE

Cognitive-behavioral therapy (CBT) for somatoform disorders is understudied in China. Western findings may not be necessarily applicable, and further trials are needed. This study evaluated CBT for Chinese patients, relative to treatment-as-usual (TAU), in terms of somatic symptoms, illness-related distress, quality of life, social function, and family burden.

### METHOD

Seventy patients with somatoform disorders received either combined CBT and TAU (CBT+TAU), or TAU alone. The CBT+TAU group received 12 weekly individual CBT sessions, each lasting 50 minutes. All analyses were intention-to-treat. Participants were blindly assessed at 4 timepoints up to 24 weeks using the PHQ-15 (Patient-Health-Questionnaire-15) and the Whiteley Index-7 (WI-7). Secondly, the following were applied: SQSS (Self-screening Questionnaire for Somatic Symptoms); GAD-7 (General Anxiety Disorder-7); HAMD-17 (Hamilton Depression Rating Scale-17); Family Burden Interview Schedule (FBIS); Sheehan Disability Scale (SDS); and the Short Form of Quality-of-Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-SF).

### RESULTS

At 24 weeks, the generalized linear mixed-effects model of the overall WI-7 scores revealed significant effects for group ( $F = 8.872, P = 0.003$ ). Group showed a significant main effect based on SQSS total scores ( $F = 6.268, P = 0.013$ ), and specifically negative perception ( $F = 6.268, P = 0.013$ ) and illness behavior ( $F = 6.062, P = 0.015$ ). Time  $\times$  group interaction was significant, based on the HAMD ( $F = 4.100, P = 0.007$ ). Only the main effect of group for the financial burden subscales of the FBIS was significant ( $F = 8.567, P = 0.004$ ) for functional disability, quality of life, and family burden due to disease. Each of the assessment scales indicated that CBT+TAU had a significantly larger effect than did TAU alone.

### CONCLUSIONS

CBT combined with TAU for somatoform disorders in the context of Chinese culture is effective, particularly to improve dysfunctional cognitions, depression, and illness behaviors.

# POSTER SESSION 03

Abstract No.: 0653

## The Impact of Mindfulness on Child-Rearing Difficulties and Parenting Anxiety of Parents of Preschoolers during the COVID-19 Pandemic

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### INTRODUCTION

In recent years, many studies have demonstrated a relationship between parenting stress and parental mindfulness. It has been suggested that parental stress, which affects parenting, can be reduced by learning mindfulness skills, which, in turn, are associated with improved marital relationships (Parent et al., 2014). Mindful parenting has also been associated with negative parenting and child psychopathology (Parent et al., 2016). Mindfulness training for parents may reduce parental stress and improve parenting. In Japan, COVID-19 has been shown to impact the burdens and mental health of mothers raising children (Ministry of Health, Labor and Welfare, 2021). Therefore, this study seeks to examine how mindfulness affects parenting difficulties and parenting anxiety.

### METHOD

The study sample was comprised of 550 parents whose children were between the ages of 0 and six years (mean age  $35.62 \pm 5.43$  years; 51 fathers and 498 mothers). A questionnaire survey was conducted in November 2021. The survey materials included a 7-point scale to assess the impact of COVID-19 on parenting, a five-item Child-Rearing Problems Scale (Honda and Arai, 2010) for assessing worries in five areas (Health, Human relationships, Environment, Language, and Expression), a Child-Rearing Problems Seriousness Scale, which consists of the same items as the Child-Rearing Problems Scale (Honda and Arai, 2010), a 14-item Parenting Anxiety Scale (Makino, 1982), and a 5-factor, 25-item Five Facet Mindful Parenting Questionnaire (FFMPQ; Mizusaki et al., 2018). This study has been determined by the Iwate Prefectural University Research Ethics Committee to not require review. A statistical analysis package, IBM SPSS AMOS 28.0 was used for analysis. The significance level was set at 5%.

### RESULTS

Structural equation modeling revealed that the model fitted well with  $\chi^2 = 3.28$  ( $p = .66$ ),  $df = 5$ , goodness of fit index = 0.998, adjusted goodness of fit index = 0.99, comparative fit index = 1.00, root mean square error of approximation = 0.00, Akaike's information criterion = 35.28, and standardized root mean square residual = 0.02. Not only did the high number of child-rearing problems have a direct and positive influence ( $\beta = 0.73$ ) on the seriousness of the child-rearing problems, but it also mediated parenting anxiety ( $\beta = 0.20$ ) and had a positive influence ( $\beta = 0.14$ ) on the seriousness of child-rearing problems. Regarding mindfulness, the first factor, "Describing," had a negative impact on parenting anxiety ( $\beta = -0.18$ ). The fourth factor, "Non-overreacting to children," had a negative impact on parenting anxiety ( $\beta = -0.23$ ). The fifth factor, "Staying away from inner experiences," had a negative impact on the number of child-rearing problems ( $\beta = -0.40$ ) and on the severity of parenting anxiety ( $\beta = -0.32$ ).

### DISCUSSION

This study demonstrated the possibility that mindfulness may reduce child-rearing problems and accompanying parenting anxiety. In particular, the suggestion that "Staying away from inner experiences" influences child-rearing problems and parenting anxiety supports the hypothesis of Bögels et al. (2010) that mindfulness breaks the cycle of ruminating and negative thoughts about parenting.

# POSTER SESSION 03

Abstract No.: 0656

## Promoting Weight Loss and Psychological Well-Being in Patients with Obesity: A Sequential Combination of Behavioral Lifestyle Intervention and Well-Being Therapy

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### INTRODUCTION

Behavioral lifestyle interventions focused on diet and physical activity are a cornerstone for the treatment of obesity. However, their effects vary substantially across individuals in terms of magnitude and durability. Personalized approaches that target psychological well-being may be promising to facilitate healthy behaviors and sustained weight loss. This preliminary study aimed to explore whether the sequential combination of behavioral lifestyle intervention (BLI) and well-being therapy (WBT) may result in more favorable outcomes than BLI alone in promoting weight loss (primary outcome) and improving psychological well-being, distress, dietary behaviors and physical activity (secondary outcomes).

### METHOD

A total of 83 patients with obesity were randomly assigned to the BLI/WBT (N = 38) or BLI group (N = 45). The BLI group received a 12-week behavioral weight loss program, whereas the BLI/WBT group received the same program followed by an additional 4-week WBT, adapted for group interventions. Data were collected at pretreatment (baseline, T1), at the end of BLI/WBT (T2), and at 6-month (T3) and 12-month (T4) follow-ups.

### RESULTS

There was a significant weight loss in both treatment groups at T2, T3, and T4. The BLI/WBT group showed greater improvements in depressive symptoms at T3 and T4, autonomy at T2, personal growth at T4, and global well-being at T4 compared with the BLI group.

### CONCLUSIONS

WBT yielded no additional effect on weight loss. However, the secondary outcomes indicate that WBT may have enduring effects that reduce vulnerability to psychological distress in patients with obesity. In order to confirm these preliminary findings and explore whether a more intensive and individualized WBT can foster sustained weight loss, future studies are needed.

# POSTER SESSION 03

Abstract No.: 0660

## Risk Factors of Middle-Aged Women with Disordered Eating Behaviors in South Korea

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### INTRODUCTION

The prevalence of eating disorders is high in adolescents and young women. However, research has shown that middle-aged women with eating disorders seeking treatment are increasing. Although they would have common clinical representations, middle-aged women tend to have higher comorbidity with mood disorders, suicidal attempts, body dissatisfaction, resistance to treatment, denial of symptoms, and long-term inpatient. Compared to research in Western, little research on eating disorders in middle-aged women has been done in Eastern Asia, especially in South Korea. Therefore, the study aims to examine risk factors of eating disorders by comparing middle-aged women with and without disordered eating behaviors.

### METHOD

290 middle-aged women with/without disordered eating behaviors completed an online survey. Those with disordered eating behaviors (Disordered eating group: DEB) were compared to the others without disordered eating behaviors (Control group: CT). Demographic variables include BMI (height and weight), educational attainment, job status, marriage status, subjective economic status, the experience of pregnancy/giving birth, and the history of eating disorders. Independent variables included body dissatisfaction, perfectionism, fear of aging, and cognitive distortions. Disordered eating behaviors were measured as a dependent variable. In addition, depression was controlled as a covariate. The process and survey were approved by the Institutional Review Board of Ajou University.

### RESULTS

Approximately 18% were above the cutoff ( $EDI \geq 21$ ) of disordered eating behaviors, although the prevalence of eating disorders ranged from 0.4% to 1.6%, depending on the subtypes of the disorder (APA, 2013). DEG was likely to have jobs ( $t(289) = 6.890, p < .01$ ) and a history of eating disorders ( $t(289) = 44.297, p < .01$ ) and were less likely to experience menopause ( $t(289) = 9.834, p < .01$ ). All dependent variables were significantly higher in DEG compared to CT ( $p < .01$ ). Subtypes of fear of aging scale were analyzed, and 'weakened physical functioning' ( $t(289) = -3.223, p < .01$ ), 'social unworthiness' ( $t(289) = -3.520, p < .01$ ), and 'concerns of appearance changes' ( $t(289) = -4.126, p < .01$ ) were significantly higher in DEG. In addition, all the subtypes of perfectionism (self-oriented, other-oriented, and social-prescribed) were significantly higher in DEG ( $p < .01$ ). BMI, SES (subjective economic status, educational attainment, and educational attainment), marriage, and pregnancy factors were not different between groups.

### DISCUSSION

Fear of aging predicted eating disorders in older adults aged 60 to 75, but not in the middle-aged group aged 40 to 50s. In contrast to the prior research, fear of aging was significantly higher in DEG. The results may reflect cultural differences given that fear of aging is more prominent among middle-aged women aged 45 to 59 compared to older adults aged 60+ in South Korea. Perfectionism was analyzed according to its subtypes as well. The results indicate that all aspects of perfectionism are associated with eating disorders among middle-aged women. The history of eating disorders can be the most vital risk factor among middle-aged women since approximately 92% of DEG reported a history of eating disorders, which would provide a framework for interventions across the lifespan.

# POSTER SESSION 03

Abstract No.: 0661

## **A Qualitative Study on Childhood Imagery and Social Trauma: Focusing on College Students with Predisposition to Social Anxiety**

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### INTRODUCTION

The purpose of this study is to explore early childhood memories of socially anxious individuals through childhood imagery and targeted social interviews, and to observe whether the memories can become socially normal. In addition, I would like to examine the subject of images and early memories experienced by people with social anxiety tendencies, and identify the key criteria for vividness, review, and self of those images.

### METHOD

Participants were those who scored 85 or higher on the Social Avoidance and Distress Scale (SADS), 42 or higher on the Brief-Fear of Negative Evaluation (B-FNE), and 20 or lower on the Korean version of the Depression Screening Tool (Patient Health Questionnaire-9; PHQ-9). The person corresponding to the above was defined as a research participant. The interview was a non-invasive, semi-structured interview based on an earlier version of the imagery interview (Lipton, Brewin, Linke, & Halperin, 2010), with a specific focus on invasive images and responses to social trauma. Referring to WIMI, which is a modified version of the autobiographical interview (AI; Levine et al., 2002) used in the study by Moscovitch et al. (2011), it was adapted to this study. Early childhood memory and social trauma interviews were conducted for five participants for about 30 minutes, and early childhood memories of socially unsafe situations, images repeatedly experienced, core beliefs related to images and memories, vividness of images and memories, and pain were examined. This confirmed the sensory experience. Finally, Nvivo 12.0 and network analysis were conducted to collect social trauma interview data through qualitative research.

### RESULTS

The participants recalled their early childhood memories at elementary school, mainly from 'rejection from others'. Criticism was reported, and the keywords 'faceless people, black, sharp eyes, others with their backs, me surrounded by faces without facial features' were reported. In addition, participants reported the core belief of 'incompetent me, worthless me', and the emotions of 'anxiety and shame'. The higher the degree of vividness of memories and images, the greater the emotional pain.

### CONCLUSIONS

When early childhood memories of participants with social anxiety were explored, they felt invasive pain equivalent to trauma memories, and it seems necessary to handle early trauma memories related to social anxiety well in the treatment setting.

## Validation of the Korean Version of the Revised Cheek-Buss Shyness Scale

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### INTRODUCTION

Shyness is defined as discomfort and inhibition in the presence of others, and various scales have been developed to measure the level of shyness (Jones et al., 1986). RCBS (Cheek & Briggs, 1990; Kim & Yoon, 1995), a revised version of the Cheek and Buss Shyness Scale, is the most widely used in South Korea, but they have not yet been validated. The factor structure has yet to be clearly identified and was derived differently for each previous study. Various suggestions have recently emerged, including the cultural influence of shyness. Specifically, there is a tendency to accept shyness as a more positive thing in collectivist culture than in individualistic culture, so an interpretation of shyness considering these cultural differences is required.

### METHOD

A total of 320 participants were recruited online. We conducted exploratory factor analysis (EFA) on half of the randomly selected data and confirmatory factor analysis (CFA) on the remaining half. In addition, reliability analysis was performed based on the final version of K-RCBS. Validity analysis was performed using Social Interaction Anxiety Scale & Social Phobia Scale (SIAPS, Kim et al., 2013), Differential Emotions Scale (DES-IV, Lee et al., 2012), and Subjective/Objective/Autonomous Self-construal scale (SOA, Yoshiyuki et al., 2007) and the relationship with related variables was analyzed.

### RESULTS

According to the EFA results, the K-RCBS had a 7-item two-factor (circumscribed shyness & general shyness) structure,  $\chi^2(8, N = 160) = 8.52, p = .384, TLI = 1.00, RMSEA = .02$  (90% CI: .00–.10). As a result of CFA, based on the low reliability and limitations of the reverse scoring items of RCBS (Crozier, 2005), the reverse scoring items were deleted, and the two-factor model showed a suitable model fit,  $\chi^2 = 26.64, CFI = .98, TLI = .97, SRMR = .04, RMSEA = .08$  (90% CI: .04–.12). The reliability of the K-RCBS was good, Cronbach's  $\alpha = .89$ . To be specific about the validity analysis results, shyness showed a positive correlation between social anxiety,  $r = .67, p < .001$ , and similar emotions (guilt,  $r = .35, p < .001$ , shame,  $r = .42, p < .001$ ) presented as related factors and also showed a positive relationship with objective self-construal,  $r = .46, p < .001$ , and a negative relationship with subjective self-construal,  $r = -.28, p < .001$ .

### CONCLUSIONS

Based on the low reliability of the reverse scoring items and previous studies that suggested that the reverse scoring items may not be appropriate for K-RCBS, the results of two-factor and 7-items excluding the reverse scoring items were derived in this study. Shyness is related to accepting it rather than being a subject of social influence, based on the positive correlation with subjective self-construal and the negative correlation with objective self-construal. This study confirmed the limitations of reverse scoring items through the analysis process and validated the K-RCBS scale.



# POSTER SESSION 03

Abstract No.: 0694

## The Effect of Age and Social Class on Values of Korean Adults

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### INTRODUCTION

The concept of value is one of the important factors in recent Acceptance and Commitment Therapy (Hayes & Smith, 2005), and affirming values has positive effects such as increasing self-acceptance (Glazer et al., 2021). Understanding what values the client adheres to can be seen as an essential element in helping clients solve their problems. Meanwhile, the gap and conflicts between generations and social classes are growing in Korea due to differences in values (Namgung, 2021). Therefore, in order to better understand and affirm their own values, it is necessary to examine how age and social class affect the values of Korean adults. Previous studies on values dealt with only a part of culturally universal values or culturally specific values (Kim & Park, 2021; Young et al. 2021). To deal with values from a comprehensive perspective, it is necessary to include both those that are culturally universal and culturally specific. Hence, this study examined the effects of age and social class of Korean adults on culturally universal values (openness to change, self-enhancement, conservation, and self-transcendence) and culturally specific values (collectivism, conformity to norms, family recognition through achievement, emotional self-control, and humility).

### METHOD

The sample of 500 Korean adults (122 in their 20s, 126 in their 30s, 128 in their 40s, 123 in their 50s) consisted of male 50.2% and female 49.8%, who were on average 39.33 (SD=10.77) years old. A demographic questionnaire including items of social class (e.g. income, level of education), as well as Portrait Values Questionnaire (PVQ; Schwartz et al., 2012), and Asian American Values Scale-Multidimensional (AAVS-M; Kim, 2005) were completed.

### RESULTS

We performed analyses using SPSS Macro Model 1 to test the assumptions. In culturally universal values, openness to change ( $B=-.18, p<.001$ ) and self-enhancement ( $B=-.22, p<.001$ ) were negatively predicted by age and positively predicted by social class ( $B=.06, p<.01$ ;  $B=.07, p<.01$ ). In culturally specific values, collectivism ( $B=.18, p<.001$ ), family recognition through achievement ( $B=.11, p<.05$ ), and humility ( $B=.19, p<.001$ ) were positively predicted by age, and humility was negatively predicted by social class ( $B=-.03, p<.05$ ). Emotional self-control was predicted by interaction between age and social class ( $B=.02, p<.05$ ). These results showed that collectivism, family recognition through achievement, and humility increased with age, whereas openness to change and self-enhancement decreased as age increased. In addition, openness to change and self-enhancement increased with social class, whereas humility decreased as social class increased. Regarding emotional self-control, only in the case of high social class, it significantly heightened as age increased.

### DISCUSSION

This study showed the effect of age and social class on values of Korean adults. The higher the age, the higher the culturally specific values representing the traditional values of Korea, and the higher the social class, the higher the culturally universal values such as openness to change and self-enhancement. Emotional self-control was heightened in the condition of high social class and high age. In value-based Acceptance and Commitment Therapy, when examining the values of the client, therapists need to understand the client's values taking into account the influence of age and social class.

# POSTER SESSION 03

Abstract No.: 0704

## Cluster Analysis of Coping Profiles Under the COVID-19 Pandemic

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Restrictions on mobility and physical contact implemented to contain the COVID-19 pandemic resulted in mental health issues. Studies indicated that the coronavirus outbreak caused an increase in stress, anxiety, and Post-Traumatic Syndrome Disease (PTSD) in affected populations, the impact of which depended on individual coping strategies. Due to the possibility of another pandemic, it is important to understand coping mechanisms to formulate intervention **METHODS** and public health policies.

This study aimed to develop a machine learning model of coping profiles of the Japanese population based on an online survey conducted from May 13 to 30, 2022, when the number of COVID-19-positive cases was high. Using the K-Means clustering algorithm and the elbow method, 5 clusters were identified from the socio-demographic, mental health status, coping behavior, and COVID-related profile data of 16,641 respondents. The 10 features that define each cluster are loneliness, well-being, psychological stress, post-traumatic growth (PTG), amount of exercise, continuous prevention, trust in government, optimism, interaction deterioration, and economic deterioration. The clusters can be generally described as semi-optimistic/semi-pessimistic (Cluster 1), optimistic (Cluster 2), stressed but with a positive outlook (Cluster 3), pessimistic (Cluster 4), and stressed with a negative outlook (Cluster 5). PTG was observed to be a determining factor that drives the characteristics of each cluster. Clusters 2 and 3, despite having high PTG scores, comparatively differed in well-being and stress conditions, highlighting the significance of coping mechanisms. This supports past research findings that post-traumatic growth is experienced by both resilient and stressed individuals, using different strategies to cope. These results can be used as a reference for behavioral management of population segments to minimize the mental health impact of a pandemic.

Main Reference:

Sugaya, N., Yamamoto, T., Suzuki, N., & Uchiumi, C. (2020). A real-time survey on the psychological impact of mild lockdown for covid-19 in the Japanese population. *Scientific Data*, 7(1). <https://doi.org/10.1038/s41597-020-00714-9>

# POSTER SESSION 03

Abstract No.: 0716

## The Effects of Perception of Stigmatization by Close Others for Seeking Help on Professional Help-Seeking Intention: Moderated Mediation Effects of Self-Stigma and Self-Compassion

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### INTRODUCTION

The purpose of this study was to explore ways to mitigate the negative stigma surrounding seeking professional help in order to promote professional help-seeking among employees who experience psychological distress. Specifically, we aimed to understand the "service gap" phenomenon, which refers to the reluctance of individuals to seek professional help despite experiencing psychological distress, and ultimately identify intervention strategies to enhance professional help-seeking behavior. To achieve this, we investigated the moderating effect of self-compassion on the relationship between stigma from significant others and intention to seek professional help, and verified the integrated moderated mediation effect.

### METHOD

A self-report online survey was conducted with 363 employees aged over 19 in South Korea ( $M=33.47$ ,  $SD=9.46$ ; 127 men, 236 women), excluding part-time workers who work as temporary employees. We used measures to assess perceived others' stigma (PSOSH), self-stigma (SSOSH), self-compassion (K-SCS), and professional help-seeking intention (ISCI). The collected data were analyzed using SPSS 23.0 for reliability analysis of the measures, descriptive statistics, and correlation analysis. To examine the moderated mediation model, SPSS PROCESS Macro 4.0 was used to apply Model 4, Model 1, and Model 7, and the significance of the mediation effect, moderation effect, and moderated mediation effect was tested through 5,000 rounds of bootstrapping sampling.

### RESULT

First, the results of the correlation analysis between each variable showed that perceived others' stigma had significant positive correlations with self-stigma and professional help-seeking intention, but a significant negative correlation with self-compassion. Self-stigma had a significant negative correlation with self-compassion but no significant correlations with professional help-seeking intention and others' stigma. Second, self-stigma partially mediated the relationship between others' stigma and professional help-seeking intention. The direct effect of others' stigma on professional help-seeking intention was positively significant, but the indirect effect mediated by self-stigma was negatively significant, indicating a suppression effect of self-stigma. Third, there was a significant moderating effect of self-compassion on the relationship between others' stigma and self-stigma, where lower levels of self-compassion strengthened the impact of others' stigma on self-stigma. Fourth, the relationship between others' stigma and professional help-seeking intention was mediated by self-stigma, and this path was moderated by self-compassion. Specifically, the indirect effect of others' stigma on professional help-seeking intention through self-stigma was stronger when self-compassion was lower.

### DISCUSSION

These findings can contribute to a better understanding of the psychological mechanisms underlying help-seeking avoidance among employees who experience psychological difficulties, and highlight the role of self-compassion in reducing the service gap by suggesting various intervention strategies.

## The Impact of Interoception on Decision-Making in Gambling Tasks

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### INTRODUCTION

The concept of interoception refers to the sensation of physiological states inside the body. Bechara et al. (1999) suggested that the correct reception of somatic markers, which are bodily signals, influences human decision-making. Werner et al. (2009) used Iowa Gambling Task (IGT) to examine the relationship between interoception and decision-making. They found that those with an accurate interoception made more rational decisions. However, the relationship between the two has not been consistently understood, which could be attributed to the relationship between interoception and its associated anxiety and emotional control. Several studies have found that a positive correlation between interoception and anxiety (Pollatos et al., 2009), whereas others found a negative correlation (Fukushima et al., 2013). Regarding anxiety and decision-making in IGT, high anxiety has been shown to inhibit proper decision-making. It is associated with increased sweating, a somatic marker when choosing from an advantageous deck (Miu et al., 2008). It is assumed that those with a more accurate interoception can regulate their emotions more effectively. This is because that awareness of bodily sensations is related to the relationship between awareness of one's emotional state and emotional regulation (Füstös et al., 2013). However, empirical research on the relationship between the two is limited. Therefore, the present study aimed to examine the relationship between interoception and decision-making, including the perspectives of anxiety tendency and emotional control.

### METHOD

University students were surveyed using (a) trait anxiety: a new version of the STAI (Hitano et al., 2021), and (b) emotion control: the suppression items of the ERQ-J (Yoshizu et al., 2013). Eighteen female participants were included in this analysis. In addition, the heartbeat counting task (Schandry, 1981) was conducted to measure the accuracy of interoception. Then the participants performed an IGT on a personal computer using Inquisit software. A polygraph device (Polymate II, AP216, TEAC) was used to measure the pulse wave during the heartbeat counting task and the skin conductance level (SCL) during the IGT.

### RESULTS

A t-test of the change in performance on the IGT, a measure of rational decision-making, between the high and low interoception groups showed that the high group showed a greater change in performance than the low group with a significant trend ( $t(16) = 2.08$ ,  $p = .054$ ,  $d = 0.980$ ). In addition, a t-test of the change in performance on the IGT between the high and low groups for trait anxiety and suppression revealed no significant differences (trait anxiety:  $t(16) = 0.96$ ,  $p = .353$ ,  $d = 0.454$ ; suppression:  $t(13) = -1.76$ ,  $p = .102$ ,  $d = -0.801$ ).

### DISCUSSION

The high interoception group made more rational decisions than the low group. Although the trait anxiety groups did not differ in the degree of rational decision-making, the high group showed an increase in sweat gland activity just before selection from the advantageous deck in the middle of the trial until the very end. This result differs from that of Bechara et al. (1997), suggesting that high anxiety affects the relationship between sweat gland activity just before selection from the advantageous deck and rational decision-making. Moreover, emotional control with suppression is not believed to influence rational decision-making.

# POSTER SESSION 03

Abstract No.: 0743

## The Impact of Perceived Public and Self-Stigma on Help-Seeking Attitudes: Mediating Effects of Self-Compassion

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### INTRODUCTION

Help-seeking behavior can be defined as any action or activity carried out by a person who perceives herself/himself as needing personal, psychological, affective assistance or health or social services, with the purpose of meeting this need in a positive way (Barker, 2007). Help-seeking behavior is an important first step in the utilization of professional services; however, it has been documented that many individuals, especially young adults, are reluctant to seek help for psychological problems (Nagai, 2015). Some barriers to help-seeking behavior include perceived public stigma, self-stigma, and lack of self-compassion. In addition, it can be inferred that past experiences of successful help-seeking promote positive help-seeking attitudes. Thus, the present study aimed to compare the relationship between public and self-stigma, self-compassion, and help-seeking attitudes between those who have never utilized professional mental health services and those who have previous experience.

### METHOD

A total of 280 university students were surveyed online using Google forms. (1) The 10-item Self-stigma of Seeking Help Scale (Vogel et al., 2006), (2) The 5-item Stigma Scale for Receiving Psychological Help (Komiya et al., 2000), (3) The 10-item Attitudes Toward Seeking Professional Psychological Help: A Shortened Form (Fischer & Farina, 1995), (4) Short version of the Japanese Self-Compassion Scale (Arimitsu et al., 2016), and (5) questions regarding past experiences of help-seeking were administered. Two models were examined, one with perceived public stigma as the independent variable (Model 1), and the second with self-stigma (Model 2). Self-compassion was included as a mediating variable, and help-seeking attitude was the dependent variable.

### RESULT

A multi-group analysis was conducted between those who have never utilized professional mental health services and those who have previous experience. Model fit was good for both models (Model 1: GFI=.98, AGFI=.95, CFI=.98, RMSEA=.04; Model 2: GFI=.99, AGFI=.95, CFI=.97, RMSEA=.03). For model 1, the direct effect of perceived public stigma on help-seeking attitude was stronger for those who have experience of previous mental health service utilization ( $\beta = -.30, p < .001$ ) compared to those without experience ( $\beta = -.15, p < .05$ ). Perceived public stigma had a negative effect on self-compassion (those with past experience:  $\beta = -.32, p < .001$ ; those without past experience:  $\beta = -.24, p < .001$ ), but this did not show a significant effect on help-seeking attitude ( $\beta = .02, p = n.s.$  for both groups). Thus, the indirect effect of perceived public stigma on help-seeking attitude was not significant, and only the direct effect reached significance. In model 2, self-stigma showed a negative effect on self-compassion (those with past experience:  $\beta = -.42, p < .001$ ; those without past experience:  $\beta = -.35, p < .001$ ), and higher self-compassion was associated with positive help-seeking attitude (those with past experience:  $\beta = .15, p < .01$ ; those without past experience:  $\beta = .17, p < .01$ ). Thus, the indirect effect of self-stigma via self-compassion was confirmed.

### DISCUSSION

The present results highlight the importance of reducing the impact of not only self-stigma but perceived public stigma as well. This was particularly important for those with previous help-seeking experiences, as larger effects were observed in this group. However, while self-stigma was associated with lower self-compassion, no indirect effects were shown for perceived public stigma. Thus, it was suggested that procedures other than compassion-focused intervention is needed in altering perceived public stigma. (3174 characters)

# POSTER SESSION 03

Abstract No.: 0746

## Socio-Cultural Influences and Risk Factors for Development of an Eating Disorder: A Korean-Western Comparison

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### INTRODUCTION

Anorexia Nervosa, characterized by excessive calorie restriction and a morbid fear of weight gain has been considered to be a culturally bound disorder primarily associated with upper class Western women (Prince, 1985). Risk factors commonly associated with the increased likelihood of developing an eating disorder, such as controlled calorie intake, weight preoccupation, and previous history of disordered eating, despite often being found to be more predominant amongst young women and girls, can be experienced by males as well (Purkiewicz et al., 2021). Additionally, the context in which we develop specific attitudes towards our physical shape and size is often molded by our individual cultural experiences. Thus, these influences are crucial to understanding the development of risk factors and the disordered behavior patterns that may stem from them (Izydorczyk et al., 2020). This study aimed to identify whether socio-cultural influences predict the development of disordered eating behaviour and whether this effect is potentially universal or specific to the Korean and Western cultures.

### METHOD

The participants included two samples of 24 Koreans and 24 Westerners, with a total of 48 participants. The measures used were the Eating Attitudes Test – 26 for the measurement of behaviours associated with disordered eating (dependent variable referred to as risk factors), and the Sociocultural Attitudes Towards Appearance Questionnaire – 3 for the measurement of sociocultural influences (independent variable) which may affect an individual's attitude towards his or her own appearance. The study first investigated whether there were differences in the prevalence of sociocultural influences and/or eating disorder risk factors between Korean and Western samples. For the purpose of comparing groups and determining possible predictive relationships between variables, independent samples t-tests and regression models were used.

### RESULTS

Group difference (MD=89.8, SD=19.5, for Korean; MD=96.4, SD=14.2, for Western) failed to reach statistical significance ( $t(46)=-1.33$ ,  $p=0.191$ ), but that both groups attained high scores on average. In terms of risk factors, there was a higher prevalence of disordered eating behaviours among the Korean participants (MD=114.7, SD=20.7) than the Western participants (MD=96.4, SD=20.8);  $t(46)=3.05$ ,  $p=0.004$ . A simple linear regression was conducted to determine whether greater sociocultural influence predicted greater prevalence of disordered eating behaviours for both Korean and Western groups. The model determined that greater sociocultural influence predicted greater risk for eating disorders in the Western sample, with no such relationship being found in Korean sample.

### DISCUSSION

The similarly high scores on average in degree of sociocultural influence indicated that both the Korean and Western groups likely feel a considerable amount of pressure and possible distress about their physical appearance as a result of external forces. The finding that greater sociocultural influence predicted greater risk for eating disorders in the Western sample, with no such relationship being found in Korean sample, may suggest further cultural differences in socially accepted beauty standards and the severity of the pressure one may experience to meet these expectations. Additionally, there is the potential for other mediating factors between sociocultural influences and disordered eating behaviours that were not examined in the current study.

# POSTER SESSION 03

Abstract No.: 0761

## Thematic Analysis of Obsessive-Compulsive Disorder Symptoms in Outpatients in Jakarta, Indonesia

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### INTRODUCTION

The prevalence rate of Obsessive-Compulsive Disorder (OCD) is considerably high, with lifetime estimates of up to 4.6% of the world population (Fawcett et al., 2020). How OCD symptoms manifest in individuals have been documented in previous studies, however comparison of OCD manifestations in different countries are scarce (Nicolini et al., 2017). This becomes a limitation as culture, beliefs, and stigma influence the types of thoughts and certain rituals that are considered acceptable or compulsive. Thus, it is necessary to identify the themes in patients with OCD in Indonesia. Indonesia is a country in South-East Asia that is quite unique in that it has a significant population of all the five major religions in the world and only around 43 million out of the 300 million population are native speakers of the national language. Understanding the common theme of OCD manifestation in Indonesia would help clinicians who treat Indonesian OCD patients in providing the appropriate diagnosis and therapy.

### METHOD

The study was conducted in an outpatient psychological clinic in Jakarta. Clinical interview notes from the Yale-Brown Obsessive Compulsive Scale Checklist of 32 patients diagnosed with OCD (n males = 9, n females = 23) were included in the analysis. The patients were between the age of 15 and 39 years old at the time of clinical interview (Mean = 27.09, SD = 5.37). All interviews were conducted by registered clinical psychologists (TA, NID, YTP, and ESJ) and a provisional clinical psychologist (SH) with experience in treating OCD patients. Descriptive thematic analysis was conducted on the interview notes to identify themes that most commonly describe OCD symptoms manifestation in individual patients. The data were coded independently by two researchers (TA and RPW) followed by in-depth discussions until agreement was reached on the main themes and sub-themes.

### FINDINGS

In the four most common subtypes, namely aggressive obsessions, other obsessions, checking compulsions, and miscellaneous compulsions, four main themes were found that explained the patient's symptoms. The first theme was, maintaining morality and rules, in which patients emphasize their sense of responsibility towards others, making a concerted effort to avoid mistakes, and being concerned with upholding their own personal standards. The second theme was concern about social judgment, such as embarrassment due to social scrutiny and concern about meeting social standards. The third theme was the belief that there are threats to the well-being and safety of oneself and others, in which the obsessions and compulsions relate to patients' identification of threats to their own well-being, their own safety and health, and the safety and health of others. The fourth theme was belief in something beyond 'reasoning', where rituals related to culture, superstitions, and spiritual practices become the themes of their obsessions and compulsions.

### CONCLUSION

From the results of the thematic analysis, we found four main themes namely maintaining morality and rules, concern about social judgment, the belief that there are threats to the well-being and safety of oneself and others, and belief in something beyond 'reasoning'. This is different from previous literature on OCD themes that reported contamination, symmetry, checking, and fear of harm to self or others (Stein et al., 2020). The themes show how social norms, beliefs, and culture in Indonesia influence the obsessions and compulsions manifestations, such as emphasizing the importance of how other people see them (morality obsession) and putting common interests

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before them (morality obsession), apologizing continuously (miscellaneous compulsion). These are considered to be in line with Indonesian social norms. Thus it is imperative for clinicians in Indonesia to be open-minded, aware of norms and culture in Indonesia, and that the "good" thing to do may actually be an OCD manifestation in the patient. In-depth inquiry with cultural sensitivity is very important so as to provide appropriate therapy and assignments to OCD patients in Indonesia.

Keywords: OCD; thematic analysis; culture; Indonesia



# POSTER SESSION 03

Abstract No.: 0763

## **Psychological Variables and Treatment in Endometriosis-Associated Persistent Pain**

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*Uppsala University, Sweden*

Chronic pain, defined as pain persisting for at least three months, is a widespread problem (Barke, 2019). One chronic pain condition affecting approximately 10 % of women globally is endometriosis (Zondervan et al., 2020). Endometriosis entails the growth of endometrial-like tissue outside of the uterus and is often associated with chronic pelvic pain, low quality of life, and heightened levels of anxiety and depression (Evans et al., 2019). In line with chronic pain conditions in general, psychological factors can influence the degree of suffering and functional impairment experienced by individuals with endometriosis. However, this condition is receiving relatively little attention in psychological research. For example, despite promising results for Acceptance and Commitment Therapy (ACT) in other persistent pain conditions (Gloster et al., 2020), no study of this form of therapy was included in one of the most recent systematic review of psychological treatments for endometriosis (Evans et al., 2019). Chronic pain, including endometriosis, is a highly individual experience. ACT is able to incorporate and address individual circumstances. Thus, it could be particularly illuminating to adopt a highly individual focus in research combining this population and treatment. Despite almost exclusive reliance on nomothetic methods based on group data, concerns have been raised in recent years about data being non-ergodic, meaning a lack of generalizability from results on the aggregated group level to the individual level (Molenaar et al., 2009). Since psychological treatments are focused on enhancing the well-being of a specific individual, the risk that several of the results of psychological studies are not ergodic deserves attention (Hayes et al., 2021; Fisher et al., 2018). Due to this, alternatives to group methods, including single-case experimental designs (SCEDs), are being increasingly applied in order to narrow the gap between research findings and application to individuals, while maintaining experimental control. These research designs, unlike group methods, use the individual as their own control through intensive, often daily, measurements of processes and outcomes before, during, and after treatment. We will present a planned study that aims to investigate the treatment outcome, and potential mediators, for patients with endometriosis-related long-term pain who will undergo an ACT-based multimodal rehabilitation using a SCED. We will also present data from research focusing on the associations between psychological flexibility and other psychological outcome variables, data on the experience of stigma in this population, and preliminary ecological momentary assessment data of psychological variables in people with endometriosis.

# POSTER SESSION 03

Abstract No.: 0777

## The Effects of Nature-Based Therapy for Mental Health and Well-Being as Psychosocial Intervention

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### INTRODUCTION

Although mental health problem is becoming serious and accounts for a large economic burden worldwide, most people do not receive proper treatment. Another emerging psychological problem is an eco-anxiety, meaning a specific form of anxiety relating to psychological distress caused by environmental changes. This study aimed to investigate the effects of a Nature-Based Therapy(NBT) as a sustainable and pro-environmental psychosocial intervention for mental health and well-being.

### METHOD

With an experimental design, the therapeutic gardening program consisted of 30 sessions as a NBT was conducted at 11 nationwide sites in Korea from May to November 2022. Participants with mild to severe level of depression and anxiety were recruited. Mental health and well-being were assessed utilizing the Mental Health Screening Tool for Depressive Disorders, Mental Health Screening Tool for Anxiety Disorders, Core Life Activities Index, Satisfaction with Life Scale, Mindful Attention Awareness Scale, Perceived Stress Scale, and a short form of the UCLA Loneliness Scale. Multilevel analysis and ANCOVA were utilized to compare two groups (Gardening vs Control). Cohen's *d* was calculated as an effect size. The bivariate Pearson correlation was computed to examine the relationship between the therapeutic alliance and the pre-post change in mental health variables.

### RESULTS

In total, 291 participants suffering from psychological distress were recruited. Among them, 192 people participated in gardening program (mean age = 52.21, SD = 24.04) and 99 people were remained as TAU (mean age = 56.04, SD = 23.99). The two groups did not differ in the baseline scores and demographic characteristics, except for marital status ( $p = 0.041$ ). The significant interaction effects were observed in Time  $\times$  Group (Gardening vs Control) in all mental health and well-being measures, even after controlling the covariate. Effect sizes were medium to large: MHS:D ( $d = 0.583$ ), MHS:A ( $d = 0.728$ ), CORE ( $d = 1.002$ ), SWLS ( $d = 0.786$ ), MAAS ( $d = 0.645$ ), ULS-8 ( $d = 0.695$ ), and PSS ( $d = 0.903$ ). Significant associations between the post-treatment (T2) therapeutic alliance scores and the pre-post change in all the mental health and well-being variables were found: depression ( $r = -0.38$ ), anxiety ( $r = -0.40$ ), vitality ( $r = 0.40$ ), life satisfaction ( $r = 0.52$ ), mindfulness ( $r = 0.52$ ), loneliness ( $r = -0.36$ ), and stress ( $r = -0.51$ ).

### DISCUSSION

NBT is an effective intervention for mental health and well-being of people suffering from psychological distress. As in other psychological treatments, therapeutic relationship plays an important role in NBT and should be considered as important factors in treatment process. The future study should adopt long-term randomized controlled design to arrive at definite efficacy and effectiveness of NBT.

# POSTER SESSION 03

Abstract No.: 0779

## **The Moderating Effects of Emotion Regulation Goals on the Relationship between Emotional Suppression and Psychological Well-Being**

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This study aimed to examine the moderating effects of emotion regulation goals on the relationship between emotional suppression and psychological well-being. A high level of emotional suppression is generally associated with poor psychological health and psychopathological symptoms. However, studies in different cultures yielded controversial findings regarding this relationship, and in certain contexts, suppression was associated with positive consequences. To cast light on this inconsistency, we examined whether emotion regulation goals moderate the relationship between suppression and psychological well-being. The data analytic sample consisted of 368 college and graduate students from universities in Korea, and participants completed the study measures via an online questionnaire. The results demonstrated that the contra-hedonic goals and instrumental goals significantly moderate the relationship, such that higher levels of contra-hedonic and instrumental regulation goals attenuated the negative effects of suppression on psychological well-being. The findings highlight the importance of examining the motivational aspect of emotion regulation and help explain individual differences in the use of emotional suppression and following outcomes.

# POSTER SESSION 03

Abstract No.: 0780

## **The Effect of Acceptance Commitment Therapy on Obsessive Symptoms on Obsessive Compulsive Personality Disorder Patients: Focusing on Video Call Group Psychotherapy**

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### INTRODUCTION

ACT is a cognitive behavioral therapy aimed at alleviating psychological pain by helping patients accept the pain they face. In particular, it is known to be effective in treating mental disorders such as depression, obsessive compulsion, stress, chronic pain, anxiety, and post-traumatic stress disorder. Recently, ACT has been introduced in the treatment of patients with OCD, and there has been a study that non-judgmental cognitive defusion is effective in treatment. Obsessive compulsive personality disorder is distinguished from obsessive compulsive disorder in terms of ego syntonic, but psychopathology has a continuous characteristic, so it may have a common therapeutic effect. Therefore, in this study, in order to minimize the cross-experience caused by COVID-19, the effect of the acceptance pre-treatment group program conducted through a video call method on the obsessive symptoms of obsessive compulsive personality disorder patients was verified.

### METHOD

Twenty-two patients with obsessive-compulsive personality disorder were randomly assigned to the treatment and control groups. A total of eight sessions were held for eight weeks, 90 minutes per session. Pre post changes were measured by Y-BOCS and CFQ.

### RESULT

After 8 weeks, the treatment group significantly decreased the Y-BOCS score compared to the control group ( $p < .05$ ). And the cognitive fusion score was also reduced ( $p < .001$ ).

### DISCUSSION

This study is the first study in Korea to apply ACT as a group using a video call method for patients with obsessive compulsive personality disorder. It has been shown that ACT can increase cognitive confusion in patients with obsessive compulsive personality disorder and reduce obsessive compulsive symptoms by accepting it instead of avoiding obsessive compulsive experiences. In the future, it is necessary to verify the long-term treatment effect for more patients.

# POSTER SESSION 03

Abstract No.: 0785

## Differences in Psychological Factors Affecting Depression in Patients with Type 1 and Type 2 Diabetes

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### INTRODUCTION

Patients with diabetes have higher incidences of major depression than the general population (Roy et al., 2012), possibly because diabetes mellitus is an onerous disease requiring patients to conduct a variety of self-care tasks for glycemic management (Fisher et al., 2015; Gao et al., 2022). However, patients with Type 1 (T1D) and Type 2 diabetes (T2D) might experience different types of difficulties and burdens that cause depressive symptoms during diabetes management and care (Balfe et al., 2012). This study investigated differences in psychological factors influencing depression in T1D and T2D, including diabetes-related medical background, illness perception in diabetes, reward observation, and value-aligned behaviors associated with depressive symptoms.

### METHOD

Patients with diabetes (N = 335, T1D: 39, T2D: 296) provided demographic and clinical information and completed the Patient Health Questionnaire-9 (PHQ-9; Muramatsu et al., 2018), the Environmental Reward Observation Scale (EROS; Kunisato et al., 2011), the Valuing Questionnaire (VQ; Doi et al., 2017), and the Brief Illness Perception Scale (BIPQ; Broadbent et al., 2006). The Waseda University Ethics Review Committee on Human Studies approved this study (Accreditation Number: 2021-351).

### RESULTS

The correlation coefficients between depression and other variables were calculated separately for T1D and T2D patients. T1D had a significant negative correlation of depression with age and the BIPQ's "sense of control" and "reward observation" ( $-.50 < r < -.46$ ,  $p < .01$ ) and a significant positive correlation with the VQ's "obstruction" ( $r = .48$ ,  $p < .01$ ). In contrast, T2D had a significant negative correlation of depression with age, the BIPQ's "sense of control," and "reward observation," and the VQ's "progress" ( $-.60 < r < -.23$ ,  $p < .01$ ), and significant positive correlation with the BIPQ's "impact on daily life," and the VQ's "obstruction" ( $.45 < r < .55$ ,  $p < .01$ ). Then, we conducted multiple regression analyses with depression as the dependent variable and the variables showing significant correlations with depression as independent variables. The results of T1D indicated a significant coefficient of determination ( $R^2 = .59$ ,  $p < .001$ ), a significant effect of age, and the BIPQ's "Sense of control." furthermore, the results of T2D also indicated a significant coefficient of determination ( $R^2 = .53$ ,  $p < .001$ ), the effect of age, the BIPQ's "Impact on daily life," the VQ's "progress," "reward observation" and "obstruction."

### DISCUSSION

The BIPQ's "sense of control," which shows the sense of disease management, affected depression in T1D. Managing blood glucose levels is essential for T1D patients' lives, which affects their depression more significantly than other psychological variables. On the other hand, depression in T2D was affected by diabetes' "Impact on daily life" more than "the sense of control," partly because many T2D patients in this study had relatively mild diseases, including only undergoing dietary therapy. This study showed that psychological variables affecting depression differed between T1D and T2D. It is essential to consider supporting diabetes patients' depression by focusing on differences in their disease type and treatment style.

# POSTER SESSION 03

Abstract No.: 0786

## **A Conversion Disorder Patient with Lower Limb Paralysis for 5 Years Stood Up by the CBT**

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It is rare for patients with conversion disorder who cannot walk for a long time without organic damage. In most clinical work, psychiatrists, neurologists or rehabilitation therapists cannot provide effective rehabilitation training for such patients. It is very challenging for psychotherapists to make individualized plans for patients with lower limb paralysis by applying CBT technology, including targeted exposure treatment of fear situations such as standing, walking, crawling, jumping and falling, value-oriented behavioral activation of depression, cognitive adjustment of catastrophic thinking, correction of interpersonal interaction mode and positive self training, self-management of walking and sports training, etc. The case in this report is a 20-year-old male. He lost his mother at the age of 6 and his father at the age of 19, has a ten-year-old older brother and an eight-year-old older sister of a estranged half-father. His intelligence level is very high. He has hardly gone to school in five years and has kept his grades at the top of the high school. He had recurrent convulsions and fainting with disturbance of consciousness 10 years ago, and was diagnosed with epilepsy. After 2 years of treatment with antiepileptic drugs, the convulsions did not recur. However, 7 years ago, intermittent weakness of both lower limbs appeared and gradually aggravated. 5 years ago, he began to suffer from continuous weakness of his lower limbs and was unable to stand without the help of others. He needs crutches to go out and walk, squatting at home. He had great difficulties in taking a bath himself. After taking a bath, his body trembled and became more tired. He could only be relieved after being in bed for 2-3 days. Take a bath only once a month or two with the help of your family. He repeatedly sought medical treatment for walking difficulties, but the treatment failed. Four years ago, they began to suffer from persistent depression and pessimism, and had suicidal ideas and plans. After his father died in an accident six months ago, his mood collapsed and his suicide impulse was so strong that he was hospitalized. After treatment with antidepressants and cognitive behavioral therapy lasting for 3 months, the patient recovered his walking, standing and playing table tennis without crutches, and dared to go home from hospital to face his beloved grandpa and grandma with terminal cancer whom he couldn't face before. For the future, he chose to participate in the training of computer graphics and planned to create the theme of mental health for mental patients as the direction of personal career and value life in the future. Our psychotherapy has successfully helped the case to walk from paralysis to nature, which has accumulated CBT experience for the treatment of complex psychiatric symptoms, highlighting the importance of behavior training and behavior therapy. The treatment of fear exposure needs to fully observe the subtle motor function of the patient's body and the matching of activities in different situations. In the face of patients' despair and sadness, targeted value-oriented behavior activation requires strong trust relationship construction for treatment. It also needs to correct its problematic interpersonal interaction mode under the support of positive therapeutic relationship.

# POSTER SESSION 03

Abstract No.: 0791

## Examination of Factors Associated with Anxiety in Stroke Patients

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### INTRODUCTION

The number of patients with stroke is approximately 197.5 thousand in Japan, facing a hyper-aged society (Ministry of Health, Labour and Welfare, 2020). Stroke patients tend to be more anxious than the general population, around a quarter of stroke patients experience anxiety symptoms (Campbell et al., 2013). Anxiety can interfere with stroke rehabilitation and prevent patients from returning to their daily lives, suggesting that psychological care for patients is lagging behind (Chun et al., 2018; Kitaji et al., 2014). This study aimed to examine the medical and social factors associated with anxiety in stroke patients.

### METHOD

An online survey was conducted on 338 patients with stroke (274 males, 64 females; mean age  $58.45 \pm 10.38$  years). The survey items included social background such as age and gender, medical background such as the site of brain damage and type of sequelae, performance status (PS), and the Generalized Anxiety Disorder-7 (GAD-7). To examine differences in the GAD-7 in medical and social backgrounds, t-tests and one-way ANOVA were performed. We conducted this study with the approval of the Waseda University Ethics Review Procedures concerning Research with Human Subjects (2021-351). The authors have no competing interests to disclose.

### RESULTS

From the results of the t-tests, significant differences of anxiety between the frontal and occipital lobes as the brain damage location were shown ( $t(37.19) = 2.29, p < .05$ ;  $t(31.55) = 2.52, p < .05$ ), and also between the types of sequelae, which was spasticity, aphasia, swallowing, higher brain dysfunction, and voiding disorder ( $t(83.6) = 2.71, p < .05$ ;  $t(38.42) = 3.36, p < .05$ ;  $t(22.78) = 2.32, p < .05$ ;  $t(41.92) = 4.26, p < .01$ ;  $t(336) = 4.37, p < .05$ ). No differences in anxiety were presented in the frequency of medical examinations or in the presence or absence of a roommate, work, alcohol consumption, or smoking. On the other hand, the difference of anxiety between levels of PS1 and PS2 was significant ( $p < .01$ ), between PS1 and PS3 ( $p < .01$ ), and between PS1 and PS4 ( $p < .05$ ).

### DISCUSSION

It was suggested that the site of brain damage, sequelae, and PS are related to anxiety. Because stroke causes a wide range of impairments, including motor function, cognition, and communication, patients are affected in various ways in their activity of daily living (ADL) (Tanaka et al., 2022). Thus, it is thought that the decline in ADL increases anxiety and decreases quality of life. Injury to the frontal lobe tends to be associated with a high incidence of higher brain dysfunction, which leads to difficulties in social life, such as difficulty in being understood by others and difficulties in human relationships (Takahashi et al., 2010). Since damage to the occipital lobe affects vision and its perception, there is concern that secondary disabilities, such as reduced opportunities to go out, may occur as a result of problems with vision, on which a large part of life depends (Omoto & Hirakawa, 2020). It is necessary to actively support stroke patients so that they can receive optimal rehabilitation for the difficulties they face in their daily lives.

# POSTER SESSION 03

Abstract No.: 0792

## Development and Validation of the Japanese Version of the Community Attitudes toward the Mentally Ill Scale (CAMI): Towards a Comprehensive Anti-Stigma Intervention Study

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### INTRODUCTION

More than 70% of patients with mental disorders fail to receive any treatment from professionals, and stigma is a barrier to seeking health care. Stigma can be seen as a term made up of three dimensions: problems of knowledge (ignorance), problems of attitudes (prejudice), and problems of behavior (discrimination). The Mental Health Knowledge Schedule (MAKS), the Community Attitudes toward the mentally ill Scale (CAMI) and the Reported and Intended Behaviour Scale (RIBS) reflects the three-dimension concept of mental illness stigma (knowledge, attitudes, and behavior). Although RIBS and MAKS have already been translated and used in Japanese, no study has been conducted on assessing the validity and reliability of CAMI in Japan. Then this study aimed to translate and validate CAMI in Japanese for our comprehensive anti-stigma intervention study.

### METHOD

A total of 399 participants (212 men, 184 women and 3 others with mean age  $\pm$  SD of  $42.0 \pm 15.8$ ) were recruited in the first survey; 97 participants (24.3%) reported that themselves or their relatives had been treated in psychiatric or psychosomatic clinics. In the second survey, the number of valid respondents was 45 (22 men, 22 women and 1 other with mean age  $\pm$  SD of  $21.2 \pm 1.0$ ). 10 participants (22.2%) reported that themselves or their relatives had been treated in psychiatric or psychosomatic clinics. CAMI consists of four factors including 'Authoritarianism', 'Benevolence', 'Social restrictiveness', and 'Community mental health ideology (CMHI)'. First, it was translated into Japanese by three psychologists independently in the first phase. Two independent bilingual persons (one psychologist and the other was not a specialist) back-translated the questions into English. After the back-translation, original developers of CAMI reviewed the questionnaire. To assess construct validity the Japanese version of RIBS ( $\alpha = .81$ ), MAKS ( $\alpha = .69$ ), and Link's Devaluation Discrimination Scale (LDDS;  $\alpha = .75$ ) were administered to participants. LDDS is characterized by a one-factor structure and is less affected by Social-desirability bias. The study protocol was approved by the ethics committee at the University of Tokyo (No. 22-335).

### RESULTS

To assess the internal consistency of CAMI, Cronbach's alpha coefficients were examined. Two of the four factors had high reliability: 'Benevolence' ( $\alpha = .80$ ), 'CMHI' ( $\alpha = .81$ ), though the remaining two were still satisfactory: 'Authoritarianism' ( $\alpha = .68$ ), 'Social restrictiveness' ( $\alpha = .77$ ). To assess the relationships among factors of CAMI, inter-factor correlations were examined. 'Authoritarianism' had negative correlations with 'Benevolence' ( $r = -.68, p < .001$ ) and 'CMHI' ( $r = -.54, p < .001$ ) and had a positive correlation with 'Social restrictiveness' ( $r = .68, p < .001$ ). 'Benevolence' had a negative correlation with 'Social restrictiveness' ( $r = .70, p < .001$ ) and had a positive correlation with 'CMHI' ( $r = .69, p < .001$ ). 'Social restrictiveness' had a negative correlation with 'CMHI' ( $r = -.69, p < .001$ ). To assess test-retest reliability, correlation coefficients and intra-class correlation coefficients of four factors of CAMI between the time were examined. All of them were correlated ('Authoritarianism':  $r = .53, p < .001$ ; ICC(1, 1) =  $.53, p < .001$ ; 'Benevolence':  $r = .72, p < .001$ ; ICC(1, 1) =  $.73, p < .001$ ; 'Social restrictiveness':  $r = .77, p < .001$ ; ICC(1, 1) =  $.78, p < .001$ ; 'CMHI':  $r = .62, p < .001$ ; ICC(1, 1) =  $.62, p < .001$ ). To assess construct validity, correlation coefficients between four factors of CAMI and RIBS, MAKS, and LDDS were examined. RIBS and MAKS were significantly correlated with all factors of CAMI. 'Authoritarianism' and 'Social restrictiveness' have negative correlations with RIBS ( $r = -.50, p < .001$ ;  $r = -.63, p < .001$ ) and MAKS ( $r = -.44, p < .001$ ;  $r = -.50, p < .001$ ). 'Benevolence' and 'CMHI' have positive correlations with RIBS ( $r = .52, p < .001$ ;  $r = .56, p < .001$ ) and MAKS ( $r = .43, p < .001$ ;  $r = .26, p < .001$ ). LDDS showed small or non-significant correlations with them:



# POSTER SESSION 03

'Authoritarianism' ( $r = .10, p = .056$ ), 'Benevolence' ( $r = -.05, p = .357$ ), 'Social restrictiveness' ( $r = .17, p < .001$ ), 'CMHI' ( $r = -.20, p < .001$ ).

## DISCUSSION

The present study indicated satisfactory internal consistency, test-retest reliability and construct validity in our Japanese version of CAMI. With the use of RIBS and MAKS, it is expected that more comprehensive research on anti-stigma and studies that include international comparisons can be conducted in the future.

## Funding:

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# POSTER SESSION 03

Abstract No.: 0806

## **The Influence of Belief in a Just World on the Hopelessness: Mediating Effect of Anxiety and Anger Contagion by Social Media and Moderating Effect of Self-Esteem**

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During the pandemic of COVID-19, the use of social media increased rapidly, resulting in new social problems such as emotional contagion. Based on the previous research that negative social media changes people's emotions and perceptions, this study aimed to find out the effect of social media emotion contagion on the helplessness of young people in their 20s and 30s in Korea who think the world is unfair. On the relationship between belief in a just world and hopelessness, we set up a mediator model of anxiety and anger contagion by social media and a moderator model of self-esteem. With an online survey, data from 305 adult men and women on their 20~39 age living in Korea were collected and analyzed using SPSS 23 and SPSS PROCESS Macro 4.1. As a result, the belief in a just world is negatively correlated to anxiety and anger contagion by social media and hopelessness and positively correlated with self-esteem. Anxiety and anger contagion by social media are positively related to hopelessness, and negatively correlated with self-esteem. Hopelessness has a negative correlation with self-esteem. Hierarchical regression analysis shows that the mediating effect of anxiety and anger contagion by social media and the moderating effect of self-esteem are separated. These results verify both variables work in a significant model between the belief in a just world and hopelessness, Finally, the result of verifying the integrated model of mediation and moderator using PROCESS Macro Model 5 shows significant results. This study is significant in that it revealed how social media influences emotional contagion on the path leading to hopelessness as the belief in the just world collapses among young Koreans. This result will provide important guidelines for the production and use of social media, and give implications for cognitive-behavioral intervention in the emotions and behaviors of young people who are in despair.

# POSTER SESSION 03

Abstract No.: 0827

## Verbal Overshadowing Disrupts Memory for Faces in Participants with Low, But Not High OCD Symptoms

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### INTRODUCTION

Putting complex visual stimuli into words was found to have an adverse, overshadowing effect, on memory accuracy for these stimuli (Schooler & Engstler-Schooler, 1990). This effect is considered to be the result of a processing shift between the way information was encoded and the way it was retrieved. As recognition typically involves automatic processing, encoding information using explicit processing such as verbalization interferes with memory performance. The present study was motivated by recent evidence that people with OCD tend to prefer controlled and focused processing in acquiring and retrieving information (e.g., Soref et al., 2018). This evidence leads to the prediction that for obsessive-compulsive (OC) individuals, both coding and retrieval of stimulus information would involve controlled processing, so that verbalizing would not constitute a processing shift for these individuals. The goal of the study was to examine the hypothesis that verbalization will be less disruptive in individuals with high OC tendencies in comparison to individuals with low OC tendencies, as it matches their spontaneous style of information processing.

### METHOD

183 participants participated in the study which was presented via an Israeli internet panel. Following the procedure described by Schooler and Engstler-Schooler (1990), participants viewed a short video of a bank robbery and were instructed to pay close attention to it, and then participated in a 20-min unrelated Sudoku task. They were then randomly assigned to one of two experimental conditions – a verbalization condition, in which participants were asked to write a detailed description of the robber; and a control condition, in which they listed states and state capitals. Subsequently, all participants viewed a lineup image depicting eight people and asked to select the one who was in the bank robbery video. Finally, participants completed a measure of obsessive-compulsive symptoms.

### RESULTS

As predicted, verbalization impaired recognition accuracy in participants with low OC tendencies, indicating an overshadowing effect, but did not affect the performance of high OC participants.

### DISCUSSION

Current findings add to growing body of research from various cognitive tasks, suggesting a distinct processing style in OC individuals. This processing style may reflect an effort of OC individual to maintain high sense of control through excessive reliance on controlled processes, and a reluctance to shift into processes that run by themselves (i.e., automatic).

### CONCLUSIONS

OC individuals tend to rely on controlled strategies in processing stimuli that are typically processed using automatic, non-verbal strategies. Taken as a whole, these findings may have important implications for understanding and treating OC symptoms.

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# POSTER SESSION 03

Abstract No.: 0835

## A Qualitative Case Study on the Development Process of Eating Disorders

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### OBJECTIVES

Eating disorders are described as a type of the mental disorders that can cause significant damage to health or even death due to persistent problems with various behaviors related to eating (American Psychiatric Association, 2013). This study aims to analyze four family therapy cases with clients experiencing eating disorders and to examine the common process contribute to the onset and the development of eating disorders.

### METHOD

A case study method was used to examine the surrounding dynamics and interactions surrounding the research subjects (Yin, 2003; Creswell, & Poth, 2016). Using the therapy transcripts of four families, we employed thematic analysis to identify key concepts.

### RESULT

The results of this study are as follows. First, factors that contributed to eating disorders were identified as individual, family, and environmental factors. Individual factors included extreme coping strategies, obedience, relationship anxiety, and distorted beliefs. Family factors included disingenuous family communication, obsessive parenting, and unstable family atmosphere. Environmental factors included sexual harassment, maladjustment to school, and failure in achievement. Second, the developmental stages of eating disorders were: (1) attachment damage; (2) formation of oppression stage; (3) formation of distorted beliefs through introspection; and (4) maladaptive coping with oppression.

### CONCLUSION

The conclusions of this study were as follows. First, the significance of this study lies in the deeper understanding of eating disorders by identifying the common factors of the disorders by analyzing four cases. Second, this study verified the process of the development of eating disorders, which has not been extensively covered in existing literature, through multiple cases.

Abstract No.: 0840

## Latent Profiles of Psychological Flexibility in College Students: Differences in Depression and Social Anxiety

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### INTRODUCTION

Acceptance and Commitment Therapy (ACT) is cognitive-behavioral therapeutic approach that promotes psychological flexibility through the process of acceptance, mindfulness, commitment, and behavior change(Hayes et al., 1999). Psychological flexibility refers to the ability to be deeply in touch with the present moment, to feel thoughts and feelings as they are without excessive defense, and to maintain or change behavior in pursuit of goals and values(Bond et al., 2011). It is important that key sub-components of psychological flexibility develop in balance(Hayes et al., 2011). Therefore, it is necessary to classify psychological flexibility patterns according to individual college students. In previous studies that analyzed the latent profiles of psychological flexibility, the following three groups were classified: 'low psychological flexibility group', 'moderate psychological flexibility group', and 'high psychological flexibility group'(bi & Li, 2020; Tyndall, 2021). The purpose of this study is to classify the latent profiles of psychological flexibility in Korean college students and to identify the differences of depression and social anxiety according to the profiles.

### METHOD

Participants were 252 Korean college students(male 76, female 176). For analysis, the measures included Acceptance & Action Questionnaire-II(AAQ-II; Heo et al., 2009), Mindful Attention Awareness Scale(MAAS; Kwon & Kim, 2007), Experiences Questionnaire(EQ; Kim et al., 2010), Engaged Living Scale(ELS; Park, 2000), The Center for Epidemiologic Studies Depression(CES-D; Jeon et al., 2001), Social Interaction Anxiety Scale(SIAS; Kim, 2001). To test the Latent profile classification and Verification of differences, multinomial logit analysis was conducted in a three-step approach using Mplus 8.0 program.

### RESULTS

Latent profiles of psychological flexibility were classified into three subgroups. The patterns of the three such as 'low-level psychological flexibility pattern(22.7%)', 'moderate-level psychological flexibility pattern(60.7%)', and 'high-level psychological flexibility pattern(16.6%)'. The differences in depression and social Anxiety among the latent profiles were also verified. Those in the low-level psychology flexibility pattern was associated with the highest levels of depression and social anxiety, however, high-level psychological flexibility pattern was associated with the lowest levels of depression and social anxiety.

### CONCLUSIONS

These results suggest that psychological flexibility is important for college students' depression and social anxiety, and that it is important to balance the key sub-components of psychological flexibility. Based on the results of this study, preventive interventions in counseling for reducing depression, social anxiety, and increasing psychological flexibility of college students were discussed.

# POSTER SESSION 03

Abstract No.: 0843

## **A Case Study of Family Therapy for Adult Children with Obsessive-Compulsive Disorder**

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### OBJECTIVES

This family therapy case study aims to explore the factors that affected obsessive-compulsive disorder (OCD) and the intervention approach used by the family therapist.

### METHOD

This study employed a case study method and used thematic analysis and matrix for data analysis.

### RESULTS

The results of this study are as follows. Factors that contributed to the development of obsessive-compulsive disorder were triggering factors, individual factors, family factors, and environmental factors. First, a triggering factor was the fear and anxiety about failing an important national certification. Second, personal factors included excessive comparison with others and self-consciousness. Third, family factors were differential treatment by the father, blunt and coercive communication style of the father, and nitpicking of the mother. Fourth, environmental factors included an upbringing in which the client had to take care of the younger sibling as a child due to both parents working and an uncomfortable living situation as the client had to share a bedroom with the uncle. The therapist's interventions included analyzing the client's anxiety rooted in his family experiences, promoting the awareness of the parents' dysfunctional communication patterns transmitted from the family of origin, helping the client express the repressed emotions, resolving misunderstandings among family members, and practicing effective communication strategies.

### CONCLUSION

This study identified the triggering factors, individual factors, family factors, and environmental factors related to OCD from a systematic perspective, and explored specific family therapy interventions used by the therapist who worked with a client with OCD.

# POSTER SESSION 03

Abstract No.: 0844

## Accuracy of Extended BERT Model to Detect Treatment Adherence to the Unified Protocol from Session Natural Language

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### OBJECTIVE

The objective of this study is to examine the performance of a natural language processing model that predicts therapist adherence to a unified protocol for the transdiagnostic treatment of emotional disorders (UP), using an extended version of BERT, applied to the dialogue of psychotherapy sessions between patients and therapists. Therapist adherence is essential for providing safe and effective psychotherapy, and developing an appropriate and efficient evaluation method is necessary.

### METHOD

Data were collected from the dialogue of psychotherapy sessions involving just under 50 participants in a UP RCT conducted in Japan (Ito et al., 2022) with permission for secondary use of data and annotation completed. We used the spoken natural language in the psychoeducation module for preliminary validation. The dialogue data were annotated by several psychologists with a master's degree or higher in clinical psychology, with emotion type (e.g., anxiety, anger, sadness) and appropriate psychoeducation content for each session (e.g., explaining emotional functioning, explaining the three components of emotion) being labeled. Based on those annotations, a binary adherence label (adequate or poor) was given for each case through discussion. An extended deep learning model combining BERT with Multi-Head Attention (MHA) and sentence dropout was used to predict the annotated labels. The predictive performance was compared to BERT with Gated Recurrent Unit (GRU) and Global Average Pooling (GAP).

### RESULT

The proposed model (BERT with MHA) showed more acceptable accuracy in predicting labels reflecting the type of emotion and session content (balanced accuracy = .70, AUC = .68) than BERT with GRU or with GAP.

### DISCUSSION

The study suggests that the extended deep learning model using BERT with MHA and sentence dropout can detect treatment adherence in the emotion psychoeducation section of the unified protocol for emotional disorders at a sufficient level of accuracy. However, further investigation is needed to improve predictive accuracy with small data.

# POSTER SESSION 03

Abstract No.: 0846

## The Unified, Transdiagnostic Treatment Protocol (UP) for Korean Young Adults with Emotional Disorders: A Comparison of Group and Individual Treatments

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### INTRODUCTION

The unified, transdiagnostic treatment protocol (UP) for emotional disorders developed by Barlow et al. (2011) is an emotion-focused cognitive-behavioral therapy consisting of five core modules and three additional modules, and has received a lot of attention over the past decade. However, most of the previous studies on the efficacy of the UP reported so far have been conducted as individual treatment, and there are only a few studies on the effects of group treatment (i.e., Bullis et al., 2015). This study was performed to examine the efficacy of individual and group treatments covering the eight modules from the UP for Korean young adults with emotional disorders. Moreover, we evaluated whether the UP group treatment would be comparable to the UP individual treatment in terms of its efficacy.

### METHODS

Participants were sixty-six Korean undergraduate students with DSM-5 diagnosis of social anxiety disorder, generalized anxiety disorder, obsessive-compulsive disorder, post-traumatic stress disorder, major depressive disorder, persistent depressive disorder. The UP treatments consisted of a total of 8, one- or 2½-hour weekly sessions, in individual and group formats, respectively, in which one session covered one module. Equally twenty-three participants in the UP group and individual treatment conditions completed outcome assessments at pre- and posttreatment and 1-month follow-up. However, clinical severity rating (CSR) by clinicians was not conducted for participants in the two treatment conditions at 1-month follow-up. Twenty participants in the wait-list control (WLC) condition provided both the baseline assessment and assessment after 8 weeks.

### RESULTS

Results of repeated measures ANOVA revealed significant interactions between the three conditions (group UP, individual UP, WLC) and two assessment periods (pre- and posttreatment) in social anxiety, generalized anxiety, depression, positive affect, and clinical severity rating of principal diagnoses. As a result of each simple comparison analysis, compared to the participants in the WLC condition, those in the UP condition showed a greater decrease in social anxiety, generalized anxiety, and clinical severity rating of principal diagnoses at posttreatment. There were no significant differences between the UP and WLC conditions in depression, negative and positive affect at posttreatment. However, as a result of within-participant comparison in each condition, the UP condition showed significant improvements in depression and negative affect, as well as increase in positive affect at posttreatment, but the WLC condition did not. No significant differences between group and individual treatment conditions of the UP emerged in any dependent variables at posttreatment. Furthermore, in all other dependent variables except positive affect, the effects of the UP were maintained over 1-month follow up. On the positive affect measure, the differences between the treatment formats of the UP were not significant at all three assessment periods. Participants in the individual treatment condition showed a significant increase in positive affect from baseline to post-treatment and 1-month follow-up, but those in the group treatment condition did not. Analyses of clinical significance revealed that a larger percentage of participants in the UP condition (56.5% group, 73.9% individual) achieved treatment responder status on their principal diagnoses relative to those in the WLC condition (15%) at post-treatment. Likewise, more participants in the UP condition (52.2% group, 60.9% individual) met criteria for the high end-state functioning on their principal diagnoses compared to those in the WLC condition (15%) at post-treatment. However, on these two clinically significant change indices, no significant differences were found between the two treatment conditions.



# POSTER SESSION 03

## CONCLUSION

These results suggest that the 8-session UP is efficacious for Korean young adults with emotional disorders, and that especially the UP group treatment may be comparable to individual treatment on almost all dependent measures, except for positive affect. Furthermore, our findings suggest that the UP (particularly group treatment) in clinical settings and community mental health centers with high demand for psychological treatment can increase cost-effective and efficient accessibility to high-quality psychological treatment for Korean young adults with diagnostically diverse emotional disorders.

# POSTER SESSION 03

Abstract No.: 0849

## Moderating Effect of Suicidality on the Associations between Childhood Abuse History and Antidepressant Response

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### INTRODUCTION

Not everyone reaches clear remission in antidepressant therapy. Childhood adversity is one of the most important risk factors of antidepressant non-response, but roll of suicidality, which is known to be high in the victims of childhood abuse, is not clear in predicting antidepressant treatment response. In short term, from 12 to 16 weeks, antidepressant treatment response was not different between individual with high and low suicidality in a few articles, but few studies were executed for longer period of time, such as a year. Research on intervention of suicidality also suggests that treatment lowering suicidality may help decrease depressive symptom severity. Therefore, we aimed to investigate interactive effects of suicidality on the association between childhood abuse history and antidepressant treatment non-response.

### METHOD

1,262 of university hospital outpatients over 7 years who met DSM-IV MDD criteria participated in this study from March 2012 to April 2017. Assessments were carried out at baseline, 1, and 2 weeks, and then every 3 weeks in the acute treatment phase (3, 6, 9, and 12 weeks), and at every 3 months in the continuation treatment phase (6, 9, and 12 months). Socio-demographic characteristics, childhood abuse history, and suicidal attempt history were gathered at baseline, and Hamilton Depression Rating Scale (HAMD), Alcohol Use Disorder Identification Test, and suicidality item of the Brief Psychiatric Rating Scale (BPRS) were administered at every visit including baseline. Non-remission of MDD was defined as HAMD score >7, and BPRS suicidal item score ≤1 was identified as low suicidal ideation group, and the others as high suicidal ideation group. Logistic regression was executed to reveal moderating effects of suicidality to relationship between childhood abuse and MDD non-remission at 12-month. Sociodemographic variables, and severity of depression and alcohol use problems are used as control variables.

### RESULTS

Childhood abuse significantly predicted non-remission at 12-month with covariates (OR=1.637, 95% CI [1.109, 2.416]). Suicidal ideation was also a significant predictor of non-remission at 12-month with covariates (OR=1.365, 95% CI [1.007, 1.851]). Suicidal attempt history, however, was not significant in predicting non-remission at 12-month with covariates (OR=1.384, 95% CI [0.869, 2.205]). Interaction of childhood abuse and suicidal ideation significantly explained non-remission of depression at 12-month (Wald=6.208, p=0.013). However, interaction of childhood abuse and suicidal attempt history didn't reach statistical significance (Wald=0.015, p=0.904).

### DISCUSSION

Depressed individuals with childhood abuse history are less likely to be recovered in antidepressant treatment. However, this effect can be moderated by suicidal ideation, not by suicide attempt history. Therefore, carrying out cognitive intervention targeting suicidal thought such as cognitive therapy for suicidal patients (CT-SP), and dialectical behavior therapy in parallel with antidepressant medication would be helpful for treating depressive patients with childhood adversity.

## **Anorexia Nervosa: Acceptability and Feasibility of an Acceptance-Based Group Approach**

Enzo Lachaux<sup>\*</sup>, Camille Meyer

*University Hospital of Strasbourg, France*

Anorexia nervosa (AN) is one of the most complex and challenging disorders to treat. With the highest mortality rate (5.9%) (Eeden, Annelies & Hoeken, Daphne & Hoek, Hans, 2021), a low response to psychotherapies and pharmacotherapies and a high attrition rate compared to other mental disorders (Fassino, Pierò, Tomba & Abbate-Daga, 2009), AN needs more research focus, including new treatment approaches. Acceptance and Commitment Therapy (ACT), a process-based therapy, is becoming one of the most studied and validated therapies. While many international recommendations promote ACT in a wide range of psychiatric disorders, ACT applied to AN has been understudied and deserves more attention.

We have created an original 7-sessions program using the 6 core processes from the ACT hexaflex model and the self-case conceptualization matrix. 12 female participants with AN aged from 19 to 45 were recruited from inpatient and outpatient clinics of the University Hospital of Strasbourg. Through the acceptance-based processes, during the group, each participant experienced creating their own functional analysis through a teamwork. The Eating Disorders Examination scale (EDE-Q), Acceptance and Action Questionnaire (AAQ-II) and Hospital Anxiety and Depression scale (HAD) were administrated pre- and post-treatment. EDE-Q was used to measure the eating related symptoms, i.e., restriction, worries about body shape, weight and nutrition. AAQ-II focused on psychological flexibility to tackle the ACT principles and the HAD measured depression and anxiety. We also used self-report questionnaires to evaluate quality of life and satisfaction regarding the intervention.

Out of the 12 participants, only 2 did not complete the program, making the attrition rate 17,3%. Post-treatment significant improvements were found on the following measures:

1. EDE-Q scores ( $p < 0.05$ )
2. AAQ-II scores ( $p < 0.05$ )
3. Quality of life questionnaires ( $p = 0.032$ )

These results demonstrate a clinical improvement on eating disorders symptoms, psychological flexibility and life satisfaction. Finally, results on the satisfaction questionnaire indicate a very high satisfaction among all the participants. All the feedbacks corresponded to either « very high » to « high » satisfaction.

Our results show the potential of Acceptance-based therapies applied to Anorexia Nervosa to improve both eating disorder and body-related symptoms but also psychological flexibility. The high acceptability of the treatment and the low dropout rates indicate that the intervention has the potential to be tested in future studies using randomized controlled trials. Overall, our work encourages the study of therapies that foster psychology flexibility in eating disorders.

# POSTER SESSION 03

Abstract No.: 0859

## **A Composite Case Study Illustrating the Difficulty in Using Cognitive Retraining When Engaging with Culturally Ingrained Beliefs**

Mariam Salie\*

*Stellenbosch University, South Africa*

This presentation will use a composite case study to demonstrate culturally ingrained core beliefs, and the challenge of identification of these beliefs outside of the culture. The case study will draw on the cases of several South African, Muslim, women of colour, who all present with similar symptoms of depression and anxiety, but who also similarly, have deep rooted cultural beliefs around their role as wife and mother, and who end up staying in unhappy marriages because of these beliefs. These beliefs are held onto, which further fuels emotions such as anxiety and guilt, and complicates the process of identification and modification of the dysfunctional beliefs.

I will use a combination of a cultural and cognitive conceptualisation for these cases, to demonstrate how they make sense of their psychological distress, and how their beliefs are informed by a combination of contextual, cultural and often religious factors. South Africa's history of apartheid and racial classifications additionally add to the complexity of identity and core beliefs. Interventions made use of a combination of cognitive and behavioural techniques, primarily cognitive restructuring through the use of thought records, guided discovery and socratic questioning, as well as imagery, and graded behavioural tasks. The challenge however, was with identifying, challenging and modifying dysfunctional beliefs held within the culture of the individual. This required a more sensitive and slow approach in order to protect the therapeutic relationship while challenging the belief.

As a person of colour myself, building rapport was not difficult and I was able to provide the safe space within which to challenge these beliefs. Because I was part of the group, by default, my presence gave permission. This presentation will include my reflections on my own positionality and how my in-group status served as an advantage but also when it challenged the space I was trying to create. Lastly, I will include an evaluation of the process and whether I felt I was remaining true to a CBT process, and the considerations I think are important when working with culture and mental health.

# POSTER SESSION 03

Abstract No.: 0860

## **Sexual Risk Behavior in Young Adults. Current and Longitudinal View with a Focus on Risk and Protective Factors**

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### INTRODUCTION

Sexual risk behavior (e.g., frequently changing sexual partners, unprotected sexual intercourse) is a problem behavior of adolescents and young adults. The consequences of sexual risk behavior can be serious and include, e.g., infections with sexually transmitted diseases and unwanted pregnancy. Studies also found that sexual risk behavior is often associated with other risk behavior, such as substance use, or externalizing behavior problems. Up to date, however, there is a lack of longitudinal studies on the development of sexual risk behavior as well as on risk and protective factors.

### METHOD

The data of N = 278 young adults (M = 22 years) from the German longitudinal study "Future Family" (current retention after 18 years: 67%) is analyzed with the focus on sexual risk behavior. Sexual risk behavior was assessed using various self-report questions (e.g., age at first sexual intercourse, number of sexual partners, previous unprotected sexual intercourse, and reasons for this) that were summarized in a severity index. In addition, various parent, child and family variables were repeatedly collected in childhood, adolescence and young adulthood (e.g., parenting behavior, socioeconomic status, children's externalizing behavior problems, parents' marital status). Part of the sample moreover received a parent centered prevention program (Triple P) when children were in kindergarten. We investigate if these factors are risk and/or protective factors for sexual risk behavior.

### RESULTS

In the current sample, 28% of the young adults showed no, 65% borderline, and 7% severe sexual risk behavior. In accordance with the literature, higher scores in sexual risk behavior were associated with more externalizing behavior problems, and other risk behavior such as extensive use of alcohol or cannabis. First results indicate that children who grew up with single mothers show an increased sexual risk behavior in young adulthood. Further possible risk and protective factors from childhood and adolescence (e.g., socioeconomic status, parent-child-relationship, parenting behavior) are presented to identify particularly vulnerable groups. It will also be examined whether parental participation in the Triple-P program has an effect on the child's sexual risk behavior 18 years later.

### DISCUSSION

The prevention of sexual risk behavior is of great importance because of its far-reaching consequences not only individually but also for the society (e.g., due to high costs in the health system). Besides determining the prevalence rates, it is also essential to identify risk and protective factors in childhood and adolescence to identify vulnerable groups that are particularly at risk to show sexual risk behavior in young adulthood. The results may provide possible starting points for the development of targeted preventive interventions for different age groups.

# POSTER SESSION 03

Abstract No.: 0866

## Protocol for a Cognitive Intervention Developed for Parents Who Have Infants with Pediatric Sleep Disturbance: Preliminary Results

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### INTRODUCTION

Recent studies have indicated that parental cognition is related to the onset of child sleep problems. However, parental cognition has not been mainly considered as a focus in child sleep intervention. The current study introduces the protocol an ongoing randomized controlled trial targeting parental cognition of infant sleep.

### METHODS

A two-arm randomized controlled trial for a cognitive intervention is being conducted. Parents with children aged 6-18 months are recruited for this study. Participants are randomly assigned in a one-to-one ratio to either intervention or active control conditions. The cognitive intervention, which targeted parental misconceptions of child sleep, consisted of 3-weekly online sessions. The active control condition received an online psychoeducation and booklets about child sleep unrelated to the intervention for three weeks. Primary outcomes were parental cognition using the Parental Understanding and Misperceptions about BAby's sleep-Questionnaire (PUMBA-Q); and child sleep, evaluated by parent-reported sleep diary and auto-videosomnography. Secondary outcomes included parental sleep using self-reported sleep diary and actigraphy and the Insomnia Severity Index. Assessments were implemented at baseline (T1) and post-intervention (T2). Feasibility of the intervention was assessed using completion and attendance rates. Acceptability was assessed by both open-ended questions and satisfaction questions on a 10-point Likert scale.

### RESULTS

This study is currently ongoing. Mean age of the parents was 30.5 years (SD=3.5), and the mean child age was 15.0 months (SD=1.4). All participants have completed either intervention sessions or online psychoeducation. Participants completed a sleep diary for most days during the participation (response rate M=97.17%, SD=0.61). Satisfaction scores indicated that the protocol was satisfactory (M=8.3, SD=2.1).

### CONCLUSION

This intervention is significant in that it is the first child sleep intervention targeting parental cognition.

**RESULTS** of the study will provide supporting evidence for the intervention in improving child sleep, which can be closely related to parental misconceptions. Given that most parents experience exhaustion in parenting, this briefly structured online intervention will be expected to be feasible and acceptable for both clinicians and parents.

# POSTER SESSION 03

Abstract No.: 0867

## A Comparative Analysis of the Korean Version of Rape Myths Scales

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### INTRODUCTION

Rape myth, a cognitive distortion that is mentioned as a common characteristic of rape perpetrators, serves to deny, justify, and rationalize abnormal sexual behavior (Abel et al., 1989; Hall and Hirschman, 1991). Compared to other crimes, the crime of rape has a conventional wisdom about the victim, such as disapproval or criticism of the victim (Kwon, Lee, & Kim, 2016), and rape conventional wisdom creates a social atmosphere that hides the damage through the rationalization of the perpetrator (Ryan, 2019). Therefore, it is necessary to understand what rape myths are socially accepted by the general public as well as perpetrators, and attempts are being made to measure rape myths (Hogge, & Wang, 2022; Thelan, & Meadows, 2022). In this study, we tried to examine the structure of rape myth by comparing four scales that measure rape myth according to subject, situation, and age.

### METHOD

To compare the rape myth scales in this study, the Korean version of the Illinois Rape Myth Acceptance Scale(K-IRMA, Yu & Song[C1], 2023), the Korean version of the Subtle Rape Myth Acceptance Scale(K-SRMA, Yu & Song, 2023), Rape Myth Acceptance Scale (RMA, Lee, 1999), and the Korean version of the sexual image-based abuse myth acceptance scale (K-SIAMA, Song, 2021) was used. Korean The Revised Conflict Tactics Scale 2 (K-CTS-2, Kim, 1999) and image-based sexual assault experience measurement items (Powell, Henry, Flynn, & Scott, 2019) were used to identify experiences of dating and digital sexual violence. A total of 334 participants participated in the study, and the gender ratio was 161 men (48.2%) and 173 women(51.8%). The age groups were 82 in their 20s (24.6%), 84 in their 30s (25.1%), 86 in their 40s (25.7%), and 82 in their 50s (24.6%).

### RESULTS

As a result of correlation analysis between each scale, the lowest correlation between the total score of all scales and the sub-factors was  $r = .40$  ( $p < 0.001$ ), and the highest correlation was  $r = .89$  ( $p < 0.001$ ). The group with experience of dating and digital sexual violence showed a significantly higher degree of acceptance of the rape myth than the group without, K-IRMA ( $t = -5.22$ ,  $p < 0.001$  and  $t = -4.59$ ,  $p < 0.001$ ), K- SRMA ( $t = -5.17$ ,  $p < 0.001$  and  $t = -3.82$ ,  $p < 0.001$ ), RMA ( $t = -5.45$ ,  $p < 0.001$  and  $t = -5.47$ ,  $p < 0.001$ ), K-SIAMA ( $t = -5.51$ ,  $p < 0.001$  and  $t = -3.94$ ,  $p < 0.01$ ). As a result of comparison according to gender and age group, the K-SRMA scale was found to be significant in measuring the rape myth of women who have experienced digital sexual violence ( $t = -2.00$ ,  $p < 0.05$ ), and the K-IRMA scale was found to be significant for women in their 20s. It was significant in measuring rape myths ( $t = -2.60$ ,  $p < 0.05$ ), the RMA scale was significant in measuring rape myths in their 50s ( $t = -1.99$ ,  $p < 0.01$ ), and the K-SIRMA scale was significant in measuring rape myths. It was significant in measuring the rape myth of perpetrators of digital sexual violence regardless of gender ( $t = -6.83$ ,  $p < 0.001$  and  $t = -2.89$ ,  $p < 0.01$ ).

### CONCLUSION

In this study, it was possible to confirm the composition of the scale to measure rape myths. The all four scales are measures of rape myth, which share similar concepts, but there are differences among sub-factors, confirming that rape myth is a multidimensional concept (Payne, Lonsway & Fitzgerald, 1999). In addition, by comparing four scales related to rape myths, it provided direction for measuring by selecting an appropriate rape myth according to the subject and situation. It is suggested that these results can be usefully used in future studies measuring rape myths, sexuality-related institutions and treatment of sexual offenders.

# POSTER SESSION 03

Abstract No.: 0878

## **Mechanism and Influencing Factors of Dialectical Behavior Therapy on Non-suicidal Self-Injury**

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Non-suicidal self-injury (NSSI) is defined as a behavior which is not recognized by culture, intentionally and directly causes repeated injuries to body tissues, but has no obvious suicide intention and will not cause death. At present, the treatment of NSSI in the world is mainly psychotherapy, and the dialectical behavioral therapy (DBT) developed from cognitive behavioral therapy (CBT) has accumulated more evidence of effective improvement of NSSI. However, the change mechanism and influencing factors of DBT also need further exploration. Therefore, this study analyzed the changes of clinical symptoms and psychological functions of NSSI patients after 13 weeks of DBT treatment, and established a SEM model of DBT effect, so as to better understand the mechanism of DBT action and explore the influencing factors of DBT on the efficacy of NSSI. The results showed that there were two chain mediating effects of DBT in improving NSSI behavior. First, DBT can improve patients' borderline personality symptoms by reducing their alexithymia, improving their level of perceptual support, and finally achieving the goal of improving NSSI symptoms; Second, DBT alleviates the depressive symptoms of patients by improving their emotional regulation skills, and finally achieves the goal of improving the symptoms of NSSI. The curative effect of DBT on NSSI and its related clinical symptoms and psychological functions is affected by the relationship with father, whether it is an only child, relationship with mother, education level and age. Patients with good family relationship and high education are more likely to benefit from DBT.



# POSTER SESSION 03

Abstract No.: 0884

## Effect of Modifying Negative Interpretation Bias Towards Ambiguous Social Stimuli across Eating and Personality Disorders

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### INTRODUCTION

Heightened sensitivity towards social rejection has been implicated in eating disorders (ED) and personality disorder (PD). This study examined the effect of a cognitive bias modification training (CBM-I) targeting the interpretation towards ambiguous social situations in individuals with comorbid ED and PD.

### METHOD

A total of 128 participants [33 with ED and PD, 22 with ED-only, 22 with PD-only, and 51 healthy controls (HC)] were recruited from a hospital and university settings, and included in the final analyses. The participants were randomly assigned to a CBM-I task with benign resolutions or a control task with neutral resolutions in a counterbalanced order in two sessions using a within-subject design. Interpretation bias towards social stimuli was measured using the ambiguous sentence completion task before and after completing the assigned task.

### RESULTS

The CBM-I task increased benign and decreased negative interpretations with large effect sizes in the diagnostic groups, and moderate effect size in the HC group. Participants' anxiety levels were also reduced after the task. The size of the change in negative interpretation was positively associated with baseline negative affect, and negatively associated with baseline positive affect.

### DISCUSSION

The results suggest that modifying interpretation bias has the potential as a transdiagnostic target of treatment for ED and PD, and a fully powered clinical trial with consecutive sessions would be warranted.

## The Effects of COVID-19 on Engagement of Twitter Self-Injury Posts in Korea

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### INTRODUCTION

Since the outbreak of COVID-19, mental health of human being has deteriorated (Patel et al., 2022), and according to a cohort study of 328,373 individuals in Korea, COVID-19 had a significant impact on self-injury for who received COVID-19 tests compared to those who haven't (Park et al., 2022). In particular, social media online spaces are one of most prevalent places where people engaged with self-injury behaviors. Uploading self-injury related posts on SNS and engaging in related posts (comments, likes, etc.) can cause social reinforcement for the uploaders (Brown et al., 2018) and could be contagious for the others (Carlyle, 2018). Therefore, mental health status since COVID-19 could be one of factors to explain increased self-injury behaviors on SNS. In addition, the limited interaction due to social distance campaign could make people more actively engaged with self-injury related posts online as an alternative of communication. Thus, the purpose of the study was to examine the influence of the pre and post COVID-19 periods on engagement in self-injury related posts on Twitter. This study will provide an opportunity for better understanding of the impact on self-injury behaviors on SNS during the COVID-19 period.

### METHOD

As of February 25th, 2023, we collected tweets with the 'self-injury (JaHae; 자해 in Korean)' hashtag on Korean Twitter from January 1st, 2018 to December 31st, 2022. The total number of data collected was 499,211, consisting of 54,451 in 2018, 43,267 in 2019, 72,451 in 2020, 148,227 in 2021, and 180,815 in 2022. We coded 2018-2019 as the pre-COVID period and 2020-2022 as the post-COVID period. The data used for analysis were 'Date, Friends, Followers, Likes, Retweets, Replies'. Except for Date, the remaining five data didn't follow the normality, so the data were transformed to logs. Frequency analysis was performed using SPSS 21.0 for the collected data, and Structural Equations Modeling was performed using AMOS 22.0 to investigate whether before and after COVID-19 affected engagement with self-injury posts. Engagement with self-injury posts was a latent variable composed of Likes, Retweets, and Replies, while COVID-19 was an observed variable coded as 0 for posts during 2018-2019 and 1 for posts during 2020-2022. Based on previous studies (Brown et al., 2018), we set Friends and Followers as control variables.

### RESULT

First, the goodness of fit analysis of the 'COVID-19 period → Engagement in self-injury posts' model showed that all indices except for  $\chi^2(11360.753, df=8, p < .000)$  were good: TLI(.960), CFI(.979), and RMSEA(.053). Second, the factor loading of Retweets and Likes, which were the observed variables for Engagement in self-injury posts, were high at .711 and .843, respectively, but Replies were low at .208. Third, even when controlling for Followers and Friends, the COVID-19 period had a significant effect on Engagement in self-injury posts ( $\beta = .050, p < .000$ ). In other words, Engagement in self-injury posts has increased even more since the COVID-19 period.

### DISCUSSION

The results of this study suggest that COVID-19 has accelerated engagement in self-injury posts on social media, and further strengthened and spread self-injury behaviors on SNS. Therefore, it is necessary to consider timely interventions in the future to address the potential increase in social reinforcement and contagion of self-injury behaviors in pandemic period.

# POSTER SESSION 03

Abstract No.: 0899

## Using the Complete Mental Health Model for Predicting Emotional Well-Being and Successful Aging in Late Midlife and Early Old Age: A Latent Profile Analysis

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### INTRODUCTION

In 2017, South Korea entered an aged society in which the population aged 65 or older accounted for more than 14% of the total population, and it is predicted to reach a super-aged society around 2026. The post-Korean War generation (i.e., the first baby boom generation) is expected to become a major member of the super-aged society within the next 10 years. As life expectancy increases, life in old age is extended, but research on mental health and quality of life are insufficient. Above all, it is urgent to improve the mental health of the elderly and solve psychological and social issues such as the high suicide rate of the elderly. The complete mental health model (Keyes, 2002; Keyes, 2005) defines mental health status by two factors, a low level of mental illness symptoms and a high level of wellbeing. In this study, participants were classified according to the complete mental health model using Latent Profile Analysis (LPA), a person-centered approach, and the predictors affecting their mental health status and the differences in emotional well-being and successful aging were examined.

### METHOD

The participants of this study were 204 adults (106 males, 98 females) of the baby boom generation, and the age range was 58 to 66 years. This study applied a 3-step latent profile analysis (LPA) to identify types of mental health status using the Depression, Anxiety and Stress Scale (DASS-21) and the Mental Health Continuum Short Form (MHC-SF). Participants completed a series of self-reported questionnaires measuring demographic variables, old age preparation, perceived social support, intimacy with a spouse, and intimacy with children as predictors, and negative and positive affect and successful aging as outcome variables.

### RESULTS

First, in the LPA, participants were classified into four subgroups: Class 1 (low symptoms & high well-being, 38.7%), Class 2 (high symptoms & low well-being, 12.8%), Class 3 (moderate symptoms & low well-being, 20.1%), and Class 4 (low symptoms & low well-being, 28.4%). The longer the time spent with the spouse, the larger the number of family members, the greater the satisfaction with income, and the higher the intimacy with children, the more likely they were to belong to the 'Class 1' than to 'Class 2'. Participants with higher perceived social support were more likely to belong to 'Class 1' or 'Class 4' than to 'Class 2'. It was found that participants of 'Class 1' experienced the most positive emotions and the least negative emotions, and reported successful aging. Conversely, participants of 'Class 2' experienced the most negative emotions and the least positive emotions, in addition to a low score in successful aging.

### CONCLUSIONS

The level of well-being was low for many elders. This study suggests that economic preparation for old age and intimate interpersonal relationships are main predictors of the flourishing lives of late midlife and early old age, and the flourishing group is more likely to achieve successful aging. This study also suggests that a cognitive-behavioural approach can be a good option for flourishing life in late midlife and early old age.

# POSTER SESSION 03

Abstract No.: 0909

## Mechanism of Action of 8-Week Mindfulness Based Intervention to Reduce Depression/Anxiety: Focusing on the Interaction Effect between Mindfulness and Self-Compassion

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### INTRODUCTION

Previous studies have examined the process variables in mindfulness-based interventions (MBI). The studies have focused on mindfulness and self-compassion (SC) as the major process variables. For example, Gu et al. (2015) have shown that an increase in mindfulness through MBI is a robust process variable in MBI, but they also point out the limitation that the finding was incompletely mediation. Kuyken et al. (2010) showed that an increase in SC by MBI predicted a decrease in depressive symptoms. On the other hand, some studies (e.g., Bergen-Cico & Cheon, 2013; Keng et al., 2012) did not show that an increase in SC by MBI predicted improvement in clinical outcome variables.

In Theravāda Buddhism, the roots of mindfulness interventions, mindfulness and SC are considered the two wheels of mindfulness practice (Prayuki, 2010). In addition, a lack of SC can lead to negative judgments that interfere with mindfulness practice because SC is the foundation of the nonjudgmental component of mindfulness (Hofmann, 2015). Therefore, it is necessary to examine not only the main effects of mindfulness and SC, but also the interaction effect between mindfulness and SC, which will contribute to a better understanding of the mechanism of action of MBI. Uchida et al. (2022) conducted a survey study to examine the interaction effect between SC behaviors and state mindfulness in daily life via the Ecological Momentary Assessment, and found that SC behaviors and state mindfulness had an interaction effect on mood. Thus, the purpose of this study is to examine the interaction effect between mindfulness and SC on depressive/anxiety symptoms in the MBI.

### METHOD

45 participants (female = 25, mean age = 44.20, SD =10.66) who complained of depression and/or anxiety participated in MBIs. For the purpose of this study, we conducted multiple regression analysis, the amount of change in mindfulness (The Five-Facet Mindfulness Questionnaire: FFMQ) (Sugiura et al, 2012) and SC (Self-Compassion Scale: SCS; Arimitsu, 2014) from pre-intervention to post-intervention (post-pre) were used as explanatory variables, and the amount of change in depressive symptoms (Beck Depression Inventory-II: BDI-II) (Kojima & Furukawa, 2003) and anxiety symptoms (State-Trait Anxiety Inventory-Form JYZ: STAI-JYZ) (Hitano et al., 2000) from pre-intervention to post-intervention (post-pre) were used as response variables. When the interaction effect between explanatory variables was indicated, simple slope analysis was used to visualize the pattern of interactions.

### RESULTS

Participants who dropped out or did not respond to the post-intervention questionnaire were excluded from the analysis. 38 participants were included in the analysis. Multiple regression analysis with  $\Delta$ BDI as the response variable showed a significant trend for a main effect of  $\Delta$ SCS and an interaction effect between  $\Delta$ FFMQ and  $\Delta$ SCS ( $\Delta$ FFMQ $\beta$  = -.46,  $p$  = .01  $\Delta$ SCS  $\beta$  = -.17,  $p$  = .34; interaction effect  $\beta$  = -.30,  $p$  = .04). Simple slope analysis showed that  $\Delta$ FFMQ significantly predicted  $\Delta$ BDI only when  $\Delta$ SCS was large (+1SD). Furthermore, multiple regression analysis with  $\Delta$ STAI as the response variable showed only a main effect of  $\Delta$ FFMQ ( $\Delta$ FFMQ $\beta$  = -.18,  $p$  = .25;  $\Delta$ SCS $\beta$  = -.56,  $p$  = .00; interaction  $\beta$  = -.02,  $p$  = .90).

# POSTER SESSION 03

## DISCUSSION

The results suggest that  $\Delta$ FFMQ predicted greater reduction in BDI-II when  $\Delta$ SCS was large than when  $\Delta$ SCS was small. Clients who complain of depressive symptoms are often in a state opposite to SC, such as preoccupation with self-criticism, guilt, and feelings of worthlessness. Such a state opposite to SC may interfere with mindfulness practice in MBI. Therefore, it may be effective for them to cultivate both SC and mindfulness to enhance the effects of MBI on depressive symptoms.

The results showed that only the main effect of mindfulness predicted the reduction in anxiety symptoms. MBI for anxiety emphasizes the acquisition of mindfulness skills that foster being receptively aware rather than attempting to control anxiety and worry directly (Goldin et al., 2017). To reduce anxiety in MBI, it may be better to focus on acquiring mindfulness skills to de-center anxiety and accept one's experiences.

# POSTER SESSION 03

Abstract No.: 0911

## Proposal for a New Approach to the Treatment of Obsessive-Compulsive Disorders Using Verbal Value Discounting

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### INTRODUCTION

In treating obsessive-compulsive disorder (OCD), many patients are reluctant to try conventional exposure response prevention (ERP) and those who do often discontinue treatment. It is also not easy to train therapists to become skilled in exposure therapy.

In OCD, washing and ruminating rituals are prolonged and frequent. Thus, interference of these compulsive behaviors is a priority. As the obstruction of compulsive behaviors inherently involves an exposure component, a small exposure task can be established simply by ensuring the obstruction. However, the prevention of rumination is difficult. As such, we have developed Verbal Value Discounting (hereinafter referred to as "Method") over 10 years to solve the above problems. We now propose it as a new approach to OCD treatment.

### METHOD

Specifically, the Method involves asking the patient to recall the obsession, such as "If I touch it, I will get sick", and to utter a broadly positive response, such as "Yeah, yeah", or "Oh, sure". The attitude when responding is also crucial; one should make fun of the obsession as to postpone the compulsive behavior for as long as possible. Here, obsessive thoughts should be addressed affirmatively, but behaviors do not need to be prevented. This Method can be taught and practiced in about 10 minutes of a session. The patient is encouraged to repeat the phrases as homework. Concurrently with the Method, patients may be given tasks to break the rules of ritualistic behaviors. It is recommended that the method be employed in initial stages of treatment. Exposure tasks can be set up afterwards if needed.

### RESULTS

After 1-2 weeks of practicing the Method, patients have reported that (1) their fear towards obsessions decreased, and (2) they began to find compulsive behaviors troublesome. Over several months, patients experienced changes in their intrusive thoughts and their obsessive-compulsive behaviors naturally declined. They also became more comfortable with trying tougher exposure tasks. Young patients (infant to elementary school age) were able to master this Method after only an initial interview and a few short sessions. It was also effective among adult patients for whom exposure-response interference at other hospitals had failed. Further, a therapist whose previous patients had all discontinued OCD treatment, saw success for the first time with this Method, witnessing a teenaged patient's symptoms halve after only three sessions.

### DISCUSSION

The purpose of this Method is to train the patient during the therapy session to separate their imagined thoughts from reality and form an attitude that discredits the value of the negative images they hold by offering a heedless verbal response to the obsessive verbal behavior. The Method prevents patients from fighting with or fleeing from their obsessions, contributing to symptom improvements. Compared to conventional ERP, this Method is easier and less overwhelming for patients to tackle. The same is true for the therapist, with it being easy to implement even for novice obsessive-compulsive therapists. In addition, it eradicates the need for the creation of an exposure hierarchy.

In our experience, higher-level tasks do not lead to a lasting result as patients may dissociate from the tough exposure experience. On the other hand, when tasks are too low-level, the patient can continue to avoid the cognitive load during exposures. In such cases, the patient's ruminations may gradually increase, leading to a severe relapse. Since obsessions are one of a patient's core beliefs that they find difficult to accept, they can only coexist by decreasing the value of the obsession. It follows that one possible treatment is to create a non-combative attitude as with our Method.

# POSTER SESSION 03

Abstract No.: 0916

## **The Efficacy of Brief Positive Cognitive Behavior Therapy Compared to Traditional Cognitive Behavior Therapy on Improving Well-Being and Goal Attainment**

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### INTRODUCTION

Positive CBT (P-CBT) has emerged as a the fourth CBT waive, based on critiques brought to traditional CBT (T-CBT) for being grounded in the deficit based medical model. We aim to identify which of the two CBT approaches P-CBT or T-CBT is more effective in terms of improving emotional states, performance and attitudes towards problems and goals in general population.

### METHOD

We conducted a randomized controlled trial with 38 healthy participants. Through simple randomization, participants were assigned one approach: P-CBT or T-CBT. Each participant received four weekly peer-therapy sessions of 30 minutes, and the outcomes were measured pre-, mid-, post-intervention and at two-month follow-up. For measuring the level of Distress and Positive Emotions, we used Profile of Affective Distress plus (PDA plus). Performance was measured with a Visual Analogue Scale (VAS). Attitudes towards problems and goals were measured using Solution Focused Inventory (SFI) which has three subscales: Problem disengagement (PD), Goal orientation (GO), and Resource activation (RA).

### RESULTS

We found no significant differences between groups across the outcomes at any time. The pairwise comparisons of the means in each group at each time point, revealed that the P-CBT approach had a statistically significant effect on improving Distress ( $d=.72$ ) and Goal Oriented ( $d=.45$ ) after the intervention ( $d=.72$ ), and on improving Performance at follow-up ( $d=.72$ ). The T-CBT approach had a significant effect on improving Distress ( $d=.56$ ) and Resource Activation ( $d=.65$ ) after the intervention, and at follow-up on Distress ( $d=.69$ ) and Performance ( $d=.88$ ).

### DISCUSSION

Our research found that P-CBT and T-CBT have similar efficacy levels, with specific effects on various outcomes. It might be that the P-CBT and T-CBT work differently based on the type of issue approached and future research will need to examine this hypothesis.

# POSTER SESSION 03

Abstract No.: 0929

## Effects of Self-Compassion and Self-Acceptance on Subjective Well-Being: Focusing on the Moderating Effect of Fear of Compassion

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### INTRODUCTION

Compassion-focused therapy (CFT) has evidence for treating depression, PTSD, social anxiety, bipolar disorder, and eating disorders (Gilbert & Simos, 2022). Self-compassion (SC), which involves treating oneself with compassion rather than blaming oneself for negative situations, is a key component of compassion (Neff, 2003). High SC is associated with better mental health, well-being (Barnard & Garbade, 2011), and subjective happiness (SH) (Arimitsu, 2014). Self-acceptance (SA) is similar to SC but has conceptual differences (Kitamura, 1997). Thus, SC might prompt SA and enhance SH. CFT suggests that some people do not respond well to SC, and these individuals may have high fears of compassion (FOC) (Gilbert, 2009). High FOC is associated with difficulties in being kind to oneself, high self-criticism, and shame (Gilbert, 2009), which can affect both SC and SA functioning. Therefore, in this study, we examined the effects of SC and SA on SH with FOC as a moderator variable.

### METHOD

A questionnaire survey was administered to 199 college students (83 males and 116 females, mean age=19.8, SD=1.27). Participants completed the following scales: (1) demographic data, (2) Japanese version of the Self-Compassionate Reactions Inventory (SC: Miyakawa & Taniguchi, 2016), (3) Fears of Compassion Scale Japanese version (FOC: Asano et al., 2017), (4) Self-Acceptance Rating Scale (SA: Sawasaki, 1993), and (5) Subjective Happiness Scale Japanese version (SH: Shimai et al., 2004). Factor analysis was conducted on the SARS. The high and low FOC groups were divided based on the mean of FOCS-J. Then, independent t-tests for SC, SA, and SH were performed. In addition, a hypothetical model was analyzed by Multi-group Structural Equation Modeling (MGSEM).

### RESULTS

Factor analysis on SARS revealed three factors: character self, affiliated self, and physical self. Correlation analysis showed associations between SC and SA ( $r=.33$ ), SC and SH ( $r=.48$ ), SC and FOC ( $r=-.38$ ), SA and FOC ( $r=-.38$ ), FOC and SH ( $r=-.37$ ), and SA and SH ( $r=.47$ ). T-tests with SC, SA, and SH as dependent variables revealed that the scores of the low FOC group were higher (all  $p<.05$ ).

RESULTS of MGSEM indicated that the hypothetical model was not sufficient, but goodness of fit indicators were acceptable (CFI=.85, RMSEA=.04). The low FOC group had a significant path from SA to SH (.64). On the other hand, the high FOC group had significant paths from SC to SH (.41) and from SC to SA (.47).

### DISCUSSION

The way each variable was related differed according to high and low FOC. In the low FOC group, the relationship between SC and SH was mediated by SA. In contrast, SC and SH were directly related in the high FOC group. This study suggests that the functions of SC and SA differ depending on FOC levels. Future studies should examine in detail the function of SC in different FOC groups.



# POSTER SESSION 03

Abstract No.: 0932

## Predictors of Treatment Dropout in OCD Patients in an Outpatient Clinic in Jakarta, Indonesia

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### INTRODUCTION

Despite the established effectiveness of Exposure and Response Prevention (ERP) in treating Obsessive Compulsive Disorder (OCD), a considerable percentage of patients drop out prematurely from treatment. Previous studies on the role of patient demographic characteristics such as gender, age, employment status, marital status in treatment dropout have found mixed results. Whilst previous studies found less severe OCD was associated with increased dropout rates, other studies suggested that levels of anxiety and depression were better predictors of dropout among OCD patients than MDD or GAD diagnosis. In this study, we aim to clarify existing predictors and examine other potential predictors.

### METHOD

Ninety eight OCD patient records at an outpatient psychological clinic in Jakarta, Indonesia were obtained. Patients were diagnosed with OCD by registered clinical psychologists, interviewed with the Yale-Brown Obsessive Compulsive Scale and had a minimum score of 8. The sample were 67.3% females (Mean age = 27.67, SD = 8.33, Range = 15-58). Thirteen met criteria for mild OCD, 45 had moderately severe, 32 had severe OCD, and eight had extreme severity. Treatment dropout was defined as patients who terminated their sessions with a clinical psychologist before completion of therapy (ERP). Sociodemographic variables (age, gender, prior visit to psychologist), clinician-related variables (patient-clinician gender match, clinicians' level of experience) and clinical variables (severity of OCD, severity of anxiety according to GAD-7, suicidal ideation) were investigated as treatment dropout predictors using logistic regression analyses.

### RESULTS

Sociodemographic variables (age, gender, prior visit to psychologist), clinician-related variables (patient-clinician gender match, clinicians' level of experience) and clinical variables (severity of OCD, severity of anxiety, suicidal ideation) did not predict dropout in OCD patients. Although around 50% of patients with severe OCD and extreme OCD terminated early, the likelihood of dropout was not significantly different from those with mild OCD at 38.5%. More than 39% of patients with mild anxiety, 46% with moderate anxiety, and 45% with severe anxiety did not complete the treatment, however they were not more significantly likely to drop out than those with no anxiety at 23%.

### DISCUSSION

We did not find age, gender, prior visit to psychologist, patient-clinician gender match, clinicians' level of experience, severity of OCD, severity of anxiety, and suicidal ideation to be predictive of ERP treatment dropout in Indonesian OCD outpatient private psychotherapy clinic settings. Previous studies that found severity of OCD and anxiety as predictors of dropout were conducted in an experimental setting and defined drop out based on the number of sessions, whereas our study involved patients who were inherently seeking treatment and defined drop out based on remission status. Because of these findings, there might be other factors unrelated to the patient and clinician characteristics that may predict patient remission status, including whether ERP is suitable for all OCD patients.

Keywords: dropout; exposure and response prevention; obsessive-compulsive disorder

# POSTER SESSION 03

Abstract No.: 0942

## The Likelihood of Panic Disorder Comorbidity According to Obsessive-Compulsive Disorder Severity in Obsessive-Compulsive Disorder Outpatient: An Indication of a Dose-Response Relationship

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### INTRODUCTION

Panic disorder is an anxiety disorder that is a common comorbidity among Obsessive Compulsive Disorder (OCD) patients (Torres et al., 2014). OCD patients often experience physical symptoms such as increased heart rate, dizziness, shortness of breath, and chest pain, which are all symptoms of panic attack. However, questions remain whether rates of panic disorder comorbidity differs according to levels of OCD severity. This study aimed to examine the likelihood of panic disorder based on OCD severity in OCD patients.

### METHOD

This study used medical records of patients diagnosed with OCD in an outpatient psychotherapy clinic in Jakarta, Indonesia. During the intake session, all patients completed the Patient Health Questionnaire (PHQ). One hundred and thirty participants (Mean age = 27.67 years, SD = 7.8, Range = 15-58 years, 66.2% female) who met the criteria of at least mild OCD according to the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989) were included in this research. Items measuring panic disorder from Patient Health Questionnaire (PHQ; Spitzer et al., 1999) were used to measure panic disorder and OCD severity was grouped according to the cutoffs from Y-BOCS. The minimum score of Y-BOCS that was included in this study was eight (mild OCD). Logistic regression was conducted to analyze the data.

### RESULTS

Forty six OCD patients (35.4%) met the screening criteria for panic disorder according to PHQ. The mean score of Y-BOCS was 23.21 (SD = 5.79). Twelve patients had mild OCD (9.2%), 57 (43.8%) had moderate OCD, 49 (37.7%) had severe OCD, and 12 (9.2%) had extreme OCD. There was a positive correlation between panic disorder and OCD symptoms,  $r = .23$ ,  $p = 0.009$ . Of the patients who had mild OCD, 8.3% met criteria for panic, while 31.6% ( $n=18$ ) of those with moderate OCD, 42.9% ( $n = 21$ ) of those with severe OCD, and 50% ( $n = 6$ ) of those extremely severe OCD met criteria for panic disorder. The extreme OCD severity patients have a higher likelihood to meet criteria for panic disorder in comparison to mild OCD patients (OR = 11.00,  $p = 0.045$ , 95% CI= 1.06-114.09), other comparisons were not significant.

### CONCLUSION

The findings show that extremely severe OCD symptoms increase likelihood for panic disorder in comparison to mild OCD symptoms in OCD patients. Although moderate and severe OCD do not significantly increase the likelihood for panic disorder in comparison to mild OCD severity in OCD patients, a dose-response relationship is observed between the percentage of those meeting the criteria for panic disorder and OCD symptoms severity. A dose-response relationship of panic disorder prevalence and OCD symptoms severity suggests that both disorders may influence each other. This supports the HiTOP categorization of OCD and panic disorders belonging to the same fear subfactor, and suggests that a reduction of symptoms in panic may lead to a reduction in OCD severity and the other way around.

Keywords: Obsessive Compulsive Disorder (OCD), Panic Disorder, Indonesia, PHQ, YB-OCS

# POSTER SESSION 03

Abstract No.: 0948

## Parenting Stress and Parental Depression: The Moderating Effect of Cognitive Emotion Regulation Strategies

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### INTRODUCTION

Parenting stress has been identified as one of the influencing factors of parental depression. Previous studies have found that cognitive emotion regulation strategies have an effect on the emotional impact of parenting stress (Miklósi et al., 2014), but few studies have considered both fathers and mothers in the family. This study aimed to explore the moderating role of maternal and paternal cognitive emotion regulation strategies between parenting stress and parental depression.

### METHOD

The Chinese version of Parenting Stress Index-Short Form (PSI-SF; Abidin, 1995), Cognitive Emotion Regulation Questionnaire (CERQ-short; Garnefski & Kraaij, 2006) and Self-rating Depression Scale (SDS; Zung, 1995) were administered to 930 pairs of parents (mother's mean age $\pm$ SD: 42.6  $\pm$  4.3, father's mean age $\pm$ SD: 44.5  $\pm$  4.5). The Chinese version of PSI-SF has consisted of 18 items, which was including assessing measures of 9 different cognitive emotion regulation strategies. PSI-SF can be divided into two subscales: executive strategies (i.e., positive refocusing, planning, positive reappraisal, putting into perspective and acceptance) and non-executive strategies (i.e., self-blame, other-blame, rumination, catastrophizing).

### RESULTS

The main effect of maternal parenting stress on maternal depression was significant ( $\beta = .52, p < .01$ ), and the main effects of maternal and paternal parenting stress on paternal depression were significant ( $\beta = .28, \beta = .35, ps < .05$ ). Maternal executive strategies weakened the relationship between maternal parenting stress and maternal depression ( $\beta = -.53, p < .05$ ), while maternal non-executive strategies enhanced the relationship ( $\beta = .52, p < .01$ ). Maternal executive strategies and non-executive strategies had a similar effect on the relationship between parental parenting stress and paternal depression ( $\beta = -.54, p < .01; \beta = .53, p < .01$ ). Paternal executive strategies weakened the relationship between paternal parenting stress and paternal depression ( $\beta = -.72, p < .01$ ), while paternal non-executive strategies enhanced the relationship ( $\beta = 1.12, p < .001$ ). Surprisingly, maternal non-executive strategies weakened the relationship between paternal parenting stress and paternal depression.

### CONCLUSION

Similar to previous studies, this study verified the moderating effect of cognitive emotion regulation strategies on the relationship between parenting stress and parental depression. For maternal depression, only their own cognitive emotion regulation strategies played a moderating role in the relationship of maternal parenting depression. But for paternal depression, in addition to their own cognitive emotion regulation strategies, the relationship was also moderated by maternal cognitive emotion regulation strategies. The results were consistent with the fathering vulnerability hypothesis (Cummings et al., 2010). Our results suggested that parents could adopt appropriate cognitive emotion regulation strategies to protect themselves from depression under parenting stress.

# POSTER SESSION 03

Abstract No.: 0962

## **Adapting and Delivering Trauma-Informed Resilience Curriculum to Address Pandemic-Related Stressors in Under-Resource and Minoritized Community: Experiences of Non-Clinical School Staff**

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### INTRODUCTION

The FOCUS (Families OverComing Under Stress) Resilience Curriculum (FRC) is a trauma-informed, classroom curriculum with components of cognitive-behavioral therapy (CBT) developed through a community-academic partnership to bolster coping skills in schools. This study examines one large urban school district's efforts to adapt and deliver the FRC to meet the needs of predominantly under-resourced and minoritized students and parents/caregivers during the pandemic, by training non-clinical school staff to deliver the FRC.

### METHOD

We conducted 7 hour-long semi-structured focus groups with 26 non-clinical school staff from June 2021 to October 2022. The focus groups explored the virtual adaptation and implementation of the FRC and the responses of students and parents during the COVID-19 pandemic. Focus groups were transcribed, analyzed using content analysis, and coded with Dedoose.

### RESULTS

Focus group findings revealed that the students and families experienced illness and loss as well as economic hardships due to COVID-19. Students and families that were already experiencing hardships before the pandemic were even more impacted, and students had difficulty transitioning from online to in-person school and staff struggled with school refusal. Staff reported that skills such as managing stress, emotional regulation, and feelings detection with the use of a "Feeling Thermometer" were helpful for students and for teachers to use in the classrooms. As students returned to school and had to cope with grief and loss from the pandemic, staff also found focusing on deep breathing exercises and creative adaptations of interactive activities, such as jumping in and out of hula hoops to identify a what they can and can not control, to be effective in the classroom. Staff felt that the model should be shared more widely with teachers and parents to deal with pandemic-related stressors.

### DISCUSSION

Schools can play a significant role in addressing the pandemic-related mental health, grief, and trauma of students and families. Training non-clinical school staff to deliver the FRC offers a promising way to increase access to mental health care for students and their families. Our findings can inform best practices for delivering school-wide coping and resilience building programs through non-clinical school staff.

# POSTER SESSION 03

Abstract No.: 0987

## **Predicting Nonsuicidal Self-Injury and Suicide Attempt Based on Psychological Scales Using Multivariate Analyses**

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In efforts to better understand and prevent nonsuicidal and suicidal attempts, numerous scales have been developed to assess the underlying concepts or gradations, such as emotion regulation or belief in clinical trials. In this study, we tested whether the scales could successfully predict nonsuicidal self-injury behavior and suicide attempt behavior, as well as beliefs about nonsuicidal self-injury and suicidal attempts. 328 Korean adults participated in our online survey. The five scales used in this study were the Difficulties in Emotion Regulation Scale, the Korean Version of the Interpersonal Needs Questionnaire, the Nonsuicidal Self-Injury Belief Scale, the Self-Harm Inventory, and the Suicide Attempt Beliefs Scale. Classification analyses using Support Vector Machine model were conducted with the scales as features and the nonsuicidal and suicidal beliefs and nonsuicidal and suicidal attempts as classes. The results showed that all four classes were successfully predicted based on individual scales as well as a combination of scales. Generally, we found better prediction accuracies in classifying the attempts than the beliefs. Our results suggest possible self-injury screening via psychological factors such as interpersonal relationships, emotional status, and general ideas about self-injury with potential applications to prevention and psychotherapeutic response for patients.

# POSTER SESSION 03

Abstract No.: 1009

## Validation of the Korean Version of the Personalized Psychological Flexibility Index

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### INTRODUCTION

The purpose of this study is to test the validity of the Korean version of the Personalized Psychological Flexibility Index (PPFI) developed by Todd B. Kashdan (2020).

### METHOD

An exploratory factor analysis was conducted on 300 adults, suggesting that the same three-factor model structure as the original scale was supported. As a result of conducting a confirmatory factor analysis on 228 adults, the model fit was good, confirming the structure of the three factors of the Korean version of psychological flexibility scale.

### RESULTS

The Korean version of the Personalized Psychological Flexibility Index was positively correlated with psychological well-being, satisfaction with life, and meaning in life, and was negatively correlated with depression, anxiety and stress, verifying construct validity. In addition, a hierarchical regression analysis showed the incremental validity of the index, suggesting that the construct of psychological flexibility is well discriminated from the K-AAQ-II. Overall, these findings indicated that the Korean version of the Personalized Psychological Flexibility Index is a reliable and valid tool for measuring the concept of psychological flexibility.

### DISCUSSION

This study ends with a discussion of the implications, limitations and directions for future research.

## Childhood Trauma and Eating Pathology: Loneliness and Emotion Dysregulation as Sequential Mediators

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Childhood trauma is known to be a risk factor for the development of eating pathology (Burns, Fischer, Jackson, & Harding, 2012). Previous literature highlights loneliness and emotion dysregulation as contributors to eating disorders (Burns et al., 2012; Levine, 2012). Childhood abuse was found to predict loneliness (Başoğlu, 2019), and experiencing loneliness is associated with eating pathology (Pritchard & Yach, 2009). In addition, the emotion regulation hypothesis of eating disorder development proposes that individuals may engage in pathological eating behavior to distract themselves from negative emotions (Heatherton & Baumeister, 1991; Overton et al., 2005). This model states that disordered eating behavior is a maladaptive way to cope with negative emotions (Burns et al., 2012). Emotion dysregulation plays an important role in the association between childhood trauma and psychopathology, such that individuals who had experienced childhood trauma tend to use more maladaptive strategies (Miu et al., 2022). Indeed, deficits in emotion regulation mediated the relationship between child abuse and eating disorder symptoms in empirical studies (Burns et al., 2012; Rabito-Alcon, Baile, & Vanderlinden, 2021). Considering that individuals perceiving higher levels of loneliness are at higher risk for emotion dysregulation (Baumeister, DeWall, Ciarocco, & Twenge, 2005), loneliness may be an antecedent factor to emotion dysregulation. However, some studies have also found support for the opposite direction such that emotion dysregulation predicted subsequent levels of loneliness (Preece et al., 2021; Southward et al., 2014). Thus, this study examined the relationship between childhood trauma and eating pathology, focusing on the possibility that loneliness and emotion dysregulation may serve as sequential mediators in this association.

Participants included 336 adults (169 males, 167 females; mean age = 39.22) in South Korea recruited for a joint study examining cross-cultural differences in predictors and mechanisms of problem behaviors. Participants completed self-report questionnaires of childhood trauma (K-CTQ; Bernstein et al., 2003; Yu, Park, Park, Ruy, & Ha, 2009), loneliness (UCLA-3; Russell, 1996; Jin & Hwang, 2019), emotion dysregulation (DERS-SF; Kaufman et al., 2016), and eating pathology (K-EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982; Rhee et al., 1998). Two sequential mediation models that included loneliness and emotion dysregulation as mediators in the association between childhood trauma and eating pathology were tested. The two models differed in the order of mediators (i.e., loneliness, emotion dysregulation) included. The models were analyzed using SPSS Process Macro. The results indicated that loneliness and emotion dysregulation sequentially mediated the association between childhood trauma and pathological eating. However, the sequential mediation that included emotion dysregulation preceding loneliness was not significant. Specifically, in both models, emotion dysregulation significantly mediated the relationship between childhood trauma and eating pathology. Loneliness did not mediate the association of childhood trauma and pathological eating, but became associated with eating pathology indirectly via its effect on emotion dysregulation.

This study suggests that childhood trauma may become associated with heightened risk for eating pathology via increased levels of loneliness and emotion dysregulation. Our findings highlight loneliness and emotion dysregulation as potential targets for the effective prevention of pathological eating who had experienced childhood trauma. This study adds support to the literature that emphasizes emotion dysregulation as an important factor in eating pathology and is consistent with addressing emotion dysregulation in CBT of the transdiagnostic model for eating disorders (Trompeter, Bussey, Forbes, & Mitchison, 2021).

## Meaningful Activities Design and Implementation for People with Dementia: Insights from Cognitive Therapy

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Meaningful activity is a vital component of psychological well-being among individuals with dementia, and previous studies and reviews have demonstrated its numerous benefits like reducing behavioural and psychological symptoms of dementia, and improving the quality of life (Roland et al 2015; Jones et al 2020; Möhler et al 2020). Thus, encouraging individuals with dementia to participate in meaningful activities is essential. However, some individuals may resist such encouragement, making it critical to identifying their underlying motivations for engaging in different meaningful activities. Earlier study interviewing people with dementia indicated they long for feelings of connectedness, including connection to self, others and environments (Han et al 2015). From the perspective of recovery-oriented cognitive therapy, the engagement of the activities that leads to connection will put the individuals with dementia in an adaptive mode, that further promotes their wellbeing and reduces the neuropsychiatric symptoms.

Qualitative study of individuals with dementia have highlighted that they often experience a disrupted sense of self, disrupted relationship with others, and a disrupted sense of the surrounding world (Wijngaarden et al 2019). These disruptions generally correspond to the cognitive triad concept (Tay et al 2023). Reminiscence therapy, as an intervention for individuals with dementia, has been shown to be promising in Cochrane review (Woods et al 2020). From the perspective of cognitive therapy, the process of delivering reminiscence therapy (noticing their "at-their-best" moments) offers a window for therapists to hypothesize cognitive conceptualization diagrams for individuals with dementia. This process will allow us to identify underlying core beliefs such as effective/helpless, lovable/unlovable, and worthy/worthless among individuals with dementia.

This paper aims to discuss the potential relevance and usefulness of core beliefs, cognitive conceptualization, and recovery map concepts in the design and implementation of meaningful activities for individuals with dementia. A cognitive therapy-informed person-centred care approach that considers individual preferences and motivations for meaningful activities will be emphasized, allowing for the creation of tailored programs that promote enhanced well-being among individuals with dementia.



# POSTER SESSION 03

Abstract No.: 1067

## Internal and External Factors to Consider in Practicing Psychotherapy with Popular Artist Clients

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Popular artists face a unique set of strength and challenges throughout their career. Studies focusing on exploring personality traits of popular artists are relatively consistent in reporting higher neuroticism (Cribb & Gregory, 1999; Gillespie & Myers, 2000; Nettle, 2006; Rankin, 2005), perfectionism (Mor, Day, Flett, & Hewitt, 1995; Rankin, 2005; Stoeber & Eismann, 2007) and lower interpersonal competence (Cooper & Wills, 1989; Kim, 2019). Another line of studies suggests common obstacles popular artists face due to the unorthodox job environment such as low income stability and social isolation (Dews & Williams, 1989; Dobson, 2011; Getzels & Csikszentmihalyi, 1978). However, there has been little attempt to replicate these results in Korea or discuss on implementing research results into the therapeutic process. Therefore, the current study aimed to explore personality and environmental factors of Korean popular artists and its relationship to psychological maladaptation.

A total of 110 popular artists - 51 musicians and 59 actors and actresses - were included in the study. 98 non-art major university students were included as a control group. The following inventories used were all translated and validated in Korean. Inventories used to measure personality factors were: the International Personality Item Pool to measure the Big-5 personality dimension (Guay et al., 2013), Multi-dimensional Perfectionism Scale to measure perfectionism (Han, 1993), and Interpersonal competence Questionnaire to measure interpersonal skills (Han & Lee, 2009). Inventories used to measure environmental factors were: the Multidimensional Scale of Perceived Support to measure perceived social support (Shin & Lee, 1999), and whether the artist belonged to an agency to measure income stability. Psychological maladaptation was measured using: the Center for Epidemiological Studies – Depression Scale to measure depression (Jeon, Choi & Yang, 2001), state anxiety items of the State-Trait Anxiety Inventory (Form Y) to measure anxiety (Han, Lee & Jeon, 1995), and Satisfaction With Life Scale to measure general well-being (Cho & Cha, 1988). A comparison between popular artists and non-artists were analysed using independent sample t-tests. Correlational analysis was used to examine the relationship between personality, environment factors and psychological maladaptation of popular artists. Cut off point for statistical significance was set at  $p < .05$ .

Results showed that popular artists scored significantly higher in conscientiousness and openness to new experience, other-oriented perfectionism (expecting others to be perfect), depression, and anxiety. They also reported significantly lower interpersonal competence, perceived social support and life satisfaction. Although there was no significant difference compared to the control group in neuroticism, self-oriented perfectionism (expecting oneself to be perfect) and socially prescribed perfectionism (believing that others expect one to be perfect), popular artists still scored significantly higher when compared to control groups of other studies using identical inventories. In addition, within the popular artist group neuroticism and all forms of perfectionism were positively correlated to depression, anxiety and negatively correlated to life satisfaction, while interpersonal competence had a reversed relationship with these factors. Perceived social support was also negatively correlated with depression and anxiety, while being positively correlated with life satisfaction. Income stability was found to only be positively correlated with life satisfaction.

The results most importantly hint on common psychological features and problems that popular artists possess compared to non-artists. For example, high levels of conscientiousness and openness to new experience can be considered in a positive psychotherapy program for artists where they can identify and reinforce these internal resources as protective factors. Another implication is derived from high other-oriented perfectionism, on how perfectionism is manifested within the popular art industry where groupwork is very common. Therefore, a group-based intervention targeting perfectionism in popular art teams such as bands or performers that focuses on lowering and communicating high standards towards each other may prove to be effective. Further implications and limitations are also discussed in detail.

## The Effect of Cognitive Behavioral Therapy in Attention Deficit Hyperactive Disorder(ADHD) Children: A Case Report Study

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### BACKGROUND

Attention deficit/hyperactive disorder(ADHD) is a type of neurodevelopmental disorder that mainly characterized by symptoms with attention deficit, hyperactive, impulsivity.

Resulting in issues with study, work and social interaction (Berger et al., 2017). Cognitive behavioral therapy(CBT) is one effective way to reduce symptoms and relapse rates, and the conceptualization framework preceded the development of therapeutic strategies (Beck, 2005). However, base on psychological assessment combining case formulation to design psychological intervention with ADHD patients is still a lack of development and clinical studies. The objective of this article is to discuss the effect of CBT which base on assessment and case conceptualization to create an intervention on a clinical case study.

### METHOD

Patient is a 8-year-old boy, single child and currently studying in second grade. The overall assessment for the patient had shown overt ADHD symptoms, self-harm, emotional instability, suicidal behavior and thought. Intervention for the patient had four phases, which during first and final phase of the intervention patient will be assessed by MOXO-CPT, Swanson, Nolan and Pelham-IV rating scales(SNAP-IV), Parent Symptoms Questionnaire (PSQ) and Questionnaire-Children with difficulties (QCD) for the result.

### RESULT

In first phase, the intervention began before the diagnoses, patient showed self-harm and suicidal thought, MOXO-CPT showed sever difficulty in timeliness( $z = -2.75$ ) and attention( $z = -1.233$ ) which both lower than the norm, medium level of hyperactive( $z = -0.788$ ) and high level of impulsivity( $z = 0.00$ ), assessment with SNAP-IV, QCD and PSQ showed clear ADHD symptoms and poor parent-child relationship. During the intervention and in phase two and phase three, patient showed significant improvement in emotional stability, parent-child relationship. In final phase, patient's situation had continuously improved. Patient's emotional state had stabilized, showing all most no signs of hyperactive behavior and impulsive action. Patient's MOXO-CPT result showed slight lower level of attention( $z = -1.365$ ) and timeliness( $z = -1.313$ ) and high level of impulsivity( $z = 0.00$ ) and hyperactive( $z = 0.00$ ). The assessment in SNAP-IV, PSQ and QCD, the patient showed no symptoms of ADHD and difficulties in daily life, however according to PSQ the patient still has some of psychosomatic disorder which will be needed for attention afterwards.

### DISCUSSION

during each phases the intervention programme were adjusted depending on the situation with the patient, for example between phase two and three the patient showed unwillingness to go back to school and self-inflicted injury because the patient thought he was abandoned by his parents. After the adjustment and intervention, patient had stopped using medication for mood disorder and willing to go back to school. During the parenting guidance arranged by the psychotherapist, the patient's situation, school environment and family environment had been evaluated. The main focus during the intervention is to use CBT such as cognitive reappraisal, collaborative problem solving and positive reinforcement, for parents to acknowledge and understand the problems now patient was facing. In order for parents to better the environment to be more supportive and encouraging for the patient. After all the intervention, although we have faced lots of challenges during each phases, but the conceptualization helps psychotherapist to have quick and better understanding for the patient, in this case the psychotherapist is quick to adjust the intervention programme for an ADHD patient. The patient was diagnosed with ADHD, and was taking medication for mood disorder and ADHD, however after phase one and two intervention, the medication for mood disorder was stopped under supervision and the result of the patient is significant, thus it shows the importance and effectiveness of combining case conceptualization in CBT with ADHD therapy.

# POSTER SESSION 03

Abstract No.: 1084

## Parenting Buffers the Influence of Socioeconomic Status on Grit

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### INTRODUCTION

Grit – a passionate perseverance toward long – term challenging goals – importantly contributes to mental health. Studies have documented positive associations between grit and subjective well-being, and grit is highlighted as a protective factor against the negative consequences of adversity on mental health. However, the factors involved in the development of this pivotal psychosocial resource remain unclear. Two oft-cited factors that contribute to grit are socioeconomic status (SES) and parenting practices. However, the empirical evidence supporting the influence of these factors remain weak. Several studies reveal null correlations in the SES/parenting - Grit relationship. Therefore, we sought to clarify the influence of parenting and SES, on grit, by examining whether these two factors interact to influence grit.

### METHODS

With a sample of 300 students from a university in Singapore (Mage = 21.15, sd = 1.91; 78% female, 20.7% male, 1.3% non-binary), we examined whether authoritative parenting (a positive parenting practice) moderates the influence of SES on grit. As SES engenders objective and subjective dimensions, we examined the influence of each dimension on grit. Objective SES was measured using income, while subjective SES was measured using the MacArthur ladder (Adler et al., 2000). Grit was measured using the 6-item persistence subscale of Duckworth's Grit scale. Authoritative parenting was measured by asking students to rate each parent on the 10 – item authoritative parenting subscale of the Parental Authority Questionnaire (Baumrind, 1971). A composite authoritative parenting score was then derived by summing the scores of both parents. We controlled for several covariates such as physical health, age, and sex.

### RESULTS

While there was no main effect of SES (both objective and subjective) and parenting on grit, we found a significant interaction between parenting and SES. Specifically, at lower levels of parental authoritativeness, low SES had a detrimental effect on grit. However, at higher levels of parental authoritativeness, SES no longer had an influence on grit. This pattern of results was found for both objective SES (income) and subjective SES.

### DISCUSSION

These results reconcile the existing theories on grit with the discrepant empirical findings. On the one hand, they provide support for theories alluding to the deleterious (positive) effects of low (high) SES on grit. On the other, these findings emphasize that the detriments (benefits) of SES can only be observed in circumstances where one does not experience protective factors (e.g., positive parenting practices) that buffer its impact. This sheds light on a boundary condition of existing theories, and thus explains the existing null correlations in the SES/parenting - grit literature. Most importantly, this study provides practical insights on how parenting interventions can be an effective tool in tackling status-related inequalities in grit, and consequently, mental health.

## **The Effects of Elderly Discrimination Victim Experiences on Loneliness: the Double Mediating Effect of Avoidance Coping Strategies and Self-Compassion**

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### INTRODUCTION

As populations around the world are aging, ageism has emerged as an important social issue. Over 400 studies from 45 countries confirm that 95% of age discrimination significantly impedes elderly health (Chang et al, 2020). Experiencing discrimination can limit social interaction (Chen & Yang, 2014) and lead to loneliness (Pelow et al., 2006). Coping strategies to counter perceived discrimination are noteworthy for older adults. Elderly individuals, due to frequent and long-term experiences of discrimination, are likely to voluntarily withdraw from participating in society by shrinking or avoiding opportunities for engagement. Conversely, self-compassion offers protection against loneliness (Akin, A., 2010) and helps cope with the loss of resources and cognitive difficulties during the aging process (Allen & Leary, 2014). Furthermore, meta-research on the relationship between self-compassion and coping found a positive correlation between emotion-focused coping strategies, such as positive reframing, and problem-focused coping strategies (Ewert et al., 2021). This study aims to confirm the mediating effect of avoidance coping strategies and self-compassion in the relationship between experiences of discrimination and loneliness among the elderly.

### METHOD

An online survey was conducted on 450 elderly people aged 65 years or older. Discrimination victim experience was measured using a scale developed and used by the National Human Rights Commission of Korea. To measure self-compassion, a scale developed by Neff (2003b) and adapted and validated in Korean by Kim Kyung-eui et al(2008) was used. The avoidance coping strategy scale was developed by Carver, Scheier, and Weintraub(Carver et al., 1989), and the scale adapted by Ha Seung-soo and Kwon Seok-man(2011) was used. The loneliness scale used the Korean version of the UCLA scale. The double mediation effect was analyzed for the data of 439 people, excluding 11 people who gave insincere responses.

### RESULTS

As a result of the double mediation analysis, the regression model for the dependent variables, experience of discrimination against loneliness, coping with avoidance, and self-compassion, was also statistically significant( $F=89.34, p<.001$ ), and the explanatory power of the model was verified to be 38%. As a result of the verification of the dual mediation model, the explanatory power increased when the parameters avoidance coping strategy and self-compassion were not input, and it was statistically significant( $B=.12 \rightarrow B=.29$ ). At this time, discrimination victim experience( $B=.12, p<.05$ ) and avoidance coping strategies( $B=.42, p<.001$ ) showed a positive influence, but self-compassion( $B=.60, p<.001$ ) showed a negative effect.

### DISCUSSION

Experiences of discrimination affect loneliness through avoidance coping strategies. This supports Richman and Leary's (2009) model of discrimination and stigma, suggesting that individuals who experience chronic discrimination may engage in withdrawal and avoidance behaviors to protect themselves from further harm. In this context, our findings indicate that the elderly, when faced with discrimination, may rely on avoidance coping strategies, ultimately leading to increased loneliness. Therefore, when loneliness increases due to discrimination experiences, the effectiveness of interventions modifying coping strategies can be anticipated. Upon verifying the dual mediating effect, the mediating effect of self-compassion ( $B=.60, p<.001$ ) was found to be relatively greater than that of avoidance coping strategies ( $B=.42, p<.001$ ). These effects align with the findings that self-compassion buffers negative emotions in stressful

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situations (Neff & Peterson, 2010) and fosters efficient behavior by promoting clear self-perception (Gilbert, 2005). Self-compassion can be particularly important for older individuals experiencing negative life events, as it alleviates suffering (Allen et al., 2012). In this regard, compassion-centered therapy was confirmed to have a significant impact on the sedation and stability system among emotional regulation models (Gilbert, 2009). This study highlights the need for measures to reduce clients' avoidance coping strategies and promote self-compassion to address the issue of discrimination victimization leading to loneliness.

## Effect of orientation to Happiness on Elder's Well-Being: The Mediation Effect of Grit

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### INTRODUCTION

Happiness is the ultimate goal of life that everyone wants (Sung & Yoon, 2010), and the same applies to elders. As the elderly population aged 65 or older in Korea is expected to continue to increase (National Statistical Office, 2022), it requires to improve the understanding of elders and promote intervention on their well-being. Previously, Hwang & Kim(2009) explained that to approach happiness and well-being, we must first understand individual's orientation to Happiness. Orientation to happiness can be divided into three tendencies: the pursuit of pleasure, meaning, and engagement (Peterson, Park, & Seligman, 2005).

According to Borghans et al. (2008), individual's goals or tendencies can be influenced by their passion and persistence to accomplish something. Based on it, we recalled Grit as a corresponding concept. Grit is passion and perseverance for long-term goals (Duckworth, & Peterson, 2007). Many studies have reported the positive effects of grit in life such as self-efficacy, resilience, and life satisfaction (Lee et al., 2017; Duckworth, et al., 2007) which have been considered important to the life of elders. In particular, a study by Smith et al. (2020) reported that Grit is highly correlated with self-reporting attention, especially flow, an engagement.

Based on these studies, this study aims to examine the effect of orientations to happiness on well-being and the mediating effect of Grit in elderly people.

### METHOD

The subjects of this study were 420 elders aged 65 or older. First, the Orientation to Happiness Scale developed by Peterson, Park & Seligman (2005) and adapted by Hwang & Kim (2009) was used to evaluate the tendency to pursue happiness ( $\alpha=.74$ ). To measure individual well-being, we used both subjective and psychological well-being scales. First, the Korean Happiness Index Scale developed by Seo et al. (2010) was used to measure subjective well-being ( $\alpha=.91$ ). Then, psychological well-being was measured by Ryff (1989)'s scale which was reconstructed by Cho(2007) ( $\alpha=.81$ ). Grit, a mediating variable was measured through Grit-S (Duckworth & Quinn, 2009) which was modified by Ha et al. (2015) ( $\alpha = .71$ ).

### RESULT

For the first, Pearson correlation analysis was conducted. The results of the pursuit of meaning, and engagement showed a significantly positive (+) correlation with grit and well-being. On the other hand, in pursuit of pleasure, no correlation was reported with maintaining interest, which is a sub-variable of grit. Also, the pursuit of pleasure ( $r=.173, p<.001$ ) had a lower correlation with grit than the pursuit of meaning ( $r=.418, p<.001$ ), and engagement ( $r=.420, p<.001$ ). The same pattern was shown in the dependent variable, well-being. Grit, a mediating variable in this study, showed a significant positive correlation with well-being ( $r=.492, p<.001$ ).

To analyze the mediating effect of grit, Process macro Model 4 of SPSS 27.0 was used. As a result of bootstrapping to verify the statistical significance of the indirect effect, the mediating effect of grit was found to be statically significant since 0 was not included in the 95% confidence interval of the indirect positive effect (Shrout & Bolger, 2002). The mediating effect of grit was reported the most in the pursuit of engagement ( $\beta=1.148, CI[0.887, 1.431]$ ), and the pursuit of meaning( $\beta=.934, CI[0.716, 1.170]$ ), and the pursuit of pleasure( $\beta=.487, CI[0.207, 0.768]$ ) was followed by.

### DISCUSSION

First, this study is meaningful as it expanded Grit to elders, which has been mainly studied for the young. Also, the correlation and indirect effect between grit and well-being support existing studies (Lee et al., 2017; Duckworth, et al., 2007) that grit has a positive effect not

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only in learning but also in various areas of life. This suggests that grit can effectively correlate with the broader age group, including the elderly, and more diverse variables.

Second, the fact that the pursuit of pleasure reports a lower correlation with grit and well-being than the pursuit of meaning or engagement emphasizes the importance of allowing the elderly to find the meaning in life and experience engagement rather than just having primary pleasure. Furthermore, the statistically significant mediating effect of grit suggests that such meaningful and engaged experiences of elders should be accompanied by maintaining interest and continuing efforts for it. With this study, we recommend considering the importance of Grit, the importance of perseverance for the elderly. This perspective can suggest enlighten insight on adapting Cognitive-Behavioral Therapy to the elders.

# POSTER SESSION 03

Abstract No.: 1104

## The Influence of Gerotranscendence on Subjective Well-Being through Death Anxiety: Moderated Mediating Effect of Difficulty of Emotion-Regulation

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### INTRODUCTION

Understanding the factors influencing the subjective well-being of the elderly is important since life expectancy in Korea is increasing (Nam, Kim, 2022). According to Tornstam (2005), reaching the gerotranscendence can lead to the discovery of more profound meaning and purpose in one's life, enhanced positive perceptions, and increased subjective well-being. According to Yalom (1980), it is crucial to courageously face and accommodate the conditions of existence, such as death, loneliness, and meaninglessness. When the gerotranscendence is fulfilled and life is integrated into something meaningful, regrets can be reduced and death anxiety can be positively affected (Kwon, 2019). Therefore, it is necessary to study how gerotranscendence affects subjective well-being through fear of death. Furthermore, since attitudes toward death influence the experience of day-to-day life (Cho, 2021), we hypothesized emotion regulation as a possible coping method to face anxiety for the elderly. can change how people deal with life (Cho, 2021), this study focused on the level of difficulty of emotion-regulation. According to the aging paradox, the elderly degenerate cognitively and physically, but not emotionally (Mather, 2012). Therefore, we tested the effect of gerotranscendence on subjective well-being through death anxiety depending on the level of difficulty of emotion-regulation.

### METHOD

A questionnaire survey was conducted on 300 elderly people aged 65 and over. For Subjective well-being, we used the Korean version of PGCMS from Yoo et al. (2012). For gerotranscendence, the Korean version of Erikson's 9-point scale from An(2014). For death anxiety, we used the Korean translation of Fear of Death Scale from Seo (1987). For emotion-regulation difficulties, the K-DERS scale of Cho (2007) was used. Excluding 4 outliers, 296 data were analyzed for mediation and moderated mediation effects.

### RESULTS

As a result of mediation effect analysis, gerotranscendence had a significant effect on death anxiety( $B=-0.559$ ,  $t=-5.276$ ,  $p<.001$ ) and subjective well-being( $B=0.145$ ,  $t=2.149$ ,  $p<.001$ ). Death anxiety had a significant effect on subjective well-being( $B=-0.13$ ,  $t=-3.6$ ,  $p<.001$ ). Analysis of the moderated mediation effect was statistically significant with an moderated mediation effect index of 0.002 and no zero between the lower and upper limits with a 95% confidence interval.

### DISCUSSION

Gerotranscendence affects subjective well-being through death anxiety. This result ties in with the existentialist perspective (Shin, 2018), emphasizing the integration of death as part of life for quality of life in the elderly. More research is needed for achieving gerotranscendence as it promotes a positive vision of aging and death, focusing on the natural development in old age. These indirect effects varied according to level of difficulty in emotion-regulation. Our result emphasizing coping with of death anxiety is in parallel with the view that most psychopathologies result from inadequate defenses against death anxiety (Kwon, 2019). Also, our result is supported by previous studies that death anxiety is with most anxiety disorders (Iverach, Menzies, & Menzies, 2014) and that deficits in emotional regulation may lead to various psychopathologies (Gross & Munoz, 1995). Gerotranscendence is not a stage that all older people can reach. However, older adults are more motivated to maintain positive emotions and recruit more cognitive resources (Mater, 2012), improving their ability to regulate emotions. Cognitive-behavioral therapy could therefore be used in older adults. In this study, we proposed a **METHOD** to manage death anxiety through emotional regulation and maintain subjective well-being even for those with low gerotranscendence



# POSTER SESSION 03

Abstract No.: 1106

## The Effect of Savoring Belief on Depression of Elder's: The Mediating Effect of Gratitude Disposition

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### INTRODUCTION

In old age, many experiences of loss can lead to depression (Han Suk-won, 2014). According to the perspective of the growth model of depression, it is necessary to cultivate strengths and abilities to pursue positive mental health (Kwon Seok-man, 2008). In this regard, we would like to increase our understanding of positive variables that can reduce depression. One of the positive psychological variables in relation to depression is "Savoring" that deliberately make efforts to amplify and sustain happiness by being aware of positive experiences and feeling them fully.(Bryant & Veroff, 2007; 2003). The elderly tend to prefer low or moderate emotional stimulation than intense emotional stimulation(Keil & Freund, 2009; Grün & Scheibe, 2008). Previous studies have shown that the higher the savoring ability of the elderly, the higher the satisfaction and happiness and the lower the depression(Smith & Hollinger Smith, 2015; Bryant, 2003). It can be seen that research on the savoring belief for the elderly is essential. Gratitude is a generalized tendency to recognize and respond with thanks to other people's contributions in positive experiences or positive results(McCullough, Emmons, & Tsang, 2002). Previous researches(McCullough et al., 2002) have shown that people with high gratitude disposition have lower levels of depression. In view of the effectiveness of Gratitude, Gratitude improve social resources such as social behavior(No Ji-hye et al, 2011), and lower negative emotions such as anxiety and depression(Watkins, Woodward. et al, 2003). In this regard, gratitude disposition can be expected to be an important mediary in increasing savoring beliefs and relieving depression.

### METHOD

An online research survey company was conducted on 300 elderly people aged 65 and over. An analysis was conducted on a total of 297 people who removed abnormal values. For savoring belief, we used the Korean version of SBI from Cho Hyun-seok et al(2010). For gratitude disposition, we used the K-GQ-6 from Kwon Sung-joon et al(2006). For depression, we used the GDS-SF-K from Ki Baek-seok et al(1996). Data were analyzed for mediation effect. The collected documentation was analyzed using SPSS 25.0 and SPSS Process Macro.

### RESULT

As a result of correlation effect analysis, savoring belief had a static significant on gratitude disposition( $r=.710$ ,  $p<.01$ ). and depression ( $r=.545$ ,  $p<.01$ ). And gratitude disposition also had a significant effect on depression ( $r=-.562$ ,  $p<.01$ ). As a result of the mediation effect analysis, the Total effect of the savoring belief on depression( $B=-.11$ ,  $t=-11.15$ ,  $p<.001$ ) was statistically significant and no zero between lower and upper limits  $[-.13, -.09]$  with a 95% confidence interval. The indirect effect was statistically significant with mediation effect of  $-.05$  and no zero between lower and upper limits  $[-.07, -.03]$  with a 95% confidence interval.

### DISCUSSION

It is meaningful that there have been few studies examining savoring belief and depression on the elderly in existing studies. It was consistent with the results of previous studies(McCullough et al., 2002) that people with high gratitude disposition had lower levels of depression. In order to reduce depression in the elderly, it is necessary to develop cognitive behavioral training methods and programs in terms of positive psychology that can promote savoring belief and gratitude. In the future, It needs to further study a cognitive approach that can maintain and develop savoring belief.

# POSTER SESSION 03

Abstract No.: 1125

## Multiple Case Studies on the Intervention and Change Process of Eating Disorder Through Cognitive-Behavioral Family Therapy

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### OBJECTIVES

This study aimed to demonstrate the stages of family therapy intervention and change process, focusing on the cases of cognitive-behavioral family therapy for 4 clients with eating disorder.

### METHOD

This study applied a case study **METHOD** that can understand the dynamics and interactions surrounding the research participants. We used a thematic to explore the stages of family therapy intervention and change process of clients with eating disorder.

### RESULT

The study revealed the stages of family therapy intervention and change of clients with eating disorder as follows: (1) exploring and recognizing the problem, (2) understanding the system, (3) practicing new communication patterns, (4) changes in the family system, and (5) changes in the clients. The therapist helped the clients and their families gain insight into the context related to eating disorder through a cognitive-behavioral family therapy. Through a cognitive-behavioral family therapy, the clients and their families became aware of their cognitive distortions. Meanwhile, the clients and their families attempted honest conversations using new communication patterns, which led to positive relationships within families. The improved awareness of their problems and changes in the communication patterns led to a decrease or elimination of eating disorder symptoms in the clients.

### CONCLUSION

The significance and implications of the study findings are as follows. First, this study provides a new direction for treating eating disorder by verifying the effectiveness of cognitive-behavioral family therapy and change process of eating disorder. Second, we recommend family therapists working with clients with eating disorder to address the problem from a family systemic perspective, and ultimately focus on promoting alternative, functional communication patterns.

# POSTER SESSION 03

Abstract No.: 1159

## The Effect of Belief About Emotional Expression on Somatization: A Moderated Mediation Analysis

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### INTRODUCTION

Belief about Emotional Expression(BEE) refers to individuals' negative beliefs about the function and consequences of emotional expression(Hae-yeon, Choi & Kyung-hwan, Min, 2005). According to a recent study, it has been reported that negative beliefs about emotional experience and expression are related to somatization disorder(Rimes & Chalder, 2010). In this study, we tried to investigate the effect of BEE on somatization in Korean adults. In order to investigate the detailed process in which BEE leads to somatization, ambivalence over emotional expression(AEE) is expected to mediate the relationship between BEE and somatization, and inhibition was measured through AEE that more clearly indicates underlying conflict and suppression. On the other hand, the meta cognitive process of BEE needs to be considered along with the aspect of attentional control, which is a factor that controls cognition. We focused on attentional control as a variable that can control the relationship between BEE and AEE. In summary, after verifying the mediating effect of AEE in the relationship between BEE and somatization in Korean adults, attentional control controls this path in the relationship between BEE and somatization.

### METHOD

A total of 296 adults in Korea, including 149 males and 147 females, completed the online questionnaires which were used to measure individuals' levels of Belief about emotional expression, the Ambivalence over emotional expression, the Somatization, and the Attentional control. Belief about emotional expression scale has consisted of 11 items. Korean Translated Ambivalence over Emotional Expressiveness Questionnaire(AEQ-K) has consisted of 20 items. From A total of 90 questions of the SCL-90-R, 12 questions on the somatization scale that measures the degree of physical symptoms that an individual experiences subjectively were extracted and used. The Attentional Control Questionnaire has consisted of 20 items, which was including measures of attention focus factors, and attention shift factors.

### RESULTS

The results of this study are as follows. First, the significant partial mediating effect of AEE on the relationship between BEE and somatization was found. Second, the significant moderating effect of attentional control on the relationship between BEE and AEE was verified. Third, the moderated mediating effect of attentional control on BEE, AEE, and somatization was verified. Specifically, it was found that the indirect effect increased as attentional control increased.

### DISCUSSION

Findings provide directions to design intervention that may help alleviate somatization symptoms. Goals and strategies to help reconfigure after confirming his or her BEE and to express emotions can be applied to counseling. In addition, it is necessary to check the level of attentional control of the client with somatization symptoms. The degree of natural attentional control may vary from individual to individual, but it can be enhanced by acquired training and effort(Wadlinger & Isaacowitz, 2010). Training such as Attention Bias Modification or Attention Training is expected to be related to attentional control and can be used in the treatment scene.

# POSTER SESSION 03

Abstract No.: 1161

## Clinical Profile of Inpatients vs Outpatients of Adolescents with OCD from an Indian Tertiary Mental Health Organization

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Paediatric OCD has been well researched with regard to the phenomenology and clinical presentations in both western as well as Indian studies. There is consensus that multiple factors impact the course and outcome of OCD. In addition to clinical variables, family factors also play a significant role and are implicated in both maintenance as well as better outcomes of paediatric OCD (Lebowitz, Panza, & Bloch, 2016). Some of key factors are parenting styles, family accommodation parental psychopathology. While the clinical profile of paediatric OCD is well documented in the Indian setting, there is a dearth of empirical research examining the clinical profiles of children and adolescents treated on an inpatient basis versus those treated on an outpatient basis.

The aim and the objectives of this study are to compare the clinical profiles of adolescents with OCD treated on an inpatient vs an outpatient basis.

### METHODOLOGY

The study was initiated after obtaining Ethics Approval from the Institute Ethics Committee of NIMHANS. The sample comprised of 103, inpatient and outpatient adolescents with OCD (Males n=67, Females n=36) in the age group of 13 to 19 years. The parent sample included (Mothers = 84; Fathers = 74). The sample was drawn from Child & Adolescent Psychiatric Services, Adult Psychiatric Services and OCD Clinic. Statistical analyses were carried out using Statistical Package for Social Sciences (SPSS) version 22.0.

The adolescents were assessed on using a socio-demographic sheet, measures of OCD and anxiety severity. The Interviewer Rated version of the Family Accommodation was used in the study.

### RESULTS

Description of the adolescent sample

A majority of the sample had a primary diagnosis of OCD Mixed, and comorbid psychiatric disorders (70.9%).

The mean Y-BOCS, was indicative of the severe OCD, with a majority of the sample with poor insight (49.5%) and moderate level of avoidance (37.9%).

OCD severity was predicted by family accommodation scores of the mother.

Results of Inpatient vs Outpatients

- Inpatient adolescents had significantly poorer insight ( $U=894.500$ ,  $p=0.01$ ) greater number obsessions ( $t=2.45$ ,  $p=0.01$ ), higher scores on Y-BOCS ( $t=2.42$ ,  $p=0.01$ ) and had a greater number of comorbid diagnosis ( $t=2.80$ ,  $p=0.006\#$ ) than compared to out-patients adolescents diagnosed with OCD which indicates that inpatients presented with much more severe forms of the disorder than compared to outpatients.
- Outpatients perceived their mothers as more authoritarian than compared to inpatients with OCD ( $t=-1.98$ ,  $p=0.05$ ) which indicates that mothers of outpatients were more punitive and verbally hostile than compared to mothers of inpatient adolescents.
- Mothers ( $t=2.51$ ,  $p=0.01$ ) and fathers of adolescents receiving in patient care ( $t=2.25$ ,  $p=0.02$ ) showed significantly higher levels of family accommodation as compared to parents whose adolescents were outpatients.

### CONCLUSIONS

Adolescents with OCD present with unique clinical profiles in the Indian tertiary settings than compared to Western Clinic settings.

Keywords: Obsessive Compulsive Disorder, Adolescents, Inpatients, Outpatients

# POSTER SESSION 03

Abstract No.: 1164

## Interpretation Bias in Cancer Survivors with Fear of Cancer Recurrence

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### INTRODUCTION

Fear of Cancer Recurrence (FCR) is the most prevalent problem in cancer survivors. Cognitive processing approach to FCR posits that cognitive biases, such as interpretation or attention to specific cues, contribute to the development and maintenance of the FCR. This study aimed to examine the difference in interpretation bias of cancer-related and general stimuli between groups with FCR and without it.

### METHOD

We developed the web-based Similarity Rating Test (SRT; Mathew & Mackintosh, 2000) for cancer patients, measuring interpretative bias using 15 items corresponding to cancer-related scenarios and general scenarios. The web-based SRT and Korean version of the Fear of Cancer Recurrence Inventory-Short form (K-FCRI-SF) were administered. 341 cancer survivors complete the task, and we exclude 21 data with a system error. 320 data were analyzed finally.

### RESULTS

More negative interpretation bias for cancer-related stimuli, and less positive interpretation bias for general and cancer-related stimuli was observed in the clinical FCR group than in the non-clinical group. The group with severe FCR tended to interpret situations negatively even in situations unrelated to the given scenario.

### CONCLUSIONS

The results of this study suggest that not only the negative interpretation of cancer-related stimuli but also the tendency of overall negative interpretation is related to FCR. Cognitive bias modification for interpretation can be a critical factor in interventions for cancer survivors with FCR.

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# POSTER SESSION 03

Abstract No.: 1165

## **A Clinical Case Study of Cognitive Behavioral Therapy: Improving Executive Functioning for a Korean Woman with ADHD**

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This case study is to examine the effectiveness of Cognitive Behavioral Therapy for a woman in her 20s who is diagnosed with ADHD, major depressive disorder, and social anxiety disorder. The data analysis was conducted using psychotherapy verbatim from the 11th session, the Minnesota Multiphasic Personality Inventory-2(MMPI-2), the Barkley Deficits in Executive Functioning Scale(BDEFS), and the Sentence Completion Test(SCT). Based on the client's chief complaints, the therapeutic goals of this study are 1) improving self-regulation, 2) reducing depression and anxiety and maintaining good interpersonal relationships, 3) promoting understanding of ADHD and practicing her daily plans, and 4) developing more adaptive thoughts and promoting her strengths. As a result of analyzing objective tests, a sentence completion test, and interviews from the client, the results from the BDEFS, 'self-restraint' and 'self-regulation of emotion' subscales were reduced to normative score, while 'self-management to time' and 'self-organization' still remained significantly high. In MMPI-2 results, the Low Positive Emotion Scale(Rc2) was changed from 66 to 53, the Depression Scale(DEP) changed from 79 to 57, and the Negative Therapeutic Index(TRT) changed from 66 to 53, all of which were clinically significantly reduced to normal range levels. Ego Strength(Es) also changed from 34 to 38, Introversion/Low Positive Emotionality(NEGE) changed from 74 to 69. In consistent with the results of the above standardized tests, the Sentence Completion Test showed that her ambiguous concept of self become more realistic and specific (4. "My future? Not yet decided" was changed to "I see it as infinite because it is not yet decided," 15. "My ability I believe in? The power to stand up again" changed to "I believe even if I'm afraid of my abilities, I try to challenge myself in the end," 28. One day I will be able to do well changed to "at least I hope that I will be a person who is close to the goals I set even if I don't achieve them). Findings demonstrate that an adult with ADHD can benefit from psychotherapy in terms of emotional regulation, but challenges with nonverbal working memory (i.e., sense of time, organization) seem to need more tailored intervention. To improve nonverbal working memory, authors will discuss diverse strategies in the session.

# POSTER SESSION 03

Abstract No.: 1167

## Does the Acceptance and Action Questionnaire-II (AAQ-II) Really Measure Psychological Distress Rather than Psychological Inflexibility?

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### INTRODUCTION

The AAQ-II has been widely used as a measure of psychological inflexibility or experiential avoidance, key constructs in the Acceptance and Commitment Therapy model of psychopathology (Bond et al., 2011; Hayes et al., 1999). However, recently, several studies have reported that this scale is more likely to measure psychological distress rather than psychological inflexibility (or experiential avoidance), contrary to the original intention of the developers. This study was conducted to further investigate the construct validity of the AAQ-II. The main question in this study is what the scale really measures, namely, whether it is an indicator of psychological distress or psychological inflexibility. To address this issue, based on previous studies and literatures, we proposed a two-factor model that assumes that psychological flexibility and psychological inflexibility form a single factor, distinct from psychological distress factor, a three-factor model that assumes psychological flexibility, psychological inflexibility, and psychological distress are separate factors, and each of these models was further subdivided again into two different models assuming that the AAQ-II is loaded on psychological inflexibility factor or that the AAQ-II is loaded on psychological distress factor. Then, we used confirmatory factor analyses (CFAs) to compare and evaluate the goodness-of-fit of these four alternative models.

### METHOD

Three hundred fifty-five undergraduates completed the Korean versions of the AAQ-II, Multidimensional Experiential Avoidance Questionnaire-24, Personalized Psychological Flexibility Index, Positive and Negative Affect Scale, Bright and Dark Personality Inventory-Short Form, and Center for Epidemiologic Studies Depression Scale.

### RESULTS

CFAs indicated that two-factor models assuming that psychological flexibility and psychological inflexibility constitute a single factor and this factor is distinguished from psychological distress factor provided a poor fit. In contrast, both models, which assume that all three factors are distinct from each other, showed a good fit. In particular, the three-factor model assuming that the AAQ-II is loaded on psychological inflexibility rather than psychological distress factor, provided the best fit, TLI = .927; CFI = .953; RMSEA (90%CI) = .092 (.070 - .115). In this model, the correlation between psychological flexibility and psychological inflexibility factors was  $r = -.384$  ( $p < .001$ ), the correlation between psychological flexibility and psychological distress factors was  $r = -.215$  ( $p < .001$ ), whereas the correlation between psychological inflexibility and psychological distress factors was very high ( $r = .866$ ,  $p < .001$ ).

### CONCLUSION

These results suggest that the AAQ-II measures psychological inflexibility rather than psychological distress in Korean undergraduates, consistent with its underlying theory. However, to make this conclusion clearer, further research is needed to examine whether the results of the study are replicated using clinical samples or samples from other cultures.

# POSTER SESSION 03

Abstract No.: 1171

## **Complicated Grief Therapy for a Woman with Guilt-Related Grief and Depressive Symptoms: A Case Report**

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### BACKGROUND

Complicated grief or also known as Prolonged Grief Disorder (PGD) is a severe form of grief that can impair a person's functioning and quality of life. One possible factor that can contribute to complicated grief is guilt related to the circumstances of the loss. There is evidence that complicated grief therapy (CGT) can be effective in reducing complicated grief symptoms even in the presence of comorbid depressive symptoms.

### CASE DESCRIPTION

We present the case of a woman who experienced Prolonged Grief Disorder comorbid with Major Depressive Disorder (MDD) symptoms for 9 years after the death of her parent due to chronic health condition. She blamed herself for not taking better care of her parent and believed that her actions had caused her parent's death. She went through 20 sessions of CGT, which focused on helping her process her guilt, self-blame and grief, identify and challenge unhelpful thoughts, and focus on her personal goals and current relationships. The usage of CBT-based methods as seen in the CGT manual that targeted the loss related guilt and behavioural avoidance was introduced in between session 4 to 9. Along with it was the imaginal and situational exposure that resembles prolonged exposure interventions for trauma.

### OUTCOME

Comparing the pre- and post-data and according to her self-report, the PGD symptoms have greatly resolved and she lives a fulfilling life now.

### RESULTS

The patient showed significant improvement in complicated grief symptoms, as measured by the Prolonged Grief Disorder - 13 from above cut off score of 29 (Prigerson et al. 2021) at 36 to below cut off score. She also reported increased positive affect, decreased guilt and anxiety and most importantly, being able to accept the loss of her mother and finding new meaning in her grief.

### CONCLUSION

This case report highlights the effectiveness of CGT in treating complicated grief with guilt-related features in cases of PGD comorbid with MDD. Clinicians should consider the role of guilt in complicated grief and use evidence-based interventions such as CGT to address it.



# POSTER SESSION 03

Abstract No.: 1172

## A Study on the Effect of Online Behavioral Activation Treatment for Negative Symptoms of Schizophrenia

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### INTRODUCTION

Negative symptoms of schizophrenia is the main factors that lead to have the social dysfunction and a low quality of life in patients. Online behavioral activation treatment is required, as the difficulty in contacting between therapists and patients increase due to the COVID-19.

### OBJECTIVES

The purpose of the study was to examine the effect of the online behavioral activation treatment on improving the negative symptoms of the schizophrenia.

### METHOD

A total of 46 patients from treatment group and 39 patients from controlled group were recruited among the patients with schizophrenia aged from 18 to 65 years were recruited for three years from July 2020 to Mar 2023. Korea version of Positive and Negative Syndrome Scale(PANSS), Clinical Assessment Interview for Negative Symptoms(CAINS), Self-evaluation of negative symptoms(SNS) were assessed the negative symptoms of the schizophrenia. Additionally, Behavioral Activation for Depression Scale(BADS) was performed to examine the level of the behavioral activation. A paired t-test was used to identify whether the effect of the online behavioral activation treatment.

### RESULTS

Patients in treatment group had significant effect on PANSS negative symptom ( $t=3.53$ ,  $p<.005$ ), total score of the CAINS ( $t=2.52$ ,  $p<.05$ ), CAINS MAP( $t=2.43$ ,  $p<.05$ ), and total of SNS ( $t=3.53$ ,  $p<.005$ ), and the level of the behavioral activation was significantly improved compared to the pre-treatment ( $t=-4.505$ ,  $p<.001$ ) at the post-treatment. However, patients in the controlled group did not show significant changes.

### CONCLUSION

Findings suggested that online behavioral activation treatment would reduce negative symptoms of schizophrenia. Limitations of the current study and implication for future research were discussed.

Keywords: behavioral activation, online behavioral activation treatment, schizophrenia, negative symptoms

# POSTER SESSION 03

Abstract No.: 1173

## The Fusion of CBT and Chinese Qigong

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### INTRODUCTION

There are many effective methods in traditional Chinese mind and body therapy, such as Qigong . Qigong is a kind of self-exercise method of body and mind that uses the function of consciousness to implement self-regulation and self-control on the life process of the human body, so as to coordinate the relationship between body and mind, cure diseases, strengthen the body, and prolong life. Adjusting the body, adjusting the breath, and adjusting the mind are the three elements of Qigong.

From the perspective of traditional Chinese medicine, qigong is an exercise method to coordinate one's own qi mechanism through self-exercise by regulating the mind . [HYPERLINK "https://www.yixue.com/%E6%B0%94%E6%9C%BA"](https://www.yixue.com/%E6%B0%94%E6%9C%BA) "气机" From the perspective of modern behavioral medicine, qigong exercise is a behavior therapy that learns and trains a benign behavior that is beneficial to physical and mental health, and finally fixes it in the form of conditioned reflex . From the perspective of psychophysiology, Qigong can be defined as a self-exercise method that uses self-suggestion as the core method to promote consciousness into a state of self-hypnosis, adjusts the balance of mind and body through the psychological- physiological -morphological self-adjustment mechanism, and achieves the purpose of fitness and treatment. . Therefore, Qigong includes the comprehensive adjustment and improvement of the body, behavior and cognition.

### METHOD

Documentation Law

Through channels such as CNKI, Wanfang database, VIP periodical resource integration service platform and Web of science, retrieve several journal articles on qigong, cognitive behavioral therapy (CBT), etc.

### RESULTS

3.1 Qigong is an effective treatment method

Tai Chi and Qigong have been studied as potentially effective ways to prevent and/or treat anxiety (Manoj and Taj, 2014 ) and depression ( Liao et al. ). Qigong has been shown to improve overall sleep quality ( Zou et al., 2018 ).

Li Weijing et al. (2018) explored the effects of Baduanjin Qigong combined with cognitive-behavioral therapy on the physical and mental health of the elderly at home . Significant increases in forced vital capacity, maximal spontaneous ventilation, quality of life, and self-reported health status were observed at 3 and 6 months in the combined intervention group with cognitive behavioral therapy.

Xie et al. (2022) found that the intra-group comparison between the Jiuzhuan Qigong group and the cognitive-behavioral therapy group showed significant improvements in both groups.

3.2 Cognitive Behavioral Therapy combined with Qigong

Many experimental studies have combined some qigong with cognitive-behavioral therapy, and obtained positive and effective results. Sunny HW Chan et al. (2020) found the mindfulness-based cognitive therapy group and the health-qigong cognitive therapy group experienced significant reductions in emotional symptoms after completion. All outcome measures improved compared to the waiting control group. Relatively speaking, compared with the health cognitive therapy group, the emotional symptoms of the health Qigong cognitive therapy group were reduced more.

Rodrigues et al. (2021) found that Tai Chi and Qigong appeared to be a promising complementary therapeutic tool to improve symptoms, with an average improvement of 46%.

# POSTER SESSION 03

## DISCUSSION

In the later stage, we can further study whether the combined treatment of some different qigong and cognitive behavioral therapy is faster than using a single cognitive behavioral therapy, and which qigong treatment is more effective.

It is hoped that this kind of Chinese kung fu, which combines the acquired air and the innate vitality into a magnificent righteousness, can get more scientific verification in the process of self-regulation, self-exercise, fitness and longevity in the life process . For example, when conducting behavioral therapy, at the same time cooperate with Qigong practice, and use biological indicators to observe.

# POSTER SESSION 04

Abstract No.: 0126

## Changing the Culture of Care for People with Complex Emotional Needs

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CNWL, UK

### INTRODUCTION

Borderline Personality Disorder (BPD) is often a diagnosis of exclusion. People with this diagnosis are frequently stigmatised by mental health services and unable to access appropriate care (Dale et al., 2017). The diagnosis of 'BPD' itself often leads clinicians to feel helpless and can lead to inappropriate or no interventions. In this paper we refer to BPD as Complex Emotional Needs (CEN) in an attempt to move away from pathologising an understandable response to adverse experiences. This paper presents an innovative approach, drawing on Cognitive Behavioural Therapy (CBT), to working with individuals with CEN in a National Health Service (NHS) setting in the UK.

### METHODS

Over the past three years, a whole systems mental health approach has been applied to the treatment of individuals with CEN in Harrow (UK). This has included, the re-designing of psychological pathways to prioritise continuity of psychological care across the mental health system (between acute and community services); training multi-disciplinary staff in basic manualised CBT/ Dialectical Behavioural Therapy (DBT) interventions; and the development of CEN pathway in the community. The impact of this approach is illustrated through a series of three case studies of high intensity service users accessing mental health care in Harrow.

### RESULTS

The following results will be presented for each of the three service users over a four-year period:

- Reductions in inpatient bed days, leading to no admission in the final 12 months to date.
- Reductions in suicide attempts and self-harming behaviours.
- Improvements in all aspects of quality of life.

The service users' experience will also be presented through interview and video data.

### DISCUSSION

This paper highlights the role and impact of psychology in changing the culture of care for individuals with CEN in mental health services. CBT intervention, applied to whole systems, can support significant improvements for people with CEN in both mental health and wellbeing. The strategies utilised and challenges faced in creating cultural change across a mental health system are discussed.

# POSTER SESSION 04

Abstract No.: 0165

## Cognitive Reactivity Amplifies the Activation and Development of Negative Self-Schema

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### INTRODUCTION

Little is known about how self-schemas are formed, fluctuate, and are reinforced. The aims of this study are to examine the state fluctuation of self-schema and the individual differences involved in it through an experimental manipulation and to extrapolate the findings to the development process of self-schema in life by using computational simulations. Here we use the mnemonic neglect paradigm (Sedikides & Green, 2000) with several specific hypotheses: The emotional valence of feedback consistent with the self-schema of positivity/negativity is perceived as self-concordant, and an inconsistent emotional valence of feedback is perceived as self-disconcordant (Hypothesis 1), Self-schemas will change in the direction of the emotional valence of feedback if the feedback is judged to be self-concordant but will be less likely to change if the feedback is judged to be self-disconcordant (Hypothesis 2), and high levels of cognitive reactivity are related not only to greater negative self-schema fluctuation in response to negative self-concordant feedback (Hypothesis 3-1) but also to greater feedback self-concordance (Hypothesis 3-2).

### METHOD

Undergraduate students exhibiting various depressive symptoms (BDI-II ranged from 1 to 36;  $M = 11.90$ ) underwent psychological testing followed by bogus feedback regarding their personality, future, and behavioural traits, where they rated their state self-schemas and feedback self-concordance trial-by-trial.

### RESULTS

Linear mixed models showed that feedback self-concordance was determined by the interaction between self-schema and the emotional valence of the feedback, and the self-schema fluctuated with the interaction between prediction error (the difference between the emotional valence of the feedback and current self-schema) and feedback self-concordance. Cognitive reactivity, the ease of responding to negative moods, was associated with higher parameters regressed onto self-schema and self-concordance regardless of the feedback valence, indicating that it enhances the likelihood of self-schema fluctuation positively and negatively. Thus, all hypotheses were supported. A computer simulation of self-schema development shows that some individuals developed a negative self-schema even after experiencing many positive events; these parameters were characteristic of individuals with high levels of cognitive reactivity.

### DISCUSSION

These results have significant implications for self-schema development and depression. Based on the idea that cognitive reactivity to emotions is unidimensional, whether individuals come to possess positive or negative self-schemas depends on the events that they experience at an early stage. An important research question is whether cognitive reactivity, which was a key individual difference in this study, is a predictor of the parameters involved in the self-schema reinforcement process in daily life as well.

# POSTER SESSION 04

Abstract No.: 0222

## Development and Validation of a Japanese Version of the Cognitive Distortion Scale

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<sup>4</sup> Nakamura Clinic, Japan

### INTRODUCTION

This study developed a Japanese version of the Cognitive Distortion Scale (CDS-J) created by Covin et al. (2011). In addition, it examined its reliability and validity.

### METHOD

Participants were 238 healthy individuals (121 males, 116 females; mean age =  $39.84 \pm 12.20$ ) stratified according to Japan's chronological population ratio, and 39 people (12 males, 27 females; mean age =  $39.69 \pm 12.52$ ) with a diagnosis of major depression and no comorbidities. The CDS-J was developed according to International Society for Pharmacoeconomics and Outcomes Research (ISPOR; Wild et al., 2005) and COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN; Mokkink et al., 2015). Descriptive statistics, confirmatory factor analysis, convergent, and discriminant validity were calculated using the R 3.5.2 package (R Core Team, 2019, Vienna, Austria). A confirmatory factor analysis with the MLR method was performed on the CDS-J's factor structure. We hypothesized that the CDS had a one-factor model based on Covin et al. (2011), Besta et al. (2014), and Ozdel et al. (2014). Four fit indices were employed: chi-square ( $\chi^2$ ), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Cronbach's alpha coefficient was calculated to verify reliability. In addition, test-retest reliability was verified using Pearson's correlation coefficient based on data from 71 healthy participants obtained two weeks apart. Furthermore, to investigate convergent validity, we used the DAS-24, ATQ, PHQ-9, and GAD-7, which measure dysfunctional belief, negative automatic thoughts, and depressive and anxiety symptoms, respectively. Furthermore, Pearson's correlation coefficients between CDS and each scale were calculated. Finally, to verify discriminant validity, CDS scores of the healthy and depressive groups were compared using Welch's t-test. The Research Ethics Review Committee of the University of Human Environments approved the study.

### RESULTS

The confirmatory factor analysis results showed an acceptable model with a one-factor structure ( $\chi^2(160)=434.38$ ,  $p < 0.01$ , CFI=0.91, RMSEA=0.09, SRMR=0.04). Reliabilities were also good ( $\alpha = 0.97$ ,  $r = 0.64$ ,  $p < 0.01$ ). Next, for criterion-related validity, the CDS-J showed significant correlations with all scales ( $r = 0.39$  to  $0.45$ ,  $p < 0.01$ ). Finally, a comparison of CDS-J between healthy and depressive groups showed a large effect size ( $t(46.88)=-5.60$ ,  $d = 1.11$ )

### DISCUSSION

The chi-square test results were not favorably related to the fit indices. However, the results were acceptable, considering the sample size and other fit indices. The study results indicate that the Japanese CDS has sufficient reliability and validity. However, future studies on the factor structure are required.

Conflict of interest: The authors declare no COI for this study.

# POSTER SESSION 04

Abstract No.: 0230

## The Effect Sense of Interoception on Depression and Anxiety

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“Interoceptive sensation” refers to perceived sensations about the state of internal organs and blood vessels and the acceptance of changes in heartbeat, blood pressure, respiration, etc. (Terasawa & Umeda, 2014). Garfinkle & Critchley (2013) proposed three graded categories: interoceptive sensibility, interoceptive sensitivity, and interoceptive awareness. The reason for addressing interoceptive sense in the present study was that there is greater attention on dysfunctions of the interoceptive sense, with proposals of it as a biomarker of psychiatric disorders and its association with various mental health problems (Nord & Garfinkel, 2021; Adams et al., 2022). However, the relationship between sense of interoception, depression, and anxiety remains to be elucidated. Many studies have assumed and examined a linear model, but previous research suggests that it may not be applicable (Dunn, Dalgleish et al., 2007). Therefore, an inverted U-shaped model was assumed and the relationship between interoceptive sensations and mental health was investigated. In addition, it is recommended that all three categories defined by Garfinkel and Critchley (2013) are measured (Shoji, 2017), but few studies in Japan have divided the sense of interoceptive perception into three categories and measured all of them. Therefore, all three categories of internal receptive sensation were measured and validated. In this study, 66 undergraduate and postgraduate students participated in the experiment. First, the participants answered the BPQ-BA (Kobayashi et al., 2021) and MAIA (Shoji et al., 2014), which are questionnaires measuring interoceptive sensibility; the CES-D (Shima et al., 1985) and the new STAI (Hietano, 2000), which measures depressive tendency, trait, and state anxiety. Second, they worked on a heartbeat-counting task (Shandry, 1983). Third, they responded to a visual analog scale (the degree to which they accurately perceived their own internal receptive sensations) to measure their interoceptive awareness. To examine the inverse U-shaped model, the subjects were divided into groups (high, medium, and low) according to their scores on the BPQ-BA, MAIA, heartbeat counting task, and VAS. The results were analyzed as independent variables, with the CES-D and STAI scores as dependent variables. The results showed no inverted U-shaped relationship. However, it was shown that the tendency toward depression and trait anxiety increased when interoception was high and when the MAIA score, an index of interoceptive sensibility, was low. The present study showed that the higher the accuracy of interoception acceptance was, the higher the tendency toward depression. The reason for this was suggested to be confounding with anxiety, as all the participants in the present study who showed high depression had moderate or higher levels of trait anxiety. The relationship between high trait anxiety, interoceptive sensibility, and interoceptive sensitivity was similar in the present study and previous studies. Against this background, Paulus and Stein (2010) speculated that the combination of interoceptive sensory perception and negative beliefs led to anxiety. It was suggested that the ability to pay attention to bodily sensations and not feeling in control increased trait anxiety tendencies.

# POSTER SESSION 04

Abstract No.: 0232

## **The Relationship between Intolerance of Uncertainty and Internalizing Symptoms in Korean College Students: The Sequential Mediating Effect of Dysfunctional Metacognitive Beliefs and Experiential Avoidance**

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### INTRODUCTION

A transdiagnostic approach can briefly explain the causes that contribute to the high prevalence of mental disorders and suggest efficient treatment goals for comorbid disorders. Therefore, understanding the relationship between transdiagnostic risk factors for preventing and treating of mental disorders is very important. Intolerance of uncertainty, dysfunctional metacognitive beliefs and experiential avoidance are discussed as transdiagnostic factors contributing to the onset and maintenance of various internalizing disorders. Specifically, intolerance of uncertainty is an individual's dispositional incapacity to consider uncertain situations as unacceptable and threatening, which focuses on elevated perceptions of threat as central to the manifestation of internalizing symptoms. Dysfunctional metacognitive beliefs refer to the cognitive content and information processing process that leads an individual to interpret the meaning of inner states, such as perceived stress, and choose maladaptive coping strategies. Finally, experiential avoidance is a characteristic of acting in a way that tries to avoid or removes internal experiences such as emotions, thoughts, and memories experienced by an individual. Although transdiagnostic vulnerabilities such as intolerance of uncertainty, dysfunctional metacognitive beliefs, and experiential avoidance have been studied as risk factors for internalizing symptoms, relatively little is known about the underlying mechanisms for internalizing symptoms at the same time by which these three factors together can lead to the development of depression and anxiety. Therefore, this study aimed to investigate the sequential mediating effect of dysfunctional metacognitive beliefs and experiential avoidance in the relationship between intolerance of uncertainty and internalizing symptoms (i.e. depression and anxiety) among undergraduate students.

### METHOD

A total of 438 undergraduate students (167 men and 271 women with mean age  $\pm$  SD of  $21.67 \pm 2.20$ ) completed The Korean Version of Intolerance of Uncertainty Scale Short Form (IUS-12), Center for Epidemiologic Studies Depression Scale (CES-D), State-Trait Anxiety Inventory Form Y (STAI-Y), Metacognitions Questionnaire-30 (MCQ-30), and Acceptance-Action Questionnaire-II (AAQ-II). The data were analyzed using structural equation modelling (SEM) to test the mediation effect.

### RESULTS

The results indicated that dysfunctional metacognitive beliefs and experiential avoidance in the relationship between intolerance of uncertainty and internalizing symptoms appeared to have a significant mediating effect. In addition, the sequential mediating effect of dysfunctional metacognitive beliefs and experiential avoidance in the relationship between them was statistically significant. Furthermore, a full-mediation model demonstrated a significantly better fit than the partial-mediation model.

### CONCLUSIONS

The result of the present study suggests that intolerance of uncertainty may contribute to internalizing symptoms through the increase of dysfunctional metacognition and experiential avoidance. Finally, through an integrated understanding of transdiagnostic variables, we tried to find a treatment plan for common factors of psychopathology.



# POSTER SESSION 04

Abstract No.: 0251

## **The Relation between Social Media Addiction Tendency and Depression: The Mediating Effect of Objectified Body Consciousness Moderated by Self-Compassion**

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### INTRODUCTION

The monumental increase in the number of users on social networking website users in the past decade, has resulted in a growing body of literature investigating the negative consequences of Social Networking Sites(SNS) addiction tendencies, especially depression. Since previous studies have reported mixed findings, there is a growing necessity to explore the potential explanatory mechanisms. Hence, the present study ought to speculate the mediating role of Objectified body consciousness in relation to SNS addiction tendencies and depression. Additionally, this study also examines the moderating effect of self-compassion to assess whether self-compassion attenuates the consequences of OBC on depression.

### METHOD

The participants consisted of 271 Korean adults (81 males and 190 females with Mean age=30.05, SD= 8.627) of whom completed questionnaires measuring SNS addiction tendency (Cho and Seo, 2013), objectified body consciousness (Kim et al.,2007), self-compassion ((Kim, Yi, Cho, Chai, & Lee, 2008) and depression (Jeon et al., 2001).

### RESULTS

The current study found that strong SNS addiction tendencies predicted both a higher level of OBC and depression. The regression analysis confirmed there is a strong mediational effect of OBC in a relationship between SNS addiction tendencies and depression and the significance of indirect effects were verified through the bootstrapping method. The robust moderating effect of self-compassion in the pathway from OBC to depression was found. In addition, the indirect effects of SNS addiction tendencies on depression through OBC were moderate by self-compassion.

### CONCLUSION

OBC explained the complex relationship between SNS addiction tendencies and depression. However, the effect of OBC on depression can be prevented by adapting compassionate attitudes towards oneself. These results suggest that a higher level of self-compassion buffers the entire track of the objectified body consciousness to depressive symptoms. The findings may shed a light on preventative maladaptive mood intervention.

# POSTER SESSION 04

Abstract No.: 0254

## Recent Research Trends of Relationship between Burnout and Depression in Korea

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### PURPOSE

Despite continuous research examining the conceptual similarity between burnout and depression, the results of the relationship between them are inconsistent. Considering the increase of social interest in burnout, it is necessary to study whether burnout is different from depression. Therefore, this study aims to analyze research including burnout and depression in Korea and examine the relationship between burnout and depression.

### METHODS

From 2016 when burnout was listed on ICD-11 to the present (January 2023), Studies examining both burnout and depression in Korea were searched using Research Information Sharing Service (RISS), Nurimedia (DBpia), Korea Institute of Science and Technology Information (ScienceON), Koreanstudies Information Service System (KISS), and National Assembly Library of Korea (NANET). A total of 688 articles were retrieved and 40 articles remained excluding duplicate papers, qualitative papers and then 26 articles were finally selected reviewing the main text.

### RESULTS

The final 26 articles were analyzed by measurement scale, academic affiliation of lead author, outcome variable, and statistical analysis. First, regarding measurement scale, Maslach Burnout Inventory (MBI) took the majority to measure burnout (21 articles), and Center for Epidemiologic Studies Depression Scale (CES-D) was mostly used to measure depression (11 articles). Second, as to academic affiliation of lead author, there were the largest number of researchers (12) who affiliate with medicine and pharmacy, and researchers (2) with social science were followed. Third, as outcome variable, burnout was represented in 14 articles and depression in 11 articles. And 1 article was about correlation study. Lastly, in terms of statistical analysis, multiple regression analysis (57.1%), logistic regression analysis (21.4%), and mediation/moderation/path analysis (21.4%) were commonly used when burnout is outcome variable and depression is predictor. When depression is outcome variable and burnout is a predictor, multiple regression analysis (54.5%) and mediation/moderation/path analysis (45.5%) were commonly used.

### DISCUSSION

This study investigates the research examining the relationship between burnout and depression in Korea. It was the most studied in the field of medicine and pharmacy, and MBI and CES-D were most used to measure burnout and depression, respectively. It was found that the study in which burnout was influenced by depression was more common than the study in which depression was influenced by burnout. When depression is outcome variable, they tend to look into explanatory power and relationship. When burnout is outcome variable, additionally, techniques to see if what group (e.g., burnout vs. not-burnout) is vulnerable to depression were commonly investigated. The result suggests that it is difficult to decide whether burnout and depression are separate or same entities. Therefore, it is necessary to examine the relationship between burnout and depression for further study and about biopsychosocial variables influencing burnout and depression.

# POSTER SESSION 04

Abstract No.: 0257

## **A Bifactor Model of Anxiety Sensitivity in Patients with Depression And/OR Anxiety Disorders**

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Anxiety sensitivity (AS) refers to the propensity for physical fear sensations associated with anxiety due to concerns for potential physical, social, or cognitive consequences. AS has been theoretically and empirically identified as a risk factor for emotional disorders. Recent findings suggest that the latent structure of AS may be better conceptualized as a bifactor model. Few studies on the bifactor model have been conducted in clinical populations. We examined the fit of the bifactor model for the ASI-3 in adults with depression and/or anxiety disorders. Based on the best fitting model, we also investigated the structural relationship between AS factors and the symptoms of depression and anxiety. The total sample consisted of 2164 outpatients ( $M = 39.74$ ,  $SD = 14.27$ ) diagnosed with depression and/or anxiety-related disorders. We conducted four different confirmatory factor analyses (CFAs). We also performed a series of structural equation modeling (SEM) analyses to evaluate the relationships between AS factors and other measures of depression and anxiety. The bifactor structure of AS in patients with depression and anxiety disorders was found to be the best model. The AS general factor was associated with both depression and anxiety. Only cognitive concerns was associated with both depression and anxiety even after accounting for the AS general factor. Physical concerns was only related to anxiety, not depression. The bifactor model of the ASI-3 was replicated in a clinical sample of patients with depression and/or anxiety disorders. AS can ultimately be interpreted as a transdiagnostic endophenotype of emotional disorders. Of the AS group factors, cognitive concerns might be a core factor for emotional disorders compared to other AS concerns. Physical concerns showed a differential relationship with depression and anxiety.

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Abstract No.: 0268

## The Association between Poverty-Related Cumulative Risk and Suicidal Behavior in Early Adulthood: Non-suicidal Self-Injury (NSSI) and Acquired Capability for Suicide as Sequential Mediators

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### INTRODUCTION

Young adults in poverty are more liable to be exposed to various risk factors that may compromise their mental health than their counterparts. Although it has been repeatedly suggested that a confluence of these risk factors may predict individuals' mental outcomes better than any single risk factor, most relevant prior works predominantly focused on income. In this study, we were especially interested in elucidating the association between poverty-related risk factors and suicidal behavior in a sample of Korean young adults. Moreover, recent studies have suggested that non-suicidal self-injury (NSSI) may play the role of a gateway to suicide by enhancing the acquired capability for suicide. Thus, this study aimed to examine whether poverty-related cumulative risk (PCR) may predict young adults' suicidal behavior even after controlling for household income, and whether NSSI and the acquired capability for suicide may sequentially mediate the relationship between PCR and suicidal behavior within the sample of poor Korean young adults.

### METHOD

544 adults (242 males, 302 females, Mage=25.99, SDage=4.19) whose household income is less than 60% of the Korean base median income in 2022 were recruited online and completed self-report questionnaires. PCR was composed of five poverty-related variables (i.e., educational attainment, economic activity status, minimum housing standard, family conflict, and social support), and computed as the sum of each component which was dichotomized (0/1) to determine risk status. NSSI was reported by the Korean version of the Functional Assessment of Self-Mutilation, and the acquired capability for suicide was evaluated with the Korean version of the Acquired Capability for Suicide Scale. The levels of suicidal ideation were assessed by the Korean version of the Suicidal Ideation Questionnaire. We also assessed the history of suicide attempts using a single question from the Korean version of the Columbia-suicide Severity Rating Scale.

### RESULTS

The results of hierarchical multiple regression indicated that PCR significantly and uniquely explained variance in young adults' suicidal ideation even when age, gender, and household income were controlled for ( $B=5.459$ ,  $p<.001$ ). Unexpectedly, current household income did not significantly predict young adults' suicidal ideation. The results of sequential logistic regression showed that PCR independently contributed to predicting past suicide attempts ( $OR=1.741$ ,  $p<.001$ ). According to the results of PROCESS macro, NSSI and the acquired capability for suicide sequentially mediated the association between PCR and suicidal ideation ( $B=0.212$ , 95% CI [0.079, 0.378]), and also the association between PCR and suicide attempts ( $B=0.021$ , 95% CI [0.005, 0.046]).

### CONCLUSIONS

Our findings have several practical implications for the prevention of suicidal behavior in early adulthood. Specifically, this study suggests that PCR may be useful in identifying young individuals at higher risk for suicide, and NSSI and the acquired capability for suicide may both be potential targets for intervention.

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Abstract No.: 0275

## Associations between Daily Emotion Regulation Style and Depression among High-Risk Young Adults: A Dynamic Structural Equation Modeling Approach

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### INTRODUCTION

People live with various emotions and constantly decide whether and how to regulate emotions according to contextual demands. Rumination has been considered a major maladaptive emotion regulation strategy, and has been consistently associated with depression. However, based on the recent literature on emotion regulation flexibility, rumination use and its adaptiveness may differ depending on the context (e.g., the intensity of negative affect). However, the momentary dynamics of emotion regulation remain not fully understood. Elucidating how depressed individuals would react to negative affect (NA) and how rumination would influence NA, and exploring whether these emotion regulation styles would explain levels of depression would offer more ecologically sensitive implications for understanding and promoting individuals' emotion regulation. Thus, this study aimed to examine the momentary dynamic of NA and rumination, considering rumination as both a response to NA and an antecedent to NA, and individual differences in their dynamic, including their relations to depression.

### METHOD

Participants were 122 college students (Mean age = 21.43, SD = 2.16) who reported subclinical levels of depressive symptoms at the baseline assessment (CES-D score  $\geq 16$ ). Following a baseline assessment, a mobile ecological momentary assessment (EMA) was conducted in which individuals recorded momentary NA and rumination 5 times daily over 7 consecutive days. After the EMA, they completed the questionnaire assessing depressive symptoms at a two-week follow-up. To elucidate within-person dynamics of daily NA and rumination, and to explore intercorrelations between random effects and association between random effect and depressive symptoms at the between-person level, the multilevel vector autoregressive model was applied by employing dynamic structural equation modeling in Mplus.

### RESULTS

The results of the within-person level model indicated that momentary NA was associated with higher rumination at the same interval; momentary rumination was related to higher NA at the subsequent time point; and both NA and rumination showed autoregressive relationships. In the between-person level model, the correlation between random effects indicated that an individual's average rumination was positively correlated with the individual's average NA; the weaker effect of NA on rumination (flatter NA-rumination slope) was related to the higher mean on rumination and NA, higher rumination inertia, and the stronger effect of rumination on the subsequent NA; higher rumination inertia was associated with the stronger effect of rumination on the subsequent NA. In addition, the common factor, which was related positively to average rumination and average NA, and negatively to the NA-rumination slope, mediated the association between baseline depressive symptoms and follow-up depressive symptoms.

### DISCUSSION

These results suggest that individuals with higher trait NA tend to ruminate more, but also show weaker momentary NA-rumination association (i.e., inflexible style of rumination). Furthermore, momentary NA and emotion regulation styles may reflect variations in baseline depressive symptoms and subsequently contribute to future depressive symptoms. Specifically, average use of rumination, average NA, and inflexible use of rumination according to the intensity of NA may play significant roles in depressive symptoms. Our study highlights that more frequent and less flexible use of rumination may be particularly maladaptive and predictive of depression, and proposes that it may be beneficial to focus on not just mean levels of but also patterns of daily use of emotion regulation strategies for more effective interventions.

## Associations between Parental Invalidation, Perceived Peer Support, and Borderline Personality Disorder Symptoms

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Borderline Personality Disorder (BPD) is a condition presenting with chronic instability across the interpersonal, self-image, affective, and behavioural domains (American Psychiatric Association, 2022). Linehan's (1993) biosocial model postulated parental invalidation, which refers to parents trivialising, rejecting, punishing, and dismissing a child's internal experiences, as a risk factor implicated in the development of BPD. Links between parental invalidation and BPD symptoms have been well-established (Lee et al., 2021). However, BPD is a stable chronic condition (Stepp et al., 2014) during adulthood, and yet few studies have examined how interpersonal factors, such as perceived peer support, could be implicated in the context of parental invalidation and maintenance of BPD symptoms.

Perceived peer support refers to one's perceptions of their general availability and quality of social support (Sarason et al., 1995) with respect to peer relationships. We focus on peers specifically since apart from parents, peers are another significant source of support. Such an interpersonal factor could be important in the maintenance of BPD symptoms, given that interpersonal interactions are of high significance but yet dysfunctional for individuals with BPD (American Psychiatric Association, 2022).

In this study, we are specifically interested in examining (1) whether past experienced parental invalidation negatively and positively predicts perceived peer support and BPD symptoms respectively, (2) the longitudinal bi-directional relationship between perceived peer support and BPD symptoms, and (3) whether BPD symptoms and perceived peer support, respectively, mediate the associations between parental invalidation and perceived peer support, and BPD symptoms.

We recruited 234 (Mage = 20.3, 80% females) undergraduate participants. Data was collected at two timepoints (8-weeks apart). We administered the Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007) at the timepoint 1 (T1) and the Perceived Social Support – Friends scale (PSS-Fr; Procidano & Heller; 1983), and Personality Assessment Inventory – Borderline Features Scale (PAI-BOR; Morey, 1991) at both timepoints. A total of 212 participants completed both timepoint questionnaires.

Data was analysed using path analysis. The data demonstrated a very good model fit. Parental invalidation positively predicted BPD symptoms ( $p < .001$ ) while exhibiting an inversed relationship with perceived peer support ( $p < .001$ ). For the cross-lagged paths, higher BPD symptoms at T1 predicted lower perceived peer support at T2, while controlling for perceived peer support at T1 ( $p < .001$ ). However, the reverse relationship was not significant. Perceived peer support did not predict an increase in BPD symptoms ( $p = .652$ ), when baseline BPD symptoms were controlled for. BPD symptoms mediated the relationship between parental invalidation and perceived peer support ( $p = .001$ ). However, perceived peer support did not mediate the relationship between parental invalidation and BPD symptoms ( $p = .654$ ).

Overall, our study showed that parental invalidation could contribute to higher BPD symptoms and lower perceived peer support. This suggests that one's experience with parents may contribute to the development of an internal working model that one could use to interpret their peer interactions. However, we found that while higher BPD symptoms led to lower perceived peer support over time, lower perceived peer support did not contribute to worsening BPD symptoms. Perhaps, low perceived peer support will only worsen BPD symptoms when one is under the context of stress, as indicated by the stress-buffering hypothesis (R. S. Lazarus, & Folkman, 1984). Overall, our findings are in line with existing literatures indicating interpersonal dysfunction as a core characteristic of BPD, and provides support specifically in the subjective perceptible domain. Furthermore, BPD symptoms was found to mediate the association between parental invalidation and perceived peer support.

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Abstract No.: 0296

## The Impact of Loneliness on Depression among Korean College Students during COVID-19: The Differential Effectiveness of Cognitive Emotion Regulation Strategies Based on Personality

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### INTRODUCTION

The COVID-19 pandemic has brought about drastic changes in the social experiences of college students, with a large portion of in-person interactions replaced by online ones. Recent studies are putting more focus on the loneliness students may feel during these changes and its possible impact on their depression (Hager, Judah, & Milam, 2020; Luttenbacher, Breukel, & Adamson, 2021; Wu, Wu, & Tian, 2022). In the face of loneliness, specific cognitive strategies can effectively minimize negative emotions while maximizing positive emotions from other aspects of life (Garnefski, Kraaij, & Spinhoven, 2001; Gross, 2002). However, it is essential to note that the effectiveness of each strategy may vary based on individual personality traits, namely, extraversion and neuroticism (McCrae & Costa, 1986). The current study examines the moderating effect of 'positive reappraisal,' 'positive refocusing,' and 'putting into perspective' on the relationship between loneliness and depression among Korean college students during the COVID-19 pandemic, with particular emphasis on potential variations across personality groups.

### METHOD

Data from 286 Korean college students ( $M=21.56$ ,  $SD=2.07$ ) was analyzed. Personality, loneliness, depression, and cognitive emotion regulation strategies were assessed using the Korean version of the following measures: NEO Personality Inventory (Costa & McCrae, 1992), UCLA Loneliness Scale (Russell, 1996), Center for Epidemiologic Studies Depression Scale (Radloff, 1977), and Cognitive Emotion Regulation Questionnaire (Garnefski, Kraaij, & Spinhoven, 2001). Participants were divided into two groups based on their dominant personality traits: the Extraversion Group ( $N=142$ ; higher extraversion scores than neuroticism scores) and the Neuroticism Group ( $N=144$ ; neuroticism scores higher than or equal to extraversion scores). Hierarchical multiple regression analyses were conducted to test the hypothesized moderating effects of cognitive emotion regulation strategies on the relationship between loneliness and depression (PROCESS macro by Hayes, Model 1).

### RESULTS

Loneliness positively predicted depression both at the sample level ( $\beta=.525$ ,  $SE=.033$ ,  $t=10.396$ ,  $p<.001$ ) and within each personality group (Extraversion:  $\beta=.321$ ,  $SE=.051$ ,  $t=4.012$ ,  $p<.001$ ; Neuroticism:  $\beta=.452$ ,  $SE=.058$ ,  $t=6.033$ ,  $p<.001$ ). While 'positive reappraisal' played an alleviating role for all participants ( $\beta=-.023$ ,  $SE=.007$ ,  $t=-3.429$ ,  $p<.001$ ), 'positive refocusing' and 'putting into perspective' varied in their effects based on individual personality traits. 'Positive refocusing' weakened the relationship between loneliness and depression for the Extraversion Group ( $\beta=-.038$ ,  $SE=.015$ ,  $t=-2.485$ ,  $p<.05$ ) but not for the Neuroticism Group. 'Putting into perspective,' on the other hand, lessened the impact of loneliness on depression for the Neuroticism Group ( $\beta=-.040$ ,  $SE=.015$ ,  $t=-2.760$ ,  $p<.01$ ) but not for the Extraversion Group.

### DISCUSSION

The current findings add to the accumulating evidence supporting 'positive reappraisal' as the protective factor against the influence of life stressors on depression (Riepenhausen et al., 2022) by replicating the result in the pandemic situation and across personality groups. Furthermore, in response to the unprecedented pandemic-induced loneliness, the present study offers a flexible examination of adaptive cognitive strategies by considering how individuals perceive social stimuli. For extroverts who perceive social interactions as pleasurable stimuli (Buecker et al., 2020), refocusing on online social events or exciting individual activities as alternatives can be effective (Garnefski,

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Kraaija, & Spinhoven, 2001). For neurotics who are emotionally susceptible to both solitude and social stressors (Buecker et al., 2020), the complex situation of physical isolation coupled with digital connections can be challenging, and thus, taking a broader perspective and maintaining balance would be helpful (Garnefski, Kraaija, & Spinhoven, 2001).

Garnefski, N., Kraaija, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation, and emotional problems. *Personality and Individual Differences*, 30(8), 1311-1327. <https://www.sciencedirect.com/science/article/abs/pii/S0191886900001136?via%3Dihub>



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Abstract No.: 0297

## Psychotherapy for Psychosis as a Syndrome: Protocol of a Randomized Controlled Trial for a Symptom-Based Management Approach for Psychosis

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### INTRODUCTION

Despite being recognized as a mental disorder for over a century, breakthroughs in treatments for schizophrenia have been few and far between. The most notable advancements include the introduction of antipsychotics in the 1950s and cognitive behavioral therapy for psychosis in the 2010s. Nonetheless, the disease often remains debilitating after psychotherapy and pharmacotherapy. The lack of developments gleaned from decades of research into the etiology and treatment of psychosis has prompted a reconceptualization of the disorder as a syndrome (e.g., Carpenter, 2016, 2022; van Os & Guloksuz, 2022). This perspective approaches the condition not as a single disease entity requiring a single treatment but as a collection of symptoms with various etiologies requiring specialized interventions. Indeed, randomized controlled trials (RCTs) involving psychotherapies targeting specific comorbidities amongst individuals with psychosis have simultaneously reduced both the targeted and psychotic symptoms (e.g., insomnia (Freeman et al., 2015)). Psychotic symptoms might be conceptualized as the culmination of a combination of mental disorder symptoms, and significant improvements may thus be observed once comorbidities are identified and treated.

### METHODS

We will conduct a two-arm (treatment vs. treatment-as-usual), assessor-blinded RCT involving 150 outpatients aged 18-65 with a diagnosis of psychosis (schizophrenia or schizoaffective disorder) from two cities in Indonesia (Jakarta dan Padang). The target sample will be equally divided between the two groups to detect moderate-to-large effect size at 80% power and 0.05 significance level. The key inclusion criteria for participants will be a score of 2 or above on the Psychotic Symptoms Rating Scale (PSYRATS) for either hallucinations or delusions, wherein symptoms have persisted for at least three months. The key exclusion criteria will include a primary diagnosis of a substance use disorder, organic syndrome (including brain injury), language deficiencies that may present a barrier to involvement in therapy, and current enrollment in other individual psychotherapy. Participants who experience a significant change in pharmacotherapy will be required to wait at least one month until the stabilization of the new dosage. Participants will be randomly assigned (1:1) depending on their area of residence. The primary outcome measures will be psychotic symptoms assessed by the PSYRATS, Brief Psychiatric Rating Scales, and Community Assessment of Psychic Experience. The secondary outcome measures will include depression, general anxiety, and somatoform symptoms (Patient Health Questionnaire), panic symptoms (Panic Disorder Severity Scale), insomnia (Insomnia Severity Index), obsessive-compulsive symptoms (Obsessive-Compulsive Inventory-Revised), mania (Young Mania Rating Scale), trauma (International Trauma Questionnaire), and social anxiety (Social Phobia Inventory). In addition, emotional regulation skills (Emotional Regulation Skills Questionnaire) and loneliness (UCLA Loneliness Scale 6) will be assessed. Follow-up assessments will be conducted at 8 and 24 weeks. The evidence-based psychotherapy will target comorbidities in a stepwise manner that follows the principle of combinability (e.g., behavioral activation for depression may be delivered in conjunction with sleep hygiene for insomnia) and case formulation (e.g., when social anxiety causes withdrawal and depression, social anxiety will be treated first). Outcomes will be analyzed on an intention-to-treat basis. A planned mediation analysis will be conducted to examine whether the reduction in comorbidities mediates a reduction in psychotic symptoms.

### DISCUSSION

This is the first symptom-based management approach RCT in psychotherapy. The trial results will highlight whether symptom-based management is effective in treating complex disorders with many comorbidities, including and beyond psychosis.

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Abstract No.: 0328

## A Longitudinal Study of Depression and Cognitive Emotion Regulation: Focusing on Gender Differences and Time Intervals

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### INTRODUCTION

Suicide is associated with depression, and it is necessary to examine the modifiable protective factors in order not to exacerbate and maintain depressive symptoms. Cognitive emotion regulation is one of the crucial factors related to the process of depression. However, the direction of mutual influence between them has not yet been examined. In this study, we examined the longitudinal relationship by cross-lagged panel model. In addition, since each of these variables is sex-dependent, we analyzed the data by gender. Furthermore, since there is no unified knowledge of the survey interval of longitudinal studies in this field, we conducted surveys at 4 weeks (4w), 8 weeks (8w), and 12 weeks (12w) after the first survey. Then, we examined three cross-lagged panel models per emotion regulation strategy.

### METHOD

The number of valid respondents was 151 in the first survey (50 men and 101 women), 116 in the second survey(4w)(45 men and 71 women), 92 in the third survey(8w) (38 men and 54 women) and 73 in the fourth survey(12w) (32 men and 41 women). The Japanese version of the Cognitive Emotion Regulation Questionnaire(CERQ) and the Japanese version of HADS-depression were used. We also used each of the CERQ subfactors ('Positive-reappraisal', 'Putting-into-perspective', 'Acceptance', 'Positive-refocusing', 'Refocus-on-planning', 'Rumination', and 'Self-blame', 'Blaming-others', 'Catastrophizing'). Age was added as a control variable in the analysis. In addition, since the data for women were measured at each menstrual cycle (Mean=30.19, SD=4.43), the menstrual cycle was also included as a control variable in the analysis for women. This study was approved by the Ethics Review Committee of the University of Tokyo (No. 21-193).

### RESULTS

For men, 'Positive-reappraisal' consistently had a negative cross-lagged effect on depression in all three analyses. 'Putting-into-perspective' showed a positive cross-lagged effect from depression to 'Putting-into-perspective' after 4 weeks. After 8 weeks, there was a positive bidirectional relationship between 'Putting-into-perspective' and depression. After 12 weeks, there was a positive cross-lagged effect from 'Putting-into-perspective' to depression. Negative cross-lagged effects from depression to 'Refocus-on-planning' were also found at 4 and 8 weeks and after 12 weeks, there was a negative bidirectional relationship between 'Refocus-on-planning' and depression. In addition, 'Blaming-others' showed a negative cross-lagged effect from depression to 'Blaming-others' at 4 weeks and a positive cross-lagged effect from 'Blaming-others' to depression at 12 weeks. Finally, 'Catastrophizing' showed a positive cross-lagged effect from 'Catastrophizing' to depression at 8 and 12 weeks. For women, 'Putting-into-perspective', 'Rumination', and 'Catastrophizing' had a positive cross-lagged effect on depression at 12 weeks, while 'Positive-refocusing' had a negative cross-lagged effect on depression at 12 weeks. In addition, a negative cross-lagged effect was found from depression to 'Blaming-others' at 4 weeks.

### DISCUSSION

The present study used cross-lagged model to examine the direction of effects between depression and cognitive emotion regulation in three time periods by gender. The results suggest that the adaptive emotion regulation strategies for depression are 'Positive-reappraisal', 'Acceptance', and 'Refocus-on-planning' for men, and 'Positive-refocusing' for women. On the other hand, maladaptive emotion regulation strategies are 'Putting-into-perspective' and 'Catastrophizing' for men, and 'Rumination' for women in addition to these two

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emotion regulation strategies. Interestingly, 'Putting-into-perspective', 'Refocus-on-planning', and 'Blaming-others' may be associated with depression in different directions depending on the time interval for men. Future studies should examine the role of cognitive emotion regulation in interventions for depression by increasing the sample size and examining the replicability of the results.

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## The Impact of Personality Traits on CBT Outcome

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### INTRODUCTION

Cognitive-behavioral therapy is highly effective in the treatment of depressive disorders (CBT; Anthes, 2014). However, around half of patients with depression do not respond to psychotherapy (Gaynes et al., 2009) highlighting the importance of examining predictors for psychotherapy outcome. A previous review revealed significant associations of personality traits, particularly neuroticism, with the onset and course of depression (Enns et al., 2011). Therefore, it seems promising to investigate the impact of such personality traits on CBT response (Bagby et al., 2008; Joyce et al., 2018). The present study aimed to investigate the predictive value of the Big Five personality factors on the outcome of CBT.

### METHOD

In this naturalistic longitudinal study, patients with an acute depressive disorder (n=37) were assessed before and after approximately 20 sessions of CBT with the Structured Clinical Interview for DSM-IV (Wittchen et al., 1997). The NEO-FFI (Borkenau & Ostendorf, 2008) was used to assess the Big Five personality traits. Patients in full or partial remission at post-treatment according to SCID were classified as CBT responders, whereas patients, who were still in acute depression, were classified as CBT non-responders. Using SPSS Statistics, we performed a logistic regression analysis (inclusion selection) with CBT response (1=yes/ 0=no) as the dependent variable. Neuroticism, extraversion, agreeableness, conscientiousness and openness were entered as independent variables to investigate the predictive value of these personality traits on CBT response.

### RESULTS

The logistic regression predicted CBT response significantly ( $X^2(1)=12.302$ ,  $p=.031$ , Nagelkerke's  $R^2=.404$ ), with neuroticism as the only significant predictor ( $p=.027$ ). Higher neuroticism had a negative impact on CBT response (Odd's ratio=0.753, 95%-KI [0.586, 0.969]). In contrast, the other personality traits showed no significant predictive value ( $p\geq.309$ ).

### DISCUSSION

Our analyses showed that higher neuroticism significantly predicted CBT non-response. Neuroticism was the only significant predictor, while personality traits such as extraversion and agreeableness had no additional effect on CBT outcome. Individuals with high neuroticism do not expect to be liked by other people, both in first encounters (Back et al., 2011) and in longer relationships (Neyer & Lehnart, 2007), which could also have a negative impact on the therapeutic relationship - one of the major common factors for psychotherapy outcome (Lambert & Barley, 2001). As the therapeutic relationship is an important common factor for the outcome of therapy (Lambert & Barley, 2001), the impact of neuroticism on CBT response may have resulted from this. The potential of neuroticism as a predictive marker of CBT non-response may be important to improve future individual treatment decision, e.g. highlighting the importance of a progressive development of a sustainable therapeutic relationship particularly in patients with high neuroticism. As this preliminary study is part of a larger research project – including data from neuropsychological assessments, general and disorder-specific questionnaires, clinical interviews, and magnetic resonance imaging – we also aim to investigate the additional impact of biomarkers for CBT response prediction in the future, in order to improve prognosis and treatment selection in patients with depressive disorders based on multidimensional data.

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Abstract No.: 0349

## The Effect of Attachment and Rejection Sensitivity on Mental Problems: Mediating Role of Shame

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### INTRODUCTION

It is well-known that people with insecure attachment and high rejection sensitivity are likely to experience mental health problems like such as anxiety, depression, and even anger. The experiences of rejection by meaningful others in a social situation can cause shame. Since people experiencing shame tend to hide this emotion from others, shame is difficult to identify and often can appear in a bypassed way (Lewis, 1971). This finding has an important implication in treatment because shame can interrupt self-disclosure in patients. This study examines whether shame mediates the association between attachment, rejection sensitivity, and mental health problems.

### METHOD

729 college students (female 66.1%,  $M=22.41$ ,  $SD=3.93$ ) completed the Korean-translated version of the Experiences in Close Relationships-Revised Scale (Kim, 2004), Rejection Sensitivity Scale for College Students (Park & Yang, 2017), the External and Internal Shame Scale (Ferreira, Moura-Ramos, Matos, & Galhardo, 2020), the Hospital Anxiety and Depression Scale for Koreans (Oh, Min, & Park, 1999), and the Korean adaptation of the State-Trait Anger Expression Inventory (Chon, Hahn, Lee, & Spielberger, 1997). The Cronbach's alpha calculation as an internal consistency indicator was acceptable (.77-.92) for the five subscales. Structural equation modeling was applied to test whether shame mediates the relationship between attachment and mental health problems as well as the relationship between rejection sensitivity and mental health problems.

### RESULTS

The results of this study are as follows. First, all variables have a significant positive relationship with one another. The higher the instability of attachment and rejection sensitivity, the higher the shame, depression, anxiety, and anger. Second, The model was found adequate and parsimonious ( $\chi^2(df)=486.099(84)$ ,  $CFI=.95$ ,  $TLI=.938$ ,  $RMSEA=.08$  [95% CI=.074~.088]). Finally, the results showed that shame mediates the relationship between attachment and mental health problems as well as the relationship between rejection sensitivity and mental health problems.

### DISCUSSION

These findings suggest that dealing with shame while intervening in mental health problems is important. Especially, people with high shame may attempt to under-report or cover up symptoms, which can negatively affect treatment outcomes. We introduce Compassion-Focused Therapy as an intervention that directly deal with one's shame and self-criticism in a compassionate manner. There is a limitation that generalization is difficult because the sample is limited to college students. In the future, it is necessary to verify the model which was proposed in this research by sampling various subjects.

# POSTER SESSION 04

Abstract No.: 0354

## **The Relationship between Loneliness and Well-Being of Young Adults: The Moderating Role of Self-Determined Motivation for Solitude**

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Korea is one of the countries with the highest rates of suicide and depression (OECD, 2021), and the rate of suicide is highest among young adults in their 20-30s, with the rate increasing only in that age group (Statistics Korea, 2021). In addition, people in their 20s have the highest occurrence of depression among all age groups in Korea (Korea Health Insurance Review and Assessment Service, 2022).

People reporting loneliness are more likely to have mental health problems and to report a lower level of life satisfaction (Kim & Shin, 2015). The rate of young adults living alone in Korea has been increasing, and a survey (Seoul Institute, 2021) indicated that 31% were not satisfied living by themselves, with 19.4% reported feeling lonely. These findings may indicate that young adults in Korea are vulnerable to emotional distress. However, studies have found that people who live alone may not experience mood disorders or can recover from depression if they enjoy engaging in solitary activities, which is consistent with the argument that solitude and loneliness need to be differentiated (Nicol, 2005). Solitude is defined as a state of no social interaction with others (Larson, 1990), whereas loneliness is a subjective appraisal that one's social needs are inadequately satisfied (Peplau & Perlman, 1982).

The present study investigated the moderating role of self-determined motivation for solitude in the relationship between loneliness and emotional well-being of young Korean adults in their 20s. Data were collected through an online survey, and respondents were 236 undergraduate and graduate students living in Gyeonggi-do, South Korea.

The measures used were (a) the abbreviated Solitude Scale-Short Form (MSS-SF; Thomas & Azmitia, 2019) to measure self-determined motivation for solitude, using items from the Korean version by Lim (2010); (b) the Korean Mental Health Continuum - Short Form (K-MHC-SF; Lim et al. 2012) to measure well-being, and (c) the Korean version of the revised UCLA loneliness scale (Kim & Kim, 1989). SPSS version 26 was used for descriptive statistics, t-tests, ANOVA, Pearson correlations, and the moderation test using hierarchical regression analysis. The key findings were as follows. First, self-determined motivation for solitude was positively correlated with well-being and negatively correlated with loneliness. Well-being and loneliness were negatively correlated. Second, the hierarchical regression analysis showed that loneliness was negatively related to well-being, self-determined motivation for solitude was positively related to well-being, and self-determined motivation for solitude significantly moderated the relationship between loneliness and well-being, as hypothesized. That is, the size of the negative association between loneliness and well-being is larger when the level of self-determined motivation for solitude is lower.

The implications and limitations of the study are as follows: First, it has theoretical implications in that it addresses the importance of the self-determined motivation for solitude in reducing risk factors for lower well-being based on loneliness among young adults. The meaning that individuals attach to being alone makes a difference in their emotional experience of solitude. There has been a lack of research on the potential positive role of solitude in people's lives, and the present results provide evidence that it can serve as a source of resilience. Second, the current study has implications for clinical intervention; by including enhancement of self-determined motivation for solitude in evidence-based treatments for young adults who have sought assistance for life stress and mental health concerns.

# POSTER SESSION 04

Abstract No.: 0396

## **Effect of Positive Psychology Interventions on Social Self-Efficacy**

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The aim of the present study was to determine the effect of positive psychology intervention on social self-efficacy. Forty participants were randomly assigned to the positive psychology intervention group or the psychological education group. A total of eight face-to-face sessions were conducted. First, social self-efficacy improved significantly in both interventions. Within group effect sizes for social self-efficacy at post-intervention were 1.46 for positive psychology intervention and 1.47 for psychological education. No significant differences between positive psychology intervention and psychological education were found at post-intervention. Second, depression symptoms did not significantly decrease in either interventions. Third, well-being improved significantly in both interventions within group effect sizes for well-being at post-intervention were 1.17 for positive psychology intervention and 1.24 for psychological education. No significant differences between positive psychology intervention and psychological education were found at post-intervention. The results showed that positive psychology interventions had a significant effect on social self-efficacy and well-being. These results mean that positive psychological intervention-based approach is expected to be possible as a way to improve self-efficacy.

# POSTER SESSION 04

Abstract No.: 0401

## Development and Preliminary Practice of a Stress Management Program for Perinatal Women Treated in Psychiatric Outpatient Clinic

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### INTRODUCTION

While pregnancy and childbirth are joyous, women face various stressors and difficulties, including pregnancy-related physical changes and hormonal imbalances, adaptation to the role of mother, and the formation of a maternal identity (Rallis et al., 2014). In this context, 10–20% of perinatal women experience psychiatric symptoms or mental disorders (O'Hara & Wisner, 2014). Maternal anxiety and depression during pregnancy can negatively impact the child's growth and development, which may result in premature birth, low birth weight, and emotional developmental problems (e.g., O'Connor et al., 2003; Kim et al., 2013), and is also related to distress in mothers. Japan has a high rate of maternal suicide (Takeda et al., 2017). Studies have shown that postpartum depression and other psychiatric disorders may be a risk factor for suicidal behaviors (Orsolini et al., 2016). Researchers are investigating the prevention and treatment of perinatal psychiatric symptoms, and have demonstrated the effectiveness of psychotherapy, especially for postpartum depression (Cuijpers & Karyotaki, 2021; Sockol et al., 2011). The effectiveness of group therapy for preventing postpartum depression and anxiety as part of prenatal education has also been studied (e.g., Austin et al., 2008), and Yasuma et al. (2020) demonstrated the preventive effects of psychological intervention based on a cognitive behavioral approach. However, in Japan, the practice of such psychological programs has rarely been reported.

Purpose: This study aimed to develop a psychological stress management program for perinatal women receiving psychiatric outpatient care and to investigate its effectiveness and feasibility.

### METHODS

Two clinical psychologists specializing in perinatal mental care developed a stress management program for women based on Kusakabe (2016) and other studies on perinatal mental health. The program included the following topics:

Understanding the stress model and applying it to organize problems in daily life

Psychological education on perinatal psychiatric symptoms, such as depression and anxiety

Awareness/interpretation of stress and cognitive restructuring

Organization and expansion of coping strategies for stress

We added the following topics that are helpful in the care of perinatal mental health: Social support: social support is particularly important in preventing postpartum depression. To bridge the participants (expectant and nursing mothers) and their community services, we provide information on support resources in municipalities and the local professionals, such as public health nurses and child caretakers, who support perinatal women. Yoga: Yoga is effective in reducing depression and anxiety symptoms during the perinatal period, and relaxes the body and mind. The program consists of five sessions, each lasting two hours. Each session will be conducted as follows: yoga in the first half, a 15-minute break, the stress management program in the latter half, and a summary of the sessions. A professional instructor experienced in working with perinatal women and infants will lead the yoga class. The following scales will be used to assess the clinical symptoms and psychological characteristics of the participants; Edinburgh Postnatal Depression Scale (EPDS; Okano, 1996), Generalized Anxiety Disorder-7 (GAD-7; Muramatsu et al., 2010), Cognitive Appraisal Rating Scale (CARS; Suzuki & Sakano, 1998), Simplified Japanese version of the WHO-Five well-being index (S-WHO-5-J; Inagaki et al., 2013), 10-item Social Provisions Scale (SPS-10; Katsuki et al., 2020), Resilience Scale (RS; Nishi et al., 2010). The validity and reliability of the Japanese versions of all these scales have been confirmed. We received permission to conduct this program from the director of a psychiatric outpatient clinic. We will start this program in May 2023, and will obtain written informed consent from all participants prior to the program.

### FUTURE PROSPECTS

During the congress, we will report on the progress of this pilot program.



# POSTER SESSION 04

Abstract No.: 0433

## Measuring Shame and Guilt. The Psychometric Properties and Clinical Utility of the Norwegian Version of the Personal Feelings Questionnaire-2

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### INTRODUCTION

Shame and guilt are universal and social emotions often functioning to elicit social approved behaviors and inhibit antisocial behavior. Although not in itself maladaptive, excessive shame and guilt – shame especially, is linked to various destructive behaviors, difficulties in emotion regulation, maladaptive personality traits, psychological difficulties, and negative treatment outcomes. This makes it especially important to have an available valid instrument to evaluate the mechanisms related to shame and guilt and to evaluate the efficacy of treatments focusing on those mechanisms - such as shame and guilt related core beliefs, and destructive behavior. As of today, no such self-report instrument is available in Norwegian. The aim of this project is to evaluate the psychometric properties of the Norwegian version of the Personal Feelings Questionnaire (PFQ-2). The PFQ-2 is a 16-item measure designed to assess guilt and shame proneness that uses a global adjective checklist measurement approach. The instrument is considered to have sound psychometric properties based on evidence of reliability and external validity. The aim of this study was to assess the clinical utility of the Norwegian version of the PFQ-2, its measurement across various populations and factor structure. Furthermore, to assess its internal reliability, construct- and discriminative validity.

### METHOD

Following the guidelines provided by the World Health Organization, the translation process included translation, evaluation by expert panel, back-translation and pilot testing of the instrument among a clinical population. Further data was collected among a community sample of students in a local university college in Norway (N=320), a clinical sample of patients in the outpatient clinic at the local psychiatric hospital (N=53) and a clinical sample of patients in an inpatient treatment facility for substance use disorder (N=46).

### RESULTS

We will present preliminary data on the psychometric properties of the Norwegian version of the PFQ-2, and the relationship between measurement of shame and guilt, demographic variables, personality traits, and symptoms of depression and anxiety. Results show that both clinical populations have stronger proneness to both shame and guilt than the community sample. There was not a significant difference between the clinical populations of outpatients at the psychiatric hospital and inpatients in long-term treatment for substance use disorder. Women are more prone to shame and guilt than men, but age does not play a significant role. The Norwegian clinical populations scored slightly higher than shown in prior research in a clinical American population, indicating a possible cultural difference. Both PFQ shame and PFQ guilt have high internal consistency, adequate construct, convergent and discriminant validity.

### DISCUSSION

The preliminary results indicate that the Norwegian version of the PFQ-2 behaves mostly as expected and in concordance with prior research in other languages and with other populations. The PFQ-2 can potentially be an important tool to use in therapy to address negative core-beliefs, behavior impulses related shame and guilt, and to evaluate proneness to shame and guilt in adult populations in Norway.

# POSTER SESSION 04

Abstract No.: 0446

## **Impulsivity and Non-suicidal Self-Injury: The Mediating Effects of Enhancement and Coping Motives**

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*Daegu University Graduate School, Korea*

The goal of this study was to investigate the mediating effect of enhancement and coping motives in the relationships between impulsivity and non-suicidal self-injury. Participants of this study were 250 adults (male: 79, female: 171) in South Korea. The data was collected by UPPS-P Impulsivity Scale, Nonsuicidal Self-injury Frequency Scale, Functional Assessment of Self-Mutilation. Findings indicated that sensation seeking and negative urgency were all significantly related to non-suicidal self-injury. have a significant correlation. And enhancement motives mediated the relationship between sensation seeking and non-suicidal self-injury. Moreover, coping motives mediated the relationship between native urgency and non-suicidal self-injury. The findings suggest that coping and enhancement motives are important to examine when studying the role of impulsivity in adults' nonsuicidal self-injury.

# POSTER SESSION 04

Abstract No.: 0486

## The Impact of Cognitive Behavioural Therapy on Self-Reported Retrospective Childhood Maltreatment over Two Years

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### INTRODUCTION

Childhood maltreatment is a major risk factor for developing major depressive disorder (MDD). It has been extensively discussed whether a depressive bias might influence self-reported retrospective reports of adverse childhood experiences. A recent longitudinal study has underlined the temporal stability of the childhood maltreatment questionnaire (CTQ) with only small effects of current depressive symptomatology. However, since some MDD patients receive psychotherapy, the retrospective assessment may change over time due to reappraisal of early adverse experiences: One of the aims of Cognitive behavioural therapy (CBT) is to bring therapeutic change by reconsolidating old memories while integrating new emotional evaluations. Based on these insights, we wanted to assess whether CBT is associated with an attenuation or increase of the retrospectively reported amount of childhood maltreatment over two time points.

### METHODS

The sample was drawn from the Marburg-Münster Affective Disorders Cohort Study (MACS), recruited as part of the bi-centric study FOR2107 across the German universities of Marburg and Münster, comprising N=247 (167 female, mean age±SD 35.85±12.87) patients with a lifetime diagnosis of MDD. We administered the CTQ at baseline and after an approx. two-year follow-up interval. The sample was split into participants with and without outpatient CBT, but no hospitalization or other therapy sessions, e.g., psychodynamic treatment, during the interval (N=143 CBTyes; and N=104 CBTno). To account for the possibility that CTQ sum scores might either increase or decrease over time, we calculated the absolute  $\Delta$ CTQ. We conducted an analysis of covariance with  $\Delta$ CTQ as dependent variable, and CBTyes vs. CBTno as pseudo-independent factor, while controlling for years of education, years since disease onset, number of therapeutic sessions in the interval, and duration of depressive episodes in the interval to reduce the impact of different severity of illness.

### RESULTS

As compared to CBTno, CBTyes had higher CTQ scores at baseline (M=44.72, SD=15.23 vs. M=40.00, SD=12.07) and follow-up (M=45.20, SD=15.31 vs. M=39.61, SD=10.82). CBTyes also reported significantly more time in the depressed state in the interval (U=8847.000, Z=4.297, p<.001). The mean  $\Delta$ CTQ was around four sum score points (CBTyes: M=4.62, SD=4.00; CBTno: M=4.47, SD=4.25) which represents 4.74% of the sum score range from 25 to 120. However, there was no significant effect of group, i.e., CBTyes vs. CBTno (F(1,240)=0.192, p=.661), even when omitting the covariates (F(1,245)=0.082, p=.775).

### DISCUSSION

The descriptive baseline difference in CTQ and cumulated depressive time in the interval between the two groups cautiously points towards childhood maltreatment as a risk factor for a more severe disease course and the resulting need of CBT in the interval. The present results are an additional confirmation of the temporal stability of the CTQ even when considering the amount of CBT. This should reaffirm that patients can process dysfunctional thinking patterns and integrate distressing memories into their biography in a way that still allows them to acknowledge their abusive or neglectful past, rather than being subject to imagination inflation, false feedback or memory implantation. Our data were drawn from a naturalistic study, not a psychotherapy study, whereas the latter might reveal more insights measuring childhood maltreatment reports and CBT over a longer period of time.

# POSTER SESSION 04

Abstract No.: 0490

## Mental Health of University Rugby Players in Japan: Examining the Influence of Participation in Official Games and Resistance to Help-Seeking

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Waseda University, Japan

### INTRODUCTION

The importance of mental health in athletes has garnered global attention. However, mental health research on specific sports and amateur athletes remains limited in Japan. For example, a study on top-level rugby players (Oshio et al., 2021) has been conducted, but no studies have discussed university or high school students. As the characteristics of each sport are different and have different effects on mental health, and university rugby players in Japan often play in the top league after graduation, this study investigates the mental health of university rugby players. In addition, we will clarify whether they participate in official matches and how their attitudes towards helping influence their mental health.

### METHOD

A web-based questionnaire survey was conducted among male members of rugby clubs at three universities in the Kanto region, with 183 valid responses (mean age:  $20.33 \pm 1.37$  years) used for analysis. The survey materials used were (a) demographic data (university affiliation, age, and participation in official games), (b) Kessler 6 (K6), (c) the Baron Depression Screener for Athletes (BDSA), and (d) the scale of resistance to help-seeking. Analyses were carried out by one-way ANOVA to calculate descriptive statistics and to examine differences in the degree of (b)~(d) according to participation in official games, and by correlation analysis of the variables (b)~(d). This study was approved by the Waseda University Ethics Review Committee on Research with Human Subjects (Approval number: 2022-102).

### RESULTS

A one-way ANOVA was conducted to compare the mean scores of three groups (top team, second team, and no official games). The results showed significant differences ( $F(2, 180) = 16.12\sim 21.42, p < 0.01$ ) between the groups. A post-hoc Tukey test was conducted, and the results showed that players who had not played an official game showed poorer mental health and more resistance to requests for help than other players. Correlation analysis showed that resistance to help-seeking was moderately correlated with K6 and BDSA in second team players and players who had not played in official games ( $r = .51\sim .56, p < 0.01$ ), but was weak to non-existent in top team players ( $r = .19\sim .39, p = 0.03\sim 0.21$ ).

### DISCUSSION

It is noteworthy that the results showed that those who had not played in official games had poorer mental health and were more resistant to seeking help. These findings are consistent with those of a previous study (Oshio et al., 2021). This highlights the importance of providing support and resources to athletes at all levels of competition, not just to top-level players. The results of the correlation analysis suggest that there may be differences in the functioning of resistance to help-seeking between top team players and the rest of the players. Therefore, even if resistance to help-seeking was present in top team players, the impact on mental health was limited, and it was important to identify other factors. The study only examined male rugby players from three universities in the Kanto region. Further research is needed to study female athletes and athletes in different sports and regions.

# POSTER SESSION 04

Abstract No.: 0493

## Parental Invalidation, Depression and Anxiety: The Mediating Role of Attitudes and Emotion Inhibition

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Parenting practices could influence a child's socioemotional development. One practice is parental invalidation, which occurs when parents disregard the child's communication of thoughts or emotions via rejection, dismissal and/or punishment (Linehan, 1993). Parental invalidation has been associated with internalizing and externalising difficulties (Buckholdt et al., 2014). Although the associations between parental invalidation and psychopathology have been well established, the mechanisms are less well understood. We propose two potential mediators – negative attitudes towards emotion expression and emotion inhibition. Attitudes towards emotion expression refer to the cognitions and behaviours concerning emotion expression (Joseph et al., 1994). Emotion inhibition is the intentional attempt to withhold and suppress emotional experience and expression (Krause et al., 2003). A specific strategy of emotion inhibition is expressive suppression. Experiences of parental invalidation in childhood may shape the child's attitudes toward emotion expression. For instance, when parents constantly dismiss a child's emotions, the child may view that emotions are not important or should be hidden. These attitudes towards emotional expression then influence the use of emotion inhibition strategies, and consequently could contribute to the development of both depression and anxiety symptoms. In this study, we investigated if negative attitudes and expressive suppression mediated the relationship between parental invalidation and depression and anxiety symptoms. Further, as mothers and fathers could assume different roles in caregiving (e.g., primary or secondary caregiver), we also explored the influence of paternal and maternal invalidation separately.

We recruited 173 undergraduate students (Mage = 20.8, 75.1% female) aged 18-25 and followed them through three timepoints (one month apart). We administered the Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007) and the Attitudes towards Emotional Expression (AEE; Joseph et al., 1994) at Timepoint 1, the Emotion Suppression subscale from the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) at Timepoint 2, and the Beck Anxiety Inventory (BAI; Beck et al., 1988) and the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) at Timepoint 3.

The longitudinal associations were analysed using path analysis model. We found that parental invalidation positively predicted depression ( $p < .001$ ) and anxiety ( $p < .001$ ) symptoms. In addition, attitudes towards emotional expression and expressive suppression serially mediated the pathway between parental invalidation and depressive symptoms ( $p = .022$ ), but not for the pathway between parental invalidation and anxiety ( $p = .114$ ). Specifically, higher parental invalidation predicted stronger negative attitudes towards emotional expression ( $p < .001$ ), which in turn predicted greater use of expressive suppression strategies ( $p < .001$ ), leading to stronger depression symptoms ( $p = .007$ ). However, expressive suppression did not predict greater anxiety symptoms ( $p = .091$ ).

Additionally, when maternal and paternal invalidation were analysed as separate variables in the model, the indirect effects were not significant. Nonetheless, both maternal ( $p = .027$ ) and paternal ( $p = .047$ ) invalidation positively predicted negative attitudes. However, only maternal, but not paternal, invalidation positively predicted depression ( $p = .001$ ) and anxiety ( $p = .025$ ) symptoms.

This study provided support for the mediating roles of attitudes and expressive suppression in the relation between parental invalidation in childhood and depression in adulthood. First, negative attitudes towards emotional expression and expressive suppression could positively predict depression symptoms. Thus, attitudes towards emotion expression and the use of expressive suppression may be change targets for individuals experiencing depression. Second, attitudes and emotional expression did not mediate the pathway between parental invalidation and anxiety symptoms, suggesting that the mechanism between parental invalidation and anxiety may differ from that between parental invalidation and depression. Also, the effects of expressive suppression may vary for different emotions. Third, attitudes and expressive suppression may mediate the relation only when considering the overall family environment (i.e., parental invalidation). The influence of invalidation from specific caregivers on internalizing symptoms outcomes may be further examined in future studies.

# POSTER SESSION 04

Abstract No.: 0507

## Structural Brain Network Connectivity Mediates the Association between Polygenic Score for Tumor Necrosis Factor-A and Processing Speed in Acute Depression

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### INTRODUCTION

Reduced processing speed is a core deficit in major depressive disorder (MDD) (Lam et al., 2014) and has been linked to altered structural brain network connectivity (Gruber et al., 2023). So far, little is known about the factors contributing to these alterations. Ample evidence highlights the involvement of genetic-immunological processes in MDD (Tubbs et al., 2020) and specific depressive symptoms (Kappelmann et al., 2021). Here, we extend these findings by examining associations between polygenic scores for tumor necrosis factor- $\alpha$  blood levels (TNF- $\alpha$  PGS), structural brain connectivity, and processing speed in a large sample of MDD patients and healthy controls (HC).

### METHOD

N=284 acutely depressed, N=177 partially remitted, and N=198 fully remitted patients with MDD as well as N=743 HC were drawn from the ongoing Marburg-Münster Affective Disorders Cohort Study (MACS, Kircher et al., 2019). Processing speed was estimated based on five neuropsychological tests using a principal component analysis (PCA). First, a general linear model (GLM) was performed to test differences in processing speed performance between the diagnostic groups. Second, network-based statistic (Zalesky et al., 2010) was employed to identify a structural brain network associated with processing speed. Third, we examined the association between TNF- $\alpha$  PGS, calculated based on the summary statistics of a genome-wide association study (Ahola-Olli et al., 2017), and processing speed, again using a GLM. Lastly, a mediation analysis was performed using a bootstrapping approach implemented in PROCESS (<http://www.processmacro.org>) to investigate whether network connectivity mediates the association between TNF- $\alpha$  PGS and processing speed.

### RESULTS

The PCA yielded a single-factor structure that explained 51.05% of the variance of the cognitive tests. The diagnostic groups differed significantly in the processing speed factor ( $p < .001$ , partial  $\eta^2 = 0.078$ ), with patients suffering from acute MDD scoring worst compared to partially and fully remitted MDD and HC. We identified a structural brain network positively associated with processing speed in the entire sample ( $p < .001$ , partial  $\eta^2 = 0.163$ ). We observed a significant TNF- $\alpha$  PGS  $\times$  diagnosis interaction effect ( $p = .004$ , partial  $\eta^2 = .009$ ), which was driven by a negative association between TNF- $\alpha$  PGS and processing speed in the acute MDD group, whereas no association was found in partially or fully remitted patients and HC. The mediation analysis revealed that brain connectivity partially mediated the association between TNF- $\alpha$  PGS and processing speed in acute MDD.

### DISCUSSION

The present study provides evidence that TNF- $\alpha$  PGS is associated with decreased processing speed exclusively in patients with acute depression. This association was partially mediated by structural brain connectivity. Using multimodal, i.e., genetic-immunological, cognitive, and magnetic imaging-derived brain network data, the current study re-establishes and extends previous findings on cognitive dysfunction in MDD (Gruber et al., 2023; Lam et al., 2014) and highlights the involvement of genetic-immunological processes in its pathomechanisms.

# POSTER SESSION 04

Abstract No.: 0516

## White Matter Microstructural Differences between Bipolar Disorder Types I and II: Associations with Disease Course and Polygenic Risk

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### BACKGROUND

Bipolar disorder (BD) is divided into subtypes BD-I – characterized by at least one manic episode that may be accompanied by depressive episodes – and BD-II – diagnosed when hypomanic as well as depressive episodes are present. Existing neuroimaging studies have shown a reduction in white matter (WM) integrity in BD patients compared with healthy controls (HC), but there are few studies examining the two BD subtypes separately or comparing them directly. Therefore, it remains unclear whether these symptomatically distinct subtypes also represent neurobiologically distinguishable psychiatric disorders. The aim of this study was to investigate microstructural differences between HC, BD subtype I (BD-I), and BD subtype II (BD-II), and to explore whether potential microstructural differences between BD subtypes are associated with clinical characteristics, such as lifelong disease course, and genetics in terms of bipolar polygenic risk scores (PRS).

### METHOD

This study included N=136 patients with BD (N=73 BD-I and N=63 BD-II) and N=136 age and gender matched HC from the ongoing Marburg-Münster Affective Disorders Cohort Study. All participants underwent magnetic resonance imaging including diffusion tensor imaging. Using tract-based spatial statistics, differences in fractional anisotropy (FA) as a measure of white matter integrity between groups were analyzed by pairwise comparisons. The comparison between BD-I and BD-II was repeated by separately including clinical variables (number of depressive and (hypo-)manic episodes and hospitalizations, time since first psychiatric symptoms and hospitalization) and genetics (PRS for BD) as additional nuisance variables. PRS for BD were calculated using genome-wide genotype data and the summary statistics of a recent genome-wide association study of BD. Lastly, associations between these variables and FA were calculated separately within the BD-I and BD-II groups using regression models.

### RESULTS

BD-I patients had reduced FA in widely distributed clusters compared with HC (ptfce-FWE<.001) as well as BD-II (ptfce-FWE=.006), with the most prominent effect localized in the anterior corpus callosum. BD-II patients showed less pronounced FA reductions compared with HC (ptfce-FWE=.049). The reduction in FA in BD-I compared with BD-II remained unchanged, even when additionally corrected for clinical variables mentioned or PRS for BD. Affected tracts consistently included the corpus callosum as well as the anterior thalamic radiation. In both BD-I and BD-II patients, analyses regarding the number of depressive as well as (hypo)manic episodes pointed in the direction of a negative association with FA, however these findings were not statistically significant when correcting for multiple testing.

# POSTER SESSION 04

## DISCUSSION

The present findings suggest that BD subtypes may represent neurobiologically distinct psychiatric disorders, based on markedly different degrees of impairment in WM microstructure. As the microstructural changes cannot be explained by differences in disease course or polygenic risk alone, a greater extent of WM alterations could serve as a potential indication of BD-I as opposed to BD-II in terms of a biomarker. Our results emphasize the idea that the classification of BD subtypes, which in current clinical practice is mainly symptom-oriented based on the level of elevated mood, may be supported by assessing the extent of neurobiological changes in WM microstructure. However, the cross-sectional design of our study does not allow interpretation of time-related effects. Therefore, future longitudinal studies should investigate whether these microstructural differences change over the course of the disease or represent a stable marker in the early stages of BD, preceding symptom progression.



# POSTER SESSION 04

Abstract No.: 0539

## The Relationship among Distraction, Cognitive Reappraisal, and Rumination: Examination Using a Cross-Lagged Effects Model

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### INTRODUCTION

One of the maintenance factors of depression is rumination (Nolen-Hoeksema, 1991). The maintenance of depression has been examined in terms of emotion regulation strategies (Gross, 2002), among which distraction and cognitive reappraisal have been shown to be effective strategies for mental health. Regarding the relationship among distraction, cognitive reappraisal, and rumination, following the Attentional Scope Model (Whitmer & Gotlib, 2012), Matsumoto's (2008) Response Style Scale, and Gross's (2002) process model, it can be presumed that distraction precedes cognitive reappraisal and thereby diminishes rumination. Therefore, from the practical perspective of cognitive-behavioral therapy, it can be hypothesized that distraction, part of the mechanism of behavioral activation, is a process that strengthens the effect of cognitive reappraisal, thereby promoting adaptive cognitive activation and diminishing rumination. In the present study, we tested these hypotheses using a cross-lagged effects model.

### METHOD

A two-wave panel online survey with a one-month time lag was conducted. The final analysis included 231 participants (99 males, 132 females; mean age = 32.19 years, SD = 7.42 years). The measures used were the extended version of the Response Style Scale (Matsumoto, 2008), Japanese version of the Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001; Sakakibara, 2015), and Ruminative Responses Scale (Treyner et al., 2003) (Japanese version, Hasegawa, 2013). This study was conducted with the approval of the Ethical Review Committee of the Department of Psychology, Faculty of Humanities, University of Toyama.

### RESULTS

Structural equation modeling using the cross-lagged effects model showed a significant positive effect from Time1 distraction to Time2 cognitive reappraisal (standardized  $\beta=.14$ , SE = 0.95,  $p = .017$ ). Conversely, a significant positive effect from Time1 cognitive reappraisal to Time2 distraction was also observed (standardized  $\beta=.12$ , SE = 0.031,  $p = .02$ ). Additionally, a positive effect from Time1 rumination to Time2 distraction was noted (standardized  $\beta=.09$ , SE = 0.05,  $p = .09$ ), although the trend remained significant. No other cross-delayed paths showed significant effects.

### DISCUSSION

The model presented in this study suggests that distraction and reappraisal positively influence each other. Reappraisal showed no influence on rumination. In addition, rumination influences distraction. These results, considered together, suggest that rumination may act as a trigger for distraction, followed by an interaction between distraction and reappraisal. This finding emphasizes the merit of prioritizing behavioral techniques in cognitive-behavioral therapy as strategies that are easier for clients to engage in when in a state of rumination. However, since no negative effects of emotion regulation strategies on rumination were found, it is possible that these effects could not be considered robust for a time period of one month.

# POSTER SESSION 04

Abstract No.: 0541

## Development and Validation of the Japanese Version of Teachers Acceptance and Action Questionnaire

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### INTRODUCTION

Acceptance and commitment therapy (ACT) regards experiential avoidance (EA) as one of the causes of preventing people from achieving their goals or values in life (Hayes et al., 2012). EA is defined as an unwillingness to remain in contact with particular private experience and taking steps to alter the form, frequency, or situational sensitivity of these experiences even though doing so is not immediately necessary (Hayes et al., 2012). A scale called Teachers Acceptance and Action Questionnaire (TAAQ; Hinds et al., 2015) is valid to measure EA related to teachers or teaching. However, Japanese version of TAAQ has not yet been developed. Therefore, this study focuses on the developing and validating of TAAQ-Japanese version (TAAQ-J).

### METHOD

Teachers who teach at either an elementary school or a middle school in Japan were selected as participants (201 men, 99 women, Mean age=45.4, SD=10.4). They were asked to answer demographic data, TAAQ-J, Maslach Burnout Inventory-Educators Scale Japanese version (MBI-ES; Okumura et al., 2015), Japanese 7-item version of Acceptance and Action Questionnaire-II (AAQ-II; Shima et al., 2013), Teachers' Occupational Stressor Scale (Takagi & Tanaka, 2003), Utrecht Work Engagement Scale-Japanese version (UWES-J; Shimazu et al., 2008) and Penn State Worry Questionnaire-Japanese version (PSWQ; Motooka et al., 2009). We consigned the data to a web research company to sample the participants and conduct anonymous web research. We asked the participants to answer TAAQ-J after one month to determine the test-retest reliability.

### RESULT

Confirmatory factor analysis was conducted to assess the factor structure of TAAQ-J and resulted in a 1-factor structure. Also, to examine reliability, Cronbach's  $\alpha$  was calculated and showed  $\alpha=.83$ . I-T correlation analysis was done, and  $r=.47-.81$  ( $p<.001$ ) was shown. Test-retest reliability was suggested from the calculation of ICC and resulted in ICC (1,1)  $=.78$ . Pearson's product-moment correlation coefficients were calculated to examine construct validity. As a result, Emotional Exhaustion (EE;  $r=.64$ ,  $p<.001$ ), Depersonalization (DP;  $r=.49$ ,  $p<.001$ ), AAQ-II ( $r=.64$ ,  $p<.001$ ), Teachers' Stressor Scale ( $r=.40$ ,  $p<.001$ ), PSWQ ( $r=.54$ ,  $p<.001$ ) UWES-J ( $r=-.37$ ,  $p<.001$ ) showed small to large moderate significant correlation was shown. Mediation analysis was conducted to also examine construct validity. Each variable was set with teachers' occupational stressor as independent variable, three factors of burnout as dependent variable and EA measured by TAAQ-J as mediation variable. Burnout and EE showed partial mediation effect, DP and Personal Accomplishment showed complete mediation effect.

### DISCUSSION

Although there are still limitations that need to be considered, TAAQ-J showed sufficient reliability and adequate construct validity. The development of TAAQ-J will contribute to deepen understanding of EA related to teachers or teaching and the examination of the relation between Japanese teachers' mental health and ACT.

# POSTER SESSION 04

Abstract No.: 0551

## **The Influence of Self-Alienation on the Meaning in Life: The Moderating Effect of Intrinsic/Extrinsic Future-Oriented Goals**

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Due to the competitive nature of society and the influence of media, emerging adults are susceptible to experiencing high levels of self-alienation. Self-alienation is the subjective experience of not knowing oneself or feeling detached from one's true self, which can predispose individuals to depression and suicide and undermine the sense of meaning in life. The meaning in life is a subjective feeling that one's life has significance or motivation to seek out such meaning, which is influenced by the pursuit of goal-oriented activities. Future-oriented goals can be categorized as intrinsic(e.g., personal growth, relationships, community) or extrinsic(e.g., wealth, fame, image) motives, and previous research suggests that pursuing intrinsic future-oriented goals rather than extrinsic ones enhances the meaning in life. This study aimed to examine the longitudinal relationship between self-alienation and meaning in life in relation to intrinsic and extrinsic future-oriented goals. We surveyed students from three universities in Korea (n=156) on self-alienation and future-oriented goals at Time 1 and on the meaning in life at Time 2, which was 3 months later. The collected data were analyzed using R 4.1.1 and SPSS 25.0. The results indicated that the meaning in life decreased as self-alienation increased and intrinsic future-oriented goals decreased, while the main effect of extrinsic future-oriented goals was not significant. However, the extrinsic future-oriented goal had a significant moderating effect on the relationship between self-alienation and meaning in life, and this moderating effect was not observed in the intrinsic future-oriented goal. All the results remained significant after controlling for positive affect, negative affect, and self-esteem. This result suggests that while self-alienation and meaning in life have a negative relationship, pursuing extrinsic future-oriented goals can alleviate this relationship. The findings of the present study emphasize the importance of interventions that focus on future-oriented goals to improve the meaning in life for emerging adults who experience self-alienation.

# POSTER SESSION 04

Abstract No.: 0555

## Trends in Research on Relationship between Depression and Experiential Avoidance of University Students in Korea

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### INTRODUCTION

Depression patients in Korea have risen continuously in the past 3 years, with a 42.3% increase in their 20s of 2021 compared to that of pre-COVID-19 in 2019. The rate of suicidal thoughts among university students was higher compared to those of people in their 20s. Therefore, comprehending the association between depression and its related factors is crucial for understanding suicidal thoughts among university students. Since the Cognitive Behavior Therapy (CBT) is an effective form of therapy for depression, experiential avoidance has been focused as one of key internal processes of depression treatment in light of third wave CBT. The purpose of the study is to review literature on depression and experiential avoidance among university students in Korea regarding suicidal thoughts and provide a trend research on their relationship and suggestion for future studies.

### METHOD

We analyzed studies on both depression and experiential avoidance in college students, beginning in 2005 when third wave CBT was first introduced in Korean literature (Moon, 2005). The target papers for analysis were searched through Research Information Sharing Service (RISS), Nurimedia (DBpia), National Assembly Library (NANET), and National Digital Science Library (NDSL) with keywords such as "depression," "experiential avoidance," and "college students". A total of 235 papers were retrieved and 15 papers were finally selected for analysis, after excluding duplicates (100 papers), irrelevant or not targeting university students (105 papers), and without full text, targeting only specific university students, and theses (15 papers).

### RESULTS

The 15 selected papers were analyzed about publication years, measurement tools, research variables, research design, and statistical analysis. Most research was conducted in 2015 and 2022, with 3 papers each, starting in 2009 with one paper. Measurement tools for depression were Center for Epidemiological Studies-Depression Scale (CES-D), Beck Depression Inventory (BDI), and Korea Depression Scale (KDS), with CES-D being most frequently used (11 papers, 73.3%). The tools for experiential avoidance were Acceptance & Action Questionnaire (AAQ), Acceptance & Action Questionnaire-16 (AAQ-16), Acceptance & Action Questionnaire-II (AAQ-II), and Korea version of the Multidimensional Experiential Avoidance Questionnaire (K-MEAQ), with AAQ-II being most commonly used (7 papers, 46.7%). Regarding variables, depression was often used as dependent variables (86.7%) and experiential avoidance as mediators (73.3%). Most studies (73.3%) were cross-sectional, along with 2 treatment programs and each of longitudinal and sequential design. As for statistical analysis, there are structural equation modeling (36%), analysis of variance (20%), regression analysis (24%), and non-parametric statistics (12%).

### DISCUSSION

The purpose of the study was to analyze the trend of research on both depression and experiential avoidance in Korean university students.

Results of the 15 selected studies confirmed that there is vigorous research about the relationship between depression and experiential avoidance: experiential avoidance was often used as mediators from the perspective of third wave CBT for depression. However, most research was conducted with cross-sectional design and AAQ was still used though AAQ-II has been developed to improve the limitation of AAQ. Future studies with longitudinal or sequential design and use of AAQ-II would be suggested.

# POSTER SESSION 04

Abstract No.: 0556

## Effects of Cognitive Appraisal and Attention Control on the Effectiveness of Coping Strategies for Depressed Mood

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### INTRODUCTION

Individual coping strategies for depressed mood can be broadly categorized as rumination and distraction; however, their effects have not been consistently found. As a background, individual differences in attention control ability (Whitmer & Banich, 2007), such as the inability to focus attention on other information from the negative aspects of the stressor, have been pointed out as influencing these coping strategies. Furthermore, it has been stated that attention control ability also influences cognitive appraisal of a stressor (Kimura et al., 2011). When these factors are integrated, it is assumed that attention control ability and cognitive appraisal of stressors influence the effects of rumination and distraction on depressed mood. However, no studies have empirically examined these factors. Therefore, the purpose of this study is to experimentally examine the effects of attention control ability and cognitive appraisal on rumination and distraction in depressed moods.

### METHODS

Twenty undergraduate and graduate students (nine males and 11 females) who agreed to participate in the study, were randomly assigned to the rumination and distraction groups. Attention control ability and depressed mood were measured, and the Trier Social Stress Test (TSST; Kirschbaum et al., 1993) was administered as a stress task. Subsequently, depressive mood and cognitive appraisal of the TSST were measured. The rumination group was asked to reflect on the TSST, while the distraction group was asked to think about content unrelated to the TSST. Depressed mood and cognitive appraisal were measured again, and participants were asked to respond to the degree of rumination and distraction as a manipulation check. The local ethics committee approved the study (approval number:2022-176).

### RESULTS

The results of the manipulation check revealed insufficient intended manipulations by TSST, rumination, and distraction induction. To examine the influence of attention control ability on the effects of ruminative and distractive induction, we conducted a correlation analysis between the improvement in depressed mood after ruminative and distractive induction and attention control ability. Results showed no association between the attentional control abilities and improvement in depressed mood (rumination group (selective:  $r = .30$ ,  $p = .39$ ; switching:  $r = .52$ ,  $p = .11$ ; divided:  $r = .25$ ,  $p = .48$ ) distraction group (selective:  $r = .30$ ,  $p = .18$ ; switching:  $r = .39$ ,  $p = .08$ ; divided:  $r = .28$ ,  $p = .22$ )). There was no significant association between attentional control ability and cognitive appraisal after the stress task. Furthermore, controllability, a subscale of cognitive appraisal, was positively correlated with improvement in depressed mood after distraction ( $r = .81$ ,  $p < .001$ ); but change in depressed mood after rumination was not related to any of the cognitive appraisals.

### DISCUSSION

These results suggest that attention control ability may not affect changes in depressive mood after rumination or distraction. Given that low attentional control ability is associated with maladaptive rumination (Levens et al., 2009) and cognitive appraisal traits are associated with increased rumination (Watkins, 2004), it is possible that attentional control ability and cognitive appraisal do not affect depressive mood associated with rumination, but the occurrence of rumination itself. Moreover, since engaging in distraction as an aversive strategy has been shown to have maladaptive consequences like increased depressive mood (Wolgast & Lundh, 2017), it is possible that the influence of attention control ability was less evident in the distraction group than in the cognitive appraisal group. Future studies should examine the effects of attention control ability on depressive mood in terms of its influence on the occurrence of rumination and distraction.

# POSTER SESSION 04

Abstract No.: 0564

## The Degree to Which the Gap between Perceived and Received Support Abandonment Anxiety and Borderline Personality Disorder

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### PROBLEM

Borderline Personality Disorder (BPD) is characterized by anxiety about being abandoned by others, and inappropriate behaviors in interpersonal situations make it difficult to maintain interpersonal relationships (APA, 2013). In particular, it has been suggested that the perception of lack of support from one's surroundings can lead to problematic behaviors such as self-injury, which is characterized by BPD (Mendez et al., 2022). In general, cognitions of support can be divided into perceived support and executive support (Cohen & Wills, 1985). Findings in the cognitive aspect of support suggest that greater cognitive discrepancies in obtaining and providing support have a negative impact on mental health (Wang & Gruenewald, 2019). As a mechanism of action, abandonment anxiety may be evoked to regulate the cognitive misalignment between perceived support and executive support, leading to problem behaviors. The purpose of this study is to examine the hypothesis that cognitive misalignment between perceived support and executive support causes BPD problem behaviors through abandonment anxiety.

### METHODS

Research collaborators: A questionnaire survey was administered to 161 Japanese four-year college students (64 males, 96 females, and 1 other (mean age:  $21.09 \pm 1.82$  years).

Questionnaire (a) Demographic data (age, gender), (b) BPD symptoms: Japanese version of Quick Evaluation of Severity over Time (QuEST-J; Iri et al., 2007), (c) Abandonment anxiety: Abandonment anxiety scale in adolescents (Saito et al., 2012), (d) Perceived Support: social support items for college students (using three teachings: "From Parents ~", "From Friends ~", and "From Lovers ~"; Katage and Onuki, 2014), (e) Performed Support: performed social support items (Fukuoka, 1997; same teachings as Perceived Support). This study was conducted with the approval of the Ethical Review Committee for Research Involving Human Subjects at Waseda University (Approval No. 2021-259).

### RESULTS

To examine the effects of cognitive balance of support on problem behaviors in BPD, mediation analysis was conducted with friends and family members as the independent variables and abandonment anxiety as the mediating variable, respectively.

A significant trend in the mediation effect was found when the source of support was friends ( $\beta = -.53$ ,  $p = .059$ ). Next, a full mediation effect was found for family members ( $\beta = -.86$ ,  $p = .0070$ ). In addition, for both sources of support, support gap scores and abandonment anxiety were negatively related (friends:  $t(159) = -1.97$ , standardized coefficient =  $-.15$ ,  $p = .051$ ; family:  $t(159) = -3.00$ , standardized coefficient =  $-.23$ ,  $p = .0030$ ).

### CONCLUSION

The results of this study suggest that the greater the cognitive discrepancy between perceived support and executive support for mothers and friends by the source of support, the more likely it is that BPD is causing problem behaviors through abandonment anxiety. In the study conducted by Wang (2019), the smaller the cognitive discrepancy between perceived support and executed support, the higher the relationship satisfaction and the lower the stress. On the other hand, information processing in BPD suggests that there may be a bias to perceive positive information negatively in those who have met diagnostic criteria for BPD (Kleindienst, 2019). These findings suggest that situations with cognitive misalignment of support in BPD are perceived negatively due to cognitive biases, evoking abandonment anxiety as a motivator to cope. Furthermore, the problematic behavior in BPD is thought to function as a coping mechanism to reduce abandonment anxiety.

# POSTER SESSION 04

Abstract No.: 0572

## **The Relationship between Perceived Burdensomeness, Thwarted Belongingness and Suicidal Ideation among Young Adults: Moderating Effects of Cognitive Emotion Regulation Strategies**

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### INTRODUCTION

The purpose of this study was to investigate the moderating effects of cognitive emotion regulation strategies on the relationship between perceived burdensomeness, thwarted belongingness, and suicidal ideation among young adults in Korea. Suicide is a leading cause of death among young adults worldwide, particularly ranking second among those aged 15-29 (World Health Organization, 2018). According to the Interpersonal Psychological Theory of Suicide (Joiner, 2005), early adulthood is a time when individuals are heavily influenced by interpersonal relationships. At that time, feelings of burden in important relationships or feelings of defeat in group affiliation can be a significant factor in suicidal ideation. Meanwhile, the efforts to regulate unpleasant emotions, known as "emotion regulation," have been shown to act as coping mechanisms in stressful situations and to affect factors related to emotional and mental pathology (Gross, 2002). Therefore, this study aimed to identify the moderating effect of cognitive emotion regulation strategies on the relationship between perceived burdensomeness, thwarted belongingness, and suicidal ideation, examining the effects of each of the nine strategies as well as total scores of the adaptive and maladaptive strategies.

### METHOD

251 college students aged 19-34 years were asked to complete a package of questionnaires. The questionnaires included the Interpersonal Needs Questionnaire-Revised (INQ-R; Joiner et al., 2008) which was validated by Joiner (2012) and translated by Choi (2015), the Suicidal Ideation Questionnaire (SIQ; Reynolds) which was translated and revised by Seo(2005) based on the Korean version of the SIQ translated by Shin(1992), and the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001) which was translated by Kim (2004). The data were analyzed using Jamovi 2.2.5.

### RESULTS

In the relationship between perceived burdensomeness and suicidal ideation, the cognitive emotion regulation strategies of Acceptance, Putting into Perspective, Positive Reappraisal, Rumination, and the total score of adaptive strategies showed a significant moderating effect. In this relationship, not only the adaptive strategies, including Acceptance, Putting into Perspective, Positive Reappraisal, but also the maladaptive strategy of Rumination, were found to reduce the intensity of suicidal ideation. According to previous research, although the Rumination is classified as a maladaptive strategy, the distinction is ambiguous due to the nature of the items, and it is presumed that the ambiguous characteristics of items can create adaptive and positive impressions depending on individual characteristics and subjective interpretation. In the relationship between thwarted belongingness and suicidal ideation, the moderating effects of Positive Refocusing, Positive Reappraisal, Self-Blame, Catastrophizing, Rumination, and the total score of maladaptive strategies were significant. Among these, adaptive strategies such as Positive Refocusing and Positive Reappraisal had reducing effects on the intensity of suicidal ideation, while maladaptive strategies such as Self-Blame, Catastrophizing, Rumination, and the total score of maladaptive strategies had increasing effects on the intensity of suicidal ideation.

### DISCUSSION

Suicidal ideation is a significant risk factor for suicide attempts (Bryan et al., 2019), and previous research has found that without intervention, more than one-third of individuals with suicidal ideation attempted suicide within one year of their first suicide attempt (Nock et al., 2013). Therefore, research on risk and protective factors that influence suicidal ideation will be crucial to prevent suicidal behaviors and suicide deaths. This study identified cognitive and emotional regulation strategies that can reduce or increase the intensity of suicidal ideation related to interpersonal factors, which can be helpful in developing specific and effective therapeutic strategies.

# POSTER SESSION 04

Abstract No.: 0573

## Attentional Bias Variability and Its Association with Depressive Symptoms

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### INTRODUCTION

Attentional bias is a phenomenon in which selective attention is given only to specific types of information among multiple stimuli received during the perceptual process. In particular, attentional bias toward negative information has been primarily studied in the context of anxiety disorders, with inconsistent results for depression showing no connection or a weak relationship. In general, attentional bias has traditionally been measured as an index score using the dot-probe task's reaction time. However, the low reliability of the attentional bias index (ABI) has raised concern about the reason for this inconsistency. Recently, attentional bias variability (ABV) has been proposed as an alternative approach. ABV assumes that the subject of selective attention can change throughout the perceptual process. Moreover, it has been found to have higher reliability than ABI. Previous research has linked ABV to post-traumatic stress disorder (PTSD), anxiety, and depression. However, it has been suggested that response time variability (RTV) is an extraneous variable. RTV represents the variance in the response time of the participant's entire trial and is not correlated with attentional bias. This study aimed to compare ABV and ABI and investigate the relationship between ABV and depression after controlling for RTV and anxiety.

### METHOD

A total of 100 college students participated in a dot-probe task using angry, happy, and neutral faces. In the task, pairs of faces (Angry-Neutral and Happy-Neutral for ABV and Neutral-Neutral for RTV) were presented simultaneously on the left and right sides of the screen for a short time. After the images disappeared, a dot was presented on either the left or the right side of the screen. The participants were instructed to respond by pressing a button corresponding to the dot's location as quickly as possible. The ABI and ABV were calculated separately for each block. After the task, participants completed self-report measures of depression and anxiety.

### RESULTS

The results of the correlation analysis revealed no significant correlation between ABI and ABV and both depression and anxiety. When controlling for RTV, there was a significant correlation between depression and ABV for angry faces. This tendency was maintained when controlling for RTV and anxiety. However, the relationship between ABI for angry faces and depression was not statistically significant.

### DISCUSSION

The results showed that RTV had no direct relationship with depression or anxiety. However, after controlling for RTV, a significant correlation was found between depression and ABV for angry faces. This suggests that when angry and neutral faces are presented simultaneously, the selective attention of individuals with depression is not consistently assigned to a particular type of stimulus, and its direction changes dynamically. Furthermore, this relationship remained significant even after controlling for anxiety, suggesting that ABV for angry faces specifically reflects depression. In contrast, unlike previous studies, ABI was found to have no significant relationship with depression or anxiety, possibly due to the lack of reliability of ABI. These results suggest the need for ABV to be used as an indicator of reliable measurement of attentional bias in depression compared to ABI.



# POSTER SESSION 04

Abstract No.: 0586

## Longitudinal Bidirectional Relationships between Sleep Problems and Premenstrual Syndrome: Shedding Light on the Menstrual Cycle

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### INTRODUCTION

Sleep disturbances are a significant component of premenstrual disturbance (Mauri et al., 1988). A cross-sectional study by Erbil and Yücesoy (2022) investigated the relationship between sleep quality and premenstrual syndrome (PMS) and found that PMS symptoms predict sleep quality. While sleep problems are potential determinants of PMS, limited longitudinal evidence exists to date, and the possibility of reverse causality cannot be ruled out. This study aims to examine the longitudinal and bidirectional relationships between premenstrual symptoms and sleep problems.

### METHOD

74 women (mean age $\pm$ SD of 24.2  $\pm$  5.7) were administered the OSA Sleep inventory MA version (OSA; Yamamoto et al., 1999) and the Japanese version of the Menstrual Distress Questionnaire Form-T (MDQ; Moos, 1968; Nippon Sport Science University, 2016) during the follicular phase, luteal phase, and subsequent follicular phase. The MDQ includes eight subscales that reflect physical, mental, and behavioral symptoms associated with menstrual cycles: pain, water retention, autonomic reaction, negative affect, impaired concentration, behavior change, arousal, and control. The OSA scale consists of five factors: sleepiness on rising, initiation and maintenance of sleep, frequent dreaming, refreshing, and sleep length. Higher total scores indicate better sleep quality.

### RESULTS

Structural equation modeling was used to investigate bidirectional relationships between PMS and sleep problems. A significant negative effect was found from 'initiation and maintenance of sleep' to PMS ( $\beta = -0.854$ ,  $p < 0.05$ ) from the follicular phase to the luteal phase. From the luteal phase to the follicular phase, a significant negative effect was found from PMS to 'sleepiness on rising' ( $\beta = -0.073$ ,  $p < 0.05$ ), 'maintenance of sleep' ( $\beta = -0.074$ ,  $p < 0.01$ ), 'refreshing' ( $\beta = -0.070$ ,  $p < 0.05$ ).

### CONCLUSIONS

This study examined the longitudinal relationship between sleep problems and PMS by considering the menstrual cycle. Cross-lagged analyses indicated that PMS in the luteal phase affects subsequent 'sleepiness on rising', 'maintenance of sleep', and 'refreshing' in the follicular phase, and a cyclical relationship existed between 'initiation and maintenance of sleep' and PMS. This study suggested that assisting patients in falling asleep and staying asleep could alleviate PMS symptoms. A limitation of this study was that the lack of analysis on the association between physiological data related to sleep quality. Further research should target a larger sample size and include the investigation of physiological indicators.

(This study was funded by JP16H05653, JP19K03278, 22H01091, 22K18582 and AL150003.)

# POSTER SESSION 04

Abstract No.: 0607

## The Immediate Effect of Progressive Muscle Relaxation on the Pain and Mood of Garment Workers

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### BACKGROUND

Musculoskeletal pain and depression are prevalent amongst garment workers as a result of awkward postures, repetitive and monotonous work and a stressful work environment. Musculoskeletal pain can have a negative impact on the mental health and quality of life of workers, subsequently leading to a decrease in productivity. Progressive Muscle Relaxation is a time efficient, cost-effective and simple technique that could be used by workers while at their workstations.

### OBJECTIVES

The aim of this study is to determine the immediate effect of PMR on the pain and mood of garment workers with musculoskeletal pain.

### METHODS

A pre-experimental, single-group pretest-posttest design was used. Data were collected in two sessions with the workers, individually (n=24). During the first session, consent was obtained, an intake interview was done to determine eligibility for the study, and the Patient Health Questionnaire-9 was administered. During the second session, the pain Visual Analogue Scale and Stellenbosch Mood Scale were administered before and immediately after the PMR intervention. Data were recorded and tracked on spreadsheets and analysed using SPSS.

### RESULTS

24 workers participated, with a mean age of 40,67 years and average length of employment of 10.26 years. PHQ-9 scores showed that most (n=9) participants presented with minimal depression, followed by (n=15) participants presenting with mild, moderate and moderately severe depression. Pain VAS scores indicated that PMR effectively decreased musculoskeletal pain with a mean difference of 2.67 ( $p < .001$ , effect size 1.74).

Results from the STEMS showed an improvement in mood after the PMR intervention (effect sizes  $>0.5$ ).

### CONCLUSION:

PMR was effective at immediately reducing musculoskeletal pain and improving the mood of garment workers with musculoskeletal pain. We recommend further research using a control group and assessing long term effects of PMR.

# POSTER SESSION 04

Abstract No.: 0611

## **Classification of Patients with Mood Disorders from Healthy Individuals Based on Early Maladaptive Schemas and Schema Modes: Study Rationale and Protocols**

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### INTRODUCTION

Diagnosing mood disorders is challenging due to the heterogeneity within major depressive disorder(MDD) and the lack of awareness of the hypomanic episode, a characteristic of bipolar disorder(BD), among psychiatrists and patients. Previous studies have shown the potential of early maladaptive schema(EMS), a belief formed from innate temperament, unmet needs in childhood, and childhood environment, to complement the difficulties of diagnosing mood disorders by showing the differences in dysfunctional cognitive style between patients with MDD and BD and healthy individuals. Machine learning algorithms hold promising potential for diagnosing mood disorders based on patient information. Prior studies examining the characteristics of mood disorders using EMS have had limitations, including small sample sizes and potential confounding from current mood state. Aim: The purpose of this study is to explore EMS differences between patients with MDD and BD and healthy individuals while excluding the influence of current mood states on the results. In addition, the study aims to develop machine learning-based classification models for MDD and BD, facilitating the diagnosis of mood disorders.

### METHODS

We will recruit 120 patients, each with a past history of MDD or BD based on Mini International Neuropsychiatric Interview(MINI), from the Mood Disorder and Suicide Prevention Clinic at the Department of Psychiatry, Asan Medical Center, Seoul, Republic of Korea, and 120 healthy individuals, without psychiatric disorders based on MINI, through advertising between the ages of 18 and 64, both male and female, with a high school diploma or higher education level. Participants with a personality disorder based on Structured Clinical Interview for DSM-5 Personality Disorders, a history of substance abuse or dependence within the last six months, evidence of intellectual disability, a psychotic symptom, a history of head injury causing loss of consciousness for more than three minutes, a significant physical illness that could affect brain function, and difficulty reading and understanding Korean will be excluded. Clinical evaluations will be conducted using Patient Health Questionnaire-9, Young Mania Rating Scale, Generalized Anxiety Disorder-7, Columbia-Suicide Severity Rating Scale, Young Schema Questionnaire-Short Form, and Schema Mode Inventory. Using analysis of covariance to adjust for depressive, manic, and anxiety symptoms, we will examine the differences in EMS and schema modes between 1) MDD group and control group, 2) BD group and control group, and 3) MDD group and BD group. Through logistic regression analysis, we will identify specific EMS and schema modes that contribute to each group. Classification models will be constructed using machine learning algorithms for 1) MDD group versus control group, 2) BD group versus control group, and 3) MDD group versus BD group, and determine the model with the best performance by deriving the area under the curve, sensitivity, specificity, positive predictive value, and negative predictive value.

### IMPLICATIONS

This study will help increase the accuracy of classifying MDD and BD and improve treatment compliance by identifying the differences in EMS between MDD and BD patients and healthy individuals, enhancing understanding of cognitive changes in mood disorders, and directly participating of patients in the evaluation process. Furthermore, it may provide a new classification model for psychiatry beyond mood disorders, laying the foundation for subsequent studies applying machine learning algorithms based on EMS and schema mode data. This model may be utilized for early detection of mood disorders through health check-ups or health projects in workplaces and local communities.

# POSTER SESSION 04

Abstract No.: 0614

## Positive Development in the Area of Tension between Goal Engagement and Goal Disengagement

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### INTRODUCTION

The developmental regulatory processes of goal engagement and goal disengagement are largely responsible for an individual's successful development (e.g., Heckhausen et al., 2010). Adaptive developmental regulation as defined as balance between goal engagement and goal disengagement represents a necessary condition for successful development across the adult lifespan (e.g., Brandtstädter & Rothermund, 2002). In this context the main aim of the present study is to demonstrate the importance of successful goal disengagement for positive development in adulthood. In particular, opportunities and risks associated with goal disengagement are examined in order to derive implications for clinical practice. This concerns, for example, the monitoring of goal disengagement processes in clinical-therapeutic settings but also the prevention of undesirable developmental trajectories. The dual-process-model (Brandtstädter & Rothermund, 2002) and the life-span theory of control (Heckhausen et al., 2010) function as basic theories. Within these theories the processes of goal disengagement are conceptualized as processes of accommodation or processes of compensatory secondary control and the processes of goal engagement as processes of assimilation or processes of selective and compensatory primary as well as selective secondary control.

### METHODS

An online survey was conducted on  $n=120$  individuals between 18-45 years of age. In addition to questions about satisfaction regarding the achievement of age-related developmental tasks, the scales measuring assimilative coping (tenacious goal pursuit/TGP) and accommodative coping (flexible goal adjustment/FGA) (Brandtstädter & Renner, 1990), the OPS-scales (especially the subscale goal disengagement/CSCD within the compensatory secondary control) (Heckhausen et al., 1998) and the WHO-5 (WHOQOL Group, 1998) for the measurement of subjective well-being (SWB) were used. The main statistical methods used were bivariate correlations as well as semipartial correlations.

### RESULTS

Among other findings the study results provide evidence for the adaptive aspects of goal engagement processes (e.g., correlation between TGP and satisfaction with one's own lifestyle:  $r=.25, p \leq .05$ ) and even more significantly those of flexible goal adjustment as a form of accommodative strategies (e.g., correlation between FGA and SWB:  $r=.40, p < .001$ ). However, at the same time the identified maladaptive components within compensatory secondary control (semipartial correlation between CSCD -adjusted for FZA- and satisfaction with one's own lifestyle:  $r(xy,z)=-.26, p \leq .05$ ) point to the need for a more differentiated approach to goal disengagement processes.

### DISCUSSION

The study results confirm the adaptive potentials of goal-related regulatory processes, but in particular indicate the importance of adequate goal disengagement for functional developmental regulation. Processes of goal disengagement appear to be adaptive when they are accommodatively flexible in form of goal adjustment. In contrast, goal disengagement that doesn't represent functional accommodation was identified as maladaptive component or risk within goal disengagement processes. Cognitive behavioral therapy could reduce this risk by adaptive redirection of those dysfunctional strategies, thus ensuring successful development in adulthood and preventing undesirable developmental trajectories. In conclusion, cognitive-behavioral therapy techniques can be used as tools to help clients balance the tension between goal engagement and goal disengagement as well as guide goal disengagement processes to realize their functional aspects for development.

## An Approach to Identify Adaptive and Maladaptive Regulation Strategies Considering Mindfulness for the Emotion of Regret in Elderly

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### INTRODUCTION

To strive toward the goal of living a satisfactory life, different daily decisions must be made. When the current life situation differs from evolving needs and values, thoughts such as “What might have been if...?” arise and can be a source for upward counterfactuals and subsequently for aversive emotions, in particular regret. Due to physical, social, and psychological losses in later adulthood, some missed opportunities aren't modifiable anymore. When people get stuck in downward spiral reminiscing about what might have been, regrets can be life determining and can lead to frustration and clinically relevant depression. Whereas some people suffer from the dysfunctional aspect of regret in later adulthood, regret has also a motivational function for developmental processes. Therefore, the relevance to identify adaptive strategies for regret regulation arises to deduce adequate implications for gender-based interventions in clinical contexts (CBT). In addition, mindfulness as a nondiscursive registration of events, with acceptance towards life choices that cannot be changed anymore, is discussed as a key element in an adaptive regret regulation.

### METHOD

A questionnaire to review people's life regrets, regret regulation strategies (theory-based constructed questionnaire), mindfulness (SMQ; Böge et al., 2020) and life satisfaction (SWLS; Diener et al., 1985) was completed by participants over 60 years (N=110). The statistical evaluation includes the descriptive analysis of the reported life regrets, an explorative factor (rotation: Varimax) and reliability analysis ( $\alpha$ , rtt) of the theory-based questionnaire of regret regulation strategies, bivariate correlations to identify the correlation between life satisfaction, regret regulation strategies and mindfulness and a MANOVA of gender differences.

### RESULTS

The sample reported an above average life satisfaction (SWLS:PR=61.79). The top two biggest regrets in later life for women and men arise from the categories self (-improvement) and health. The explorative factor analysis showed six regret regulation strategies (explained variance: 65.88%): problem-focused Reminiscing (REM: $\alpha$ =.79,rtt>.60), Behavioural-Repair-Work (BRW: $\alpha$ =.77,rtt>.49), Upward Counterfactuals (UC: $\alpha$ =.70,rtt>.49), Distraction (DIS: $\alpha$ =.64,rtt=.48), Psychological-Repair-Work (PRW: $\alpha$ =.60,rtt>.39) and Avoidance (AV: $\alpha$ =.60,rtt=.43).

The sample used mostly adaptive strategies to regulate regret such as PRW (M=2.89(SD=.61)) and BRW (M=2.87(SD=.59)). On the contrary maladaptive strategies were rarely applied: UC:M=2.57(SD=.68), REM:M=2.26(SD=.71), AV:M=2.16(SD=.71) and DIS:M=2.15(SD=.72). The analysis of the data revealed a negative correlation for UC and life satisfaction ( $r=-.21, p=.032$ ) as well as for mindfulness and maladaptive strategies (REM: $r=-.62, p<.001$ ; AV: $r=-.38, p<.001$ ; DIS: $r=-.30, p=.001$ ; UC: $r=-.29, p=.002$ ). Furthermore, a significant positive correlation between mindfulness and adaptive PRW ( $r=.44, p<.001$ ) was observed.

In addition, the results showed that men (29.18%) reported less life regrets than women (70.82%) and gender differences ( $\Lambda=.86, F(1,103) = 2.81, p=.014, \eta^2=.14$ ) regarding the applied strategies DIS ( $F(1,108) = 6.91, p=.010, \eta^2=.06; M\sigma=2.32(SD\sigma=.70); M\varphi=1.97(SD\varphi=.69)$ ) and AV ( $F(1,108) = 5.60, p=.020, \eta^2=.05; M\sigma=2.31(SD\sigma=.73); M\varphi=2.00(SD\varphi=.65)$ ).

### DISCUSSION

Due to the reported high life satisfaction of the sample and the preferred use of adaptive rather than maladaptive regret regulation strategies, the implications on the subjective well-being and the possibilities to enhance older people's life quality with replacing maladaptive with adaptive strategies are discussed. The study supports the hypothesis that maladaptive strategies like UC, which can be

# POSTER SESSION 04

a source for developmental psychopathologies, correlates negative with life satisfaction. As a result, mindfulness and adaptive strategies encourage each other and can be learnt in clinical interventions such as CBT to prevent negative outcomes of regret. Furthermore, gender differences in communication about regret and the use of different strategies for emotion regulation must be considered in clinical interventions.

# POSTER SESSION 04

Abstract No.: 0617

## **Attentional Engagement and Disengagement to Emotional Stimuli in Depression: Mediating Effects of Cognitive Emotion Regulations**

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### INTRODUCTION

Depression disorders have a high prevalence rate and can cause dysfunction in daily life. The cognitive theory of depression posits that cognitive factors play an important role in the development and maintenance of depression. Previous studies have found that there are relations among cognitive regulation, cognitive bias, and emotion regulation strategies. In particular, attentional bias to emotional information has been indicated as a significant factor in the onset, maintenance, and recurrence of depression. Attentional bias can be divided into two components: attentional engagement and disengagement, occurring during the initial and final stages of attention processing, respectively. These two mechanisms have different effects on people with depression. Recently, a study found that the interaction between cognitive bias and emotional regulation strategies affects depression. In the theoretical and empirical work, modifying the cognitive bias of depressed individuals and inducing the use of effective emotional regulation strategies can lead to a change in emotional response. However, research on classifying attentional bias in depressed individuals using various experimental measurement methods has produced inconsistent results, and there are few studies on the effect of the interaction between cognitive bias and emotional regulation strategies on depression. In the present study, we aim to examine the impact of attentional engagement and disengagement with positive and negative emotions on cognitive emotion regulation strategies and depression in individuals with depression.

### METHOD

A total of 100 college students participated in the attentional assessment task and completed the depression and Cognitive Emotional Regulation Strategy scales. The attentional assessment task measures, separately, engagement and disengagement of attentional bias toward emotional stimuli (Grafton & MacLeod, 2014).

### RESULT

Attentional engagement with positive emotions had a negative correlation with depression and a positive correlation with adaptive emotional regulation strategy. It was also found that the adaptive emotional regulation strategy mediates the relationship between attentional engagement with positive emotions and depression.

### CONCLUSION

The results of this study showed that attentional engagement with and disengagement from positive and negative emotions had different effects on depression. In particular, it was similar to the results of previous studies that the depression group may have less positive bias than the healthy group. Furthermore, the interaction between cognitive biases and emotional regulation strategies impacted depression. The results confirmed that increased attentional engagement with positive emotions was associated with increased adaptive emotion regulation strategies, leading to a reduction in depressive symptoms.

# POSTER SESSION 04

Abstract No.: 0631

## The Relationships between Psychological Flexibility, Self-Compassion, and Mental Illness of Japanese Athletes: A Large-Scale Cross-Sectional Web-Based Survey

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### INTRODUCTION

Recently, there has been growing interest in athletes' mental illnesses (Reardon et al., 2019). However, there have been few studies on mental illness among athletes. Moreover, only a few studies have demonstrated the applicability of cognitive behavior therapy to athletes' mental illnesses. According to Ekelund, Holmström, and Stenling (2022), evidence of third-wave cognitive behavioral therapies for athletes is crucial for expanding psychological support for athletes. The study examined the relationship between athletes' mental illness, psychological flexibility, and Self-Compassion and validated the application of cognitive behavior therapy.

### METHODS

Athletes (N = 2415, 1229 men and 1186 women, mean age = 27.88 years, SD = 6.59) completed the Japanese version of the Patient Health Questionnaire-9 (PHQ-9: Muramatsu, 2018), the Japanese version of the Generalized Anxiety Disorder-7 (GAD-7: Muramatsu, 2018), the Athens Insomnia Scale Japanese version (AIS-J: Okajima et al., 2013), the Japanese version of the Eating Disorder Diagnostic Screen-DSM-5 version (Kuribayashi et al., 2021), the Japanese version of the Alcohol Use Disorders Identification Test (Hiro, 2000), the 2-items on suicidal ideations (Nihon Zaidan, 2016), the Japanese version of the Acceptance and Action Questionnaire-II (Shima et al., 2013), the Cognitive Fusion Questionnaire (Shima et al., 2016), and the Japanese version of the Self-Compassion Scale (Arimitsu, 2014). We defined "athletes" as those who are currently in company or organization teams (businessmen's teams), amateur club teams, or university extracurricular activities (excluding association) as an athlete and participating in games and official competitions. The main sports of this study's participants were soccer (N = 211), baseball (N = 194), tennis (N = 151), volleyball (N = 122), track and field (N = 122), and basketball (N = 116).

### RESULTS

A multiple regression analysis indicated that the AAQ-II and the CFQ score explained 38% of the PHQ-9 score ( $F(2, 2412) = 743.75, p < .001$ , adjusted  $R^2 = .38$ ). Moreover, the AAQ-II score predicted the PHQ-9 score ( $\beta = .28, p < .001$ ) and the CFQ score the PHQ-9 score ( $\beta = .37, p < .001$ ). Furthermore, two predictors explained 42% of the GAD-7 score ( $F(2, 2412) = 873.13, p < .001$ , adjusted  $R^2 = .42$ ). Also, the AAQ-II score ( $\beta = .27, p < .001$ ) and the CFQ score predicted the GAD-7 score ( $\beta = .40, p < .001$ ). Multiple regression analyses indicated that the self-compassion scale's six factors explained 26% of the PHQ-9 score ( $F(6, 2408) = 143.52, p < .001$ , adjusted  $R^2 = .26$ ). Additionally, the self-criticism score ( $\beta = .26, p < .001$ ), the common humanity score ( $\beta = .17, p < .001$ ), the isolation score ( $\beta = .25, p < .001$ ), and the mindfulness score predicted the PHQ-9 score ( $\beta = -.12, p < .001$ ). In addition, the self-compassion scale's six factors explained 28% of the GAD-7 score ( $F(6, 2408) = 873.13, p < .001$ , adjusted  $R^2 = .27$ ). The self-criticism score ( $\beta = .27, p < .001$ ) and the isolation score predicted the GAD-7 score ( $\beta = .22, p < .001$ ).

### DISCUSSION

The AAQ-II, CFQ, and Self-compassion subscales were associated with mental illness in athletes, which supported the study's hypothesis. However, some results, such as the association between common humanity and PHQ-9, contradicted the study's predictions. It is necessary to validate the efficacy of ACT and CFT interventions for athletes in future study.



# POSTER SESSION 04

Abstract No.: 0633

## The Impact of Interpersonal Trauma on Formation of Interpersonal Perceptual Impression

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### INTRODUCTION

According to a study by Plana, Lavoie, Battaglia, and Achim (2014), after experiencing a traumatic event, the ability to process emotional information decreases and the ability to accurately classify the facial expressions of others is impaired. In addition, those who experienced traumatic events reported more negatively biased interpretations of threatening and neutral facial expressions (Yoon & Zinbarg, 2008; Staugaard, 2010), more anxiety in positive facial expressions (Weeks, Heimberg, & Rodebaugh, 2008), and lower accessibility and reliability (Heuer, Rinck, & Becker, 2007). Therefore, this study aimed to examine the differences in the formation of interpersonal cognitive impressions according to the experience of interpersonal trauma.

### METHOD

A screening test was conducted involving 277 adult participants residing in Daegu and Gyeongbuk, Korea. After excluding participants with severe depressive symptoms (> 21 points on the Center for Epidemiological Studies-Depression (CES-D)), groups were assigned according to the presence or absence of interpersonal trauma. The participants consisted of 34 adults: a relational trauma group (n=20) and a control group (n=14). Participants who arrived at the laboratory were tested for emotional expressions (anger, neutrality, happiness) displayed on the monitor on an 8-point visual analogue scale (VAS), to examine the tendency of interpersonal perception judgment according to the trauma experience, warmth, obedience, reliability, and accessibility. After completing the rating task, participants completed the Looming Maladaptive Style Questionnaire (LMSQ) and the Post-traumatic Cognitions Inventory (PTCI) self-report.

### RESULTS

As a result of the normality test, the non-parametric Kruskal-Wallis test was conducted because the normality assumption was not met. There was a significant difference between the groups in terms of anger expression ( $F(1,32)=4.816, p=.028$ ), neutral expression ( $F(1,32)=8.279, p=.004$ ), and reliability among the subjective judgment areas of interpersonal perception. Comparing the average between groups resulted in the trauma group indicating lower confidence in anger and neutral expressions than the control group. Regarding accessibility, there was a significant difference between the groups only in anger expression ( $F(1,32)=6.541, p=.011$ ), and the trauma group showed a lower approach tendency toward anger expression than the control group. However, there was no significant difference between the groups in terms of anger, neutrality, warmth of happy facial expressions, and compliance ratings.

### CONCLUSIONS

It has been found that people who have experienced interpersonal trauma form a lower level of trust in angry expressions, which makes them difficult to approach. These results suggest that interpersonal trauma experiences make it difficult to process facial expressions accurately, which are important clues in social interactions, and thus show lower accessibility.

# POSTER SESSION 04

Abstract No.: 0635

## **The Effects of Interpersonal Traumatic Experiences and Perceived Social Support on College Students' Depression and Social Anxiety: Focusing on the Role of Mattering**

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Interpersonal trauma is a traumatic event experienced in human relationships, which is known for causing symptoms of psychological maladjustment such as depression and social anxiety. However, there is insufficient research on the effects of interpersonal traumatic experiences on a subsequent course of depression and social anxiety, and there is quite insufficient research on how certain psychological factors function in that process. The present study aimed to investigate the role of mattering in the process in which interpersonal traumatic experiences and perceived social support affect a course of depression and social anxiety, and examine the effectiveness of mattering-writing intervention and social support-writing intervention.

In study 1, questionnaires measuring interpersonal traumatic experiences, perceived social support, mattering, depression and social anxiety were administered three times at two weeks intervals to 86 college students. As a result, interpersonal traumatic experiences and perceived social support independently had an effect on a course of depression and social anxiety. Mattering turned out to mediate the process in which perceived social support affected the course of depression and social anxiety, and specifically mattering which is experienced immediately after interpersonal traumatic experiences turned out to mediate the process in which perceived social support which was experienced immediately after interpersonal traumatic experiences affected the subsequent 1-month course of depression and social anxiety. Especially, while mattering mediated both processes in which perceived social support affected depression and social anxiety in high-interpersonal trauma group, mattering mediated only the relationship between perceived social support and social anxiety in low-interpersonal trauma group.

In study 2, fifteen college students who experienced more than one considerably painful interpersonal traumatic event randomly assigned to mattering-writing group or social support-writing group, and participants performed mattering-writing activities or social support-writing activities three times at every other days for 5 days. As a result, while depression significantly decreased after the intervention in mattering-writing group, depression and social anxiety did not significantly decrease after the intervention in social support-writing group. However, there was no significant difference in the decrement of depression and social anxiety between two groups.

The present study has confirmed that interpersonal traumatic experiences and perceived social support independently affects the course of depression and social anxiety, that mattering mediated the process in which perceived social support affected the course of depression and social anxiety, and that mattering-writing intervention could reduce college students' depression who had experienced interpersonal trauma. Finally, limitations of the present study and suggestions for future research were discussed.

# POSTER SESSION 04

Abstract No.: 0644

## **Cognitive-Behavioral Characteristics of Individuals Experiencing Multiple Major Depressive Episodes - A Comparison with Those Who Have Never Experienced a Major Depressive Episode -**

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### INTRODUCTION

Individuals with a major depressive disorder (MDD) experience a recurrence of depressive episodes after remission. The recurrence rate increases with each major depressive episode (MDE), and it is assumed that those with recurrent depressive episodes exhibit characteristics of vulnerability to depression. Cognitive-behavioral factors like behavioral activation and negative thinking are associated with the degree of depressive symptoms; cognitive-behavioral therapy aimed at improving these factors has been effective in improving the symptoms. However, it is unclear whether these cognitive-behavioral characteristics exist among those who have experienced multiple MDEs and are likely to relapse into depression. Additionally, cognitive reactivity is a vulnerability factor of depression recurrence. It predicts depression recurrence and increases with each MDE (Elgersma et al., 2015; Yamamoto et al., 2014). It is a salient characteristic of those repeatedly experiencing depression recurrence. Therefore, this study aimed to compare the characteristics of cognitive-behavioral factors and cognitive reactivity of individuals who have experienced multiple MDEs with those who have not experienced MDEs.

### METHOD

A total of 437 participants (192 men, 242 women, and 3 who did not specify their gender; mean age  $36.92 \pm 15.13$  years) completed a shortened Japanese version of the Automatic Thoughts Questionnaire-Revised (ATQ-R; Hollon & Kendall, 1980) (Sakamoto, Tanaka, Tanno, & Ohno, 2004), the "behavioral activation" factor in the Japanese version of the Behavioral Activation for Depression Scale (BADs; Kanter, Mulick, Busch, Berlin & Martell, 2007) (Takagaki et al., 2013), the Japanese version of The Center for Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977) (Shima, Kano, Kitamura, & Asai, 1985), and the Japanese version of the Leiden Index of Depression Sensitivity-Revised (LEIDS-R, Van der Does & Williams, 2003) (Yamamoto et al., 2014) through an online survey.

### RESULTS

A t-test was conducted with MDE experience and depressive symptoms as the independent and dependent variables, respectively; the results showed that depressive symptoms were significantly higher in the "experienced" group than in the "no experience" group ( $t(435) = -14.47, p < .001$ , Cohen's  $d = -1.44$ ). In addition, t-test results with MDE experience as the independent variable, and cognitive-behavioral factors and cognitive reactivity as the dependent variables showed that negative automatic thoughts ( $t(435) = -11.44, p < .001$ , Cohen's  $d = -1.14$ ) and cognitive reactivity ( $t(435) = -11.31, p < .001$ , Cohen's  $d = -1.12$ ) were significantly higher in the "experienced" group than in the "no experience" group. In contrast, positive automatic thoughts ( $t(435) = 6.88, p < .001$ , Cohen's  $d = .068$ ) and behavioral activation ( $t(435) = 5.73, p < .001$ , Cohen's  $d = .057$ ) were significantly lower in the "experienced" group.

### CONCLUSION

Individuals who had experienced multiple MDEs were more likely to show negative reactions during depressive mood arousal or less activated behavior than those who had not experienced MDEs. Considering that high cognitive reactivity is a characteristic of depressed individuals who repeatedly relapse, the results indicate that reducing cognitive reactivity may contribute to the prevention of depression relapse.

Abstract No.: 0649

## The Moderating Role of Experiential Avoidance in the Association between Negative Affect and Stress: An Ecological Momentary Assessment Study

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According to the stress generation model, individuals are not passive recipients of negative life events, but play significant roles in generating subsequent stress in their lives (Hammen, 1991). Although stress generation theory was proposed in relation to depression, a few studies have focused on the role of negative affect in predicting stress which in turn is a risk factor for subsequent depression (Watson et al., 1988a). As potential reciprocal relationships between negative affect and stress are likely to occur in day-to-day context, it is important to utilize a research design that can tap momentary fluctuations in individuals' psychological experiences. In addition, it has been suggested that individuals who are not able to effectively manage their emotions to daily events are at higher risk for experiencing more severe and longer distress (Mennin et al., 2007). More importantly, it has been suggested that negative affect may become associated with later stress more strongly for individuals who have less advanced emotion regulation skills. For example, negative affect was found to be related to smoking behavior only when the levels of experiential avoidance were high (Bloom et al., 2015). Further, there is a lack of research examining daily contexts in which stress may occur considering the influential role of daily stress in overall well-being (Pillow et al., 1996). Such approach might be particularly needed in understanding how young adults experience and modulate daily negative emotions and stress, given findings that suggest individuals are more prone to show fluctuations in negative emotions during this developmental period (Rocke et al., 2009). Therefore, we examined the moderating role of experiential avoidance in the relationship between negative affect and successive stress through ecological momentary assessment in high-risk group for depression. Participants were 115 undergraduate students (92 females, 23 males; average age = 21.49, [SD = 2.18]) who completed baseline measures of experiential avoidance (K-MEAQ; Gamez et al., 2011; Lee & Yoo, 2017) and depression (K-CES-D; Radloff, 1997; Jeon et al., 2001), and were screened to ensure their high-risk status for depression (K-CES-D score > 16; Cho et al., 1998). Subsequently, they were instructed to respond to five message alerts per day for a week at quasi-random times (between 10 A.M. and 10 P.M. at a minimum of 90 min) consisting items that measure negative affect and the occurrence of stress. Negative affect was assessed using 3 items (i.e., distressed, nervous, guilty) from the 5-point Likert scale K-PANAS (Watson et al., 1988; Lee et al., 2003). The occurrence of stress was measured through a dichotomous item (Conolly & Alloy, 2018). We used multilevel modeling for all analyses considering the nested structure of our data (35 momentary assessments at level 1 nested within each participant at level 2). The relationship between negative affect and subsequent stress occurrence was examined in within-person context using lag analyses, and baseline experiential avoidance was incorporated in the model as a moderator between the two within-person variables. Gender and age were added as between-person variables. A total of 3978 momentary alerts from 115 participants were used after excluding data that had no within-person variance. Controlling for stress occurrence at time t-1, negative affect at time t-1 did not independently predict stress occurrence at time t in within-person context (OR=1.07, 95% CI[0.97, 1.17]). Cross-level interactions were significant between momentary negative affect and baseline experiential avoidance in predicting stress in the subsequent time point (OR=1.14, 95% CI[1.002, 1.31]). Specifically, the simple slope of negative affect for subsequent stress was significant only when baseline experiential avoidance was 1SD above the grand-mean (OR=1.16, 95% CI[1.03, 1.32]). That is, while transient negative affect generally fades away, high tendency to use experiential avoidance might persist and exacerbate momentary negative affect to generate daily stress.

This study expands the literature on daily experiences of emotions and stress among individuals at risk for depression. Specifically, our results suggest that higher levels of negative affect may lead to higher levels of stress only for individuals who tend to rely on experiential avoidance as an emotion regulation strategy. The findings may have important clinical implications such that individuals' tendencies to engage in experiential avoidance might become a promising target for addressing stress generation in daily contexts that could contribute to future depression.

# POSTER SESSION 04

Abstract No.: 0650

## **Relationship between Insecure Attachment and Borderline Personality Disorder Symptoms in a Treatment Seeking Population with Adverse Childhood Experiences: The Dual Mediating Effect of Self-Compassion and Emotional Regulation Skills Deficit**

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### INTRODUCTION

Previous research has suggested that one of the critical risk factors of borderline personality disorder (BPD) is insecure attachment. Emotion regulation skills deficit and low self-compassion, which were also discussed to be related with insecure attachment, were each identified as key latent construct of BPD and has been focused as core treatment targets. So far, examining the mediating effect of emotion regulation in the relationship of insecure attachment and BPD, emotion regulation skills capacity did not fully explain the relationship between the two, suggesting the possibility that self-compassion can additionally explain the relationship more completely and be integrated in treatment strategies. We sought how both emotion regulation skills deficit and self-compassion would mediate insecure attachment and BPD. We hypothesized that insecure attachment leads to low self-compassion which lead to emotional regulation skill deficit, which in turn increases BPD symptoms.

### METHOD

In a treatment seeking clinical group of 79 adults with at least one adverse childhood experience (ACE), the Prove Adult Attachment Type (PROVE\_AAT) scale was used to measure insecure attachment, the Korean Borderline Symptom List (K-BSL-23) was used to measure BPD symptoms, and the Korean Self-Compassion Scale (K-SCS) was used to measure self-compassion. To measure emotional regulation skills deficit, sub-factors of the Korean Difficulties in Emotion Regulation Scale (K-DERS) demonstrating skills deficit were used, including non-acceptance of emotional responses, lack of emotional clarity, and limited access to emotion regulation strategies. Next, the dual mediation effect (Hayes, 2013) of self-compassion and emotion regulation skills deficit between insecure attachment and BPD symptoms was analyzed.

### RESULTS

The effects of insecure attachment on self-compassion,  $B=-.334$ ,  $\beta=-.265$ ,  $p<.01$ ; self-compassion on BPD symptoms,  $B=-.264$ ,  $\beta=-.444$ ,  $p<.05$ ; and self-compassion on emotional regulation skills deficit were significant,  $B=-.643$ ,  $\beta=-.839$ ,  $p<.001$ . The effect which self-compassion and emotional regulation skills deficit consecutively mediate the relation between insecure attachment and BPD symptoms was statistically significant,  $B=.069$ ,  $\beta=.092$ , 95% CIs [.019, .185], where in this model the effect of emotional regulation skills deficit on BPD symptoms was significant,  $B=.323$ ,  $\beta=.416$ ,  $p<.05$ . Next, the effect in which insecure attachment affects BPD symptoms through self-compassion was significant,  $B=.088$ ,  $\beta=.118$ , 95% CIs [.010, .274]. However, the effect of emotional regulation skills deficit on BPD symptoms through insecure attachment was not found,  $B=.042$ ,  $\beta=.056$ , 95% CIs [-.007, .164]. Emotional regulation skills deficit mediated between insecure attachment and BPD symptoms only following self-compassion.

### DISCUSSION

This study examined the differential effects of self-compassion and emotion regulation skills deficit in the relationship between insecure attachment and BPD symptoms. We suggest that providing self-compassion training in addition to emotion regulations skills training would benefit for people who experienced ACEs and insecure attachment in BPD treatment.

# POSTER SESSION 04

Abstract No.: 0654

## Longitudinal Changes in Processing Speed and White Matter Structure Depend on Depressive Recurrence

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### INTRODUCTION

Major depressive disorder (MDD) is a highly debilitating mental disease. Cognitive deficits are among the core features of MDD, and are major predictors of poor treatment response. Moreover, cognitive dysfunctions become aggravated over the course of depression. As effective prevention and treatment interventions require knowledge of the disorder and its deficits, a comprehensive understanding of the underlying pathomechanisms of cognitive dysfunction in MDD is of great clinical and scientific interest. One promising avenue to gain more insights into these mechanisms, is to study white matter (WM) microstructure in the brain. Previous studies have demonstrated reduced WM integrity in patients with MDD compared to healthy controls (HC) in several fiber tracts, with alterations most pronounced in MDD suffering from recurrent depressive episodes. Likewise, associations between FA and cognitive dysfunction have been found in above-mentioned fiber tracts in depressed individuals, raising the idea that diagnosis-related WM deficits may provide a structural basis for cognitive deficits in MDD. So far, however, the vast majority of these studies have been cross-sectional, limiting the ability to draw causal conclusions of the underlying biological processes. Here, we present the first DTI study that investigates the longitudinal associations between WM integrity and cognitive performance in a well-powered sample of MDD and HC.

### METHODS

N=464 participants (N=210 MDD, N=254 HC) were selected from the MACS, which is part of the FOR2107 consortium for this diffusion-tensor-imaging-study employing tract-based spatial statistics. All participants were scanned twice with a follow-up period of approximately 2 years ( $M=766.7\pm 87.5$  days) at two scanning sites. The Trail Making Test (TMT) was administered to assess processing speed at both time points. MDD patients were divided into recurrent with at least one recurrence during follow-up ( $N_{\text{recurrent}}=95$ ) and recovered ( $N_{\text{recovered}}=111$ ). We analyzed contrast images ( $\Delta$ =follow-up–baseline) of common WM integrity markers ( $\Delta$ FA,  $\Delta$ MD,  $\Delta$ RD, and  $\Delta$ AD) as dependent variables, diagnosis (HC vs. MDD),  $\Delta$ TMT and the diagnosis $\times$  $\Delta$ TMT-interaction as independent variable. We conducted an additional exploratory ANCOVA with WM metrics as dependent variable, recurrence (MDDrecurrent vs. MDDrecovered),  $\Delta$ TMT and the recurrence $\times$  $\Delta$ TMT-interaction as independent variables.

### RESULTS

As expected, MDD patients had slower processing speed compared with HC at both time points ( $p<.001$ ).  $\Delta$ TMT increased over time, i.e., participants had quicker processing speed at follow-up compared to baseline ( $p=.033$ ), irrespective of diagnosis ( $p=.484$ ). White matter microstructural changes over time were similar in MDD patients compared with HC (diagnosis:  $\text{ptfce-FWE}>.065$ ; interaction:  $\text{ptfce-FWE}\rightarrow.226$ ). However, a negative association was found between  $\Delta$ TMT and  $\Delta$ MD ( $\text{ptfce-FWE}=.010$ ),  $\Delta$ RD ( $\text{ptfce-FWE}=.021$ ) and  $\Delta$ AD ( $\text{ptfce-FWE}=.005$ ). Participants that were quicker at follow-up compared to baseline had increased white matter integrity. No effects were found for  $\Delta$ FA ( $\text{ptfce-FWE}>.096$ ). Surprisingly, in the MDD subgroup, MDDrecurrent were quicker overall in the TMT compared with MDDrecovered ( $p=.013$ ). In MDDrecurrent patients the association between  $\Delta$ TMT and  $\Delta$ MD ( $p=.025$ ) and  $\Delta$ AD ( $p=.023$ ) was more pronounced compared with the association in MDDrecovered.

### CONCLUSIONS

This is the first longitudinal study that shows a moderating effect of recurrence on the association of CD and white matter integrity reductions in MDD patients. While the direction of the effect in recurrent MDD is surprising and might be due to confounding factors of treatment, this result expands upon previous cross-sectional studies and highlights the importance of white matter integrity for CD in MDD patients.

# POSTER SESSION 04

Abstract No.: 0671

## **A Laboratory Stressor Can Switch from a Proactive to a Reactive Control Process among Depressed Individuals: Perspective from Dual Mechanism of Cognitive Control**

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### INTRODUCTION

The framework of the Dual Mechanism of Cognitive Control, conceptualized by two distinct modes of cognitive control: reactive and proactive control process, has been applied to understanding the psychopathology of depression. This study aimed to reveal the effect of temporary stressors on reactive and proactive control processes in relation to depression. To this aim, changes in reactive and proactive control after laboratory stressor was investigated.

### METHOD

Forty-eight participants were administered the below procedure in the form of the online experiment: 1) BDI-II, 2) AX-CPT (pre), 3) anagram task (laboratory stressor), and 4) AX-CPT (post). As the index of the balance of reactive and proactive control,  $d'$  context was computed from the performance of the AX-CPTs. VAS measured the degrees of stress, mood, and fatigue before and after the anagram task for manipulation check. Based on the total score of BDI-II, participants were classified into the depressed group (score > 13) and the non-depressed group (score < 14).

### RESULTS

After confirming the experimental manipulation check that the anagram task significantly increased participants' stress, Two-way ANOVA (time, group) was conducted on  $d'$  context. The analysis revealed the significant interaction of time and group, suggesting that depressed individuals showed decreased  $d'$  context after exposure to laboratory stress.

### DISCUSSION

Our results suggested that depressed individuals switch more reactive control processes than non-depressed individuals. Moreover, results also suggested that laboratory stress makes individuals' control process more reactive. These indicated that stressors could enhance more reactive control process rather than the proactive control process, and it was related to depressive symptoms.

# POSTER SESSION 04

Abstract No.: 0675

## Association between Rumination, Postpartum Depression, and Insomnia According to the Experience Sampling Method

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### INTRODUCTION

Several studies have shown that rumination affects postnatal depression (O'Mahen, Flynn, & Nolen-Hoeksema, 2010; O'Mahen, Boyd, & Gashe, 2015; Raes et al., 2014). However, self-report questionnaires are limited by biases in retrospection, which is of particular concern when studying emotional disorders (reviewed in Kircanski, Joormann, & Gotlib, 2012; Mathews & MacLeod, 2005). In addition, rumination has been linked to poor sleep quality, and a study of perinatal women found that women with higher insomnia and rumination scores had higher scores for postpartum depression and suicidal ideation than those with lower scores for one or both (Kalmbach et al., 2020). However, few studies have longitudinally examined the associations among rumination, postnatal depression, and insomnia in perinatal women. The experience sampling method (ESM) is a real-time data collection method in which participants report their experiences multiple times per day. The strength of ESM lies in its ability to examine processes as they unfold within an individual over time (Ruscio et al., 2015). Thus, this study aimed to reveal the relationships among rumination, postnatal depression, and insomnia using ESM.

### METHODS

Ten women within one year postpartum were recruited as participants from a community sample. Two types of measurement were used: ESM and questionnaire ratings. For the ESM variables, we randomly questioned the participants through "exkuma" (via SNS) four times a day for five days. "Exkuma" is a Japanese ESM platform that sends signals via SNS and allows responses on the web. The ESM variables include momentary rumination (Ruscio et al., 2015), state affect (PANAS), and state depression (K6; Furukawa, Kessler, Slade, & Andrews, 2003) symptoms. The questionnaire variables included postpartum depression (EPDS; Cox, Holden, & Sagovsky, 1987; Okano, 1996) and rumination (RRS; Hasegawa, 2013); insomnia (AIS) was also assessed at baseline. We also measured their history of psychiatric illness, social support, and children's sleep as confounding variables. Perinatal depression, rumination, and insomnia were assessed on the last day.

### RESULTS

The mean age of the mothers was 36.40 years ( $SD=4.41$ ) and the mean age of the children was 7.60 months ( $SD=2.91$ ). Pearson's correlation coefficients were calculated to examine the association between each measure at Time 1, and significant positive correlations were found between EPDS and RRSbrooding ( $r=.71, p<.05$ ) and RRSreflection ( $r=.94, p<.01$ ). No significant correlations were observed between postpartum depression and parenting stress or insomnia. We also conducted a multilevel analysis with K6 scores from the ESM as objective variables and momentary rumination and PANAS negative and positive mood scores as explanatory variables; nesting at the individual level, momentary rumination and negative moods significantly predicted depression, but rumination had a larger value. Furthermore, a multilevel analysis using momentary rumination as the objective variable and the variables measured at Time 1 as explanatory variables revealed that tendencies toward insomnia, trait brooding, and stress related to children's sleep significantly predicted momentary rumination.

### CONCLUSION

Postpartum depression was strongly associated with rumination even at the state level (ESM data), and trait rumination was a likely predictor of depression. State rumination may also be associated with insomnia and sleep disorders in children. Therefore, further analyses using additional data are required.



# POSTER SESSION 04

Abstract No.: 0677

## **The Mediating Effects of Perceived Social Support and Personal Growth Initiative in the Relationship between Kinesiophobia and Life Satisfaction among Chronic Pain Patients**

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One of the major psychiatric issues associated with chronic pain is kinesiophobia (i.e., fear of movement), which is outlined in the Fear-Avoidance Model (FA model; Lethem et al., 1983; Vlaeyen & Linton, 2000). This study was designed to investigate the relationship between kinesiophobia and life satisfaction, using two protective psychological predictors: perceived social support and personal growth initiative. Specifically, the study hypothesized that these psychosocial variables would mediate the relationship between kinesiophobia and life satisfaction among chronic pain patients.

The present study tested the hypothesized serial mediation model of life satisfaction in the context of the fear of movement among 314 ethnically diverse adults who experienced chronic pain in the United States, using Structural Equation Modeling. After controlling for age and gender, the hypothesized model produced acceptable fit indices,  $\chi^2(54) = 111.520$ ,  $p < .001$ , CFI = .976, SRMR = .061, RMSEA = .059 (.043 - .075), and accounted for 17.4%, 51.4%, and 55.1% of the variance in perceived social support, personal growth initiative, and life satisfaction, respectively. The results showed that, as expected, life satisfaction, perceived social support, and personal growth initiative were positively correlated, while kinesiophobia was negatively correlated with all other variables. Furthermore, social support and personal growth initiative formed pathways that mediated the link of the fear of movement to life satisfaction. That is, higher levels of kinesiophobia were associated with lower social support, which, in turn, was associated with lower levels of personal growth initiative and lower life satisfaction. The findings of the present study have important clinical implications. Despite experiencing excessive fear of movement due to a painful injury, chronic pain patients would benefit from obtaining social support through the development of relationships among family, friends, and significant others, including therapists. By doing so, patients may increase their self-directed tendency to grow throughout life, which is a desirable outcome or even goal of counseling. Finally, the psychological mediators identified in the study, such as perceived social support and personal growth initiative, may act as protective factors for chronic pain patients and increase their life satisfaction. In sum, this study contributes to the theoretical extension of the fear-avoidance theory to the chronic pain patients' well-being through the identification of social support and personal growth initiative as important mediators in the relationship between kinesiophobia and life satisfaction, and highlights the potential protective effects of these psychological factors for chronic pain patients.

# POSTER SESSION 04

Abstract No.: 0688

## Long-Term Relationship between Adverse Childhood Experiences and Hair Cortisol Levels in Young Adulthood

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### INTRODUCTION

A systematic review elucidated that adverse childhood experiences (ACEs) have long-term effects on mental and physical health in adulthood (Hughes K et al., 2017). Moreover, as for the effects on biological embedding mechanisms, ACEs are also associated with enduring changes in the nervous, endocrine, and immune systems. Particularly in the endocrine system, adults with a history of childhood maltreatment and current depression showed greater cortisol response to the Trier Social Stress Test compared to non-maltreated and non-depressed controls (Danese & McEwen, 2012). Although blood and saliva have been used to measure cortisol levels in response to stress, cortisol levels fluctuate throughout the day and are affected by acute stress before sampling. To overcome these limitations, cortisol in hair has recently been used to assess chronic stress. Cortisol is incorporated into keratin during hair production. Since hair grows approximately 1 cm per month, measuring hair cortisol at 3 cm from the scalp can be used to assess cortisol levels over the past 3 months (Izawa, 2016). However, the long-term relationship between ACEs and hair cortisol levels in adulthood remains to be elucidated. This study aims to investigate the relationship between ACEs and hair cortisol levels in young adulthood.

### METHOD

A total of 81 University students (40 men and 41 women with mean Age $\pm$ SD of 21.2  $\pm$  1.9) were included in this study. 36 participants had some ACEs. The Japanese version of the questionnaires were administered as follows; Adverse Childhood Experiences questionnaire (ACE; Fellitti et al., 1998; Tsuboi, 2014); Perceived Stress Scale (PSS; Holmes et al., 1967; Iwahashi et al., 2002). To assess the mean concentration of cortisol levels over the 3 months, approximately 10 hairs were sampled from the scalp as close to the skin as possible. The 3cm-long hair was grounded using a ball mill and subjected to aqueous acetonitrile to extract the hair cortisol. The measurement of hair cortisol was performed using liquid chromatography/tandem mass spectrometry. Correlation coefficients between hair cortisol levels and the number of ACEs were examined. The study protocol was approved by the ethics committee at the University of Tokyo (No. 21-18).

### RESULTS

There was no significant correlation between the total number of ACEs and hair cortisol levels ( $r = .14$ , n.s.). Hair cortisol levels have a positive significant correlation with the total number of ACE in ages 0 to 6 ( $r = .23$ ,  $p = .039$ ). On the other hand, hair cortisol levels have no significant correlation with the total number of ACEs in ages 7 to 12 ( $r = .11$ , n.s.), 13 to 18 ( $r = .18$ , n.s.), higher than 19 ( $r = .17$ , n.s.). Multiple regression analysis revealed that there was a trend-level relationship between hair cortisol levels and the total number of ACEs in age from 0 to 6, even though the effects of age, sex, and perceived stress were controlled ( $\beta = 1.28$ ,  $p = .055$ ).

### DISCUSSION

This study suggests that ACEs particularly in early childhood are associated with hair cortisol levels in young adulthood. To get 'under the skin' by the effects of ACEs, there might be a critical or sensitive period of biological development. Large-scale prospective studies should replicate these findings and investigate the possible embedding mechanisms in the future.

Funding:

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# POSTER SESSION 04

Abstract No.: 0696

## Effects of Parental Validation on Adolescent Emotion Regulation and Behavioral Outcomes

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Borderline personality disorder (BPD) is a severe and pervasive mental health condition characterized by a consistent pattern of difficulties in interpersonal relationships, emotional dysregulation, unstable sense of self, and impulsivity (American Psychiatric Association, 2013). One of the most influential models of BPD is the biosocial model, which proposes that BPD develops as a result of on-going interactions between an individual's biological vulnerabilities and an invalidating childhood environment (Linehan, 1993). Along with the biosocial model, Linehan (1993) developed Dialectical Behavior Therapy (DBT) for treatment of individuals with BPD, in which validation serves as core strategy. Validation is a response communicated to an individual that his/her private experiences are understandable, acceptable, and important. Despite the emphasis on childhood experienced parental invalidation in the biosocial model, and validation strategies in DBT, few studies have examined the effects of parental validation on adolescent outcomes and whether a brief validation training session could aid parents in increasing the use of validation strategies. This study hence sets out to study the effectiveness of brief validation training and the effects of parental validation on emotion regulation and behavioural outcomes among adolescents.

Fifty-three parent-adolescent dyads (Mage for parents: 45.40; Mage for adolescents: 13.94; 75.5% mothers; 43.4% daughters; 41.5% mother-son dyads) participated in a laboratory experimental study. During the laboratory session, the dyads were randomized into one of two conditions: a 30-minute parent training on validation strategies (intervention condition, N = 27) or supportive communication (control condition, N = 26). The parent and adolescent then participated in a discussion task focusing on an event that made the adolescent feel sad. After which, adolescents rated their affect, perceived empathy, perceived invalidation, and completed a distress tolerance task and a risk-taking task (BART task). The level of validation was coded using on the Validating and Invalidating Behaviors Coding Scale (Fruzzetti, 2001).

A one-way ANOVA was conducted to analyze whether the overall coded validation level was higher for parents in the experimental group than in the control group, while controlling for parent enthusiasm level at baseline. The results of the manipulation check indicated that the overall coded validation level was higher for parents in the experimental group than for parents in the control group ( $p = .047$ ). A multivariate analysis of variance was conducted to analyze whether adolescents in the intervention group, compared to those in the control group, demonstrate more positive affect, less negative affect, higher perceived empathy, higher distress tolerance, and less risk-taking behaviours after a communication task with the parent. Parent enthusiasm level at baseline was included as a co-variate in the analysis.

Results indicated that there were no significant differences between adolescents in the intervention group versus those in the control group on any of the outcome variables ( $p > .05$ ).

Our findings indicate that a 30-minute training in validation strategies could be effective in helping parents engage in greater use of validation. A lack of between-condition effect on adolescents' affective and behavioral outcomes suggests that more intensive validation training may be needed, or that a longer observation period may be needed in order for the interpersonal benefits of validation to be observed. Further, it is plausible that the training provided in the control group (supportive communication) may have exerted benefits that masked the expected differential effects across conditions. Our findings indicate that a brief training session could aid parents in increased usage of validation strategies. However, the effects of parental validation on adolescent outcomes may not be observed immediately.

# POSTER SESSION 04

Abstract No.: 0697

## Psychopathic Personality and Emotions: The Role of Counterfactual Thinking

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### INTRODUCTION

Individuals with high levels of psychopathic traits experience less regret and guilt when individuals' own behaviors lead to negative consequences for other people (Hare, 1993). They also show less emotional reactivity to the suffering of others (Jameel et al., 2019). A possible explanation for individuals with antisocial or psychopathic traits to experience less feelings of guilt and regret is that these individuals have less counterfactual thinking. Counterfactual, which literally means contrary to facts, is the name given to a way of thinking that focuses on how the past or present could be different. The present study aims to investigate whether counterfactual thinking is the underlying mechanism for explaining the link between psychopathy and emotions.

### METHOD

We conducted an online study with members of general population (N=137) who are aged between 18-58. To evaluate participants' counterfactual thinking, this study employed the use of 4 meticulously crafted scenarios. All participants were presented with two scenarios; a scenario ending with negative consequence for oneself and another ending with negative consequence for the friend. We applied The Test of Self-Conscious Affect-2 to assess emotions and Psychopathic Personality Inventory Revised-Short Form for measuring psychopathic traits. Pearson correlation analysis was used to examine the relationship between psychopathic traits and emotions, counterfactual thinking and emotions, and psychopathic traits and counterfactual thinking. Moderation analysis was used to investigate moderating effects of psychopathic traits on the relationship between counterfactual thinking and emotions.

### RESULTS

The results of the correlation analysis showed that psychopathic traits including Fearless Dominance, Self-Centered Impulsivity, Coldheartedness are negatively correlated with emotions including guilt, regret, shame, blame whereas Coldheartedness and Shame were found to be positively correlated ( $p < .05$ ). There was a significant positive or negative correlation between counterfactual thinking and emotions depending on type of counterfactual thoughts ( $p < .05$ ). On the contrary, there was no significant correlation between psychopathic traits and counterfactual thinking ( $p > .05$ ). The results did not demonstrate any moderating effect of psychopathic traits including Fearless Dominance, Self-Centered Impulsivity, Coldheartedness on the link between counterfactual thoughts and emotions ( $p > .05$ ).

### DISCUSSION

The present study fills the gap in literature by examining the relationship between psychopathic traits and moral emotions in the context of counterfactual thinking. Future large-scale studies are required to assess the relationship between counterfactual thoughts and emotional deficits found in psychopathy.

# POSTER SESSION 04

Abstract No.: 0703

## Association between Subjective Cognitive Decline and Neurocognitive Function

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Subjective cognitive decline (SCD) among the ageing population recently has received growing attention as a predictor of neurocognitive disorders. However, there are inconsistent opinions about the effectiveness of SCD as a predictor of neurocognitive disorders. In this study, we examined the association between SCD and neurocognitive function based on psychological and clinical assessment in a cognitively normal group of community-dwelling elderly. A sample of 111 community-dwelling adults aged 60-89 years and rated as CDR 0 completed KDSQ-SR (Korean Dementia Screening Questionnaire – Self Report; Yang et al. 2002), S-GDS-K (Short Form Geriatric Depression Scale – Korean Version; Cho et al. 1999), CERAD-K-NP (the Korean Version of the Consortium to Establish a Registry for Alzheimer's Disease assessment Packet, the 2nd Edition, Neuropsychological Battery; Woo et al. 2015), K-MMSE (Korean-Mini Mental State Examination; Kang et al. 1997), and K-UPSA-2-VIM (the Korean version of the University of California San Diego Performance-based Skills Assessment, Validation of Intermediate Measure). As suggested by previous studies, we defined participants with a total of KDSQ-SR $\geq$ 6 as a subjective cognitive decline group (SCD), and those with KDSQ-SR $<$ 6 as a non-subjective cognitive decline group (NSCD). All analyses were performed using SPSS 21. The t-test and analysis of covariance (ANCOVA) were applied to investigate the differences between the two groups. The statistical significance level of each item was set to .05. As a result, there were no significant differences between SCD group (n=56) and NSCD group (n=55) in terms of sex, age, education year, most neurocognitive functions, and ability to perform daily activities. Depressed mood, however, was significantly higher in SCD group compared to NSCD group (p=0.012). Even after controlling for depressed mood, the results were the same. These findings suggest that providing psychological interventions such as cognitive behavioral therapy or behavioral activation to the elderly with subjective cognitive decline will be useful, because it may be effective in improvement of depressed mood and low cognitive efficacy.

# POSTER SESSION 04

Abstract No.: 0717

## Is the Suicide Crisis Syndrome a Psychological Marker for Suicide Ideation and Attempt?

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### INTRODUCTION

Contemporary suicide risk assessment heavily relies on self-reported suicidal ideation or attempt history. However, people often do not reveal suicidal ideation and assessing one's suicidal ideation or behavior itself is not sufficient in intervening suicide risk. Thus, more innovative, clinically informative methods for suicide assessment are needed. The Suicide Crisis Syndrome (SCS; Galynker et al., 2017) was proposed to assess pre-suicidal cognitive and affective states that emerge proximate to suicide risk without relying on self-reported suicidal ideation. The SCS includes five components: Entrapment, affective disturbance, loss of cognitive control, hyperarousal, and social withdrawal. The aim of this study was to examine whether the suicide crisis syndrome would be a psychological marker for suicide ideation and attempt.

### METHOD

A total of 837 community adults in Korea participated in the study through an online survey. The mean age of the participants was 31.24 (SD = 7.20) and the majority were women (n = 732, 87.46%). All participants completed the Korean version of the revised Suicide Crisis Inventory-2 (SCI-2, Bloch-Elkouby et al., 2021; Park et al., 2023), Patient Health Questionnaire (PHQ-9; An et al., 2013; Kroenke et al., 2011), 7-item Generalized Anxiety Disorder (GAD-7; Ahn et al., 2019; Spitzer et al., 2006), C-SSRS (Posner et al., 2008) and responded to questions of past-year suicide attempt. Following the C-SSRS protocol (<https://cssrs.columbia.edu/the-columbia-scale-c-ssrs/about-the-scale/>), we used the presence of suicide attempt history and the cut-off score of 4 or more on the C-SSRS suicidal ideation severity items to identify high risk groups.

### RESULTS

Among participants, 7.05% (n = 59) reported 4 or more on the C-SSRS suicide ideation severity and 2.57% (n = 21) reported having attempted suicide within the last one year. Logistic regression analysis revealed that high suicidal ideation group (i.e., 4 ≥ C-SSRS) reported significantly higher scores on the SCI-2 (OR = 1.028, 95% CI [1.021, 1.035]) and all subfactors of the SCI-2: Entrapment (OR = 1.117, 95% CI [1.086, 1.149]), Affective Disturbance (OR = 1.089, 95% CI [1.068, 1.111]), Loss of Cognitive Control (OR = 1.106, 95% CI [1.077, 1.136]), Hyperarousal (OR = 1.100, 95% CI [1.074, 1.128]), and Social Withdrawal (OR = 1.228, 95% CI [1.163, 1.296]). Also, individuals with suicide attempt in the past year reported significantly higher scores on the SCI-2 (OR = 1.026, 95% CI [1.016, 1.036]) and all subfactors of the SCI-2: Entrapment (OR = 1.109, 95% CI [1.061, 1.158]), Affective Disturbance (OR = 1.077, 95% CI [1.047, 1.109]), Loss of Cognitive Control (OR = 1.100, 95% CI [1.055, 1.146]), Hyperarousal (OR = 1.092, 95% CI [1.052, 1.133]), and Social Withdrawal (OR = 1.218, 95% CI [1.119, 1.327]). The above results remained after controlling for demographic variables (i.e., age, gender, education) as well as clinical symptoms of depression and anxiety.

### DISCUSSION

The results of this study suggest that the suicide crisis syndrome measured by the SCI-2 are all good indicators for severe suicide ideation and suicide attempt within the last one year. Cognitive and affective disturbances of the suicide crisis syndrome need to be assessed and intervened in reducing suicide risk.

# POSTER SESSION 04

Abstract No.: 0721

## Mediating Effects of Psychological Flexibility between Job Stressors and Mental Health among Human Service Workers in Japan: A Longitudinal Mediation Model

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### INTRODUCTION

Burnout is a prolonged response to chronic emotional and interpersonal stressors on the job (Maslach et al., 2001). Numerous studies have investigated burnout as a mental health issue for those working in the human services such as health care, education, and social work. Kroska et al. (2017) investigated burnout from the viewpoint of the psychological flexibility model, which is a key concept of acceptance and commitment therapy (ACT). They found that greater avoidance and lower engagement in values-based behavior were associated with greater burnout. Recently, burnout research seems to have shifted to its opposite, work engagement. Instead of looking exclusively to the negative pole, researchers extended their interest to the positive pole of worker's well-being (Schaufeli et al., 2002). Thus, both burnout and work engagement are important concepts when considering the mental health problem of human service workers. However, relatively few studies investigate the relationship among job stress, burnout, and work engagement from the viewpoint of the psychological flexibility model. We investigated the validity of our model with psychological flexibility as a mediating variable.

### METHOD

A total of 300 service workers participated this study (182 female, Mean age = 44.25 ± 11.05). The predictors (job stressors such as workload, job controllability, and interpersonal stressor: Brief Job Stress Questionnaire) were assessed at Time1. The mediators (psychological flexibility such as experiential avoidance and value: Acceptance and Action Questionnaire-II, Value of Younger AGE scale) and outcome variables (mental health such as burnout and work engagement: Japanese Burnout Scale, Utrecht Work Engagement Scale) were assessed at Time2, one month after Time1.

### RESULTS

Maximum likelihood estimation revealed the model appeared to fit the data adequately,  $\chi^2(5) = 4.26$ ,  $p = 0.51$ ,  $GFI = 0.99$ ,  $AGFI = 0.98$ ,  $RMSEA = 0.00$  (90% confidence interval: 0.00, 0.07). The effect of job controllability and interpersonal stressor on burnout, and all stressors on work engagement were direct. The effect of workload and interpersonal stressor on burnout were indirect via experiential avoidance. The effect of job controllability on burnout and work engagement were indirect via value.

### DISCUSSION

These results indicate that psychological flexibility mediated the relationship between job stressors and mental health among human service workers in Japan. Our findings provide implications for future research which focus on the ACT program for preventing burnout and promoting work engagement among service workers.

# POSTER SESSION 04

Abstract No.: 0722

## Comparison of Effectiveness Evaluation of Cognitive Behavioral Therapy Process between 20 Refractory Schizophrenics with Persistent Auditory Hallucinations and 10 Psychotherapists

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### BACKGROUND

The auditory hallucinations of a quarter patients with schizophrenia still cannot completely disappear after receiving antipsychotic drugs. Antipsychotic drugs combined with cognitive behavioral therapy (CBT) is considered to be a possible and effective method for schizophrenia and auditory hallucination. Based on the poor accessibility of psychotherapy for schizophrenia, such patients will hardly receive CBT. At the same time, few psychotherapists have continuously devoted their work energy to schizophrenia patients with persistent auditory hallucinations, and they also lack themselves' experience in judging whether psychological treatment is effective for such patients. To promote psychotherapy, especially CBT, to schizophrenia with persistent auditory hallucinations, it is necessary to understand the evaluation of both sides on the effectiveness of the treatment process. The objective of this study is to present the similarities and differences between patients and CBT therapists in evaluating the effectiveness of CBT. 10 CBT psychotherapists respectively provide 10 sessions of psychotherapy to 2 schizophrenia patients with persistent auditory hallucinations. At baseline the patients selected the specific themes which they want to be helped by therapist, and at the end of treatment they gave feedback on the contents that they received during the psychotherapy. The therapists evaluated the items of helps that the patients received and the changes that occurred during the CBT. Meanwhile, the patients and therapists evaluated the trust relationship between them respectively. The average age of the patients is  $27.3\pm 6.3$  years. The duration of auditory hallucination is  $5.0\pm 0.8$  years and the diagnosis time of schizophrenia is  $4.5\pm 1.4$  years. In the list of 20 specific themes, the top three ones that patients most want to be helped in psychotherapy include that 80% of patients expect to practice effective methods to deal with auditory hallucination, 70% expect therapists to help them understand things in the world of auditory hallucination, 65% expect to get the courage to face problems directly. At the end of the treatment, the expected goals that fall behind include: only 45% of patients who have been helped to practice some methods to deal with auditory hallucinations, only 35% of patients who have been helped to understand things in the world of auditory hallucinations. Those higher than the expected goals include: 80% expressed their inner troubles, 70% their inner pain were understood, 60% gained some sense of security, 60% tried to develop their personal interests, 55% tried to take physical exercise. Psychotherapists believe that they have helped 80% of patients learn some methods to cope with auditory hallucinations, helped 70% to try positive activities in their lives, helped 65% to practice their personal interests, 65% to improved their family relationships, et al. Psychotherapists believe that they helped 80% of patients to understand the realistic basis of their interpersonal interaction mode in their hallucinations and 85% of patients feel the understanding for the hardships of their continuous efforts in frustration with their illness from therapy processes. Only 15% reported the disappearance of auditory hallucinations had lasted for 2 weeks at the end of treatment. Of the patients' satisfaction with the psychotherapist, 75% were very satisfied., 60% were willing to continue to pay for psychological treatment. Meanwhile, Psychotherapists believe that they have established a good trust relationship with 95% of patients, and with 60% of patients' families.

The results of the effectiveness of CBT process evaluated by patients and therapists are basically the same, that is, CBT can benefit schizophrenics patients with persistent auditory hallucinations in many aspects of daily life. However, it should be noted that the therapists have a tendency to magnify the trust of patients in them, as well as the effects of psychotherapy, especially the methods to deal with auditory hallucinations, while the patients have a tendency to inappropriately select the psychotherapy themes and avoid psychotherapy.



# POSTER SESSION 04

Abstract No.: 0723

## **Social Reactions to Dating Violence Disclosure and Depression: The Mediating Effects of Post-Traumatic Cognitions and the Difference in Types of Violence**

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### INTRODUCTION

Dating violence (DV) has been highly prevalent and had a serious impact on victims' psychological health such as depression and PTSD in Korea. DV is a term that includes abusive, controlling, and aggressive behavior occurring in a previous or current dating relationship and takes the form of physical, sexual, and psychological violence. However, existing research on DV has mostly focused on factors related to perpetrators and has little focus on factors related to negative consequences that victims would experience. Social reactions to disclosure of dating violence are known as an important factor that affects victims' recovery and adjustment. Negative social reactions to assault disclosure such as victim-blaming, controlling, and treating differently, have been associated with depression across studies. Such negative reactions can negatively influence the victim's interpretation of the traumatic experience and, in turn, would increase depression. Therefore, it is important to examine the role of posttraumatic cognition on the relationship between social reactions to dating violence disclosure and depression. The impact of the different types of dating violence also needs to be examined to identify how these effects can vary by the type of DV.

### METHOD

The purpose of the study is to (a) analyze the effect of social reactions to DV disclosure and posttraumatic cognition on victims' depression and (b) investigate the difference of such effects by the types of violence. For this, about 200 participants who were exposed to dating violence will complete a research packet including Dating violence experience, Social reactions to DV disclosure, posttraumatic cognition, and depression. Dating violence will be categorized into three domains: physical, psychological, and sexual violence. Social reactions will be measured by 2 types of positive reactions - emotional support (e.g., told you it was not your fault) and tangible aid (e.g., helped you get medical care), and 3 types of negative reactions - treat differently (e.g., pulled away from you), take control (e.g., tried to take control of what you did), distraction (e.g., told you to stop talking about it). Posttraumatic cognitions consist of 3 factors: negative cognitions about self, negative cognitions about the world, and self-blame. Data will be analyzed using descriptive statistics, Pearson correlation coefficient, and structural equation modeling. The multi-group analysis will be conducted to examine the difference in the effects by the type of violence. We hypothesize that negative reactions to dating violence will increase depression by increasing negative posttraumatic cognition. In addition, it is hypothesized that positive reactions will decrease depression by reducing negative posttraumatic cognition. Also, the effect of each path is expected to vary by the type of dating violence.

### DISCUSSION

The finding of this study would provide an opportunity to better understand dating violence and the role of social reactions after disclosing the violence experience. Furthermore, the results would suggest the need for posttraumatic cognitive-focused intervention to help the psychological aftereffects of dating violence. Finally, the study will provide basic knowledge on how the type of violence plays differently on the effect of posttraumatic cognition in the relationship between DV disclosure and depression.

# POSTER SESSION 04

Abstract No.: 0726

## **A Pilot Investigation of a Universal Prevention Program for Depressive Symptoms in Chinese Adolescents: A Cluster Randomized Controlled Trial**

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Depressive symptoms are prevalent among Chinese adolescents and pose a significant risk to their academic and social functioning. However, there is a lack of effective prevention programs to reduce depressive symptoms in this population. A pilot cluster randomized controlled trial was implemented in a sample of senior secondary school adolescents. Participants in the intervention group (N = 148) received a six-week universal prevention course, whereas the control group (N = 131) received a routine course focusing on career development. Depression, anxiety and stress symptoms were measured at pretest, posttest, and 6-month follow-up. The Linear Mixed Models showed that the group  $\times$  time interaction was significant for depressive symptoms measured by DASS-21 ( $F(2, 550) = 5.72, p = .003$ ) and marginally significant for that measured by SMFQ ( $F(2, 549) = 2.41, p = .09$ ). This finding was also supported by the calculation of effect sizes. For DASS-21 and SMFQ, the Cohen's  $d$  at posttest was 0.37; 95% CI 0.61, 0.14 and 0.28 (95% CI 0.51, 0.04), respectively. In a 6-month follow-up, the effect of the intervention diminished for depressive symptoms assessed by SMFQ ( $d = 0.21, 95\% \text{ CI } 0.44, 0.03$ ) and DASS-21 ( $d = 0.16, 95\% \text{ CI } 0.40, 0.08$ ). Likewise, the level of anxiety and stress were significantly reduced after the program, but not maintained in the follow-up. This pilot study showed that a universal prevention program is promising in reducing adolescent depressive symptoms. A full randomized controlled trial is needed in the future.

# POSTER SESSION 04

Abstract No.: 0736

## Optimal Cut-Off Score of the Acute Suicidal Affective Disturbance Inventory for Suicide Risk Assessment

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### INTRODUCTION

The Acute Suicidal Affective Disturbance Inventory (ASADI; Tucker et al., 2016) is a self-report measure of assessing acute suicidal crisis symptoms, including a drastic increase in suicidal intention, social/self-alienation, hopelessness, and overarousal. The ASADI was developed to establish validated and clinically useful diagnostic criteria for 'Suicidal Behavior Disorder (SBD)' in the Diagnostic and Statistical Manual of Mental Disorder 5th Edition (DSM-5; American Psychological Association, 2013). The current criteria for SBD in the DSM-5, the presence of suicide attempts within the last two years, have been criticized for its low predictive validity and limited ability to detect suicide acuity (Ribeiro et al., 2016; Rogers et al., 2019a). Previous studies have shown that the ASADI is a valid measure of acute suicide crises and was associated with number of lifetime suicide attempts (Rogers et al., 2019b). However, no cut-off score of the ASADI has been suggested, limiting its clinical utility (Stanley et al., 2016; Tucker et al., 2016; Rogers et al., 2017; Oh et al., 2022). The aim of the present study was to suggest optimal cut-off scores of the ASADI in identifying high-risk groups with severe suicidal ideation and suicide attempt.

### METHOD

A total of 1,675 community adults in Korea participated in the study and completed the Korean version of the ASADI (Oh et al., 2022; Tucker et al., 2016) and C-SSRS screening version (Posner et al., 2008). Among them, 682 who reported having experienced a drastic increase in suicide intention in their lifetime (i.e., those who responded 'yes' to the item 2a on the ASADI) were included in the analysis. Receiver-operating characteristic (ROC) curve analysis was used to provide the optimal cut-off value for the ASADI to identify high-risk groups of severe suicidal ideation (i.e., 4 or more on the C-SSRS) and suicide attempt, respectively.

### RESULTS

The area under the ROC curve (AUC) for the C-SSRS ideation scale (i.e., 4 or more) was 0.73 (95% CI [0.688, 0.765],  $p < .001$ ). The optimal cut-off value was 220.42 (out of 400 points), with sensitivity of 70.7%, specificity of 64.0%, and positive predictive value of 38.9%. Similarly, for suicide attempt, the AUC was 0.72 (95% CI [0.674, 0.762],  $p < .001$ ). The optimal cut-off value was 222.25, with sensitivity of 70.7%, specificity of 64.8%, and positive predictive value of 39.5%.

### DISCUSSION

These results demonstrate that the cut-off score of 220.42 or higher on the ASADI indicates high-risk at suicide that requires clinical attention.

## The Effects of Rumination and Perceived Fairness on Aggressive Behavior

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### INTRODUCTION

Recent crimes have one thing in common: after experiencing an antecedent event, an aggressive behavior that is more intense than the reaction it provoked appears. Ruminating on negative antecedents and the thoughts and feelings experienced at the time can increase anger and lead to excessive aggressive behavior. In the Integrative Cognitive Model (ICM; Wilkowski & Robinson, 2010), which described rumination and aggression, rumination was described as a major cognitive process of aggression behavior that appears as a result of instantaneous emotional regulation failure. However, the inconsistent results of previous studies on the effect of rumination on aggression suggest the possibility of intervention of regulatory variables. Fairness is an important issue around the world and is considered an important issue in Korean society as well. Previous studies examining the relationship between perceived fairness and aggressive behavior confirmed that aggressive behavior appeared more when perceived fairness was low. Therefore, in order to explain the phenomenon that appears in modern society, we tried to verify through experiments how the interaction of rumination and perceived fairness affects aggressive behavior, and we tried to expand the ICM.

### METHODS

It was completely randomized design of 2(rumination: high/low) × 2(perceived fairness: high/low) and undergraduate student of 85 were participated. All participants receive a negative evaluation of their writing by the collaborating researcher after writing the first task, the 'essay', thereby missing the opportunity to receive additional rewards. In the second task, 'Writing an answer to the question', 5 questions that were relevant or unrelated to the evaluation and result of the essay were presented to manipulate rumination. Then, in order to manipulate perceived fairness, reasons for the evaluation of essays that met or did not meet the evaluation criteria were presented. Before proceeding with the last task, the 'CRT Game', the attack behavior was measured by informing the opponent of the game that he was a collaborative researcher and selecting the intensity and duration of the noise to be heard as a penalty when the opponent lost the game. After all the tasks were completed, a questionnaire was filled out to measure the operation check, and the study was terminated.

### RESULTS

The two-way interaction effect of rumination and perceived fairness on noise intensity and noise duration, which are aggressive behaviors, was significant, and the hypothesis was verified. As a result of the simple main effect analysis, in the case of the perceived fairness low group, the rumination high condition had a larger noise intensity and a longer noise duration than the low condition, but in the case of the perceived fairness high group, the rumination high condition between the and low condition was no significant difference in noise intensity and noise duration.

### DISCUSSION

From a clinical perspective, the results of this study can be used as a therapeutic intervention method. When rumination is used repeatedly as a cognitive emotion regulation strategy, rumination becomes chronic and difficult to handle in a therapeutic setting. After experiencing a negative situation, an individual who frequently uses rumination as a way to deal with the evoked emotion can control aggression caused by rumination through the process of highly perceiving the fairness of the situation. At this time, the process of increasing perceived fairness can be done through psychotherapy, and mindfulness and MBCT can be considered as such intervention measures.

# POSTER SESSION 04

Abstract No.: 0752

## Exploration of a Process Model in Which Perfectionism Leads to Maladaptation and Suicide

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Previous research has shown that perfectionism is associated with maladaptation and suicide. Multidimensional perfectionism conceptualized by Hewitt & Flett (1991) is composed of self-oriented perfectionism (SOP), other-oriented perfectionism (OOP), and social prescriptive perfectionism (SPP); SOP and SPP have been found to be maladaptive. Hewitt et al. (2006) proposed the perfectionism social disconnection model (PSDM) that explains the process by which perfectionism leads to maladjustment and suicide. This model assumes that social disconnection (e.g. hopelessness) mediates the relationship between SPP and maladjustment or suicide. And more, when it comes to examining perfectionists' maladjustment and suicide, it has been argued that it is important to address perfectionistic self-presentation (Hewitt et al., 2003). Perfectionist self-presentation is divided into perfectionistic self promotion (PSP), nondisplay of imperfection (NDP), and nondisclosure of imperfection (NDC), and social disconnection mediates the relationship between NDP and NDC and suicide (Roxborough et al., 2012). The objectives of this study were (1) to examine the PSDM in Japan, (2) to explore new models with the addition of perfectionist self-presentation, and (3) to examine differences by sub-dimension of perfectionism.

A questionnaire survey was administered to 129 undergraduate and graduate students. Interpersonal hopelessness was used as an index of social disconnection, depression as that of maladjustment, and suicidal ideation as that of suicide. The scales were (1) Multidimensional Perfectionism Scale Japanese ver. (Otani & Sakurai, 1995), (2) Perfectionism Self Presentation Scale Japanese ver. (Kataoka & Fukui, 2021), (3) the interpersonal domain items of Expanded Hopelessness Scale (Takahira, 1998), (4) Beck Depression Inventory Japanese ver. (Hayashi, 1988), and (5) Short form of the Suicidal Ideation Scale (Sueki, 2019). The bootstrap method (Bootstrap = 5000, CI = 95%) was used to test for indirect effects.

First, the results of the mediation analysis indicated that interpersonal hopelessness mediates the relationship between SPP and depression (indirect effect = .16, 95% CI .01, .32) or suicide ideation (indirect effect = .12, 95% CI .00, .24). Next, the serial mediation model and moderated mediation model were examined and compared, and the former was adopted. The results of the serial mediation analysis showed that all the effects from SPP to the sub-dimension of perfectionistic self-presentation were significant, but only NDP and NDC had significant effects on interpersonal hopelessness. Then, NDP and NDC mediated the relationship between SPP and depression (NDP; indirect effect = .06, 95% CI .00, .15 / NDC; indirect effect = .08, 95% CI .00, .18) or suicidal ideation (NDP; indirect effect = .05, 95% CI .00, .12 / NDC; indirect effect = .05, 95% CI .00, .13) with interpersonal hopelessness. SOP had significant effects on PSP and NDP, however, only NDP and Interpersonal hopelessness mediated the relationship between SOP and depression (indirect effect = .05, 95% CI .00, .12) or suicidal ideation (indirect effect = .04, 95% CI .00, .10). On the other hand, OOP had a significant effect only on PSP, and the relationship between OOP and depression or suicidal ideation was not mediated by any sub-dimensions of perfectionistic self-presentation and interpersonal hopelessness.

These findings suggest that PSDM may be established in Japan; SPP goes through social disconnection, leading to maladjustment and suicide. It was also indicated that whether one goes through interpersonal despair to depression or suicidal ideation depends on the sub-dimension of perfectionism, which may be influenced by perfectionistic self-presentation. Therefore, The way in which perfectionists present themselves may lead to social disconnection, which in turn may resulting maladjustment and suicide.

# POSTER SESSION 04

Abstract No.: 0756

## Lonely or Feeling Alone? Understanding Kesepian from Indonesian BPD Patients

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### INTRODUCTION

Loneliness is a common experience. Loneliness is often measured with the revised UCLA Loneliness Scale (ULS-20; Russell et al., 1978), and is most commonly defined as perceived social isolation, or an unpleasant feeling that one's social needs are not being met by the quantity or quality of their social relationships (Hawley & Cacioppo, 2010). However, loneliness may not be expressed similarly in all cultures and languages (Heu et al., 2021). In Indonesia, loneliness is called "ke-sepi-an" from the word "Sepi", which means quietness and non-crowded, and focuses on the objective state of being without sound or people rather than on one's inner state (Hudiyana et al., 2022). They found that characteristics of loneliness such as being outgoing and not being withdrawn that are measured in ULS-20 to be not relevant in Indonesia's general population. They conceptualize a universal measure of loneliness with six items from the ULS-20 based on community samples from Germany, Indonesia, and the US. However, it is not known whether their formulation regarding loneliness that applies in Indonesian context also applies to the clinical population, particularly Borderline Personality Disorder (BPD) patients who experience chronic loneliness and emptiness. The aim of the present study was to examine the phenomenology of loneliness (kesepian) through the lens of Indonesian BPD outpatients.

### METHOD

A phenomenological study was conducted in an outpatient psychological clinic in Jakarta, Indonesia. Unstructured interviews were conducted on three females who were diagnosed and currently receiving dialectical behavioral therapy treatment for BPD (Borderline Symptom List-23, Patient 1 Mean score = 1.47, Patient 2 Mean score = 2.43, Patient 3 Mean score = 2.56). All participants provided consent for participating in the research.

### FINDINGS

There were three meaningful themes of loneliness experience (kesepian) of Indonesian BPD patients. The first theme was beliefs of social disconnection. All patients were in a stable relationship (two married, one dating), but they felt disconnected in the relationship. They complained that their support system lacks in quantity and quality. To feel connected, they expressed the need to feel safe and certain about their connection. One of the patients feels like others interact just because they are obligated to hang out as a friend or partner, not because their friends or partners are connected to them. The second theme was that patients feel that a lack of crowd or noise (sepi) was indicative of impending crisis as it reminds them of being abandoned, rejected, or excluded. This led patients to "protect" themselves from lack of noise (loneliness) by distractions, such as listening to loud music or going to crowded places. Interestingly, the distraction could also escalate their feeling of loneliness. One patient expressed that going out can help ease the discomfort just for a short time, but then the loneliness intensified several hours after and a crisis may come. The third theme was that BPD patients experienced loneliness more when alone, and rarely experienced solitude. One of the patients stated that she could have a positive self-discovery when being alone and actually have peace, but eventually loneliness made its way back and may lead to a crisis. This might be due to their all-or-nothing thinking about aloneness, being alone means they were unwanted and people intentionally excluded them.

### DISCUSSION

We found that the thematic experience of loneliness in Indonesian BPD outpatients corresponds to both the general loneliness definition

## POSTER SESSION 04

of lacking social connection (Hawkley & Cacioppo, 2010) and the Indonesian language usage of the word as a state of "sepi" (quiet, not crowded). On the surface when they change situations from being alone to going out into a crowd, it reduces their loneliness, in line with "ramai" or the antonym (and antidote) of "sepi" in Indonesian. However, they will quickly feel lonely again in the crowd due to their negative thinking pattern as is the conceptualization of loneliness from Hawkley and Cacioppo (2010). The three themes are also consistent with the loneliness phenomenon as measured by the universal measure of loneliness by Hudiñana et al (2022), but it lacks measuring the feelings of chronic abandonment and the ingrained negative beliefs of social connection that are felt by people with BPD. Our findings support the conceptualization of BPD etiology by Fonagy and Bateman (2008), in which people with BPD grew apart from their normal development and thus are not connected to the society, which leads them into a state of chronic loneliness.

# POSTER SESSION 04

Abstract No.: 0757

## **Emotional Aspects of Severe Mental Disorders. Alexithymia and Affective Regulation in Schizophrenia: Therapeutic Opportunities and Challenges**

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Schizophrenia is a serious mental illness that affects the whole life of a person and includes different symptoms that are cognitive and affective. It is a severe long-term disorder that can lead to serious deterioration of quality of life. Schizophrenia is associated with considerable disability and may affect all areas of life including personal, family and social life. The main aim of the study is to analyze the emotional aspects of mental health in patients with schizophrenic disorder. Although the role of cognitive processes in psychosis has long been appreciated, the impact of affect regulation and subjective emotional experience has only recently been more broadly acknowledged. Research on schizophrenia and emotions has revealed that schizophrenic patients lack the ability to recognize and express emotion, as well as an understanding of emotions in social context. Patients can't maintain their emotional experiences and have flat affect, which means they don't express emotions. They have high levels of alexithymia and dysfunctions in social cognition. The current study will focus on the relationship between levels of alexithymia, emotional and cognitive coping strategies, quality of life and attitudes towards psychological help. We examine the levels of depression, anxiety and stress and their relationship with flat affect and difficulties identifying inner subjective emotional experience. The scales that are used are Toronto Alexithymia Scale (TAS-20); Depression, Anxiety and Stress scale (DAS), Emotion regulation questionnaire (ERQ). Questions about attitudes toward health specialists were constructed. 25 patients with schizophrenia and 120 healthy controls were examined.

Results indicated that patients with schizophrenia had higher levels of alexithymia and were using strategies as expressive suppression, which were linked with greater levels of stress. Quality of life and life satisfaction were lower in schizophrenic patients. The results will be used for improving therapeutic psychological approaches when working with patients, recommendations for psychological work have been given.



# POSTER SESSION 04

Abstract No.: 0765

## Does Pre-Operational Thinking Predict Borderline Personality Features?

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### INTRODUCTION

Borderline personality disorder or emotionally unstable personality disorder is a personality disorder characterized by easy and high levels of emotional response, anger, problems in interpersonal relationships, self-harm, feelings of emptiness, and impulsive behavior. While the incidence of borderline personality disorder is around 6% (1), the incidence of such features is around 25% (2). It is accepted that genetic and psychosocial factors play a role in the formation of borderline personality traits.

CBASP, which was developed for chronic depression, suggests that Piagetian preoperative thinking style plays a role in the formation of chronic depression. Patients with borderline personality disorder also show cognitive characteristics such as global general thinking, overgeneralization, black and white thinking, similar to individuals with pre-operational thinking. Therefore, we hypothesized that some personality traits of borderline patients might be related to the level of cognitive development and especially preoperational thinking defined by Piaget.

So, in this study, we aimed to test whether there is a relationship between personality disorder related beliefs especially beliefs of borderline personality disorder patients and pre-operative thinking style.

### METHOD

36 (24 female, 12 male) college students between the ages of 18-24 (mean age 20.47) and who had BDI scores higher than 25 (mean scores  $32.9 \pm 5.69$ ), recruited for the study. Psychiatric symptoms and personality belief were assessed with Beck Depression Inventory (BDI), Brief Symptom Inventory (BSI) and short form of Personality Belief Questionnaire (PBQ-SF) respectively. Cognitive developmental level of the subjects was assessed with the Luebeck Questionnaire for Recording Preoperational Thinking. Spearman correlation and logistic regression analyses were used for assessing predictor variables.

### RESULTS

Using Spearman's correlation coefficient, we didn't find any significant associations between the borderline personality beliefs and the BSI anxiety subscale ( $r = -.073$ ,  $p = .674$ ); BSI depression subscale ( $r = .06$ ,  $p = .72$ ), BSI negative self-image subscale ( $r = .072$ ,  $p = .68$ ), gender ( $r = -.046$ ,  $p = .79$ ) and age ( $r = -.053$ ,  $p = .758$ ). The only significant correlations was found between borderline personality beliefs and total Luebeck score ( $r = -.334$ ,  $p = .047$ ). On the other hand borderline personality beliefs showed significant relationship with the preoperational thought style in logistic regression analysis which is measured by Luebeck Questionnaire for Recording Preoperational Thinking ( $p = .027$ ).

### DISCUSSION

Our results suggested that there is a significant relationship between pre-operational thinking style and borderline personality beliefs which is identified with the PBQ. On the basis of that It could be proposed that as individuals' pre-operational thinking styles increase, they are more prone to display borderline personality related beliefs. These findings supported that pre-operational thinking could play a role not only in depression but also in personality disorders. But in order to show this relationship we need further study in clinical groups.

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# POSTER SESSION 04

Abstract No.: 0789

## Development and Efficacy of an Individual Cognitive Behavior Therapy Program for Adults with Attention-Deficit/Hyperactivity Disorder

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### INTRODUCTION

Clinical practice guidelines worldwide recommend cognitive behavioral therapy (CBT) as an effective psychosocial treatment for attention-deficit/hyperactivity disorder (ADHD) in adulthood. However, whether such interventions designed overseas are equally acceptable in the Japanese population, regarding values and perspectives of care and practices concerning leads to dropouts still needs to be discovered. This study aimed to develop an individualized CBT program tailored to the needs of Japanese adult patients with ADHD and examine its efficacy.

### METHOD

A literature review was first carried out to summarize the current evidence and availability of adult ADHD-CBT programs. Semi-structured interviews were then conducted on ten adult Japanese patients with ADHD to develop a questionnaire to confirm the needs and applicability and explore possible intervention forms. Subsequently, an online questionnaire was delivered to a patient group. Based on the results, the CBT workbook was assembled through an expert consensus development meeting. The efficacy of the developed ADHD-CBT program was examined by a multicenter feasibility trial of 12 adult patients with ADHD. The primary outcome was changes in Conners' Adult ADHD Rating Scales (CAARS) scores over time, measured every session throughout the intervention. The Japan Agency for Medical Research and Development funded this study (JP21dk0307100).

### RESULTS

A total of six papers were extracted from the literature review, none of which contained studies of the Japanese nor Asian population, with little consistency regarding specific target mechanisms for intervention, number of sessions, and delivery format. There were also no standardized treatment protocols and guidelines in Japan. The online survey obtained 51 valid responses. The mean age of participants was 39.8 years; 62.7% were female, and 64.7% were on medication for ADHD, with a mean duration of ADHD treatment of 5.5 years. Responses revealed issues and perspectives of care in time management (n=42, 82.4%), organization (n=39, 76.5%), procrastination (n=45, 88.2%), not being able to take care of family (n=32, 69.6%) and regarding that as self-responsibility (n=38, 77.6%) leading to poor self-esteem (n=40, 81.6%). More than half of the respondents expected therapy that could freely discuss their concerns (n=30, 58.8%) and one that focused on emotional regulation (n=30, 58.8%) and self-acceptance (n=35, 68.6%). Most desired an individual session (n=40, 78.4%) over group therapy alone (n=4, 7.8%), highlighting the need for individualized therapy. The developed ADHD-CBT program includes four essential modules, sixteen elective modules, and a relapse prevention module to be selected and delivered within twelve to sixteen sessions, allowing the therapist to tailor which modules to be provided based on individual evaluation.

### DISCUSSION

The result of the online survey supported the need of developing an individual CBT program for Japanese patients with ADHD and their difficulties varied differently. Based on the findings, a tailored individual CBT program for ADHD in adulthood was developed. The efficacy of the developed ADHD-CBT program will be discussed, along with the significance and relevance of tailored program in addressing clinical difficulties handled by Japanese patients with ADHD. Changes in CAARS scores over time will be reported with data collected up to the day of the presentation.

# POSTER SESSION 04

Abstract No.: 0793

## Understanding Psychological Burden of Young Adult Carers in Japan: A Large-Scale Workers' Study

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### INTRODUCTION

In recent years, more children and youth are starting to get recognized as unpaid carers for their family member with a several conditions such as disability, mental health conditions, and illness. Some of those carers with excessive caring responsibilities are often impacted socially and psychologically. Compared to young carers (YCs) who are under 18-year-old, young adult carers (YACs) aged 18-year-old to 25-year-old are known to be not getting enough recognition by society (Chevrier, Lamore, Untas, & Dorard., 2022). England was one of the first countries to notice the importance of protecting and providing necessary care for children and adolescents, and Japan has just begun to recognize the presence of YCs. There have been a very limited number of large-scale studies carried out on YCs and especially YACs in Japan. Therefore, in our study, we aimed to understand the consequences of caring at a young age.

### METHODS

In our study, we recruited 2,379 participants ( $M = 37.26$ ,  $SD = 8.26$ , male = 921, female = 1,458) through an online outsourcing website to study the potential impacts of being a YAC. All participants were asked to answer questionnaires which included demographic information, "Kessler Psychological Distress Scale (K6)", "Rosenberg Self-esteem Scale (RSES)", and "Perceived Stress Scale (PSS)". The study protocol was approved by the ethics committee at the University of Tokyo (No. 22-366).

### RESULTS

83 participants older than 26-year-old were identified as ex-YACs who only experienced caring during the age of 18 to 25 and had no caring experience before the age of 18 (male = 23, female = 60). We then analyzed the data by sex, and t-test results of K6 demonstrated that ex-YACs were more likely to score higher in distress level than non-carers ( $N = 1,832$ ) who had never experienced caring role before (male  $t(22.65) = 2.13$ ,  $p = .044$  & female  $t(65.28) = 2.05$ ,  $p = .044$ ). For RSES, only male ex-YACs tended to have lower self-esteem than non-carers ( $t(22.93) = -2.10$ ,  $p = .05$ ). Conversely, in PSS, only female ex-YACs scored significantly higher in distress level ( $t(64.99) = 2.64$ ,  $p = .01$ ). Above findings also might explain our other finding that experiencing caring role between the age of 18 to 25 produced a higher tendency to develop mental health problems than the non-carer population (male  $t(22.80) = 2.05$ ,  $p = .052$ , female  $t(64.51) = 1.95$ ,  $p = .055$ ).

### DISCUSSION

The results of this study suggested that experiencing caring at a young age (18-year-old to 25-year-old) may seriously affects YACs psychologically for a long time that we need to realize the importance of protecting their mental health. Importantly, sex of YACs might differently affect how YACs are psychologically impacted whether it is their self-esteem or stress level. Social interventions such as welfare and scholarships are gradually arising; however, psychological interventions such as cognitive behavioral therapy and career counseling are much more needed than what we have proposed in past studies. Longitudinal study to track YACs and to investigate possible consequences of caring at a young age is necessary to understand their burden and may prevent them from developing more serious mental health problems.

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# POSTER SESSION 04

Abstract No.: 0796

## The Relationships between Multiple Facets of Self-Concept Clarity and Depression

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Previous studies have reported that inconsistent, unstable, and uncertain self-concept, or low self-concept clarity (SCC), is related to depression. However, the findings are limited to nonclinical samples and have relied on self-report questionnaires. This study investigated the relationship between depression and SCC by including both clinical and nonclinical samples and employing a behavioral task that measures reaction time, internal consistency, and the confidence ratings of self-descriptiveness decisions about positive and negative trait adjectives. In Study 1, the SCC scale was administered to 47 nonclinical participants and 52 depressed patients. The quadratic model best explained the relationship between SCC and depression, suggesting that the negative linear relationship between the two variables changed into a positive relationship once depression severity reached a certain level. In Study 2, 24 undergraduate students with depressive symptoms and 21 depressed patients completed the me/not-me task. For positive self-descriptive decisions, less self-consistency and shorter reaction time were associated with higher depression severity. For negative self-descriptive decisions, greater self-consistency and shorter reaction time predicted higher depression severity. Most results remained significant after controlling for the proportion of positive or negative attributes endorsed as self-descriptive. Overall, the results of both studies suggest that holding a certain and consistent self-view is associated with a more severe level of depression beyond that of the content of self-concept.

# POSTER SESSION 04

Abstract No.: 0801

## The Mediating Effect of Decentering on the Relationship between Response Style and Depression

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### INTRODUCTION

The response style theory (Nolen-Hoeksema, 1991) states that the response style, categorized as adaptive or maladaptive, is one factor influencing chronic depression (Treyner et al., 2003). However, the process by which response styles influence depression is unclear. Decentering is one of the factor effective in preventing chronic depression in mindfulness-based cognitive therapy and cognitive restructuring (Bieling et al., 2012; Farb et al., 2018). Previous studies have shown that decentering is increased by adaptive response styles (Kobayashi et al., 2020; Matsumoto, 2013). This study examined the relationship between response style and depression, with decentering as a possible mediator of the relationship between the response style and depression, a psychological factor preventing the persistence of depression.

### METHOD

The Center for Epidemiologic Studies Depression (CES-D; Shima et al., 1985), the Response Style Scale (RSS; Shimazu, 2010), and the Experiences Questionnaire (J-EQ; Kurihara et al., 2010) were administered to 340 healthy adults (168 men and 171 women, and 1 other with mean age of  $29.26 \pm 12.06$ ). Correlation analysis, mediation analysis using the bootstrap method were used to examine correlations between key variables and mediating effects of decentering. We conducted this study with the approval of the Waseda University Ethics Review Procedures concerning Research with Human Subjects (2020-381). The authors have no competing interests to disclose.

### RESULTS

Depression has negative correlations with reflection ( $r = -.19, p < .01$ ) and distraction for change the mood ( $r = -.19, p < .01$ ). Depression has positive correlations with brooding ( $r = .63, p < .01$ ) and distraction to avoid ( $r = .23, p < .01$ ). Mediation analysis with response style as the independent variable, depression as the dependent variable, and decentering as the mediating variable results indicated that decentering mediated the relationship between reflection and depression ( $\beta = -.52, 95\% \text{ CI} = -.69 \text{ to } -.36$ ), also brooding and depression ( $\beta = -.29, 95\% \text{ CI} = -.41 \text{ to } -.20$ ). Moreover, decentering partly mediated the relationship between distraction for change the mood and depression ( $\beta = .16, 95\% \text{ CI} = .09 \text{ to } .24$ ). No indirect effects were observed on the relationship between distraction to avoid and depression ( $\beta = .06, 95\% \text{ CI} = -.06 \text{ to } .19$ ).

### DISCUSSION

These results suggest that decentering played a mediating role between response style and depression. When people have psychological stressors, considering reflection or distraction for change their mood might increase decentering, which distances the self from negative emotions and thoughts and lead to an objective understanding of problems. As a consequence, ruminating negatively about problems might be reduced leading to decreased depression because attention is focused on negative information and thoughts. Further intervention strategies to reducing of depression should focus on increasing decentering.

# POSTER SESSION 04

Abstract No.: 0802

## Narrative Review of Scales Measuring Positive Emotions

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### INTRODUCTION

Traditionally, the primary goals of clinical psychology have been to treat mental illness and reduce negative affect. With the rise of positive psychology and the emphasis on preventive interventions, increasing positive affect has also become an important goal. In clinical psychology, well-being, happiness, and life satisfaction are often used as outcomes, and research is often conducted with the goal of increasing these outcomes. However, it is not possible to measure changes in these states over time. Furthermore, there are limitations in applying the findings of basic research on emotions. Therefore, the present study reviews scales that measure positive emotions and describes their limitations and prospects for use as outcomes in clinical psychology research. The results of the hand research showed that the scales can be categorized from three perspectives.

### BASIC EMOTION THEORY

According to the basic emotion theory (Ekman, 1994), basic emotions include anger, fear, surprise, sadness, disgust, contempt, and happiness. The Profile of Mood States (POMS; McNair et al., 1971) is a scale based on the basic emotion theory; it includes tension/anxiety, depression/dejection, anger/hostility, fatigue/inertia, and confusion/bewilderment. The POMS 2nd edition (POMS 2; Heucert and McNair, 2012) added the factor of friendliness, which consists of such items as friendly, considerate, and sympathetic.

### CIRCUMPLEX MODEL

The circumplex model proposed by Russell (1980) is composed of pleasure-displeasure and degree-of-arousal dimensions. The most commonly used scale based on the circumplex model is the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Positive affect consists of such items such as excited, active, enthusiastic, and proud. The Activation-Deactivation Adjective Checklist (Thayer, 1967) and UWIST Mood Adjective Checklist (Matthews et al., 1990) are other measures based on the circumplex model.

### TWO TYPES OF POSITIVE AFFECT

Compassion-Focused Therapy (CFT; Gilbert, 2009) classifies positive affect into two types based on the findings of neuropsychology (Depue & Morrone-Strupinsky, 2005). The first is the system associated with doing/achieving and anticipating rewards/successes, which are related to dopaminergic pathways. The second is the contentment system, which is related to oxytocin/opiate. The emphasis in CFT is that the latter type—not the former—increases positive affect, though both types can be measured with a positive affect scale (Gilbert et al., 2008). Active positive affect consists of such items as energetic, lively, and excited, while safe/warmth positive affect consists of such items as safe, secure, content, and warm.

### DISCUSSION

In the circumplex model, more pleasure is better for the pleasure-displeasure dimension. For the arousal dimension, too much arousal is associated with bipolar disorder and burnout. Therefore, clinical psychology may use the pleasant/non-arousal domain as an outcome. The PANAS, one of the most commonly used positive affect scales, can measure the pleasant/arousal domain. Thus, it may not be suitable for clinical psychology research. In clinical psychology research, it would be desirable to aim at increasing the friendliness of the POMS 2 and the safe/warmth positive affect of CFT.

# POSTER SESSION 04

Abstract No.: 0803

## Assessing the Impact of Executive Function Training on Instrumental Learning Deficits in Children with ADHD: A Randomized Controlled Trial

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### INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is marked by elevated levels of inattention, hyperactivity, and impulsiveness that are inconsistent with a child's developmental stage. As a result, children with ADHD often fail to conform to the expected social, cognitive, and emotional requirements of their environment, increasing their risk of adverse outcomes later in development. A critical skill for adaptive socio-emotional and cognitive functioning is the ability to learn to adapt one's actions to the frequently changing expectations or requirements of the environment, also called Conditional Discrimination Learning (CDL). Previous research showed that children with ADHD have difficulties with this type of instrumental learning or the ability to adjust their behavior to environmental demands and situational changes, especially when there is a delay between the situational cue and the required response (De Meyer et al., 2019; Hulsbosch et al., 2021). In addition, working memory is a core deficit of ADHD and can be expected to have a detrimental effect on this learning. Given that current evidence-based behavioral treatment for ADHD relies heavily on learning principles, remediation of such deficits is essential. In a previous study, remediation was successfully obtained by providing response-specific reinforcement in a CDL task (De Meyer et al., 2021). Although working memory training has limited impact on ADHD symptoms in well-conducted and blinded trials, to date it is unknown whether training of working memory can affect the ability to adapt to situational changes or CDL. This study intends to yield a better understanding of whether a deficit in CDL learning can be remediated by computerized game-based working memory training.

### METHODS

Children with ADHD (n = 50) completed a 5-week working memory training (Braingame Brian). Half of the ADHD sample received adaptive (i.e., tailored to the child's level of performance) working memory training in a game world, while the other half received working memory training that is non-adaptive (having little to no beneficial effect on working memory capacity, also considered a placebo control). In addition, participants completed an arbitrary Delayed Matching-To-Sample task assessing conditional discrimination learning under a delay (primary outcome). Also, they completed a working memory task (Corsi Block Tapping Task). Both tasks were administered at baseline, upon completion of the training, and 2 months after the training. The study is preregistered in the Netherlands Trial Register (NTR5444).

Results will be discussed during the poster presentation.

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# POSTER SESSION 04

Abstract No.: 0807

## **Tele-Guidance Self-Help Augmentation for Patients with Personality Disorder Using Vodcasts: A Feasibility Randomized Controlled Trial**

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This study aimed to examine the feasibility, acceptability, and potential impact of a guided self-help (GSH) intervention targeting emotion regulation for patients with personality disorder (PD). A total of 59 patients with PD were recruited and randomly assigned to either a GSH arm (n=30) or a treatment as usual (TAU) arm (n=29). GSH intervention included a series of vodcasts, workbooks, and weekly tele-guidance for 4 weeks in addition to TAU. Outcomes of personality related emotion dysregulation problems were measured at baseline, 4 weeks (end-of-intervention), and 8 weeks (follow-up). Though 22 patients in the GSH arm (73%) and 21 (72%) in the TAU arm completed assessments at the end of the intervention, among whom randomly assigned, all patients who once attended the first session continued to the end of sessions in both arms. There was an interaction effect between time and group on anxiety, where the GSH group showed significant reduction in anxiety at follow-up. There was a time effect on self-harm behaviors, where the GSH group showed reductions in self-harm behaviors at follow-up. Our study suggested that augmenting the GSH interventions using vodcasts focused on emotion regulation might provide an effective intervention for patients with PD.



# POSTER SESSION 04

Abstract No.: 0809

## Effects of Reappraisal as Coping with Shame on Depression and Anxiety

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Shame is a common emotion experienced in daily life. While shame is a necessary emotion for living adaptively in society, when it becomes excessive, it is associated with various maladjustments, including depression. Examining effective ways of coping with shame is important for the prevention of depression. This study focused on reappraisal as a way of coping with shame. Reappraisal is one of the adaptive emotion regulation strategies and is considered to have multiple sub-strategies. The purpose of this study was to investigate the effects of reappraisal sub-strategies on depression and anxiety in the experience of shame. Participants were 188 undergraduate and graduate students. They were asked to recall a recent event in which they felt shame and to complete a questionnaire measuring the intensity of shame, reappraisal sub-strategies, as well as depression and anxiety. The results showed that some types of reappraisal were negatively related to depression and anxiety, while others were positively related. The findings of this study suggest that sub-strategies such as avoiding overthinking about the event are more likely to reduce later depression and anxiety than sub-strategies such as requiring active thinking about the event. This study examined the short-term effects of reappraisal on negative emotions, therefore, future research should also examine the long-term effects of reappraisal in detail.

# POSTER SESSION 04

Abstract No.: 0810

## The Association between Attentional Biases and Emotional Resilience

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### INTRODUCTION

In a complex and unpredictable world, facing adversity is a normal part of the human experience. However, there are large individual differences in how people emotionally cope following exposure to adversity. The construct of emotional resilience, defined as the ability to demonstrate more positive emotional outcomes than expected based on the adversity experienced, sits at the core of these individual differences as some individuals demonstrate more positive emotional outcomes and display fewer disruptions to their emotional functioning relative to others facing similar adversity. It is vital to understand the cognitive mechanisms underlying higher levels of emotional resilience as it is associated with lower rates of emotional vulnerability. Theorists have proposed that emotionally resilient individuals implement more adaptive attentional bias processing when experiencing adversity. This study tested the hypothesis of whether emotionally resilient individuals have higher attentional bias alignment, in that they show greater attentional bias for threats that they can control, relative to threats they cannot control.

### METHODS

A measure of participants' emotional resilience was first obtained using the residual-based **METHOD**. All participants then completed a Dual-Probe Attentional Bias Alignment Assessment task. This task is based on the dual-probe task and includes a threat cue and a reward cue. Participants can avoid exposure to a danger predicted by the threat cue in some blocks but not others. Alignment is indexed as the difference in attentional bias between these block types.

### RESULTS

If the hypothesis is supported, more emotionally resilient individuals will demonstrate higher attentional bias alignment by attending more to the threat cues when avoiding the danger is possible, than when that is not possible.

### DISCUSSION

The ability to adaptively attend to threat only when control is possible may be a significant contributing factor to individual differences in emotional resilience. Findings of the current study serve to advance current theoretical understandings of attentional biases as a cognitive process underlying variation in emotional resilience.

# POSTER SESSION 04

Abstract No.: 0828

## Memory Bias About Self and Attentional Control in Schizophrenia with Persecutory Delusion

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### BACKGROUND AND PURPOSE

The defensive model of persecutory delusion hypothesized that persecutory delusion is a defensive reaction against implicit negative self-representation by exhibiting explicit positive self-representation. Attentional control ability associated with persecutory delusion in schizophrenia, and could be a modulator. The current study aims to investigate self-referential memory bias examining whether or not discrepancies between implicit and explicit self-representation exist in schizophrenia with persecutory delusion, and examined interaction effect of memory bias and attentional control.

### METHODS

The self-reference judgment and incidental learning task adopted in this experiment to measure memory bias about self. A 3 x 3 mixed design was used, with groups (30 schizophrenia with persecutory delusion vs. 30 schizophrenia without persecutory delusion vs. 30 healthy control) x emotionality of words (positive /depressive /threatening). Participants were also complete the Green et al. Paranoid Thought Scale (GPTS) and the Attentional Control Scale(ACS).

### RESULTS

Compare to the control group, the results showed that two schizophrenic groups had more negative explicit and implicit self-representation, special in condition with threatening words. We also found schizophrenia with persecutory delusion had lower attentional control abilities, but it had no modulate effect.

### CONCLUSIONS

The results of the current study implicate more negative self-representation in the mechanism of persecutory delusion. The effect of attentional control need more studies to examine. Theoretical and clinical implications of results are discussed.

# POSTER SESSION 04

Abstract No.: 0837

## Examining Impulsivity in Individuals with Borderline Personality Traits Following Social Exclusion

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### INTRODUCTION

Borderline personality disorder (BPD) is characterized by unstable patterns and marked impulsivity are prominent in interpersonal relationships, self-image, and affect. Impulsivity is a key feature that impacts long-term symptom severity and treatment prognosis in BPD patients. BPD patients' interpersonal difficulties are also related to impulsivity, particularly when they anticipate rejection and abandonment, which can lead to impulsive and dangerous behaviors. Consistent with Widiger and Trull's the dimensional models of personality disorders, recent studies have shown that nonclinical individuals with BPD traits experience similar difficulties as BPD patients. However, no experimental studies have examined their impulsivity according to subtypes in the context of social exclusion. Therefore, the present study aimed to investigate the pattern of impulsive behaviors and impulsive choices following social exclusion using the Cyberball paradigm for BPD traits and healthy control groups in Korean college students.

### METHOD

We recruited 360 college students and divided them into a BPD traits group ( $n=41$ ) (15 men and 26 women with mean age  $\pm$ SD of  $21.7 \pm 2.6$ ) and a control group ( $n=38$ ) (18 men and 20 women with mean age  $\pm$ SD of  $22.7 \pm 2.7$ ) based on their scores on Korean version of Personality Assessment Inventory-BPD. Participants in each group were randomly assigned to social exclusion conditions and inclusion conditions to carry out the Cyberball task. Impulsive behaviors and impulsive choices were then measured using a stop-signal task and a delay discounting task, respectively. Two-way ANCOVA was used to analyze the results.

### RESULTS

After controlling depression and anxiety scores, the BPD traits group showed higher overall impulsive behaviors ( $p < 0.05$ ) and impulsive choices ( $p < .01$ ) than the control group. Additionally, the BPD traits group showed significantly higher impulsive behaviors ( $p < 0.01$ ) and impulsive choices ( $p < 0.01$ ) following experiencing social exclusion situations.

### DISCUSSION

In conclusion, this study suggests that individuals with BPD traits have higher levels of impulsive behaviors and impulsive choices, particularly in response to social exclusion.

Results are consistent with prior research on nonclinical individuals with BPD traits. In those studies, individuals with BPD traits showed impulsive behaviors that were self-destructive, expressed inappropriate anger outbursts, and engaged in self-harming or suicidal behaviors in reaction to negative social interactions. These findings suggest that interventions targeting impulsivity may be useful in treating individuals with BPD traits, especially in the context of social exclusion.

# POSTER SESSION 04

Abstract No.: 0839

## Differences in Risk Factors among Adult Prison Inmates Who Committed Different Types of Crime

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### INTRODUCTION

Offenders who commit different crimes receive different treatment in the criminal justice system. Offenders are classified into theoretically important and practical categories. For example, Mulders et al. (2012) found four distinct subgroups of offenders based on risk factors: severe violent offenders, violent property offenders, property offenders, and sex offenders. Japanese prisons implement offender treatment programs based on the types of crime. However, the characteristics of offenders who commit certain types of crime are unclear. The purpose of this study is to identify differences in risk factors between offenders who committed violent, property, and drug crimes and inmates who did not commit such crimes.

### METHODS

We administered the Japanese version of the Criminal Thinking Inventory (JCTI; Kishi et al., 2014) to male prison inmates (N = 585, mean age  $\pm$  SD = 19.2  $\pm$  0.9). We also collected information on the inmates' crime types, the number of committed crime types, incarceration time, the presence of juvenile delinquency, childhood maltreatment experiences, and experiences of gang membership.

### RESULTS

Logistic regression analysis demonstrated that the increased number of committed crime types was associated with the risk of violent crimes (OR = 2.23, 95% CI: 1.75-2.84,  $p < 0.001$ ) and property crimes (OR = 3.70, 95% CI: 2.65-5.13,  $p < 0.001$ ). Childhood maltreatment (OR = 2.32, 95% CI: 1.36-3.95,  $p < 0.001$ ) and experience of gang membership (OR = 2.54, 95% CI: 1.53-4.23,  $p < 0.001$ ) also increased the risk of violent crimes. Moreover, the risk of drug crimes was associated with increased incarceration times (OR = 1.15, 95% CI: 1.02-1.30,  $p = 0.019$ ), experiences of gang membership (OR = 2.51, 95% CI: 1.74-3.61,  $p < 0.001$ ), and criminal thinking (OR = 1.34, 95% CI: 1.12-1.59,  $p = 0.001$ ).

### CONCLUSIONS

There are differences in risk factors between offenders who committed violent, property, and drug crimes and those who have not committed these crimes. These findings have implications for assessing and treating offenders who committed different crimes.

# POSTER SESSION 04

Abstract No.: 0841

## Development of the Mental Health Screening Tool for K-Entertainment Trainees: A Preliminary Study

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### INTRODUCTION

The number of trainees that aim to become performers in Korea has been steadily increasing every year. A large proportion of K-entertainment trainees are minors and only 62.6% of them make their debut and 31% give up pursuing their dream halfway. Because of the uncertainty in their status, excessive stress, and intense competition, trainees' mental health is constantly threatened. They tend to hide their depression or anxiety, worrying that they might lose an opportunity to debut and be expelled from their agencies (Park, 2021). Although an early mental health problem detection system is needed, there has been no research on the development and validation of mental health screening tests for trainees in Korea. If their psychological problems are not perceived at the optimal time in the referring process, there is a concern for those at high risk, who then cannot receive the services they require. Since celebrities and trainees spend more time in their entertainment agencies than at school, entertainment agencies need to develop customized mental health screening tests in order to provide early psychological intervention for them. Therefore, this study aims to develop and validate a reliable but simple mental health screening test, allowing a quick check and immediate monitoring of mental health conditions.

### METHOD

First, we selected domains for measurement based on the literature review. With an advisory committee composed of experts in psychological counseling for celebrities and trainees, researchers discussed the domains for measurement, the purpose of the screening tool, and the method of presenting results were discussed. Subsequently, we conducted a focus group interview with entertainment agency officials to receive detailed feedback on the implementation plan and usability of screening tests. Based on the feedback and opinions, we reorganized the domains for measurement: depression, anxiety, self-harm, suicide, trauma, difficulty in emotional regulation, and interpersonal difficulty. We then generated a preliminary pool of scale items. To construct the final pool of items for the preliminary scale ( $n=79$ ), one clinical psychology professor, one clinical psychologist, and several graduate students of clinical psychology revised, selected, and verified the items. Validity and reliability was further tested with 272 trainees and celebrities, recruited through an online community.

### RESULTS

This study showed excellent reliability of the main variables (Cronbach's  $\alpha = 0.826\sim 0.964$ ). The total scores of the subareas of the preliminary scale and the outcomes of the standardized Mental Health Screening tool for Depressive disorders (MHS:D), for Anxiety disorders (MHS:A), and for Suicide (MHS:S) showed a significantly positive correlation. Using an exploratory factor analysis (EFA) to determine the validity of the subscales, the suitability of factor analysis was determined (KMO, 0.965; Bartlett's  $\chi^2 = 16476.929$ ;  $df = 2415$ ;  $P < 0.05$ ). Eight factors in total were extracted and the explanatory power was high, with 62.987% of the cumulative variance accounted for. However, considering the factor loadings of the composed items, only factors 1, 2, and 3 were analyzed as a meaningful clusters. Factor 1 was named 'emotion regulation/interpersonal problems'. Factor 2 was named 'mood related symptoms,' and Factor 3 was named 'self-harm/suicide.'

### CONCLUSIONS

This study defined the domains of psychological maladjustment for K-entertainment trainees and produced a preliminary scale, intended

## POSTER SESSION 04

to measure those areas. The items developed in this study showed significant content validity, internal consistency, convergence validity, and factor construct validity. Future work should secure the suitability and group identity of samples to represent trainees by recruiting more participants. Selecting fewer items with high predictability based on the question response theory may improve the utility of the screening tool. Through the development of a preliminary screening scale for trainees, we expect that related people can respond to the trainees' unique mental health problems.

# POSTER SESSION 04

Abstract No.: 0850

## Experiential Avoidance, Suicidal Imagery, and Suicide Attempt: The Role of Spontaneous and Intrusive Suicidal Imagery

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### INTRODUCTION

One of common motives for suicide and suicidal behavior is to escape from aversive self-awareness and associated negative affect (Baumeister, 1990). Accordingly, people who have difficulty enduring distress and a tendency to avoid emotional pain or distress are more vulnerable to suicidal behavior (Hayes et al., 1996). One may use various strategies to escape from emotional distress during suicide crisis, one of which is to engage in suicidal imagery as an attempt to escape from self (Selby et al., 2007). Suicidal imagery occurs either spontaneous or intrusive ways and both increase the likelihood of suicide attempt (Ng et al., 2016). The goal of this study was to examine the role of experiential avoidance and suicidal imagery in suicide attempt. Specifically, it was hypothesized that people with high experiential avoidance would be more likely to attempt suicide, and this relationship would be mediated by suicidal imagery.

### METHOD

A total of 1,675 community adults were recruited through the Korean online community for this study. The average age of the participants was 31.2 years ( $SD = 7.8$ ). Most of the sample were women ( $n = 1357, 81\%$ ) and had a Bachelor's degree ( $n = 1303, 78.9\%$ ). All participants completed self-report measures of the Korean version of the Multidimensional Experiential Avoidance Questionnaire (K-MEAQ; Lee & You, 2017; MEAQ; Gámez et al., 2011), the Suicidal Imagery Questionnaire (SIQ; Ko & You, 2020), and responded to a question about suicide attempt history.

### RESULTS

Of the 1,674 participants, 180 (10.8%) reported a lifetime history of suicide attempt. First, logistic regression analysis revealed that the experiential avoidance was significantly associated with suicide attempt ( $OR = 1.03, 95\% CI [1.02, 1.04]$ ). Second, the hypothesized mediation model was tested. All analyses were conducted after controlling for demographic variables of age, gender, and education level. As expected, experiential avoidance was significantly associated with suicidal imagery ( $B = 0.04, p < .001$ ), and suicide imagery was significantly associated with suicide attempt ( $B = 0.1, p < .001$ ). After accounting for the mediating effects of suicidal imagery, the association between experiential avoidance and suicide attempt was no longer significant, indicating the full-mediation effect of suicidal imagery in the relationship. Third, the mediation effect of subfactors of suicidal imagery, spontaneous and intrusive, was examined. The results showed that only spontaneous suicidal imagery fully mediated the relationship between experiential avoidance and suicide attempt ( $B = 0.07, p < .001$ ) while intrusive suicidal imagery did not ( $B = -0.01, p = .56$ ).

### DISCUSSION

People with higher experiential avoidance are more likely to attempt suicide and this association was fully mediated by suicidal imagery, particularly spontaneous suicidal imagery. This study suggests that experiential avoidance and suicidal imagery needs to be considered in suicide risk assessment and as intervention targets in preventing suicide attempt.



# POSTER SESSION 04

Abstract No.: 0851

## The Relationship between Childhood Experiences of Maltreatment and Symptoms of Psychopathology: A Mediating Role of Hostile Interpretation Bias in Facial Emotion

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### INTRODUCTION

Individuals with a history of childhood maltreatment may have difficulty recognizing others' emotions, such as interpreting ambiguous facial expressions as angry (hostile interpretation bias in facial emotion). These biases are likely due to abnormal emotional experiences with their parents in abusive environments, which have affected neuropathological connections that undermine recognition, processing, expression, and understanding of emotions. In addition, biases in facial emotion recognition may affect their ability to respond appropriately when others express emotion, ultimately leading to multiple types of psychopathology. Despite the associations between childhood maltreatment, facial emotion recognition, and psychopathology, studies examining the role of facial emotion recognition bias as a mechanism linking childhood maltreatment and psychopathology have been limited. Therefore, this study aimed to examine the mediating role of hostile interpretation bias in facial emotion on the relationship between childhood maltreatment experiences and symptoms of psychopathology.

### METHOD

This study was conducted among undergraduate students and graduates between the ages of 19 and 25, and included 83 participants recruited from Busan, South Korea, between October 2020 and December 2022. Participants completed a morphed facial emotion recognition task and several self-report questionnaires (e.g., Childhood Maltreatment Experiences Scale; the Symptom Checklist-90-Revised, SCL-90-R). The facial emotion stimuli were created by mixing emotions (three emotion pairs: angry-happy, angry-sad, and happy-sad) in different ratios (seven levels: 20:80, 30:70, 40:60, 50:50, 60:40, 70:30, 80:20), using FaceGen Modeller v.3.5.3. In the task, participants were presented with these face stimuli and were asked to make two-alternative forced choice decisions (e.g., 'angry' or 'happy'). Using the response rate data, the psychometric function was used to estimate points of subjective equality (PSEs) of three emotion pairs, which are indices of participants' tendency to interpret facial emotions. Monte Carlo **METHODS** with PROCESS Macro were used to test multiple mediation models.

### RESULTS

Of the types of childhood maltreatment (i.e., physical, and emotional abuse, and neglect), only emotional abuse was significantly associated with the angry-happy PSE score ( $r=.30, p<.01$ ). As expected, the angry-happy PSE score was also positively associated with all of the symptoms of psychopathology ( $r=.28 \sim .41, p<.01$ ). All multiple mediation models were significant, except for obsessive-compulsive: childhood experiences of emotional maltreatment associated with a biased tendency to judge ambiguous facial expressions as angry (in the angry-happy pair), which in turn was positively associated with symptoms of psychopathology. However, none of the associations with other types of maltreatment or PSEs scores for other emotion pairs were significant.

### DISCUSSIONS

Hostile interpretation bias in facial emotion may be a transdiagnostic mechanism linking childhood maltreatment with multiple types of psychopathology.

## **The Influence of Evaluative Concerns Perfectionism on Procrastination of College Students: The Sequential Mediating Effects of Repetitive Negative Thought and Negative Affect**

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Many university students suffer from stress because of evaluation situations. Many university students suffer from stress related to evaluation situations and the rumination of stress causes avoidance of their surroundings. The aim of this research was to verify the sequential mediating effect of repetitive negative thought and negative affect (depression/anxiety) in the relationship between evaluative concerns perfectionism and general procrastination, academic procrastination among university students in Korea. For this purpose, 229 participants were surveyed on online forms. The measurement tools used for this study were Multi-dimensional Perfectionism Scale (FMPS, HMPS), General Procrastination (GP), Academic Initiation Procrastination Scale (AICPS), Korean Perseverative Thinking Questionnaire (K-PTQ), Center for Epidemiological Studies-Depression Scale (CES-D), Beck Anxiety Inventory (BAI). To analyze these data, SPSS 23.0 was used for descriptive statistics and correlation analysis. Bootstrapping was performed by using PROCESS Macro ver. 4.1. The results of this research are as follows. First, evaluative concerns perfectionism, general procrastination, academic procrastination, repetitive negative thought, and negative affect (depression/anxiety) had meaningful positive correlations. Concretely, evaluative concerns perfectionism have positive correlations with general procrastination ( $r = .18, p < .01$ ), academic procrastination ( $r = .27, p < .001$ ), repetitive negative thought ( $r = .68, p < .001$ ), negative affect ( $r = .58, p < .001$ ). General procrastination has positive correlations with academic procrastination ( $r = .83, p < .001$ ), repetitive negative thought ( $r = .34, p < .001$ ), negative affect ( $r = .35, p < .001$ ). Academic procrastination has positive correlations with repetitive negative thought ( $r = .42, p < .001$ ), and negative affect ( $r = .36, p < .001$ ). Repetitive negative thought have a positive correlation with negative affect ( $r = .62, p < .001$ ). Secondly, the full mediating effect of repetitive negative thought among evaluative concerns perfectionism and general procrastination, academic procrastination was significant. The full mediating effect of negative affect among evaluative concerns perfectionism and general procrastination, academic procrastination was significant. Lastly, the sequential full mediating effect of repetitive negative thought and negative affect (depression/anxiety) among evaluative concerns perfectionism and general procrastination, academic procrastination was significant. In conclusion, evaluative concerns perfectionism caused general procrastination and academic procrastination through repetitive negative thought and negative affect (depression/anxiety).

The discussions of this research are as follows. First, this research provided the basis for a relationship between evaluative concerns perfectionism and procrastination to use personality, cognitive, affective, and behavioral variables. Second, this research presented that general procrastination should have to be studied like academic procrastination. Third, evaluative concerns perfectionism can not be changed easily when it comes to personality. But, according to the result, to change the evaluative concerns perfectionism, it will be efficient to involve the cognitive and affective variables like repetitive negative thought and negative affect. Forth, we presented that the problem caused by evaluative concerns perfectionism was able to be understood through the repetitive negative thought in the transdiagnostic approach.

# POSTER SESSION 04

Abstract No.: 0853

## The Efficacy of a Structured CBT-Based Psychological Treatment among Korean Artists with Psychological Problems

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### INTRODUCTION

It is necessary to develop and disseminate evidence-based psychological treatment for artists with psychological problems. Thus, this study was conducted to examine the efficacy of a structured CBT-based psychological treatment, or so-called 'the ARTIST' for artists.

### METHOD

The ARTIST stands for awareness, restructuring & relief, trust, improvement, self-regulation and taking action. It was developed as a 12-session program. Artists took part in the ARTIST group (n=32) and were compared to the control group (n=49). The Korean version of Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Satisfaction With Life Scale (SWLS), Goal-focused Self-regulation Scale (GF-SRS) were administered from baseline to termination phase.

### RESULTS

The ARTIST group had lower ratio for dropout rate (21.9%) than the control group (36.7%). Paired T-tests showed that the ARTIST group had significant changes of PHQ-9, GAD-7, SWLS and GF-SRS. In addition, the ARTIST group had larger effect sizes in PHQ-9 (Cohen's  $d = .216$ ) and GAD-7 (Cohen's  $d = .241$ ) scores compared to the control group (all Cohen's  $d < .20$ ).

### CONCLUSIONS

The ARTIST could not only relieve emotional problems such as depression and anxiety, but also increase self-efficacy and subjective wellbeing. Also, the low dropout rate suggests that the ARTIST can increase compliance with psychological treatment for artists. To be considered an empirically supported therapy (Chamless & Hollon, 1998), further evaluation of the ARTIST is necessary through more robust experimental design.

### ACKNOWLEDGEMENT

This study was funded by the Korea Artists Welfare Foundation

# POSTER SESSION 04

Abstract No.: 0868

## **Beliefs About Emotion Matter in the Context of Depression and Emotion Regulation Strategies: A Meta-Analysis and Meta-Analytic Structural Equation Modeling**

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Beliefs about emotions have been theorized to play a role in emotional outcomes, such as depression, by influencing the emotion regulation process. Among the various emotion beliefs, two overarching beliefs have been proposed as fundamental to a person's general beliefs about emotions: 1) "beliefs about the goodness/badness of emotions", that is whether an emotion should be desired or valued, and 2) "beliefs about the controllability of emotions", that is whether an emotion is fixed or malleable (Ford & Gross, 2019). Although two previous meta-analytic studies have shown that ECB is related to psychological distress (Burnette et al., 2020) and emotion regulation strategies (Hong & Kangas, 2022), no study has yet systematically reviewed and summarized the relationships between beliefs about the goodness/badness of emotions and emotional outcomes, and the mediating role of emotion regulation strategies in the emotion beliefs-depression relationship. We conducted meta-analyses to systematically review this idea with a focus on beliefs about the value of positive affect (VPA) and emotion controllability beliefs (ECB) in relation to depression, the use of cognitive reappraisal, and expressive suppression. Further, using two-stage meta-analytic structural equation modeling (TSSEM), we examined whether the emotion regulation strategies mediate the relationship between ECB and depression.

Our systematic search identified 18 articles ( $n = 5,795$ ) for the VPA-depression, 17 articles ( $n = 7,632$ ) for the ECB-depression, 23 articles ( $n = 11,022$ ) for the ECB-cognitive reappraisal, and 15 articles ( $n = 7,526$ ) for the ECB-expressive suppression relationship analyses. We found that, across studies, the VPA-depression relationship varied significantly according to the degrees to which a person values the emotion(s). The negative relationship between VPA and depression was reversed when VPA was extreme. A general preference for positive affect had a small negative correlation with depression, while a medium positive correlation existed between extreme happiness valuation and depression. ECB had a significant cross-sectional and longitudinal relationship with lower depression as well as more frequent use of cognitive reappraisal and less frequent use of expressive suppression. The type of ECB (i.e., general/second person vs. self) moderated the cross-sectional relationship between ECB and depression, indicating that ECB about one's own emotions had a stronger relationship with depression than ECB about emotions in general. TSSEM results revealed that both reappraisal and expressive suppression partially mediated the relationship between ECB and depression.

These findings have several implications. First, the degree to which a person values PA and happiness is essential for understanding the relationship between VPA and depression. On one hand, extreme happiness valuation may represent a person's excessive emotion goal, which can lead to feeling disappointed over one's current states (citations) and accordingly worsens their overall mood. On the other, wanting to feel PA in moderation may help a person pursue PA without excessively worrying about not achieving an emotional goal. Further research is necessary to elucidate the specific mechanism underlying these relationships. Second, our results showed that ECB, particularly about one's own emotions, was significantly associated with depression via more frequent use of cognitive reappraisal and less frequent use of expressive suppression. These findings could explain why depressed individuals exhibit problematic patterns in their use of emotion regulation strategies. Limitations of our study include significant heterogeneity in effect sizes and including only studies on ECB in the TSSEM analysis. Despite the limitations, our results highlight the importance of emotion beliefs in understanding depression and the role of emotion regulation strategies as a significant mediator in the emotion beliefs and depression relationship.

# POSTER SESSION 04

Abstract No.: 0873

## Linguistic Features during Assessment Interviews between Insomnia Patients with Depression

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### INTRODUCTION

Sleep disorders often coexist with psychiatric disorders, especially in patients with depression, where 77%-90% have insomnia symptoms (Stewart et al., 2006). It has been suggested that treatment strategies should be based on depressive symptoms and other subtypes (Blanken et al., 2019) in cognitive behavior therapy for insomnia (CBT-I), and more accurate diagnosis and differentiation will contribute to clinical practice. Previous studies have identified linguistic features of depression (e.g., increased first-person pronouns) in empirical studies for the purpose of more objective diagnosis, and it is not clear whether these results can be applied to the comorbidity of sleep disorders. In this study, we will explore linguistic features during assessment interviews between insomnia patients with depression and those without depression, including the findings of previous studies.

### METHOD

Verbatim data from interviews for eligibility assessment in a clinical trial of remote cognitive behavior therapy for insomnia (JRCT: 1030210575) were used. 12 subjects met the following criteria: 1) meet the diagnosis of insomnia (meets DSM-5 criteria for insomnia disorder), 2) have mild or severe insomnia symptoms ( $\geq 8$  points on ISI). For the presence of depressive symptoms, a cutoff score of 9 was used on the Patient Health Questionnaire-9 (PHQ-9) measured after the interview. The proportion of first person pronouns in the total number of words was calculated by morphological analysis to split the verbatim data into words. These proportion was compared between those with and without comorbid depressive symptoms to see if the trend shown in previous studies is observed. In addition, a co-occurrence network was used to identified words that are characteristic of those with and without comorbid depressive symptoms among those with insomnia disorders.

### RESULTS AND CONCLUSION

Among all subjects, 6 were depressed (meanage = 49.5 female = 3) and 6 were nondepressed (meanage = 51.67 female = 2). No correlation was shown between the PHQ-9 and ISI of the subjects. ( $r = 0.02$ ). A t-test on the percentage of first person pronoun use in the two groups at the cutoff of the depression scale showed no significant difference between the two groups. ( $t(12) = -2.076$ ,  $p = .083$ ,  $d = -1.20$ ) The results suggest that at the treatment of therapy, it is difficult to recognize the co-occurrence of sleep disorders and depressive symptoms based on the findings of previous studies.

On the other hand, a co-occurrence network shows the characteristic words in the two groups, more sleep-related characteristics such as "sleep (verb & noun)" and "wake (verb & noun)" were found in the group with comorbid depression than in the group without depression. Sleep-waked-related words may be a marker for the co-occurrence of depressive symptoms even at the beginning of treatment.

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# POSTER SESSION 04

Abstract No.: 0877

## Relationships between Generalized Anxiety Disorder Symptoms and Executive Functions: The Mediating Role of Heart Rate Variability

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Generalized anxiety disorder (GAD) is a common illness which impairs the overall quality of life and health of patients, including increased risk of cardiovascular mortality (DeMartini et al., 2019). GAD is characterized by excessive and uncontrollable worry alongside somatic experiences, particularly muscle tension, fatigue, and restlessness (American Psychiatric Association, 2013). Another somatic symptom associated with GAD is low resting state heart rate variability (HRV). HRV is the variation in time intervals that occur between successive heartbeats. Higher HRV is associated with greater physiological and emotional adaptability. Low HRV, by comparison, is associated with reduced executive control of attention – particularly response and stimulus inhibition (Ottaviani et al., 2017) - which is also apparent in high levels of anxiety (Shi et al., 2019). There is evidence that lower HRV is not only observed in GAD samples, but that low resting state HRV can predict GAD symptoms a year later (Makovac et al., 2016). However, studies investigating the relationships between HRV, worry/anxiety/GAD, and cognitive functioning are limited in both quantity and sufficiently powered samples. We will report the results of mediated regression analyses assessing whether baseline HRV mediates the relationship between GAD symptoms (measured via the GAD-7; Spitzer et al., 2006) and worry (measured via the Penn State Worry Questionnaire; Meyer et al., 1990) on one hand, and executive function task performance on the other. The colour-word Stroop is a classic test of the ability to inhibit stimulus-driven responses. The emotional Stroop assesses the ability to inhibit distraction from emotionally salient negative stimuli, an ability that is impaired at high levels of anxiety (Bar-Haim et al., 2007). The Sustained Attention to Response Task (SART) measures the ability to inhibit prepotent behavioural responses and has previously been used to demonstrate inhibitory deficits in participants reporting high levels of trait anxiety (Forster et al., 2015). The results will clarify the extent to which HRV underpins the relationship between anxiety and moment-to-moment cognitive functioning.

# POSTER SESSION 04

Abstract No.: 0886

## The Attenuation of Spider Avoidance Action Tendencies in Spider-Fearful Individuals and Its Impact on Behavioural and Emotional Responding to Spiders

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### BACKGROUND

Studies using the Approach/Avoidance Task (AAT) paradigm have demonstrated that individuals with heightened levels of spider-fear, as compared to lower levels of spider-fear, are characterised by biased action tendencies, indicated by speeded completion of movements that increase apparent distance between spider-stimuli and themselves (push movements), compared to movements that decrease apparent distance between spider-stimuli and themselves (pull response). Research using training variants of the Approach/Avoidance Task has also demonstrated that this pattern of action tendencies can be attenuated amongst individuals with heightened spider-fear. However, the effect of this manipulation on behaviour and emotion in the presence of a spider has not been examined. The aim of the present study was to determine whether the attenuation of avoidance action tendencies to spider stimuli, as measured on the Approach/Avoidance Task paradigm, influences behavioural and emotional responding to a spider setting amongst spider-fearful individuals in more naturalistic settings.

### METHOD

A cohort of 941 undergraduate students from the University of Western Australia completed the Fear of Spiders Questionnaire earlier in the teaching semester, and invitations to participate in the study were disseminated to students who scored in the top third of Fear of Spiders Questionnaire scores (FSQ score  $\geq 59$ ). Individuals with scores in this range on the FSQ have been shown to exhibit elevated avoidance action tendencies to spider stimuli as compared to non-fearful individuals (Rinck & Becker, 2007). Eighty-eight participants who reported relatively high levels of spider-fear completed a procedure designed to either attenuate avoidance action tendencies for spider stimuli (Approach Spider Condition) or have no impact on action tendencies for spider stimuli (Control Condition). Action tendencies were assessed before and after the manipulation. Participants then completed an 'in vivo' assessment of behavioural and emotional responding to a spider, which measured the number of steps voluntarily taken toward a spider and self-reported level of anxiety at each step.

### RESULTS

Results demonstrated that the Approach/Avoidance Task paradigm manipulation procedure was successful in attenuating avoidance action tendencies to spider stimuli in the Approach Spider Condition as compared to the Control Condition as intended. Importantly, the use of novel stimulus images in the Post-Manipulation Assessment Phase of the task ensured that observed change in action tendencies reflected change in responding to spider and butterfly stimuli in general, rather than to those stimuli presented during the manipulation phase specifically. However, participants in each condition did not differ in behavioural or emotional measures recorded during the 'in vivo' assessment.

### CONCLUSION

These findings replicate research indicating avoidance action tendencies to spider stimuli can be manipulated amongst individuals with heightened spider-fear, though suggest that their manipulation may not influence 'real world' behavioural or emotional responding to spiders.

# POSTER SESSION 04

Abstract No.: 0897

## Examining the Psychometric Properties of a New Attentional Bias Assessment Task Based on the Dual-Probe Paradigm

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### BACKGROUND AND OBJECTIVE

Numerous studies have shown that individuals with elevated anxiety vulnerability show a preferential attentional allocation to negative stimuli as compared to individuals low in anxiety vulnerability. Most of these studies have employed the attentional probe tasks such as the dot-probe paradigm to assess individual differences in anxiety-linked attentional bias. However, a serious limitation of this literature is that conventional approaches to the attentional bias assessment such as the attentional probe tasks have consistently shown poor reliability. A new paradigm named the dual-probe paradigm has shown promising results in reliably assessing attentional allocation (Grafton, Teng, MacLeod, 2021). The current study explains the process of developing a new attentional bias assessment task based on the dual probe paradigm, will test the psychometric properties (i.e., reliability, and convergent validity) of the new task, and examines if it can sensitively detect anxiety-linked attentional biases to negative information.

### METHOD:

One hundred twenty students who vary in their anxious disposition from the University of Western Australia's student pool will complete the attentional assessment task, which consists of 24 video-pairs in each two talking heads presented positive and negative information about different topics. The required stimuli for the current task were generated using Artificial Intelligent methods to control for various aspects of the stimuli presentation and reduce the time and cost of developing the required task stimuli. Both probe-based and eye-movements recording indices will be measured in this study to examine the reliability of two versions of the task and provide the required information for the assessment of its convergent validity.

### RESULTS

The results of this project provide critical information about the new generation of attentional bias assessment tasks that rely on response accuracy instead of reaction time, employ video clips as the stimuli and capitalize on Artificial Intelligence methods for stimuli creation.

### CONCLUSION

The findings of this research have important theoretical and practical implications for a reliable and sensitive assessment of anxiety-linked attentional biases. The use of such video stimuli within future studies adopting this dual probe attentional assessment approach will enable researchers to rigorously test more precise hypotheses concerning the attentional basis of elevated anxiety vulnerability.



# POSTER SESSION 04

Abstract No.: 0898

## **A Pilot Randomized Controlled Study of a Single-Session of ACT Matrix for College Students with Emotional Dysregulation**

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Acceptance and commitment therapy (ACT) is a manualized psychological treatment targeting experiential avoidance and value-based behaviors (Levin et al., 2022; Hayes, Strosahl, & Wilson, 1999). Despite growing support for ACT, not many studies have examined its effectiveness as a treatment for emotional dysregulation. Although ACT has been found to be effective in mitigating emotional dysregulation, it requires highly trained personnel and is difficult for clients to understand. ACT Matrix is a useful tool that can efficiently and effectively implement ACT. As it focuses on self-monitoring one's behavior and internal experiences (Polk & Schoendorff, 2014), we expect that it will increase emotion recognition in the emotional dysregulation group. In the present study, we explore the effects of ACT Matrix on emotional dysregulation, psychological flexibility, values, depression, anxiety and stress, and life satisfaction in college students with high levels of emotional dysregulation. A total of 164 college students completed the Korean version of the Emotional Dysregulation Scale (K-DERS), of which only 18, with a total score greater than 1SD from the mean, participated in our study. Participants were randomized to Matrix (N=10) or control (N=8) conditions. The Matrix group completed one session (50 minutes) of the ACT Matrix, and the control group received education on emotional regulation. Both groups filled out a questionnaire daily for two weeks from the day after the treatment/education. The experimental group was asked to monitor their own behavior and internal experiences. The questionnaire was designed to maintain the intervention's effectiveness and increase participants' awareness. The control group was asked to read a short article on emotional regulation. Assessments were made pre- and post-treatment and at one month of follow-up. The data showed a significant difference in outcome measures at follow-up. Compared with the control condition, participants who completed the Matrix treatment showed significant improvements. Emotional dysregulation decreased statistically significantly ( $\chi^2(2)=15.74, p<.01$ ), and psychological flexibility ( $\chi^2(2)=12.80, p<.01$ ), value ( $\chi^2(2)=7.80, p<.05$ ) and life satisfaction ( $\chi^2(2)=10.31, p<.01$ ) increased significantly. However, there was no statistically significant difference in depression, anxiety, and stress ( $\chi^2(2)=1.59, p=.45$ ). The results provide a basis for further application of ACT Matrix and illustrate the utility of ACT Matrix for emotional dysregulation.

Keywords: Emotion Dysregulation, Matrix, Acceptance and Commitment Therapy (ACT)

# POSTER SESSION 04

Abstract No.: 0900

## Personality Traits and Mental Health Indices of K-Entertainment Trainees and Performers

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### INTRODUCTION

Trainees and performers in the Korean entertainment industry are recognized for their talent in the arts, but how they respond to the unique stress and pressure brought onto them as adolescents is minimally studied. In previous research, artists in general were reported to show higher levels of neuroticism, impulsivity, and stress, compared to the non-artist group. In this study, we intended to do a comprehensive check-up of trainees' and performers' personality traits and mental health (depression, anxiety, suicidal risk) to understand the psychological state of K-entertainment artists, and to inform the development of treatment protocols or screening tools better suited to this population.

### METHOD

We recruited 272 trainees and performers to complete a 20-minute online survey, through advertisement on an online trainee community, age ranging from teens ( $n = 72$ ; 20s:  $n = 189$ ) to 30s ( $n = 11$ ). The survey included the Mental Health Screening tool for Depressive Disorders (MHS:D), for Anxiety Disorders (MHS:A), for risk of Suicide (MHS:S), and the Bright and Dark Personality Inventory-Short Form (BDPI-SF). MHS:D/A/S were developed and validated for the purpose of effective early screening at various scenes, such as first response sites, counseling centers, schools, or companies. The BDPI was developed and validated on a Korean population to measure personality based on the five-factor model of personality (extraversion, agreeableness, conscientiousness, openness, emotional stability) and includes five more factors that represent maladaptive personality traits (detachment, egocentrism, disinhibition, psychoticism, negative affectivity).

### RESULTS

48.2% of the participants showed higher than medium severity of depressive symptoms. 28.7% reported higher than medium severity of anxiety symptoms and risk of suicide. As expected from previous research, extroversion was significantly correlated with detachment ( $r(271) = -.249, p < .001$ ), disinhibition ( $r = -.336, p < .001$ ), psychoticism ( $r = -.243, p < .001$ ), and negative affectivity ( $r = -.375, p < .001$ ). Emotional stability and conscientiousness were both correlated with disinhibition ( $r = -.228, -.178$ , respectively; both  $p < .001$ ). However, agreeableness did not show significant correlation with any of the five maladaptive personality traits. The correlations between personality traits and clinical symptoms show that extroversion was negatively correlated with severity of depression and anxiety ( $r = -.275, -.341$ , respectively; both  $p < .001$ ). Conscientiousness was negatively correlated with depression and risk of suicide ( $r = -.138, -.164$ , respectively; both  $p < .05$ ). Emotional stability was negatively correlated with all three symptoms ( $r = -.149, -.155, -.138$ , respectively; all  $p < .05$ ). All maladaptive personality traits were positively and strongly correlated with depression and anxiety, and weakly with suicidal risk (all  $p < .001$ ).

### DISCUSSION

This study examined the relationship between the mental health indices and personality traits of K-entertainment trainees. The results indicate that almost half of the trainees were experiencing severe depressive symptoms and almost a third, severe anxiety and high risk of suicide. These results highlight the need to better understand the specific psychological risk that trainees are subjected to. The finding that high negative affectivity and low emotional stability are both correlated with high severity of depression, anxiety, and suicidal risk further lends evidence to the emotional difficulties that artists experience. In following research, a comparison of the symptom levels and personality trait levels of the trainees to standardized indices would be meaningful. Overall, our findings attest to the difficulties young adult trainees and performers go through in dealing with emotions and stress in their training process.

# POSTER SESSION 04

Abstract No.: 0901

## Psychometric Properties and Factor Structure of the Korean Version of the Behavioral Activation for Depression Scale (BADS) in Depressed Elderly Persons

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### INTRODUCTION

Behavioral Activation (BA) has been proven to be an evidence-based treatment for depression a stand-alone therapy (Jacobson et al., 1996). Currently, BA is known as a single behavioral strategy used as part of a broader cognitive behavioral therapy (CBT) for depression, and is known as a full treatment on its own (Martell, 2018). The Behavioral Activation for Depression Scale (BADS) was developed by Kartner et al. (2006) to measure the timing and methods of behavioral activation after treatment. This scale consists of four factors: Activation (AC), Avoidance/Rumination (AR), Work/School impairment (WS), and Social Impairment (SI), and includes a total of 25 items. This study aims to validate the BADS for Korean elderly people with clinical depressive symptoms.

### METHOD

Two studies were conducted. In Study 1, exploratory factor analysis was performed on data from 110 elderly participants (106 diagnosed with depression, mean ages; males=75.50(SD=5.42), females=77.99(SD=5.26)) to identify the factor structure of the scale. The participants were considered high-risk for depression (Geriatric Depression Scale (GDS) score of 10 or higher, UCLA Loneliness Scale score of 35 or higher, Scale for Suicide Ideation score of 15 or higher). In Study 2, confirmatory factor analysis was conducted on data from 102 high-risk elderly participants (79 diagnosed with depression, mean ages; males=73.00(SD=5.83), females=78.17(SD=5.21)) to confirm the validity of the factor structure identified in Study 1. Convergent and discriminant validity were also examined through correlation analyses between the derived factors and the Valuing Questionnaire (VQ), Environmental Reward Observation Scale (EROS), and GDS.

### RESULTS

In Study 1, the WS factor was extracted as the first factor, followed by the SI, AR, and AC factors. Eight items were identified, with two items for each factor, explaining 86.97% of the total variance. The Cronbach's alpha for each factor was as follows: WS, .888; SI, .937; AR, .754; and AC, .669. In Study 2, confirmatory factor analysis was conducted, and the factor loading for each item was found to be significant. The goodness of fit was excellent, with  $\chi^2=707$  ( $p=.770$ ), GFI=.977, CFI=1.000, TLI=1.023, and RMSEA=.000(90% CI: .000~.067), confirming the validity of the 4-factor structure. The Cronbach's alpha for each factor was as follows: WS, .889; SI, .900; AR, .825; and AC, .693, showed a reliable level. The relationship between each factor was examined, and the WS factor showed significant positive correlations with SI ( $r=.415$ ,  $p<.001$ ) and AR ( $r=.213$ ,  $p=.031$ ), but showed a significant negative correlation with AC ( $r=-.412$ ,  $p<.001$ ). The SI factor showed a significant negative correlation with AC ( $r=-.347$ ,  $p<.001$ ), but did not show a significant correlation with AR. The relationship between the Valuing Questionnaire (VQ), Environmental Reward Observation Scale (EROS), GDS and BADS were analyzed. The WS, SI, and AR factors showed significant negative correlations with VQ (WS,  $r=-.501$ ,  $p<.001$ ; SI,  $r=-.434$ ,  $p<.001$ ; AR,  $r=-.327$ ,  $p=.002$ ) and EROS (WS,  $r=-.449$ ,  $p<.001$ ; SI,  $r=-.424$ ,  $p<.001$ ; AR,  $r=-.274$ ,  $p=.010$ ), but showed significant positive correlations with GDS (WS,  $r=.428$ ,  $p<.001$ ; SI,  $r=.346$ ,  $p<.001$ ). On the other hand, the AC factor showed significant positive correlations with VQ ( $r=.527$ ,  $p=.001$ ) and EROS ( $r=.585$ ,  $p=.001$ ), but showed a significant negative correlation with GDS ( $r=-.401$ ,  $p=.001$ ), as logically predicted, confirming the convergent and discriminant validity.

# POSTER SESSION 04

## CONCLUSION

The purpose of this study was to validate BADS of Kartner et al.'s (2006) to depressed older adults in Korea. The results confirmed the same four-factor structure as the original scale, but the number of items was reduced from 25 to 8. The validated scale in this study was judged to have excellent psychological measurement properties, including factor structure, internal consistency reliability, inter-factor correlations, convergence, and discriminant validity. This study can be distinguished from previously developed scales in that it was validated for older adults aged 65 and older who are at high risk for depression, loneliness, and suicide. Furthermore, since this scale maintained the same four-factor structure as the original scale while reducing the number of items to eight, it is expected to be useful for researchers who wish to conduct empirical studies on the effectiveness of BA for depressed older adults who are difficult to survey with many items.

# POSTER SESSION 04

Abstract No.: 0905

## **The Effect of Compassion Intervention on the Prosocial Behavior Intentions and Loneliness of University Students**

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The lack of positive social interactions and the subsequent loneliness in modern society is dramatically rising. Prosocial behaviors have been suggested as an antidote to loneliness. The negative effects of loneliness and the positive effects of prosocial behaviors have been well documented in previous studies, but research on effective intervention methods is lacking. Recently, research has shown that compassion can improve relationships by promoting an understanding of interconnectedness and a desire for others to be free from suffering. Therefore, this study aimed to examine the effects of compassion intervention on loneliness and prosocial behavior intentions. To this aim, 25 university students were randomly assigned to compassion, psychoeducation, or untreated group. The compassion and psychoeducation groups underwent a 6-week program consisting of weekly 90-minute sessions. After the intervention, a behavioral task was given to participants who were presented with narrative scenarios (physical pain, physical sensations without pain, emotional pain, and emotions without pain) and were asked to rate their willingness to help the protagonist and the amount of money they are willing to donate to the protagonist.

Results showed that the compassion group was more willing to donate in emotional suffering scenarios and more inclined to help in all types of scenarios as compared to the psychoeducation group. Self-report questionnaires of loneliness and compassion were also administered before, immediately after, and four weeks after the intervention. There was a significant increase level of compassion four weeks after the intervention in the compassion group compared to the untreated and psychoeducation groups. The level of loneliness was also decreased in the compassion group over time. These findings suggest that compassion intervention can effectively reduce loneliness and increase prosocial behavior intentions, and imply the potential benefits of cultivating compassion for oneself and society as a whole.

# POSTER SESSION 04

Abstract No.: 0907

## Preliminary Validation of a Korean Version of the Body Investment Scale

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### INTRODUCTION

Bodily attitudes that influence the appearance-related events is called body image attitudes, which could be divided into body image evaluation and body image investment (Cash, 2011). Despite the multi-dimensional nature of body image attitudes, majority of previous works on body image attitudes have focused primarily on body image evaluation (Kling et al., 2019). Assessment tools for body image attitudes in Korean are no exception in that most of the measurements tap the partial concept of the body image attitudes (Koh & Cho, 2017; Lee & Son, 2015). Body Investment Scale (BIS; Orbach & Mikulincer, 1998), first developed to examine the level of body image attitudes of suicide attempter, is known to measure both body image evaluation and body image investment (Marco et al., 2018). It has four subscales: body feelings and attitudes, comfort in touch, body care, body protection. The present study aimed to test whether BIS is reliable and valid questionnaire measuring the bodily attitudes more comprehensively.

### METHOD

In the first step, the BIS was translated into Korean by the first author (CHM) and then reviewed by three certified clinical psychologists. Secondly, a bilingual clinical psychologist back-translated the draft. Lastly, following the feedback from the original author of the BIS regarding the back-translated version of the BIS, final version of the scale was confirmed. We administered the BIS and measures of body satisfaction, depression, suicide-related cognitions and behaviours (e.g. reasons for living, suicide attempt, self-harm) in a sample of Korean college students (N=382; 179 males, 171 females, 2 no response). Based on the data, reliability, factor structure, convergent and discrimination validity of the scale were analysed.

### RESULTS

The confirmatory factor analysis shows that a 4-factor model fit the data adequately as the original version (CFI=.920, RMSEA=.060, SRMR=.070). Cronbach's alpha coefficient of the scale was within acceptable range (total=.83, body feelings=.80, comfort in touch=.80, body care=.64, body protection=.62). The total score of the BIS was positively correlated to body satisfaction ( $r=.563, p<.01$ ), supporting that the scale taps the cognitive construct of body image attitudes. Besides, reasons for living was positively correlated with sum score of the BIS ( $r=.583, p<.01$ ), body feelings ( $r=.501, p<.01$ ), comfort in touch ( $r=.273, p<.01$ ), body care ( $r=.393, p<.01$ ), body protection ( $r=.421, <.01$ ). On the other hand, depression showed significant negative correlation with all subscales of the BIS ( $p<.05$ ). Finally, the level of body investment varied significantly with the suicide-related experiences. Specifically, participants who had experience of suicide-related behavior within one year reported significantly lower level of body investment than not ( $p<.01$ ).

### CONCLUSIONS

We believe that the present study build a foundation for future studies regarding body image attitudes and relevant psychological constructs, without which the true nature of body image attitudes cannot be understood. In line with previous studies, findings of the current study suggest that body image attitudes is multi-dimensional construct. To fully understand and expand our knowledge about body image attitudes and its relationship between general psychopathology, there is critical need to verify other measurement tools of body image investment.

# POSTER SESSION 04

Abstract No.: 0910

## **Self-Compassion and Emotion Regulation: Focusing on Emotional Distress Tolerance and Low Arousal Positive Affect**

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Self-compassion involves being kind and understanding towards oneself in moments of suffering, inadequacy, or failure, rather than self-criticism or self-judgment. Self-compassion has been known to help alleviate negative affect (NA) and promote positive affect (PA). However, there is a lack of research on how self-compassion can produce this emotional regulation effect. It has been suggested that self-compassion makes painful experiences more endurable. Thus, we sought to examine whether self-compassion increases distress tolerance and this increased tolerance helps better regulate emotions. In addition, few studies on self-compassion have specifically examined PA. Therefore, in this study, we considered both NA and PA as indices of emotion regulation. To this end, self-report questionnaires of self-compassion, emotional distress tolerance, and the frequency of NA and PA experienced during the past two weeks were administered to a sample of 477 Korean adults (343 women). Affective words describing NA and PA were classified into four categories based on valence and arousal: high NA (e.g., angry), low NA (e.g., sad), high PA (e.g., excited), low PA (e.g., relaxed). The results of correlation analysis showed that self-compassion and emotional distress tolerance were positively correlated, while both being negatively correlated with NA and positively correlated with PA. Furthermore, the result of regression analysis showed emotional distress tolerance partially mediated the relationship between self-compassion and NA, and this relationship held true for high- and low-arousal NA. However, for PA, emotional distress tolerance partially mediated the relationship between self-compassion and low-arousal PA, but not for high-arousal PA. This study suggests that emotional distress tolerance may be a psychological mechanism that explains how self-compassion improves emotion regulation. Regarding PA, only low-arousal PA was mediated by emotional distress tolerance, which may be due to high-arousal PA being activated by the drive-seeking system, while low-arousal PA is governed by the soothing-contentment system which self-compassion addresses. These findings suggest that self-compassion and emotional distress tolerance could be a target for intervention for individuals who struggle with regulating their emotions.

# POSTER SESSION 04

Abstract No.: 0918

## The Impact of Difficulties in Emotion Regulation and Perceived Stress on Nonsuicidal Self-Injury: The Mediating Role of Depressive Symptoms

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### INTRODUCTION

In recent years, the prevalence of nonsuicidal Self-Injury (NSSI) among adolescents and young adults has continued to increase both domestically and internationally, and has received significant attention from many educators, researchers, and clinicians, as well as government officials. Based on previous studies, this study focused on the difficulties in emotion regulation as a vulnerability factor and perceived stress as a trigger factor for NSSI among adults in their twenties, and hypothesized and tested the mediating role of depressive symptoms in the relationship between these two variables and NSSI. In addition, we aimed to examine whether perceived stress plays a moderating role in the relationship between difficulties in emotion regulation and depressive symptoms.

### METHOD

Data on difficulties in emotion regulation, perceived stress, depressive symptoms, and NSSI were collected from a total of 301 adults in their 20s (137 men, 164 women) in South Korea through an online survey.

### RESULTS

As expected, correlational analysis revealed significant positive correlations between difficulties in emotion regulation, perceived stress, depressive symptoms, and NSSI,  $r = .409 \sim .772$ ,  $p < .001$ . Structural equation analysis revealed that the model in which difficulties in emotion regulation and perceived negative stress independently contribute to NSSI through the full mediation of depressive symptoms provided an adequate fit to the collected data,  $CFI = .946$ ,  $TLI = .933$ ,  $RMSEA(90\% CI) = .090 (.079 - .101)$ ,  $SRMR = .044$ . These results indicate that difficulties in emotion regulation and perceived negative stress do not directly influence NSSI, but rather indirectly through depressive symptoms. Furthermore, hierarchical multiple regression analysis revealed that both difficulties in emotion regulation and perceived stress significantly contributed to the prediction of depressive symptoms, and the interaction effect between difficulties in emotion regulation and perceived stress was also significant,  $\beta = .089$ ,  $p < .01$ ,  $\Delta R^2 = .008$ . In particular, difficulties in emotion regulation had a stronger impact on depressive symptoms in high perceived stress than in low perceived stress.

### CONCLUSION

The results of this study suggest that difficulties in emotion regulation and perceived stress contribute to NSSI among young adults in their 20s in Korea, particularly indirectly through the full mediation of depressive symptoms. The results also indicate that the impact of difficulties in emotion regulation on depressive symptoms is moderated by the level of perceived stress. Furthermore, our findings provide support for the importance of focusing first on the alleviation of depressive symptoms and considering the roles of both difficulties in emotion regulation and perceived stress in order to effectively prevent NSSI among Korean adults in their 20s.



# POSTER SESSION 04

Abstract No.: 0920

## **Factor Structure and Other Psychometric Properties of the Overall Anxiety Severity and Impairment Scale (OASIS) and the Overall Depression Severity and Impairment Scale (ODSIS) in Korea Adults Exposed to Natural Disasters**

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Anxiety and depressive disorders are known as very common mental disorders around the world. Validation of self-report instruments to briefly measure the severity and impairment of symptoms associated with anxiety and depressive disorders, for example, the Overall Anxiety Severity and Impairment Scale (OASIS; Norman et al., 2006) and the Overall Depression Severity and Impairment Scale (ODSIS; Bentley et al., 2014), is needed to conduct extensive screening assessments or monitor treatment outcome for these two disorders. In this study, we aimed to examine the factor structure, internal consistency, concurrent, convergent and discriminant validity of the Korean version of the OASIS and the ODSIS. To this end, the OASIS, ODSIS, and conceptually similar or distinct measures were administered to 385 Korean adults who experienced natural disasters (earthquakes, typhoons, and others).

Confirmatory factor analysis indicated that consistent with previous studies, a single factor model with the error terms of item 1 and item 2 correlated provided close fit to the collected data on the OASIS, [CFI = 1.00; TLI = 1.00; RMSEA(90% C.I.) = .00 (.00 - .059)], and the ODSIS, [CFI = .998; TLI = .995; RMSEA(90% C.I.) = .085(.42 - .113)]. The internal consistency coefficients (Cronbach's  $\alpha$ ) of the OASIS and ODSIS were .866 and .904, respectively. In addition, the OASIS showed a significant positive correlation with the Patient Health Questionnaire-9 (PHQ-9) ( $r = .626$ ), Posttraumatic stress disorder checklist for DSM-5 (PCL-5) ( $r = .509$ ,  $p < .001$ ), Impact of Event Scale-Revised (IES-R) ( $r = .530$ ,  $p < .001$ ), and Work and Social Adjustment Scale (WSAS) ( $r = .347$ ,  $p < .001$ ), indicating the two scales' good concurrent validity. The correlation between the OASIS and the Concise Measure of Subjective Well-Being (COMOSWB) was significant but lower ( $r = -.206$ ,  $p < .001$ ) than other correlation coefficients, providing support for the discriminant validity of the OASIS. The ODSIS was strongly correlated with the PHQ-9 ( $r = .699$ ,  $p < .001$ ), which was significantly stronger than the correlation between the ODSIS and COMOSWB ( $r = -.226$ ,  $p < .001$ ) ( $Z = 13.23$ ,  $p < .001$ ). These results provide support for the convergent and discriminant validity of the ODSIS. It also showed significant positive correlation with the PCL-5 ( $r = .497$ ,  $p < .001$ ), IES-R ( $r = .481$ ,  $p < .001$ ), and WSAS ( $r = .387$ ,  $p < .001$ ), indicating its good concurrent validity. In conclusion, our findings suggest that the OASIS and ODSIS are reliable and valid measures of severity and impairment associated with anxiety and depressive symptoms, respectively, for Korean adults exposed to natural disasters.

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## The Impact of Evaluation Concern Perfectionism and Psychological Flexibility on Depressive Symptoms among Korean Undergraduate Students in the COVID-19 Pandemic Era

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This study was conducted to examine the impact of evaluation concern perfectionism and psychological flexibility on depressive symptoms among undergraduate students living in the COVID-19 pandemic era. One hundred twenty five undergraduate students attending 2, 3 and 4-year universities nationwide participated in this study. After analysing the correlations between evaluation concern perfectionism, psychological flexibility and depressive symptoms, hierarchical multiple regression analysis was used to explore the moderating role of psychological flexibility in the relationship between evaluation concern perfectionism and depressive symptoms. As a result, evaluation concern perfectionism showed a significant positive correlation with depressive symptoms ( $r=.559, p<.001$ ), and a significant negative correlation with psychological flexibility ( $r=-.672, p<.001$ ), and depressive symptoms showed a significant negative correlation with psychological flexibility ( $r=-.622, p<.001$ ). Further, the correlations between the dimensions of evaluation concern perfectionism and the dimensions of psychological flexibility was examined. As a result, all dimensions of evaluation concern perfectionism showed significant positive correlations with depressive symptoms ( $r=.425 \sim .525, p<.001$ ) and significant negative correlations with psychological flexibility ( $r=-.571 \sim -.618, p<.001$ ). In particular, among the dimensions of evaluation perfectionism, the dimension of concern over mistakes showed the greatest positive correlation with depressive symptoms, and the dimension of doubt about performance showed the greatest negative correlation with psychological flexibility. In addition, all dimensions of psychological flexibility showed significant negative correlations with evaluation concern perfectionism ( $r=-.331 \sim -.777, p<.001$ ), and significant negative correlations with depressive symptoms ( $r=-.236 \sim -.665, p<.001$ ). Among them, the dimension of openness had a relatively high correlation with depressive symptoms. Both evaluation concern perfectionism and psychological flexibility uniquely contributed to depressive symptoms,  $\beta=.258, p<.01$ ;  $\beta=-.449, p<.001$ , respectively, and the interaction effect of these two predictors was not significant,  $\Delta R^2=.004, \beta=.191, ns$ . The moderating effect was re-analyzed by controlling the gender variable, but no significant results were derived,  $\Delta R^2=.004, \beta=.094, ns$ . Additional analyses indicated that only the moderating effect of the dimension of spontaneity of psychological flexibility was significant,  $F(3, 121)=27.394, R^2=.404, \beta=.745, p=.021$ , in the relationship between the dimension of concern over mistakes of evaluation concern perfectionism and depressive symptoms. This showed that the dimension of spontaneity was more strongly negatively associated with depressive symptoms among individuals reporting low concern over mistakes compared to those with high concern over mistakes. The results of this study suggest that evaluation concern perfectionism and psychological flexibility independently contribute to depressive symptoms, and spontaneity plays a moderating role in the relationship between concern over mistakes and depressive symptoms. Also, our findings suggest the need to consider the role of evaluation concern perfectionism as a vulnerability factor and psychological flexibility as a protection factor in understanding and alleviating depressive symptoms of Korean undergraduate students during the COVID-19 pandemic era.

# POSTER SESSION 04

Abstract No.: 0924

## Reliability and Validity of the MHS: D-2 and the MHS: A-2 as Screening Tools: A Comparison with Full-Length Versions

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Early detection and intervention is very important in depressive disorders and anxiety disorders considering its impact on the result of intervention and quality of life. Given that hospitals and clinical experts are not always the first to visit when people experience depressive and anxious symptoms, it is necessary to provide community networks with reliable and valid screening tools. The MHS: D and the MHS: A was developed to efficiently identify people with depressive disorders and anxiety disorders in South Korea and have excellent reliability and validity. The present study investigated the reliability and validity of the MHS: D-2 and the MHS: A-2 in comparison with their full-length versions, the MHS: D and the MHS: A as screening tools for depressive and anxious symptoms, and recommended screening cutoff scores for MDD and GAD for use in South Korea. A total of 527 participants completed the MHS: D, the MHS: A and other depressive and anxiety disorder measures. All participants were assessed with a structured clinical interview, Mini-International Neuropsychiatric Interview (MINI). The data were analyzed with SPSS 26.0 and R. The result of confirmatory factor analysis demonstrated an acceptable fit for a two-factor model ( $\chi^2 = 0.347$  (df = 1), CFI = 1.000, TLI = 1.003, RMSEA = 0.000) consisting of depressed mood and loss of interest for depressive symptoms, and difficulty in control of worry and its significant impact or distress in life for anxious symptoms respectively. The MHS: D-2 showed good internal consistency with Cronbach's alpha of 0.894. The MHS: D-2 total score was significantly correlated with total scores of the CES-D, BDI, PHQ-9 respectively ( $r=0.819$ ,  $r=0.777$ ,  $r=0.784$ ,  $p<.001$ ). The MHS: A-2 also showed good internal consistency with Cronbach's alpha of 0.803. The MHS: A-2 total score was significantly correlated with total scores of the BAI, GAD-7, PSWQ ( $r=0.743$ ,  $r=0.847$ ,  $r=0.685$ ,  $p<.001$ ). This indicates the MHS: D-2 and the MHS: A-2 have good convergent validity. The MHS: D-2 showed 0.815 of sensitivity, 0.896 of specificity and 0.919 of AUC with the optimal cut-off score of 3.5 for screening MDD. The MHS: A-2 showed 0.875 of sensitivity, 0.848 of specificity and 0.931 of AUC with the optimal cut-off score of 2.5 for screening GAD. The full-length versions showed better screening ability than the MHS: D-2 and the MHS: A-2, but these shortened versions also showed excellent screening ability with brevity. Overall, the current study demonstrates the MHS: D-2 and the MHS: A-2 are valid scales for depressive symptoms and anxious symptoms, respectively. Moreover, it seems the MHS: D-2 and the MHS: A-2 have clinical utilities meeting different needs of the community with their simplicity.

# POSTER SESSION 04

Abstract No.: 0925

## The Mediating Role of Worry and Rumination in the Effects of Mind Wandering on Anxiety and Depression

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### INTRODUCTION

Mind wandering is a shift in the contents of thought, away from events in the external environment to self-generated thoughts and feelings. Mind wandering can be understood as a multidimensional construct that is comprised of basic properties (such as intentionality and valence), some of which are crucially important, due to their clinical influences. Within this theoretical framework, we proposed a hypothetical model that assumes a mediating role for worry and rumination in the effects of mind wandering on anxiety and depression.

### METHOD

Data from 55 participants (all Japanese college students) were analyzed. In this study, the worry was assessed by the Japanese version of the Penn State Worry Questionnaire, the rumination was assessed by the Japanese version of Rumination-Reflection Questionnaire, the anxiety symptom was assessed by the Japanese version of Generalized Anxiety Disorder-7, the depression symptom was assessed by the Japanese version of Center for Epidemiologic Studies Depression Scale. The frequency of different intentional and unintentional types of mind wandering content was assessed by using the thought sampling method in the sequence Sustained Attention to Response Task.

### RESULTS

The results of mediation analysis with a bias-corrected bootstrapping method (samples = 5000) were that worry fully mediated the positive relationship between the frequency of unintentional negative mind wandering and anxiety symptom ( $\beta=.25$ ; 95%CI:[0.25,0.91], $p<.05$ ). Worry fully mediated the positive relationship between the frequency of unintentional negative mind wandering and depression symptom ( $\beta=.24$ ; 95%CI:[0.56,2.23], $p<.05$ ). Rumination fully mediated the positive relationship between the frequency of unintentional negative mind wandering and anxiety symptom ( $\beta=.17$ ; 95%CI:[0.13,0.66] ; $p<.05$ ). Rumination fully mediated the positive relationship between the frequency of unintentional negative mind wandering and depression symptom ( $\beta=.17$ ; 95%CI:[0.30,1.72] ; $p<.05$ ).

### DISCUSSION

Negative unintentional mind wandering may influence the worsening of anxiety and depression symptom by mediating increased worry or rumination. Unintended negative mental wanderings may worsen anxiety and depressive symptoms by enhancing strategies of worry and rumination about future and past events to avoid unintended negative emotions, and may maintain negative self-referential processing.

# POSTER SESSION 04

Abstract No.: 0931

## Emotional Coherence and Emotion Regulation in Daily Life

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Emotional coherence refers to the coordination of a person's experiential, behavioral, and physiological responses as the emotion unfolds over time. Theorists suggest that coherence across emotion response systems enables individuals respond to changing environmental demands in an organized, timely, and optimal manner, thereby facilitating effective responses to stressors and challenges in daily life. Although higher emotional coherence may promote effective emotion regulation, there is limited research examining the relationship between coherence and emotion regulation, and prior research has used artificial experiments or retrospective assessments with response biases, limiting their ecological validity. This study aimed to investigate whether emotional coherence influences effective emotion regulation in everyday life using ecological momentary assessment (EMA). This study consisted of two parts: (a) laboratory assessment, (B) 7 days of EMA. During the laboratory assessment, emotional coherence was measured in 68 adults while they watch emotion-eliciting videos (amusement, anger, sadness, fear). Participants continuously rated their emotional experience using a response meter. Their physiological responses were continuously recorded using infrared plethysmograph sensors, and their facial expressions were continuously evaluated using the Facial Action Coding System. In the EMA phase, participants completed surveys five times per day for seven days, reporting their momentary negative affect, the intensity of a stressful event since the last survey, and how long ago the event occurred. Time-lagged cross-correlations were used to calculate coherence, and multilevel models were used to examine the relationship between stressful events, daily momentary negative affect, and coherence. The results showed that more stressful events were associated with increased momentary negative affect, but this effect was less pronounced in individuals with higher coherence. Additionally, the interaction between coherence and stressful event was significant when the event occurred between 60 minutes and 3 hours before the survey, but not when it occurred less than 60 minutes prior. These findings indicate that emotional coherence may buffer the impact of stress in daily life, thus promoting effective emotion regulation.

# POSTER SESSION 04

Abstract No.: 0933

## **Early Social Cognitive Training Intervention for Ultra-High Risk State for Psychosis: A Preliminary Efficacy Study**

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Individuals who are in high risk of transition to psychosis, or who are undergoing the prodromal phase of schizophrenia has been receiving attention in recent years. Despite the attention given to 'ultra-high risk(UHR)' individuals, only a few studies have attempted treatment toward the population. The current study aimed to examine the effects of social cognitive training intervention targeted for individuals who are experiencing difficulties in daily social situations or who had experienced near psychotic symptoms. early in need of early intervention. The program adapted in this clinical trial modified the Korean version of 24-session Social Cognitive Skills Training program and implemented the same content over 10 weeks. The intervention includes four components of social cognition (emotion recognition, social perception, attributional style, and Theory of Mind). Participants were recruited via social workers and local hospitals and were screened according to Comprehensive Assessment of At-Risk Mental States (CAARMS) interview. The treatment was implemented in group format with three participants who were clinically stabilized. All participants completed pre- and post- treatment assessments of social cognition, psychiatric symptoms, neurocognition, and daily functioning. Participants demonstrated significant improvements in psychiatric symptoms. Moreover, there was significant positive change in subtests that measured processing speed and working memory. Finally all group members showed increased score in facial affect recognition related task and theory of mind related task. Overall, Results were promising in proving the feasibility of implementing early social cognitive training intervention for UHR individuals in community setting. Further study could be recommended by restructuring or changing the specific contents of the intervention to specifically target the UHR population, and the efficacy proved through this study ought to be replicated in a randomized controlled trial setting or with comparison group.

# POSTER SESSION 04

Abstract No.: 0937

## **Association of Shame with Self-Esteem, Emotion Dysregulation and Interpersonal Issues in Adult Psychiatric Patients Referred to an Adapted DBT Program in Singapore**

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### INTRODUCTION

Shame is an emotion that is known to be related to various forms of psychopathology. Research has found that shame is a predictor of the development and maintenance of Borderline Personality Disorder (BPD) and other psychiatric disorders. Emotions associated with shame have been known to increase negative self-concept, as well as contribute to difficulties in emotion regulation and interpersonal effectiveness. These include behaviours related to non-assertiveness or impulsivity and social inhibition. The present study investigates the association of shame with self-esteem, emotion dysregulation and interpersonal issues in adult psychiatric patients in Singapore.

### METHOD

Participants are adult outpatients from the Institute of Mental Health (IMH), a tertiary psychiatric institution in Singapore. They are sample from a population of patients who were undergoing the acute phase of psychotherapy and were enrolled into an adjunctive adapted Dialectical Behaviour Therapy (DBT) skills training program. Participants were referred by their individual therapists to this program for the management of common psychiatric symptoms, more specifically, difficulties in emotion regulation, via equipping them with effective coping skills. Prior to the commencement of the program, participants were assessed on their levels of shame, self-esteem, emotion dysregulation and interpersonal issues using the Internalized Shame Scale (ISS), Rosenberg Self-Esteem Scale (RSES), Difficulties in Emotion Regulation Scale (DERS) and Inventory of Interpersonal Problems (IIP-32), respectively. It was hypothesized that higher levels of shame are associated with greater difficulties in emotion regulation and interpersonal issues, and lower self-esteem.

### RESULTS

Data collection is ongoing. Correlational analyses of scores were conducted in the current sample (N = 25) with ages of M = 24.72 (SD = 4.6). Majority of participants were female (n = 19), all of whom presented with BPD and/or mood and anxiety symptoms, and all but one participant was on a prescribed regime of psychiatric medications. As predicted, shame was positively correlated with emotion dysregulation ( $r = .68, p < .01$ ) and interpersonal issues ( $r = .58, p = .002$ ). However, no significant correlation was found between shame and self-esteem ( $r = -.19, p = .38$ ). The final results will be available for the conference.

### DISCUSSION

Although preliminary, a higher level of shame has shown to be associated with greater difficulties in regulating emotions and interpersonal issues, and both associations have large effect sizes. This finding adds to the growing literature reporting the important implications of shame in psychopathology and associated interpersonal difficulties. However, a higher level of shame was not found to be related to poor self-esteem. This finding is inconsistent with past research that showed a positive relationship between shame and self-esteem. Notably, age was moderated for in the shame-self-esteem relationship in these past studies, while the current study sample consists of mostly young adults. Directionality of the relationship could not be established in this correlational study. However, this is the first study to establish a relationship between shame and transdiagnostic issues that are commonly seen in the psychiatric population in Singapore. Future research is warranted to examine whether targeting shame in psychological interventions could increase the efficacy in managing emotional difficulties and improve interpersonal effectiveness.

# POSTER SESSION 04

Abstract No.: 0939

## The Relationship between Severity Levels of Depression and Alcohol Abuse among Outpatient Psychological Clinic in Jakarta

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### INTRODUCTION

The comorbidity of depression and alcohol abuse in the clinical population has been increasingly recognized. Meta analysis has shown that people with depression have a higher chance of developing alcohol use disorder (AUD) because of the pharmacological effects of alcohol that can affect certain brain areas and the behavioral symptoms of depression can motivate people to drink more as a way of negative coping mechanism (Connor, Pinquart & Gamble, 2009). Moreover, a recent systematic review reports that severe depression was found to be a strong risk factor of alcohol abuse in clinical settings (Hunt et al., 2020). However, questions remain whether different levels of depression lead to different likelihoods that a person may develop AUD in the clinical population. In the present study, we examined patients from an outpatient psychological care clinic in Jakarta, Indonesia to determine the probability of patients to meet the screening criteria of AUD based on different levels of depression and gender.

### METHOD

We used patient medical records for all patients who have registered into the clinic and who have been given the patient health questionnaire for depression severity (PHQ-9) that consisted of 9 items and PHQ alcohol abuse items (PHQ) that consisted of 6 items. PHQ-9 was administered to 535 patients (n = 156 males and n = 379 females, M = 13.78, SD = 6.68 and M = 14.79, SD = 6.26), whereas PHQ was administered to 457 patients (n = 134 males and n = 323 females, M = 1.29, SD = 1.13 and M = 1.41, SD = 1.20). Binomial logistic regression analysis was conducted to ascertain the effect of gender (male and female) and the different levels of depression (no depression, mild, moderate, moderately severe, and severe) on the likelihood of meeting the alcohol abuse screening diagnostic criteria.

### FINDINGS

Both severe and moderately severe depression increase the odds of alcohol abuse (moderately severe, OR = 2.66, p = .048, 95% CI [1.007, 7.05]; severe, OR = 2.82, p = .044, 95% [1.027, 7.72]). Gender showed no difference in the likelihood of meeting the alcohol abuse screening criteria (OR = 1.03, p = .928, 95% CI [0.58, 1.79]).

### CONCLUSION

Severe and moderately severe depression levels seem to increase the probability of meeting the alcohol abuse screening criteria among outpatients than no depression, mild and moderate levels. Moreover, gender does not play a role in contributing to the likelihood of alcohol abuse screening criteria. Interestingly, a cross-sectional study suggested that patients who have a mild to moderate depression level showed an increased consumption of alcohol in the primary care settings (Åhlin et al., 2015). Based on clinical experience, Indonesian outpatients who suffered from mild and moderate depression levels tend to be not bothered by their depression. Whereas, those with moderately severe and severe depression are typically aware of their symptoms and bothered by their condition, which makes them more vulnerable to abusing alcohol as an escape. This may suggest that the functioning diagnostic criteria that demarcates between pathological and non-pathological depression in Indonesian outpatients start at moderately severe levels of depression. However, even though there is a biological factor between male and female in the context of alcohol consumption, gender roles seem to be fading away which imply that there was no difference between male and female regarding alcohol consumption in Indonesia.



# POSTER SESSION 04

Keywords: Depression; Substance Abuse; Alcohol Abuse

Abstract No.: 0944

## Emotion Recognition Alterations in SAD and ASD, and Their Link to Facial Mimicry Responses and Metacognitive Judgments

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Facial expressions are highly relevant signals in the identification of others' emotional states. Research has suggested that facial mimicry (i.e., the automatic mirroring of observed expressions) as well as metacognitive judgments (i.e., confidence in one's emotion recognition skills) can aid emotion recognition. Identifying others' emotions correctly enables smooth interpersonal communication. By contrast, alterations in the perception of facial emotional expressions have been associated with social interaction difficulties in both individuals with Social Anxiety Disorder (SAD) and individuals on the autism spectrum. Whether altered integration of information from facial mimicry responses or metacognitive judgments could explain differences in emotion recognition in individuals with SAD and individuals on the autism spectrum, compared to non-diagnosed individuals, is to date unclear. With the current study, we aim to examine variation in the predictive value of facial mimicry responses and metacognitive judgments regarding emotion recognition, which is systematically linked to the distinct clinical conditions. In addition, we explore whether emotional arousal in response to emotional facial expressions varies depending on the clinical condition. Lastly, as the integration from bodily responses in cognitive processes might also rely on the attention to and accuracy in perceiving those signals, we will further examine self-reported interoceptive attention and interoceptive accuracy in the two conditions. In our ongoing experiment, participants on the autism spectrum (N = 32/45 collected), with a diagnosis of SAD (N = 20/45 collected) or with no psychiatric, neurological or neurodevelopmental condition (N = 17/45 collected) first passively view short videos of spontaneous facial expressions (anger, happiness, sadness, fear and neutral). Meanwhile, we record facial muscle responses over the Corrugator supercilii and the Zygomaticus major regions, as indicator of facial mimicry, and electrodermal activity, as indicator of emotional arousal. In a separate task, participants are asked to label the same emotional expressions according to the five possible emotion categories, to indicate their confidence in their labeling decision, and to rate the intensity of the displayed person's emotional experience. Self-reported interoceptive accuracy and attention, next to other clinical and personality traits, are already assessed in a diagnostic session prior to the experiment. Based on a previous study in a healthy sample with varying levels of social anxiety and autistic traits, we expect that facial mimicry is less predictive of emotion recognition accuracy in individuals on the autism spectrum, and that their confidence ratings are less calibrated to their actual recognition performance compared to the control participants. Individuals with SAD, in contrast, are expected to show a reduced confidence in their emotion recognition performance whereas the accuracy itself is not necessarily lower compared to the control participants. The data of the full sample (45 participants per group) will be analyzed and presented at the conference.

# POSTER SESSION 04

Abstract No.: 0954

## **Brief Psychological Interventions (BPIs) for Older Adults: Exploring the Experiences of Paraprofessionals Delivering BPIs and Their Supervisors**

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Brief Psychological Interventions (BPIs) are a novel and innovative form of treatment delivery which could offer relief to the demand and resource pressures experienced across the UK National Health Service (NHS). Brief Psychological Interventions (BPIs) have the following characteristics, they are (1) based on long-term evidence-based psychotherapy, (2) delivered by paraprofessionals and (3) are brief in nature (Roberts et al., 2021). Following efficacy success in working-age secondary care (Wright et al., 2020; Roberts et al., 2021), for the first time, BPIs have been introduced into older adult secondary care to enhance the quality of mental health care, through improving the availability, accessibility and efficiency of treatment.

The present service evaluation investigated the impact of delivering BPIs on paraprofessionals and supervisors (qualified psychological professionals), and what adaptation BPIs required when delivered to Older Adults. Research shows older people can benefit from, and sometimes require, clinical models to be tailored to their specific needs (Dick-Siskin, 2002). However fundamentally, for services to provide an effective service to clients, paraprofessionals need to feel valued, satisfied and confident within their job role, as research suggests support workers often feel undervalued and puzzled about the purpose of their role (Kessler et al., 2012).

Qualitative data was collected through semi-structured interviews and analysed using thematic analysis. Quantitative measures such as Professional Quality of Life scale (Pro-QOL) and Professional Self-Doubt Scale (PSD) were also used. Thematic analysis of paraprofessionals and BPI supervisors garnered a critical insight into how to improve BPI procedures for both paraprofessionals and older adult clients. Such findings include recommendations on how best to prepare paraprofessionals to deliver BPIs and how to modify session structure to factors commonly experienced by older adults.

The results can inform approaches to training and supervision of BPIs in hope that this leads to improved client engagement and treatment efficiency.

# POSTER SESSION 04

Abstract No.: 0957

## **Interpersonal Psychotherapy for the Treatment of Major Depressive Disorder Impacts the Valence of Autobiographical Memories Post-Treatment and at 6-Month Follow-Up**

Florencia Trespalacios\*, Ariel Boyle, Stephanie Gumuchian, Mark A. Ellenbogen

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### INTRODUCTION

Dysfunction in the recall of autobiographical memories (AM) has been observed among individuals with Major Depressive Disorder (MDD). Relative to healthy individuals, the valence of the memories recalled by those with MDD following the presentation of a cue word tends to be more negative and incongruent with the valence of the cue word presented (e.g., negative memories triggered by positive cue words). Research proposes that AM recall deficits have a bidirectional relationship with depressive symptoms and may play an important role in the onset and maintenance of depression. Thus, changes in AM recall may also be involved in the recovery from and recurrence of MDD. This study aimed to assess whether interpersonal psychotherapy (IPT) for the treatment of MDD had an effect on the valence of individuals' AM recall.

### METHODS

Twenty four individuals with MDD received 16 weekly sessions of IPT. At pre- (time 1) and post-treatment (time 2) and 6-month follow-up (time 3), depressive symptoms were measured using the Inventory of Depressive Symptomatology – Clinician Rated. AM recall was assessed using the Autobiographical Memory Test (5 neutral, 5 positive, and 5 negative cue words were presented).

### RESULTS

Repeated measures analyses of variance revealed a significant effect of IPT on the reduction of depression symptoms [ $F(2, 42) = 64.18, p < .001$ ]. There were also significant changes in the average positivity [ $F(2, 40) = 4.97, p = .012$ ] and negativity [ $F(2, 40) = 15.72, p < .001$ ] of AM memories elicited by negative and neutral cue words, respectively. Overall, however the nature of the change varied between post-treatment time points. Specifically, there was a significant decrease in mean AM negativity in response to neutral cue words from time 1 to time 2 [ $t(21) = 4.45, p < .001$ ], suggesting that IPT treatment was associated with reduced negativity in recalled AM immediately post treatment. However, between time 2 and time 3 post-treatment, there was a significant decrease in mean AM positivity in response to negative cue words [ $t(21) = 3.05, p = .006$ ] and a significant increase in mean AM negativity in response to negative cue words [ $t(21) = -2.25, p = .036$ ].

### DISCUSSION

These results suggest that recovery from MDD following IPT occurs alongside changes in the valence and congruence of AM recall, and that these changes may shift over time post-treatment. Autobiographical memory function may be a mechanism relevant to the recovery from depression and may be implicated in the long-term efficacy of psychotherapeutic treatments for MDD. Future research should assess AM recall changes following other popular treatments for MDD (e.g., Cognitive Behavioural Therapy) and with longer term follow-ups, to observe if these effects are maintained and evaluate their potential role in risk of MDD relapse.

# POSTER SESSION 04

Abstract No.: 0958

## Mental Health Status and Psychological Characteristics of Korean Artists Visiting Counselling Centres

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### INTRODUCTION

Most artists are in very poor social and economic conditions, but research on their psychological conditions is very scarce. In this study, we investigated the mental health status of artists who applied for psychological counseling.

### METHOD

From March 17 to July 1, 2019, 457 artists who applied for psychotherapy at the Korea Artists Welfare Foundation and received psychological tests were collected. Among them, the data of 341 artists who were administered the Minnesota Multiphasic Personality Inventory-2(MMPI-2), and 93 data from the Temperament and Characteristics Inventory(TCI) were analyzed retrospectively. We classified into three groups(normal, sub-clinic, and clinic) according to the T-score, and the ratio of the clinical group was examined for each scale.

### RESULTS

36.7%, 31.1%, and 30.0% of artists on 2(D), 0(Si), and 7(Pt) of the MMPI-2 Clinical Scale scored as high as 65T or higher. In contrast, only 32 (9.4%) on 5(Mf) and 6 (1.8%) on the 9(Ma) were classified as clinical groups. On restructured clinical(RC) scale, Demoralization(RCd), Dysfunctional Negative Emotion(RC7), Somatic Complaints(RC1), and Low Positive Emotion(RC2), the proportion of artists belonging to the clinical group was higher than generally expected. All respondents were classified as a very low-level group on the Persistence scale(P), Self-transcendence(ST), and Cooperativeness(P) scale of the TCI.

### CONCLUSIONS

These results showed that artists who applied for psychotherapy tended to show negative emotions such as depression and anxiety, complain of a lot of physical symptoms, and experience poor positive emotions in daily life. In addition, the possibility of being uncomfortable and isolated in social relationships due to not being able to accept others, and lack of persistence in solving problems due to low patience was suggested. Findings from this study suggest that the development of tailored psychological interventions for artists is needed.

\*Acknowledgement: This study was funded by the Korea Artists Welfare Foundation, 2019

# POSTER SESSION 04

Abstract No.: 0959

## Exploring the Impact of the COVID-19 Pandemic on Depressive Symptoms: A Moderated Mediation of Perceived Stress and Intolerance of Uncertainty

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### INTRODUCTION

The COVID-19 pandemic was a period of global uncertainty characterized by fluctuating health recommendations and major changes to daily living. Many individuals restructured their lives due to COVID-19 sickness, new caregiving roles, at-home confinement, changes to employment and financial income, and restricted abilities to participate in social and other activities. Recent studies have reported that mental health difficulties emerged or worsened over this period. One factor found to influence the experience of depressive symptoms over the pandemic is intolerance of uncertainty, which consists of negative beliefs, attitudes, and reactions to uncertain situations. In addition, perceived stress, defined as an individual's appraisal of the threat of a situation and their ability to cope with it, has been found to be positively associated with depressive symptoms. The present study aimed to examine whether experience of perceived stress mediates the relationship between the impact of the COVID-19 pandemic on symptoms of depression over time. Further, we examined whether individuals' levels of intolerance of uncertainty moderated these associations.

### METHODS

106 adults living in Quebec, Canada, completed a battery of questionnaires online at three different timepoints, each three months apart, between May 2020 and January 2021. A moderated mediation analysis was conducted, with Time 1 scores on a COVID-19 Impact Questionnaire created by the research team as the predictor variable, Time 3 Beck Depression Inventory - II scores as the outcome variable, Time 1 Perceived Stress Scale scores as the mediator, and Time 1 Intolerance of Uncertainty Scale scores as the moderator.

### RESULTS

There was a statistically significant indirect effect of COVID-19 pandemic impact on depression scores, where the positive association between COVID-19 pandemic impact and perceived stress at Time 1 was moderated by intolerance of uncertainty scores [ $R^2$ change = .047,  $F(1,102) = 8.86$ ,  $p = .0036$ ], and perceived stress, in turn, positively predicted depression scores at Time 3 [coeff.=1.05,  $t = 2.59$ ,  $p = .01$ , 95% C.I. (.25, 1.86)]. Individuals with intolerance of uncertainty scores one standard deviation above the mean had the highest levels of perceived stress, however their perceived stress levels were not significantly associated with levels of COVID-19 pandemic impact. The impact of the COVID-19 pandemic positively predicted participants' experience of perceived stress only for those with intolerance of uncertainty scores below one standard deviation from the mean. For all individuals, higher perceived stress predicted depressive symptoms six months later.

### DISCUSSION

These results highlight the role of perceptions of stress in the risk for the development of depressive symptoms over time. More specifically, we found that individuals high in intolerance of uncertainty are particularly vulnerable to the experience of perceived stress regardless of the degree of adversity experienced related to the COVID-19 pandemic. Therapeutic interventions that address beliefs about uncertainty, as well as one's ability to cope with stress, may therefore be particularly helpful in preventing the development of depression.

# POSTER SESSION 04

Abstract No.: 0965

## Development and Effectiveness Validation of Mindfulness-Based CBT Program Incorporating Gardening

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Mindfulness has been applied in various areas by utilizing the sense of here-and-now, and its field of application is expanding. There are many studies that show that nature-friendly methods such as forest, water, and wind are used in connection with mindfulness. The purpose of this study is to develop and conduct a cognitive behavioral therapy program, that combined mindfulness and gardening, for university students. These students were experiencing symptoms such as lethargy and social avoidance due to trauma or emotional difficulties. Then, the study attempted to verify the effect of the therapy program. To this end, an 18-session program, combining mindfulness and gardening, was created according to the ADDIE model and comparatively applied to a university student experimental group (n=22), a control group (n=16). The program was conducted twice a week for three hours. To evaluate the effectiveness of the program, depression (Mental Health Screening Tool for Depressive Disorders; Han et al., 2021), anxiety (Mental Health Screening Tool for Anxiety Disorders; Han et al., 2021), core life activities (Mental Health Screening Tool for Core Life Activities; Han et al., 2021), life satisfaction (SWLS; Diener et al., 1985), loneliness (UCLA Loneliness scale; Russel et al., 1978), perceived stress (PSS; Cohen et al., 1983), post-traumatic stress (PDS; Bora Nam, Ho-In Kwon, and Jung-Hye Kwon, 2010), mindfulness awareness (K-MAAS; the Korean version of Mindful Attention Awareness Scale; Sun Jung Kwon and Kyo Heon Kim, 2007), and self-compassion and self-apathy (SCS; Neff, 2003) were measured. As a result of the program, depression ( $t=-2.098$ ,  $p<.05$ ), anxiety ( $t=-2.133$ ,  $p<.05$ ), loneliness ( $t=-2.340$ ,  $p<.05$ ), stress ( $t=-2.548$ ,  $p<.05$ ), post-traumatic stress ( $t=-2.204$ ,  $p<.05$ ), and self-apathy ( $t=-2.133$ ,  $p<.05$ ) were significantly decreased. However, there was no significant difference in life satisfaction ( $t=-1.330$ , ns.), mindfulness awareness ( $t=-1.355$ , ns.), and self-compassion ( $t=-.710$ , ns.). These results indicate that cognitive behavioral therapy combining mindfulness and gardening can lead to meaningful improvement for college students experiencing emotional difficulties. The possibility of mindfulness's expansion by gardening, effective connection between the two concepts, and the therapeutic effect of gardening were discussed, as well as the implications and limitations of the study were discussed.

# POSTER SESSION 04

Abstract No.: 0973

## Examining the Dynamics of Depressive Symptoms Using Ecological Momentary Assessment: Implications for CBT

Jiwon Kang\*, Kyungmee Chung, Khishigdelger Batbaatar, Seoi Lee

Yonsei University, Korea

### INTRODUCTION

CBT (Cognitive Behavioral Therapy) is an evidence-based treatment for depression, but response rates are limited to 80% and require improvement. The severity of depressive symptoms affects response rates, and recent research has emphasized the importance of assessing the dynamics of depressive symptoms. The dynamics of depressive symptoms are mainly assessed by two indices: MV (Mood Variability), which indicates the magnitude of mood changes, and EI (Emotional Inertia), which indicates the extent to which mood is carried over from one moment to the next. The emergence of digital technology has facilitated the development of DP (Digital Phenotyping). One of the data collection methods of DP is EMA (Ecological Momentary Assessment), which can measure the dynamics of depressive symptoms through repetitive evaluation in real time.

The purpose of this study was to investigate whether the dynamics of depressive symptoms vary according to the severity of depressive symptoms. To achieve this, 1) participants were grouped based on their level of pre-depression severity, and identified whether there were any significant differences in the dynamics of depressive symptoms between these groups. Then, 2) participants were grouped based on the dynamics of depressive symptoms and identified whether there were any significant differences in their level of post-depression severity between these groups.

### METHOD

This study collected EMA data using PHQ-9 (Patient Health Questionnaire-9) for three times a day at three-day intervals for 2 months from 100 adults (mean age = 31.19 years; SD = 11.23; males = 36, females = 64). To identify whether there were any significant differences in the dynamics of depressive symptoms according to the level of pre-depression severity, and participants were grouped into 4 groups based on their BDI-II (Beck Depression Inventory-II) scores; normal, mild, moderate, and severe. Statistical analyses were conducted to identify significant differences between these groups in the dynamics of depressive symptoms. MV was calculated as the standard deviation and range of EMA data, and EI was calculated as the autocorrelation coefficient of EMA data. Also, to identify whether the level of post-depression severity varied according to the dynamics of depressive symptoms, latent profile analysis was conducted to classify participants into 4 profiles based on their dynamics of depressive symptoms; from profile 1 (the smallest MV and the lowest EI) to profile 4 (the largest MV and the highest EI). Statistical analyses were conducted to identify significant differences between these profiles in the level of post-depression severity measured through BDI-II.

### RESULTS

This study showed significant differences in MV of EMA data between the groups (Standard Deviation:  $F = 8.827, p < .01$ , Range:  $F = 12.784, p < .01$ ), and significant differences were identified between the normal and the moderate group ( $p < .05$ ), and between the normal and the severe group ( $p < .01$ ). However, no significant difference was found in EI. Also, this study showed significant differences in the level of post-depression severity ( $F = 13.107, p < .01$ ), and significant differences were identified between profile 1 and 2 ( $p < .01$ ), and between profile 1 and 3 ( $p < .01$ ).

### CONCLUSION

The findings that the dynamics of depressive symptoms vary based on the level of depression severity highlight the importance of assessing the dynamics of depressive symptoms before applying CBT to monitor prognosis closely for clients with higher degree of depressive symptom dynamics to improve response rates for CBT.

But there were limitations in this study, including the collection of EMA data once every three days and the restriction of depressive symptom dynamics to two types; MV and EI. Future studies may benefit from collecting EMA data more frequently and developing new indices to measure the dynamics of depressive symptoms, and re-identify the findings of this study.

# POSTER SESSION 04

Abstract No.: 0975

## **The Effect of Unconscious Emotional Words on Facial Expression Perception**

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Emotional perception is highly important in human relationships, as one's behavior and attitude can be influenced by the perceived emotions of others. Emotions can be perceived differently depending on factors such as facial expressions, language, and environment. This study investigated whether the perception of facial expressions is influenced by unconscious emotional words. During the experiment, emotional words were presented to one eye while the other eye was presented with continuous flash suppression (CFS) stimuli to prevent conscious processing of the presented emotional words. CFS is used to study unconscious visual information processing. As one eye is presented with continuous and rapidly changing pattern stimuli, static stimuli presented to the other eye are suppressed in consciousness. After CFS, the face stimulus was presented and participants rated how happy the face looked. The results of the experiment showed that when the subliminal words were positive happy faces were perceived as happier than when the words were negative. When the subliminal words were negative, sad faces were perceived as sadder than when the words were positive. The expressionless faces tended to be perceived as happy when the unconscious word was positive, and as sad when the word was negative. This suggests that even unconscious emotional words can affect the perception of facial expressions, and unconscious information processing may potentially affect behavior and attitudes when interacting with others.



# POSTER SESSION 04

Abstract No.: 0976

## **Comparison of Individual Differences in Perception of Visual Illusions Based on Cognitive and Visual Abilities**

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*Chungbuk National University, Korea*

The perception of visual illusions may depend not only on an individual's basic visual abilities but also on higher-order cognitive abilities. Previous studies have shown that individuals with low cognitive ability, as defined by clinical standards, have a lower ability to perceive visual illusions than the control group. This study aimed to investigate cognitive ability, visual ability, and visual illusion perception in the general population and determine which visual properties of illusion stimuli were related to which cognitive ability. The visual illusions used in this study were size illusion, length illusion, and orientation illusion. Cognitive abilities were measured through memory and executive function tasks, while visual ability was measured through visual matching and spatial reasoning tasks. The results showed that individuals with high cognitive and visual abilities perceived the Delboeuf illusion, a form of size illusion, more weakly. However, there was no correlation between cognitive or visual ability and the illusion of length or orientation. As size perception requires a higher level of visual processing than orientation or length, this suggests the possibility of it being related to higher-order cognitive abilities. Additionally, individuals with high cognitive abilities were also found to have high visual abilities, indicating that vision, previously considered an automatic process, can intervene in complex cognitive processes. Therefore, visual factors need to be considered alongside cognitive abilities to determine an individual's overall cognitive profile.

Keywords: visual illusion, cognitive ability, visual ability, individual difference

# POSTER SESSION 04

Abstract No.: 0996

## Early Maladaptive Schemas among Community Members, Forensic Offenders, and Mentally Disordered Offenders

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### INTRODUCTION

The number of crimes related to mental disorders has risen continuously. However, effective interventions that reduce the recidivism rate of mentally disordered offenders (MDO) are still insufficient, and thus understanding the underlying cause of recidivism in MDO is crucial to developing an effective intervention. Early maladaptive schemas (EMSs) have been indicated as a critical factor in various mental disorders including personality disorders. Despite the high prevalence of mental disorders among offenders, the levels of EMS are not fully understood in offenders in clinical or non-clinical forensic settings.

### METHOD

The current study aimed to compare the levels of EMS among 169 people from a community sample (CS), 252 forensic offenders (FO), and 147 MDO in Korea. In addition, the relationships between EMS, psychiatric symptoms and functioning of MDO were evaluated.

### RESULTS

The results show that offenders have higher EMS levels compared to CS. The EMS levels were highest in MDO, followed by FO and CS. In MDO, EMS levels were highly correlated with both psychiatric symptoms measured by the Brief Psychiatric Rating Scale and functioning measured by the Clinical Outcome Routine Evaluation.

### DISCUSSION

The current findings highlight that EMS levels in MDO should be incorporated into assessment and treatment planning due to their close associations with psychiatric symptoms and functioning. In addition, implementing the Schema Therapy to MDO should be considered an effective intervention in order to reduce the EMS level and clinical symptoms. Limitations and implications were further discussed.

Keywords: Early Maladaptive Schemas, Forensic Offenders, Mentally Disordered Offenders, Schema Therapy

# POSTER SESSION 04

Abstract No.: 1002

## Exploring the Development of Perfectionism: Role of Parenting and the Impact on Self-Conscious Emotions and Mood

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### BACKGROUND

Maladaptive perfectionism is a transdiagnostic construct that has been examined extensively in the context of psychopathology and clinical disorders. Theories of perfectionism identify several pathways to the development and maintenance of perfectionism. Socialization and parenting are crucial aspects in this developmental trajectory of perfectionism and contribute to the schema of self and others. Understanding these trajectories are important in developing interventions that target these early patterns of socialization and parenting.

### AIM

We examined perfectionism, parenting and parental bonding, including control, care and overprotection, self-conscious emotions, and psychological outcomes namely depression and self-esteem, in a sample of Indian youth.

### METHODS

A cross-sectional design was adopted. Four hundred two youth, living with parents aged 18-25 were recruited from colleges in Bangalore, India. They responded to a shortened version of the Test of Self-conscious affect -3 (TOSCA 3), a scenario-based measure, Frost's Multidimensional perfectionism scale, Psychological Control Scale, Parental Bonding Instrument, Beck's Depression Inventory, and Rosenberg's Self-esteem scale.

### RESULTS

Parental psychological control was positively correlated with all subscales of perfectionism, except organization. Overall perfectionism was negatively correlated with both parental dimensions (care and over-protection) on the parental bonding instrument. Parental expectations on the measure of perfectionism was positively correlated with parental over-protection, while paternal psychological control was significantly associated with shame and guilt. Paternal psychological control was positively associated with scores on depression and negatively with self-esteem.

Perfectionism was positively correlated with subscales of shame, detached and external, and guilt. While guilt was associated with personal standards, parental expectations, and organization suggesting social messages in the context of parenting, shame was associated positively with all dimensions of perfectionism, except organization. Only personal standard considered a positive aspect was associated with higher self-esteem. As expected, greater depression severity was associated with higher scores on all dimensions of perfectionism except personal standards and organization. Depression was significantly associated with total shame, external, but not with total detached/unconcerned, and guilt. Gender differences were noted with females reporting greater guilt, and males reporting higher parental criticism, concern over mistakes, and personal standards on FMPS. Females also reported greater experiences of paternal care while males reported greater experience of parental control from both parents.

Psychological control by the mother and paternal over-protection were significant predictors of overall perfectionism. Concern over mistakes and doubts over actions on the perfectionism scale were significant predictors of shame.

### CONCLUSIONS

Parental psychological control plays an important role in maladaptive perfectionism, and self-conscious emotions in young adults. Greater maladaptive perfectionism is associated with the experience of shame and guilt. Shame and guilt as self-evaluative emotions also impact mood and self-esteem, beyond their regulatory functions. The results are discussed in the context of available literature, cultural factors, and implications for addressing these variables in interventions.

# POSTER SESSION 04

Abstract No.: 1014

## Is Punishment Learning Biased by Rumination in an Online Feedback-Based Probability Learning Task? A Processing Modes Perspective

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### INTRODUCTION

Rumination is a factor of depression that is characterized by two thought modes—excessive abstract (evaluative) thought and infrequent concrete (experiential) thought. Although previous findings and the integrated theory of rumination have suggested that individuals with rumination inhibit the performance of punishment learning, few empirical studies have examined their associations. Moreover, research has yet to distinguish the role of thought modes in this context. Therefore, our study investigated the relationship between rumination and punishment learning using an online probability learning task.

### METHODS

The study included 95 undergraduate and graduate students (N=95; 67 females; Mage = 21.23 years; SD = 1.60 years) who completed all tasks on an online experimental platform. Participants were asked to complete a probabilistic learning task with punishment feedback. After completing questionnaires designed to measure processing modes and current mood states, they conducted the task. In the task, participants were presented with two meaningless figures and were asked to select one of them, which may result in punishment feedback. Correct and incorrect conditions were associated with different punishment probabilities (A: 30%, B: 70%; or A: 70%, B: 30%); however, participants did not inform the probabilities. Participants were also instructed to avoid punishment as much as possible. Using computational modeling, we analyzed the performance of punishment learning and how participants noticed the punishment probability with the figures.

### RESULTS

The results indicated a negative association between concrete thought modes and punishment learning, but abstract thought modes did not influence punishment learning. These findings suggest that concrete processing mode (not abstract processing mode) could explain the relationship between rumination and punishment learning in healthy individuals.

### CONCLUSIONS

The present study highlights the role of thought modes in punishment learning and provides evidence that concrete processing mode may be associated with punishment learning in individuals who engage in rumination. Based on these results, we are conducting a preliminary experiment for Study 2, in which we will directly manipulate thought modes and investigate the performance of punishment learning.

# POSTER SESSION 04

Abstract No.: 1028

## Detection of Patients with Bipolar Depression Using an Eye-Tracking Paradigm

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### INTRODUCTION

Eye-tracking is an experimental method that records eye movement and gaze position over time and tasks, widely used to observe the allocation of visual attention. Eye-tracking technology provides real-time and intuitive demonstration of both results and processes by accurately measuring the area where the participant's gaze remains and the time spent in that area. Previous research on bipolar disorder in a current depressive episode has shown a decrease in attention to happy images compared to a healthy control group. This suggests that the lack of elaboration to positive stimuli may be a factor in maintaining the depressive episode. Meanwhile, regardless of mood episode, even in asymptomatic patients, attention to threatening images was found to be higher in the healthy control group. However, most studies did not distinguish between subtypes of bipolar disorder or addressed bipolar I disorder only. There is also a limitation stemming from a small sample size. Aim: Through the analysis of eye-tracking patterns in patients with bipolar depression and healthy controls, we aim to reveal differences in attentional bias between the former and the latter.

### METHODS

We will recruit patients with bipolar disorder who are 18-64 years old, have a high school diploma or higher, and are currently in a major depressive episode according to the Mini International Neuropsychiatric Interview criteria, as well as 80 healthy controls, in a department of psychiatry in a general hospital. For the language stimulus, a screen will display words written in red and white at the same time, and the participants will be asked to respond 'yes/no' to whether the meaning of the red word describes their characteristics. For the multi-facial expression stimulus, emotional facial expressions from the Yonsei Face Database, including happy, sad, threatening, and neutral emotions, will be presented in a 2x2 manner on the screen. For the single facial expression and Rorschach stimulus, various facial expressions and the entire Rorschach test will be presented on one screen. Various eye-tracking variables, such as location of first fixation, maintained fixation, relative fixation frequency, and glance duration will be collected. To analyze language stimuli, repeated-measures analysis of variance will be employed to investigate significant differences in attentional biases towards emotional information between two groups for each eye-tracking variable and to examine how well the presented words are remembered in a recognition task. For the analysis of facial expressions and picture stimuli, mixed-model analysis of variance (ANOVA) will be used to investigate significant differences in attentional biases. For the analysis of single facial features and Rorschach images, each image will be divided into multiple areas of interest before applying mixed-model ANOVA.

### IMPLICATIONS

The results of this study can be combined with clinical interviews to enhance the accuracy of diagnosis of bipolar depression, allowing for early therapeutic intervention and improving clinical treatment levels. Moreover, by repeating the test during treatment, it may be possible to modify treatment strategies predicted to have poor therapeutic response, leading to improved quality of life for bipolar disorder patients and reduced duration of illness.

# POSTER SESSION 04

Abstract No.: 1043

## **Effectiveness of Mindful Walking Intervention in Nature on Sleep Quality and Mood Disturbance among University Student during COVID-19: A Randomised Control Study**

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The aim of this project was to conduct a randomised control study to examine whether outdoor mindful walking in nature could effectively improve university students' sleep quality, mood, and mindfulness during the lockdown of the COVID-19 pandemic in the U.K. Participants were measured at T0 (pre-study baseline), T1 (pre-intervention), T2 (post-intervention), and T3 (follow-up). A total of 104 participants (female = 94) who were experiencing sleep difficulties were randomly allocated to either an experimental (i.e. nature) or control (i.e. urban) walking environment. Participants in each walking condition independently undertook a daily 35-minute walk for a week (7 days). Subjective sleep quality, total mood disturbance, mindfulness, and degree of nature, and participants' perspectives and suggestions about the intervention, were collected. Findings suggest that both groups exhibited significant improvements on participant's trait mindfulness, sleep quality and mood after the intervention. However, mindful walking in nature did not bring additional mental health benefits to participants than to those who walked in urban environment. Participants reflected their perspectives about the intervention, which will assist with further intervention development. Additionally, this study also showed significant positive relationships between improvement of sleep quality and decreased total mood disturbance after the intervention. Mediation analyses confirmed that sleep quality was the significant mediator of the relationship between the outdoor mindful walking intervention and mood improvement ( $B = .68$ ; CI [.49 to .88]).

Findings contribute to the evidence base for the effectiveness of outdoor mindful walking interventions on mental health. Especially these findings add new knowledge of how mindful walking outdoors reduces university students' mood disturbances and improves their sleep quality and mindfulness level during the pandemic.

# POSTER SESSION 04

Abstract No.: 1058

## The Double Mediating Effect of Thwarted Interpersonal Needs and Mindfulness on Stress and Suicidal Ideation among Korean Baby Boomers

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### INTRODUCTION

Korean baby boomers refers to the large group of people who were born between 1955 when the fertility rate rose sharply after the Korean War and 1963 when the birth rate slowed due to birth control policies, accounting for about 14.5% of the population. Baby boomers began to enter the aged society in 2020. In 2011, 10 years ago, the suicide rate of baby boomers per 100,000 people was 39.1, but the suicide rate in 2019 rose significantly to 46.6 per 100,000, which is much higher than the OECD (Organization for Economic Cooperation and Development) average of 17.2. This increase in the suicide rate suggests that there is an urgent need for intervention measures in terms of mental health for older adults in Korea, including baby boomers.

### METHODS

This study identified the relationship between stress and suicidal ideation among Korean baby boomers and examined the double mediating effect of thwarted interpersonal needs and mindfulness on this relationship. For this purpose, data were collected from 200 baby boomers (born between 1955–1963) using the stress, suicidal ideation, thwarted interpersonal needs and mindfulness scales. PROCESS Macro 3.5 Model 6 was used to analyze the double mediating effects. Data collection was commissioned by INVIGHT PANEL Co., Ltd., a panel data collection company, to respond to a survey of Korean baby boomers living all over Korea. A survey was conducted with 200 participants, 100 men and women each, to examine the population by making the ratio of men to women the same. The survey was conducted online, and it collected data on demographic characteristics, stress, suicidal ideation, thwarted interpersonal needs, mindfulness measures. The data from 200 questionnaires were used for the analysis.

### RESULTS

Using 95% bootstrap confidence intervals from 5000 bootstrap replications, the double mediating effect of thwarted interpersonal needs and mindfulness on the relationship between stress and suicidal ideation of baby boomers was verified. Verifying the simple mediating effect revealed that the path from stress to suicidal ideation via thwarted interpersonal needs was significant (0.0104~0.0513). Furthermore, the path from stress to suicidal ideation via mindfulness was also significant (0.0071~0.0316). However, it was found that the direct effect of stress on suicide accidents was not significant (-0.0124~0.0462). The sequential double mediating effect of thwarted interpersonal needs and mindfulness on stress to suicidal ideation (stress → thwarted interpersonal needs → mindfulness → suicidal ideation) was 0.0134 (0.0046~0.0257), which was significant.

### CONCLUSION

We reviewed psychological intervention programs on promoting thwarted interpersonal needs, mindfulness to reduce suicidal ideation in the Korean baby boomers. Lastly, this study ends with discussions of implications, limitations, and suggestions for future studies.

# POSTER SESSION 04

Abstract No.: 1059

## **The Cognition-Emotion-Behavior Model and Its Neurophysiological Mechanism of Interpersonal Gratitude**

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The purpose of the present study was to examine the “cognition- emotion-behavior” model and its neurophysiological mechanism of interpersonal gratitude with two following studies to enhance the integrative understanding of interpersonal gratitude. Study 1 was aimed to investigate the cognition-emotion-behavior process of interpersonal gratitude. The path analysis was executed after recruiting 266 healthy controls and 122 depression patients. The result revealed that the three types of locus of control as cognitive variables predicted the level of the interpersonal gratitude, and the interpersonal gratitude predicted not only the level of depressive symptoms but also the reciprocal and prosocial action tendencies, which could be interpreted as the cognition-emotion-behavior model. Study 2 was intended to explore the neurophysiological mechanism based on the cognition-emotion-behavior model of the interpersonal gratitude. The electroencephalogram (EEG) of 65 depressive patients were measured and analyzed. The result showed that the alpha1 power, beta1 power, and the activity of 16 beta1 source to be significantly correlated with the level of interpersonal gratitude. In addition, internal and chance locus of control were significantly correlated with beta1 activity of prefrontal regions, and reciprocal and prosocial action tendencies were significantly correlated with beta1 activity of much more regions including limbic and temporal areas. This study examined the interpersonal gratitude path model and its neurophysiological mechanism using EEG.



# POSTER SESSION 04

Abstract No.: 1062

## **The Effects of Pathological Narcissism on Emptiness in the Undergraduates: The Double Mediating Effects of Actual-Ideal Self Discrepancies and Experience Avoidance**

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This study examined the relationships among pathological narcissism, actual-ideal self-discrepancies, experiential avoidance, and emptiness in the undergraduates.

To examine the relationships among these factors, undergraduates completed self-report measurements such as Pathological Narcissism Inventory(PNI), Actual-Ideal Self-discrepancies Questionnaire, Korean version of the Multidimensional Experiential Avoidance Questionnaire: K-MEAQ-24), and Emptiness scale. A total of 446 data(male: 223, female: 223) were used for the analysis, To analyze data, SPSS 21.0 and SPSS Process Macro 4.3 versions were used.

The main results of analysis showed that all variables had significant positive correlations with each other, except for the correlation between narcissistic grandiosity and self-discrepancies.

The results of this study are as follows. First, self-discrepancies and experiential avoidance showed double mediating effect between pathological narcissism and emptiness in the undergraduates. Second, only experiential avoidance showed mediating effect between narcissistic grandiosity and emptiness. Third, each of self-discrepancies and experiential avoidance showed the single mediating effect between narcissistic vulnerability and emptiness.

This study is meaningful in that it verified the double mediating effects of pathological narcissism, actual-ideal self-discrepancies and experience avoidance on emptiness. Therefore, when we encounter undergraduates with pathological narcissistic tendency complaining emptiness in counseling and clinical scenes, interventions to reduce actual-ideal self-disagreement and experience avoidance are needed, and it can help reduce the emptiness of undergraduate students.

Keyword: Pathological Narcissism, Narcissistic Grandiosity, Narcissistic Vulnerability, Emptiness, Undergraduates, Self-discrepancies, Experiential Avoidance

# POSTER SESSION 04

Abstract No.: 1073

## **Path Analysis of Perceived Mothers' Negative Parenting Behavior, Distress Tolerance, Abandonment Schema, and Relationship Addiction for Young Adults with Borderline Personality Tendency**

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### INTRODUCTION & OBJECTIVE

In the literature, borderline personality disorder (BPD) has been reported to be related to relationship addiction, maltreatment parenting, childhood maladaptive schemas, and low distress tolerance. Given the situation, this study attempted to shed light on the path of relationship addiction manifested in individuals with BPD. This study wanted to address this issue by focusing on young adults whose main developmental task involves building relationship intimacy and established a path model beginning with maternal negative parenting. Based on literature review, this study further set up abandonment maladaptive schema and distress tolerance as sequential mediators which ultimately affect relationship addiction.

### METHODS

For this study, 3,756 early adults between the ages of 19 and 25 in Korea participated in the survey. Personality Assessment Inventory-Borderline Feature Scale (PAI-BOR), Parenting Behavior Inventory, Abandonment Schema Questionnaire, Distress Tolerance Scale and Relationship Addiction Questionnaire were administered to those participants. For the final analyses, individuals obtaining T score  $\geq 62$  in PAI-BOR were selected as individuals showing borderline personality disorder (BPD) tendency. Four-hundred-nineteen (11.15%) were selected based on this criterion. Therefore, the validity of the path model was tested using data from these 419 young adults. Thirty percent of the 419 BPD tendency group belonged to the clinically severe BPD group ( $T \geq 90$  in PAIBOR).

### RESULTS

AMOS 25.0 was used for the analysis of the data, and the mediating effect was verified using Bootstrapping.

Results demonstrated that maternal negative parenting (inconsistency, excessive interference, abuse, neglect) did not directly affect relationship addiction. The most significant path from maternal negative parenting perceived by the BPD tendency group to relationship addiction was a sequential mediation path of maternal negative parenting behavior  $\rightarrow$  distress tolerance  $\rightarrow$  abandonment schema  $\rightarrow$  relationship addiction ( $\beta = .10, p < .01$ ). The second significant path was shown as a simple mediation path of maternal negative parenting behavior  $\rightarrow$  abandonment schema  $\rightarrow$  relationship addiction ( $\beta = .08, p < .01$ ). In the BPD tendency group, the path of distress tolerance  $\rightarrow$  relationship addiction was found not significant.

### CONCLUSION

This study is meaningful in that it confirms the effects of early negative maternal parenting on relationship addiction in young adults with BPD tendency. This study further contributes to enhancing the understanding of BPD by identifying the path through which early maternal parenting is affecting relationship addiction of individuals with BPD. Particularly, this study found the importance of abandonment-related maladaptive schema as a mediator. Inconsistent with the previous findings, this study found that distress tolerance of the BPD tendency group did not directly affect relationship addiction. Given the findings, it is suggested that abandonment schema is an important predictor in the process from negative parenting to relationship addiction in young adults with BPD tendency. Clinical implications were discussed.

# POSTER SESSION 04

Abstract No.: 1074

## Research on Automatic Thought as a Risk Factor for "COVID-19 Blues"

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There is a growing need to study the role of automatic thoughts as a risk factor for COVID-19-related mental health issues, such as the "COVID-19 blues." Automatic thoughts are habitual patterns of thinking that can lead to negative emotions and behaviors. When faced with the stress and uncertainty of the pandemic, individuals may be more prone to experiencing automatic negative thoughts, such as catastrophizing or overgeneralizing, which can contribute to feelings of depression, and hopelessness.

Understanding the link between automatic thoughts and COVID-19-related mental health issues can help inform prevention and intervention efforts. By identifying individuals who are at higher risk of developing mental health issues related to the pandemic, interventions can be tailored to target specific thought patterns and help individuals develop more adaptive ways of coping with stress and uncertainty. Additionally, identifying and addressing automatic negative thoughts early on may prevent the development of more severe mental health issues in the future. Overall, studying the role of automatic thoughts in COVID-19-related mental health issues is crucial for promoting mental health and well-being during and after the pandemic.

The PHQ-9, ATQ-N, and ATQ-P were administered to 200 Korean adult men and women, with the additional question "Have you experienced severe psychological stress due to the coronavirus?" to detect coronavirus blue. Subjects who reported experiencing severe psychological stress due to the pandemic and scored above the cutoff score on the PHQ-9 were categorized into the COVID-blues group, while the rest were categorized as normal. In the statistical analysis process, a logistic regression analysis was conducted with the dependent variable of COVID-blues and the independent variables of ATQ-N and ATQ-P sub-factors. The results showed that the higher the scores of dissatisfaction and negative self-image among the sub-factors of the ATQ-N scale, the higher the likelihood of experiencing COVID-blues. Implications and limitations of the study and directions for further research were discussed.

# POSTER SESSION 04

Abstract No.: 1075

## The Effects of Mindfulness-Based Interventions on Depression and Stress in Korean Family Caregivers of People with Dementia

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### INTRODUCTION

As the number of dementia patients increases rapidly, the number of family caregivers of persons with dementia (PWD) is also increasing rapidly. The importance of relieving burden of care and stress is constantly being emphasized. Recent meta-analyses have shown the effects of Mindfulness-based interventions (MBIs) on depressive symptoms, anxiety, stress, and quality of life in family caregivers of PWD. Mindfulness-based interventions (MBIs) are being widely implemented to reduce stress in nonclinical settings and even, brief MBIs can impact numerous health-related outcomes. The purpose of this study is to evaluate the effects of MBI on depression and stress in family caregivers of PWD in Korea.

### METHOD

In 2019, the authors developed a four-session MBI program for family caregivers of PWD, called 'Hearim for Recovery to Daily Life', with the Korean National Institute of Dementia. "Hearim" is a Korean word with an empathetic meaning that observes the sadness or pain of oneself or others. This MBI program consisted of 4 sessions for 2 hours and trained four subtopics repeatedly: (S)Stopping habitual responses - (L)Look at one's body and movement - (S)See the one's value and behaviour - (L)Listening to one's inner voice. Mindfulness practices include breathing, body scan, heightening awareness of a few simple body motions, exploring value and value-based behaviour, and self-compassion. Program implementation and data collection were conducted at 34 local government dementia care centers from May to July 2021. A total of 325 adults who completed the previous two "Hearim" series program called "understanding dementia" and "Wisdom to care" were enrolled and randomly assigned to the experimental and the control groups. Center for Epidemiological Studies Depression Scale (CES-D), Perceived Stress Scale (PSS), and Stress Response Inventory (SRI) were used to assess depression, stress, and physical stress responses.

### RESULTS

There was no significant difference about subjective stress, somatic stress responses, and depression between two groups before participating in the program. After program, there was a significant difference in all areas of the experimental group that CES-D score (SD) was decreased from 20.48(11.83) to 15.91(11.70), PSS score decreased from 19.14(6.18) to 15.69(6.54), and SRI score decreased from 11.69(8.12) to 8.68(7.80). There was no significant difference in all areas of the control group.

### CONCLUSIONS

As with previous studies, Mindfulness-based intervention programs may be effective in depression, stress, and physical stress responses in family caregivers of PWD. However it is not clear about mechanism of effectiveness, so further studies are needed.

# POSTER SESSION 04

Abstract No.: 1092

## Relationships between Coping Resource Loss, Sense of Coherence, and Mental Health: A Cluster Analysis of a Japanese University Student Sample

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### INTRODUCTION

In the transactional model of stress and coping (Lazarus & Folkman, 1984), psychological stress is defined as a specific relationship between the individual and the environment that they appraise as a threat to their well-being by overloading or exceeding their resources, while Hobfoll (1989) identifies "loss of resources" as one of the situations that can lead to psychological stress. Relatedly, Antonovsky (1987) emphasizes the significant role of Resistance Resources as any internal and external resources that individuals can draw upon to manage stress and maintain their sense of coherence (SOC) and mental health. While the importance of stress coping resources is clear from these previous studies, research on how loss of coping resources, SOC, and mental health are related in Japan is scarce. For this reason, the current study aimed to explore the relationship between coping resource loss, SOC, and mental health among university students in Japan, who generally experience environmental changes and various stressors.

### METHOD

A questionnaire consisting of the following three measurements and a face sheet was administered to 120 students (60 men and 60 women with mean age $\pm$ SD of 20.03 $\pm$ 1.40) at a national university in Japan. The Japanese versions of the World Health Organization's Five Well-Being Index (WHO-5; Awata et al., 2007) and the Sense of Coherence 13-item Scale (SOC-13; Yamazaki & Yoshii, 2001) were used to measure mental health (the clinical cutoff score is 13) and SOC in the participants respectively. The Resource Loss Inventory is a 58-item checklist about resource loss in the four categories of material, social, personal, and energy resources, referring to the Conservation of Resources Evaluation (COR-E; Hobfoll & Lily, 1993). This inventory was used to measure resource loss in the participants over the period from before to after entering university.

### RESULTS

A Ward's hierarchical cluster analysis with squared Euclidean distances based on the Total Resource Loss and SOC scores identified three distinctive clusters: Cluster 1 (n=63), Cluster 2 (n=45), and Cluster 3 (n=12). A one-way analysis of variation (ANOVA) was conducted with the three clusters as independent variables and the Total Resource Loss and SOC scores as dependent variables, and significant group differences were found for both scores (Total Resource Loss:  $F(2,117)=305.44$ ,  $p<.001$ , SOC:  $F(2,117)=14.36$ ,  $p<.001$ ). Multiple comparisons using Tukey's HSD method (5% level) showed significant group differences (Cluster 3>Cluster 2>Cluster 1 for Total Resource Loss and Cluster 1>Cluster 2>Cluster 3 for SOC). Cluster 1 was then identified as the "low resource loss and high SOC" group while Cluster 2 was as the "medium resource loss and medium SOC" group and Cluster 3 was as the "high resource loss and low SOC" group. A one-way ANOVA showed that the Mental Health scores of the three clusters significantly differed ( $F(2,117)=4.95$ ,  $p<.01$ ), and the multiple comparisons showed a significant difference in the scores between Cluster 1 (M=16.43) and Cluster 2 (M=14.04). A similar three-cluster solution was also observed for each subgroup resource loss (material, social, personal, and energy), and the mean mental health score of the "high personal resource loss and low SOC" group (M=11.50) was the only one below the clinical cutoff of the WHO-5.

### DISCUSSION

The results indicate that the degree of mental health may differ among groups by the extent of an individual's resource loss and SOC. Also, the lower degree of mental health in the group with high personal resource loss and low SOC is worthy of attention. These findings suggest that considering the relationships between resource loss and mental health can have clinical implications in the assessments of and interventions for individuals' or groups' well-being, and further examination and future research involving other relevant factors, including SOC, are also warranted in Japan.

# POSTER SESSION 04

Abstract No.: 1093

## The Clinical Characteristics of Patients with Borderline Personality Disorder and the Effectiveness of Mentalization Based Treatment and Structured Clinical Management: A Preliminary Report on Interim Analysis

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### INTRODUCTION

Randomized controlled trials have shown evidence-based psychological treatments, such as mentalization-based treatment (MBT) or dialectical behavioral treatment (DBT), to be effective for borderline personality disorder (BPD). Although the large socioeconomic burden due to high suicidality rate and increased usage of medical services among BPD patients, there is a lack of long-term cohort research on the effectiveness of treatment for BPD patients in South Korea. Accordingly, this study aimed to investigate the clinical characteristics of patients with BPD in comparison to health controls (HC) and the effectiveness of a 12-months MBT against SCM outpatient approach for treatment of BPD in South Korea.

### METHOD

Participants have been recruiting at Gangnam Severance Hospital since March 2021, and those meeting BPD criteria were randomly allocated to MBT or SCM. Sixty-eight participants (40 BPD patients and 28 HC) have been recruited until now. Among them, 17 patients (11 MBT and 6 SCM) finished the treatments for 12 months. Outcome measures were assessed at baseline and after 6- and 12-months. An independent sample t-test, repeated measures ANOVA (RM ANOVA), and paired sample t-test for follow-up analyses were conducted for statistical analyses.

### RESULTS

Patients with BPD showed significant differences in adverse childhood events ( $t(62.97) = 9.16, p < .001$ ), depressive symptoms ( $t(66) = 8.50, p < .001$ ), suicide risk ( $t(49.77) = 9.87, p < .001$ ), resilience ( $t(66) = -10.05, p < .001$ ), self-reported borderline personality symptoms ( $t(65.06) = 16.25, p < .001$ ) compared to HC. Also, mentalization capacity ( $F(2, 30) = 5.995, p = 0.006$ ), resilience ( $F(2, 30) = 3.99, p = 0.029$ ), and depressive symptoms ( $F(2, 30) = 3.37, p = 0.048$ ) significantly differed between time points but did not differ significantly between treatment groups. Follow-up analyses using paired sample t-test showed that mentalization capacity of MBT group increased from baseline to after 6-months as well as from baseline to after 12-months,  $t(10) = 3.38, p = .007$ ; baseline  $M = 37.27, SD = 7.16$ ; after 6-months  $M = 33.36, SD = 7.15$ ;  $t(10) = 3.64, p = .005$ ; baseline  $M = 37.27, SD = 7.16$ ; after 12-months  $M = 28.73, SD = 10.94$ . However, mentalization capacity of SCM group did not statistically significant all between time points. The levels of resilience of MBT group increased from baseline to after 6-months as well as from baseline to after 12-months,  $t(10) = -2.49, p = .032$ ; baseline  $M = 143.82, SD = 23.48$ ; after 6-months  $M = 154.91, SD = 20.18$ ;  $t(10) = -2.83, p = .018$ ; baseline  $M = 143.82, SD = 23.48$ ; after 12-months  $M = 160.82, SD = 12.68$ . However, resilience scores of SCM group did not statistically significant all between time points. Both treatment groups did not show a significant difference in depressive symptoms across all time points.

### DISCUSSION

These results substantiate the previous research that the patients with BPD demonstrated higher levels of adverse childhood events, depressive symptoms, suicide risk, and self-reported borderline personality symptoms, and lower levels of resilience. Based on these results, it may be inferred that the patients with BPD in this study well reflected the clinical characteristics of BPD. Furthermore, both

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treatment groups were associated with significant decrease in depressive symptoms and increase in mentalization capacity and resilience through the treatment. In particular, patients in MBT group showed increase in mentalization capacity and the levels of resilience not only from baseline to after 12-months but also to after 6-months. However, because participants per treatment group are quite small, further evaluations with more samples are recommended.

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# POSTER SESSION 04

Abstract No.: 1094

## A Pilot Study of Mindfulness Based Counseling Program(MBCP) in Comprehensive Cardiac Rehabilitation

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### INTRODUCTION

Heart diseases has become the foremost cause of health burden worldwide. These diseases can result in significant stress, chronic stressors such as anxiety and depression which are regarded as the independent risk factors for cardiovascular disease. Despite of improvements in treatments, the prognosis of cardiovascular disease remains poor. Cardiac rehabilitation(CR) is a valuable treatment for patients with various cardiac disease. Although cardiac rehabilitation has traditionally focused on exercise, recent European guidelines emphasize the need for diet and psychological counseling in addition to exercise. Mindfulness is often defined as the ability to attend in a non-judgmental way to one's own physical and mental processes during ordinary, everyday tasks. Mindfulness therapy has showed the considerable potential in improving the psychological outcomes in patients with chronic pain, obesity, hypertension, depression, and anxiety, including cardiovascular disease. Therefore in this study, we developed a Mindfulness Based Counseling Program(MBCP) as a psychological intervention in comprehensive CR and applied it together with exercise and dietary counseling to cardiac patients.

### METHOD

Health-Related Quality of Life (Health-related quality of life, HRQL; Ware, Kosinski, & Keller, 1996), Domain Satisfaction(Boehm et al., 2011), Type D Scale 14, Patient Health Questionnaire-9 (Kroenke et al., 2001), Generalized Anxiety Disorder-7, Perceived Stress Scale(Cohen, 1983), 40 items total were administered to 13 participants who had a history of either heart failure with reduced ejection fraction myocardial infarction. 6 participants were assigned to exercise based CR group and 7 participants were assigned to comprehensive CR group. All participants in comprehensive CR group received 6 week MBCP program and exercise, dietary counseling as well. In MBCP program, 2 sessions(30 minutes per session) were conducted face-to-face and 4 sessions(20 minutes per session) were consisted of phone counseling and online mindfulness training resources. MBCP program consisted of psychological counseling, mindfulness education(eg., Mindful Raisin Eating, Body Scan, Mindful Breathing, Mindful Walking, etc.), help increase the motivation to maintain health behaviors.

### RESULTS

The Wilcoxon signed-rank test was used to test for pre-post differences in the comprehensive CR group, and showed that General Health improved on health-related quality of life measures( $p < .04$ ) and a reduction in anxiety(GAD-7) measures( $p < .03$ ). Negative affectivity of Type D personality also tended to decrease from pre to post( $p < .07$ ). Perceived stress also tended to decrease from pre to post( $p < .06$ ). The Wilcoxon signed-rank test was used to test for pre-post differences in exercise group, and showed reduction in depression(PHQ-9) measure( $p < .04$ ). Mann-Whitney U test was used to test for the differences in post-test scores between comprehensive CR group and exercise group. As a result, Body Pain measure showed an increase in exercise group( $p < .09$ ).

### DISCUSSION

The aim of this study was to investigate the feasibility of a psychological intervention program MBCP in comprehensive cardiac rehabilitation for people with heart disease. The results of CR group showed that General Health improved on health-related quality of life and a reduction in anxiety. Also, there was improvements in negative affect(in Type D personality) and perceived stress decreased. Participants in the exercise group showed a decrease in depression. Comparing the difference in post-test scores between the comprehensive CR group and the exercise group, participants in the exercise group showed an increase in Body Pain, suggesting that



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they were better able to deal with their body pain after participating in the comprehensive rehabilitation program.

The sample size in this study was not large enough to generalize the findings. Furthermore, it is noteworthy that the program MBCP was conducted somewhat after the diagnosis of heart disease or hospitalization, which may have reduced the participants' psychological discomfort and desire for psychological counseling. Nevertheless, it is significant that our study was almost the initial attempt of psychological intervention for heart disease in Korea. For further studies, larger sample may be needed and should consider implementing the psychological intervention soon after the diagnosis or during hospitalization. We also suggest that developing an application to manage exercise, diet, and psychological programs will be convenient for participants.

# POSTER SESSION 04

Abstract No.: 1101

## **The Effect of Work Overload on Job Burnout: The Moderation Effect of Problem Focused Coping and Job Autonomy**

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### BACKGROUND

Job burnout has deepened and expanded in the modern work environment characterized by work specialization, informatization, convergence and integration. This study confirmed the interaction between the individual and the environment in the process of high-skilled, unstructured job stress leading to burnout.

### METHODS

In this study, the moderation effect of problem-focused coping and job autonomy was examined in the relationship between work overload and job burnout, targeting 150 employees (mean age = 40.7, female 68.7%) of large commercial bank branches in Korea,

### RESULTS

First, the moderation effect of problem-focused coping in the relationship between work overload and job burnout was not significant. Second, the effect of work overload on job burnout was found to be different according to the level of problem-focused coping and job autonomy.

### CONCLUSIONS

The results of this study confirmed that the autonomy of the work environment must be guaranteed in order for problem-focused coping to work effectively in excessive work situations.

# POSTER SESSION 04

Abstract No.: 1114

## Relationships between BIS/BAS and Anger Ruminations in Japanese College Students

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### INTRODUCTION

Anger rumination increases the intensity of anger experience, and is associated with increased depression, hostility, and aggression (Izadpanah et al., 2017). Anger rumination is an inward anger response that is defined as repetitively and passively focusing on one's distress (Nolen-Hoeksema et al., 1997). According to Cooper et al. (2008), the behavioral inhibition system (BIS) leads to inward anger reactions. Khoshfetrat et al. (2022) found that BIS is positively correlated with anger rumination. This study examined the relationship between BIS/BAS and anger rumination in Japanese college students.

### METHOD

The Japanese version of the Behavioral Inhibition/Behavioral Activation Scales (BIS/BAS; Takahashi et al., 2007) and The Japanese version of the Anger Rumination Scale (ARS; Hatta et al., 2013) were administered to 418 college students (132 males and 286 females with mean age  $\pm$  SD of  $20.96 \pm 3.61$ ). The Japanese version of BIS/BAS consisted of 20 items, which were including assessing measures of the BIS, BAS-Drive, BAS-Reward Responsiveness, and BAS-Fun Seeking for each item. ARS consisted of 17 items with three subscales (Anger Reflection, Memories of Anger Experience, and Thoughts of Revenge).

### RESULTS

Correlation coefficients between the four subscales of BIS/BAS and three subscales of ARS were examined. BIS has positive correlations with Anger Reflection ( $r = 0.52, p < 0.01$ ), Memories of Anger Experience ( $r = 0.45, p < 0.01$ ), and Thoughts of Revenge ( $r = 0.22, p < 0.01$ ). BAS-Drive has positive correlations with Thoughts of Revenge ( $r = 0.13, p < 0.01$ ). BAS-Reward Responsiveness positive correlations with Anger Reflection ( $r = 0.23, p < 0.01$ ), Memories of Anger Experience ( $r = 0.21, p < 0.01$ ), and Thoughts of Revenge ( $r = 0.23, p < 0.01$ ). BAS-Fun Seeking has positive correlations with Thoughts of Revenge ( $r = 0.14, p < 0.01$ ).

### CONCLUSIONS

In the present study, Anger Reflection and Memories of Anger Experience have positive correlations to BIS. Conversely, BAS was not significantly correlated with the anger rumination subscales or, if significantly correlated, the correlation coefficients were small. These results are consistent with previous studies and indicate that BIS is a factor that increases inward anger among Japanese college students. Note. The study was granted ethics approval by the Research Ethics Committee at HSU (2022-0005).

# POSTER SESSION 04

Abstract No.: 1118

## Transdiagnostic Processes of Cognitive Vulnerabilities in Emotional Psychological Conditions

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*National University of Singapore, Singapore*

### INTRODUCTION

Recent literature has expounded the presence of transdiagnostic processes and a shared latent internalising factor in emotional psychological conditions (or "emotional disorders", e.g., major depressive disorder, generalised anxiety disorder), exerting significant bearing on the proposed shift from broadly categorical diagnostic nosologies to one that is transdiagnostic. Yet, there has not been any published scale for the assessment of a multitude of transdiagnostic processes across emotional psychological conditions. The present study sought to assess these processes and the posited latent internalising factor through the application of the novel Transdiagnostic Processes for Emotional Symptoms Scale (TPESS; Hong et al., 2021).

### METHODS

TPESS, gold-standard questionnaires for symptoms of emotional psychological conditions and the Mini International Neuropsychiatric Interview (MINI) were administered at baseline (T1) and 6-months post-baseline (timepoint 2; T2). Structured equation modelling (SEM; factor analysis, path analysis) and multiple linear regression were applied to study the factor structure of the TPESS and associations between TPESS and the hypothesised internalising factor derived from the symptom measures.

### RESULTS

506 students from the National University of Singapore, aged 18 to 30, were recruited.

Results demonstrated the presence of a transdiagnostic core for emotional psychological conditions as measured by the TPESS ( $\chi^2 = 249.777$ ,  $df = 33$ ,  $p < .001$ ). The transdiagnostic core significantly predicted a latent internalising factor at T2 ( $\beta = .55$ ,  $p < .001$ ;  $\chi^2 = 350.713$ ,  $df = 101$ ,  $p < .001$ ). This association was no longer significant when controlling for the latent internalising factor at T1 ( $\beta = .09$ ,  $p = .248$ ).

### DISCUSSION

The overall findings suggested that TPESS is a reliable measure of transdiagnostic cognitive vulnerabilities and an overall transdiagnostic core in emotional psychological conditions. This transdiagnostic core can further predict stable internalising dimensions shared by present DSM-V emotional psychological conditions. The study underscores the dimensional structure of emotional psychological conditions, hence the need for modifications to existing condition-specific assessments and treatment protocols to incorporate transdiagnostic elements.

# POSTER SESSION 04

Abstract No.: 1123

## Shared and Distinct Neurocognitive Features of Internet Gaming Disorder and Alcohol Use Disorder

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### BACKGROUND

An imbalance between goal-directed (model-based) and habitual (model-free) decision-making systems is a common feature in addictive disorders. However, little is known about whether similar decision-making deficits appear in internet gaming disorder (IGD). This study compared neurobehavioral features associated with model-based and model-free systems in IGD and alcohol use disorder (AUD).

### METHOD

Inside the functional magnetic resonance imaging (fMRI) scanner, individuals diagnosed as IGD (n = 22) and AUD (n = 22) and healthy control (HC; n = 30) performed the two-step task, a well-validated task for assessing the contribution of model-based and model-free systems in decision-making. We provided a mechanistic account of choice behavior using computational modeling and hierarchical Bayesian analysis. Then, we performed a model-based fMRI analysis to identify neural correlates of model-based and model-free prediction errors in each group.

### RESULTS

Computational modeling results suggest that the model-based weights did not differ among the three groups. However, neural correlates of the model-based prediction error dissociated the IGD group from the others. The IGD group showed significantly lower activation in the right orbitofrontal cortex compared to the AUD group ( $t=-4.82$ ,  $p<0.001$ ) and greater activation in the bilateral insula compared to the HC group ( $t=4.66$ ,  $p<0.001$ ).

### CONCLUSIONS

We found distinct neural mechanisms underlying goal-directed behaviors in IGD, compared to AUD and HC. This finding suggests that excessive gaming might entail aberrant decision-making processes.

# POSTER SESSION 04

Abstract No.: 1127

## **Examining the Efficacy of a Standardized Positive Mental Imagery Intervention Using Cognitive Bias Modification and IAPS Stimuli on Reducing Depressive Symptoms among University Students: A Randomized Controlled Trial**

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### INTRODUCTION

Depressed individuals often have difficulty generating positive mental imagery about the future. Although interventions to promote positive imagery have been developed for the treatment of depression, there is a lack of standardized intervention procedures. In this study, we developed an intervention for promoting positive imagery in depression using a Cognitive Bias Modification approach, using standardized International Affective Picture System (IAPS) stimuli and Korean affective words, and tested its effectiveness in reducing depressive and negative affect and increasing positive affect among university students with a tendency for depression.

### METHODS

This study was a randomized controlled trial. 48 university students with depressive tendencies were selected and randomly assigned to three conditions: positive imagery intervention (N=16), positive language intervention (N=16), and control imagery condition (N=16). Each condition performed a task using neutral IAPS pictures and positive or negative Korean words. The intervention procedures for each condition were as follows: (1) Participants in the positive imagery condition were instructed to generate vivid mental images of possible future events using a neutral picture-positive word pairing presented randomly on a computer screen. (2) Participants in the positive language condition used the same neutral picture-positive word pairing but generated verbal descriptions of future events instead of using mental imagery. (3) Participants in the control imagery condition also generated mental imagery but using neutral picture-positive and neutral picture-negative word pairings in equal numbers. Before and after the intervention, all participants completed the Korean version of the Prospective Imagery Task, the Center for Epidemiologic Studies Depression Scale, the Positive and Negative Affect Schedule, and the State-Trait Anxiety Inventory-State, and changes were measured.

### RESULTS

The positive imagery intervention condition showed significantly greater reductions in negative affect, depression, and state anxiety compared to the control imagery condition, and significantly greater increases in positive affect and positive imagery ability. Moreover, the positive imagery intervention condition showed significantly greater reductions in depression and state anxiety compared to the positive language intervention condition. These results suggest that the positive imagery intervention may be an effective way to intervene in depression.

### CONCLUSION

This study provides evidence that a standardized positive imagery intervention using standardized IAPS stimuli and Korean affective words is effective in reducing depressive and negative affect and increasing positive affect and positive imagery ability among university students with depressive tendencies.

# POSTER SESSION 04

Abstract No.: 1130

## Physiological Responses to Social Rejection in Non-suicidal Self-Injury

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### INTRODUCTION

Non-suicidal self-injury (NSSI) refers to deliberate, self-inflicted harm to one's body without the intention of suicide. NSSI is strongly associated with interpersonal stress (Peel-Wainwright et al., 2021), and there is growing concern that individuals who have difficulties regulating their emotions in social situations use NSSI as a coping strategy (Nock & Prinstein, 2004).

Several recent studies have reported altered physiological responses when individuals with NSSI face social stress, such as changes in brain activity (Dahlgren et al., 2018; Hooley et al., 2020) or abnormalities in the hypothalamic-pituitary-adrenal (HPA) axis identified by altered cortisol responses (Klimes-Dougan et al., 2019; Reichl et al., 2019). However, there is a scarcity of research on the physiological response of the autonomic nervous system (ANS) in individuals with NSSI.

In this study, we observed the physiological response of individuals with NSSI through a virtual reality (VR)-based social rejection task, which aimed to examine how those with NSSI perceive and process social stress.

### METHODS

The present study examined the physiological responses of young adults with and without NSSI using a VR-based social rejection task. The task simulated an online chat environment in which participants received direct feedback on their opinions from others. Most of the feedback given to participants was negative, designed to induce feelings of social rejection, such as ("I think that's a stupid idea!") and ("You're so lame.")

The study involved 20 participants with NSSI and 36 control participants who completed a VR-based social rejection task while their skin conductance and heart rate (measured through photoplethysmography; PPG) were monitored. Along with baseline physiology response measured in a resting state before the VR task, responses throughout the task were measured repeatedly.

Rejection sensitivity was assessed with the rejection sensitivity questionnaire (RSQ; Downey & Feldman, 1996). Physiological responses were measured as mean levels of skin conductance response (SCR) and heart rate variability (HRV). SCR was assessed through the intensity and number of suprathreshold skin conductance responses. HRV was calculated as a time domain measure, including the standard deviation of intervals between adjacent beats (SDNN). Two-sample t-test and 2×2 (group × task) repeated measures analysis of variance ANOVA were conducted to determine any group differences and the effects of the social rejection task.

### RESULTS

For all participants, significant changes were observed in HRV but not in SCR during the VR-based social rejection task. Notably, the task had a significant main effect on SDNN ( $F=4.71, p=.034, \eta^2=.080$ ). These physiological results indicate that the task caused increased distress, resulting in more irregular heartbeats, and suggest that the experimental manipulation was valid.

Regarding the RSQ scores, the NSSI group has higher levels of rejection sensitivity than the control group ( $M=10.73, SD=3.30; M=8.50, SD=2.59$ , respectively;  $t(54)=2.802, p=.007$ ). However, the group interaction effect was insignificant ( $F=2.36, p=.013, \eta^2=.042$ ). Furthermore, there were no significant differences in baseline SCR and HRV. Our findings suggest that individuals with NSSI do not have significantly different physiological responses to social rejection compared to the control group.

### CONCLUSION

The current results imply that there may be a discordance between the HPA axis and the ANS in response to stress, which could be attributed to cognitive factors related to stress processing. Future research is needed to explore further the interaction between the HPA axis and the ANS under social stress.

# POSTER SESSION 04

Abstract No.: 1135

## **Momentary Emotion Goals, Emotion Malleability Beliefs, and Depression in Individuals with Depressive Disorders: An Ecological Momentary Assessment Study**

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A person's desired emotion, an emotion goal, is an integral part of emotion regulation process. Understanding one's emotion goals can be particularly important for individuals who struggle with emotion regulation, such as those with depression. Using ecological momentary assessment (EMA), this study aimed to examine whether momentary emotion goals of people with depression would predict changes in subsequent depression in daily life as well as future depressive symptoms at 4-5 weeks after the baseline. A total of 50 female participants with depression reported their momentary emotion goals and depression 3 times a day for the 7-day EMA study and 43 students reported depressive symptoms at both Times 1 and 3. Results showed that desired low arousal positive emotion (LAP) at T-1 buffered the effects of prior depression on depression at the following timepoint: the more a person wanted to feel LAP at the prior timepoint, the impact of prior depression on subsequent depression decreased. At the mean level, greater desired-experienced discrepancies of depression and LAP predicted increases in future depressive symptoms. These results highlighted the importance of emotion goals, particularly desired LAP, in understanding depression.

Keywords: desired emotion, emotion preference, depression



# POSTER SESSION 04

Abstract No.: 1142

## **Momentary Emotion Goals, Emotion Malleability Beliefs, and Depression in Individuals with Depressive Disorders: An Ecological Momentary Assessment Study**

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### **BACKGROUND**

Mild cognitive impairment (MCI) is a condition characterized by cognitive decline greater than expected for age but not meeting criteria for dementia. There is a growing interest in understanding the emotional processing abilities of patients with MCI, as emotional processing plays a critical role in social interactions and may contribute to difficulties with daily functioning. However, the extent to which patients with MCI have impaired recognition of emotions in facial expressions compared with healthy controls remains unclear.

### **METHODS**

In this study, we compared the recognition of emotions in facial expressions between patients with MCI and healthy controls. We recruited 41 patients with MCI and 12 age- and gender-matched healthy controls. Participants completed a facial emotion recognition task in which they viewed pictures of faces displaying six basic emotions (anger, disgust, fear, happiness, sadness, and surprise) and neutral, and were asked to identify the emotion displayed.

### **RESULTS**

Patients with MCI showed significantly lower accuracy in recognizing emotions in facial expressions compared with healthy controls ( $p < .05$ ). Specifically, patients with MCI had lower accuracy in recognizing emotions of happy, disgust, and neutral, but not anger, fear, sadness, or surprise.

### **CONCLUSION**

Our findings suggest that patients with MCI have impaired recognition of certain emotions in facial expressions compared with healthy controls. These results highlight the importance of assessing emotional processing in patients with MCI and suggest that interventions aimed at improving emotional processing may benefit this population. Further research is needed to explore the underlying mechanisms of these deficits and to determine the clinical relevance of these findings.

# POSTER SESSION 04

Abstract No.: 1147

## **Parental Psychological Control and Internalizing Symptoms in Emerging Adulthood: A Cognitive Mechanism**

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Parental psychological control—parents' covert control over children's behavior—has often been linked to symptoms of internalizing disorders (e.g., depression and anxiety). However, despite this well-established relationship, its underlying mechanisms remain largely unknown. In view of well-established cognitive theories of affective disorders (e.g., Beck's Cognitive Theory of depression, Young's theory on early maladaptive schemas; Beck, 1976; Young, 1994), cognitions play a pivotal role in influencing emotional maladjustment. Thus, we sought to investigate a cognitive mechanism that explains this relationship. Testing emerging young adults, we found that sense of control and negative automatic thoughts serially mediate the relation between parental psychological control and depressive and anxious symptoms. Moreover, both maternal and paternal use of psychological control resulted in similar outcomes. This study adds to current literature by explicating the specific cognitive pathways that underlie parenting and symptoms of internalizing symptoms, and inform interventions that address the negative consequences of experiencing psychologically controlling parenting practices.

# POSTER SESSION 04

Abstract No.: 1163

## **A Clinical Case Study of Cognitive Behavioral Therapy for a Korean Woman with Schizophrenia: Changes to Life of Dignity**

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This case study is to show the efficacy of cognitive behavioral therapy for a Korean woman in her 30's with schizophrenia. Schizophrenia is a chronic mental disease with poor prognosis, which requires for a life-long management. The data analysis was conducted using the psychotherapy verbatim of 10 sessions. Based on the client's chief complaints, the therapeutic goals of this study are 1) changing the core belief that she is an incompetent being into more adaptive coping belief, 2) helping recognize that hallucinations and delusions are 'just internal experience' and manageable, 3) helping her with positive emotions, 4) helping her discover strengths and find the meaning of life. The client's participation in sessions was very cooperative, and during the 10 sessions, she filled out the assigned thought record sheets and practiced one enjoyable activity every day without omission. It was found that by using assertive training skills in stressful situations, she changed for rational problem-solving direction. A dose reduction of 0.5 mg of risperidone was made during outpatient treatment during the session. The client modified her core belief that she was incompetent to the more adaptive one. She reported that although she had schizophrenia, she can lead a social life and become independent while managing the disorder well, and when hallucinations and delusions are activated, she was capable of utilizing various coping skills learned from the sessions. She was able to check negative automatic thoughts, while distinguishing and objectifying delusions and cognitive errors from what could actually happen. She maintained a positive mood through the activities of practicing enjoyable activities every day without missing, and reported that her strength was 'listening to other people's stories', and her dream is to help other people by doing peer vocational support activities related to her mental challenges. The findings indicate that through psychoeducation, normalization of symptoms contributed to reduction of stigma and incompetence. Additionally, self-monitoring her distorted thoughts by filling out them on thought record sheets throughout sessions led to adaptive thinking, while accepting as she is. Creative interventions the therapists used in each session will be discussed in terms of collaborative empiricism.

# POSTER SESSION 04

Abstract No.: 1166

## **The Effects of Covert Narcissism and Overt Narcissism on Chronic Self Destructiveness: Mediation Effect of Impulsivity**

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The purpose of this study was to verify the relationship between Covert Narcissism(CN), Overt Narcissism(ON) and Chronic Self Destructiveness(CSD) and the mediation effect of impulsivity. Covert Narcissism Scale(CNS), Narcissistic Personality Disorder Scale(NPDS), Chronic Self Destructiveness Scale(CSDS) and UPPS-P were used in 52 adults. The major question of this study is firstly, how are CN, ON, CSD, and impulsivity influenced each other? Secondly, do CN and ON have a relevant impact on CSD? Lastly, does impulsivity have a mediation effect on the relationship between CN, ON and CSD? The result of this analysis are summarized as follows. Firstly, as a result of correlation analysis, CN showed a significant positive correlation with CSD, whereas ON did not show correlation with CSD. CN and ON both showed positive correlation with impulsivity, and impulsivity showed positive correlation with CSD. Secondly, as a result of regression analysis, CN and every sub-factors of CN(goal insecurity, need for recognition/huge self-illusion, exploitation/self-centeredness, hypersensitivity/vulnerability, timidity/lack of self-confidence) showed to have a positive effect on CSD. However, ON did not have a effect on CSD, and only the sub-factor self-centeredness showed to have a positive effect on CSD. Thirdly, impulsivity had a mediation effect between the relationship between CN and CSD. However, the direct effect between CN and CSD was also supported meaning that impulsivity was not the only variable to explain the relationship between CN and CSD.

## Social Cognitive Training for Early Psychosis: Protocol for a Pilot Study

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### BACKGROUND AND AIMS

Despite the surging interest on implementing evidence-based practice for people with severe mental illness, there has been comparatively a few attempts to devise empirically supportive treatment for people who experienced first episode psychosis (FEP). Recently increasing international guidelines have recommended administering services targeting individuals experiencing clinically high risk or ultra-high-risk (UHR) psychosis. In fact, after the onset of a psychotic episode, conducting early intervention is known to be highly concerned with reducing personal burden and societal pressure. FEP often result in extreme level of distress and functional deterioration. Yet, several concerns have been raised concerning the duration of treatment effect and the generalizability of the knowledge gained from the training. As some studies including the cognitive remediation study revealed the importance of adapting the learned skills to individuals' actual daily lives, it would also be essential to offer opportunities to practice social skills in real-life situations.

The intervention that includes both the social cognitive training components and behavioral activation components is called SCoBA. This is a novel and encouraging approach towards people who have recently experienced FEP or who are exposed to the highly risky environment of gaining psychosis. The SCoBA study is an interesting approach to optimize the behavioral and functional benefits of interventions for Early Psychosis (EP). It includes various intervention that combines (a) Social Cognitive Skills Training (SCST) with (b) Behavioral Activation (BA) therapy.

The aim of this study is to develop the protocol that could be utilized practically in actual lives of people suffering from FEP or people classified as UHR population. Furthermore, development and dissemination of the above program can be a starting point to practice prevent the long duration of untreated psychosis in the community.

### METHODS & DESIGN

SCoBA is a 20-session group-based intervention which is expected to be done in 10 or 20 weeks as it can be implemented once or twice a week. The therapy is mainly consisted of four modules related to social cognitive training: 1) emotion perception through facial recognition; 2) social perception; 3) attributional bias; and 4) theory of mind. In addition, the protocol would include role-playing and worksheet activities to prepare participants before integrating the skills in their lives. Meanwhile, participants will also be spared with a session to think of ways to increase adaptive and nondepressed behaviors and to decrease unhealthy avoidant behaviors. As individuals undergoing prodromal phase of psychosis have a high possibility to step back from behaviors of multiple domains in life, the above practice can assist them to at least not deny their interest in pursuing interpersonal relationships and engaging in numerous social situations. During the process of the intervention, participants will receive psycho-education about chaotic and disorganized experience during and after FEP or in the stage of UHR. As therapists grab the opportunity to figure out the stressful events and personal stressors, individuals will be able to design and work on their own techniques in dealing with the environment they are surrounded with.

### DISCUSSION

The present study is expected to contribute to the field of cognitive and behavioral therapy or recovery by investigating the feasibility and effectiveness of the trial. This main purpose of this study is to make the basis for evaluating the effect of the program on social cognition and behavioral activation. We hypothesized that the intervention will prove improvements in emotion perception, theory of mind, intrinsic motivation, and the overall mood symptoms. Considering the fact that FEP and UHR population are undergoing a serious level of confusion due to their decline in functioning, the process of planning and fulfilling each of their target behaviors step by step could naturally facilitate self-efficacy and competency. As we are pursuing to advance toward a sustainable future, this could be a meaningful start for clinicians and researchers to actively think of ways to expand services specialized for FEP and UHR population.

Keywords: Early psychosis, First episode psychosis, Early intervention, Ultra-high risk, Social cognition, Behavioral activation



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