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EABCT 2022

EUROPEAN ASSOCIATION FOR BEHAVIOURAL
AND COGNITIVE THERAPIES

**Re-Thinking CBT: *providing
strategies for a new way
of living***

September 7-10, 2022

Universidad Pompeu Fabra
Campus Ciutadella.
Barcelona, Spain

ABSTRACTS



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Keynote Addresses	
1 – 12	Pages 3 – 7
Symposia Thursday	
1 – 39	Pages 8 - 40
Symposia Friday	
40 – 57	Pages 41 – 91
Symposia Saturday	
58 - 70	Pages 92 - 123
Open Paper Symposia Thursday	
1 - 7	Pages 124 - 138
Open Paper Symposia Friday	
8 – 18	Pages 139 - 154
Open Paper Symposia Saturday	
19 - 29	Pages 155 – 174
Special Interest Group	Page 175
Technical Demonstration	Page 176
Panel Debates	Page 177
Roundtables	Page 178
Skills Classes 1 – 12	Pages 179 - 184
In-congress Workshops	Pages 185 – 190
Posters	Pages 191 - 203

Keynote Addresses

Keynote Address 1

There are benefits when therapists walk the talk: But questions remain

James Bennett-Levy, University of Sydney, Australia

For over a century, the case for personal practice (mostly personal therapy) in therapist training was largely based on tradition and belief. Consequently, some empirically-based therapies (e.g. CBT) steered clear of insisting on personal practice for training and professional development. However, in the last decade there has been increasing empirical support for the proposition that personal practice enhances therapist skills and client outcomes. Nevertheless, theory and research remain at a formative stage. As well as reviewing the empirical case for the value of personal practice, this presentation highlights questions for future research. For instance: What kinds of personal practice are most beneficial for therapists? When? For what purpose? For some or all therapists? How important is therapist reflection? Are there dangers in personal practice? How can the safety of trainee therapists be maximised?

Keynote Address 2

Adolescents and emerging adults: Profiles, risks and clinical opportunities

Anne Marie Albano, New York Presbyterian Hospital's Youth Anxiety Center at CUCARD

Keynote Address 3

Bridging the gap between positive psychology and clinical interventions: Is it possible?

Carmelo Vazquez, Complutense University, Madrid, Spain

In its 1948 constitution, the WHO defined health as "a state of complete physical, mental and social well-being". Despite the ambition of this definition, due to the absence of valid measurement methods and effective interventions to improve well-being, over time this idea became a worn-out cliché. Perhaps the time has come to revisit this definition and make it more operational. The impetus of positive psychology, among other factors, has revived the possibility that this utopian idea of health can be developed with scientific methods and robust measures.

In the last two decades, interest in well-being and happiness has permeated many areas of basic and applied research in psychology. There is an increasingly robust program for research in the neuroscience and psychology of positive emotions and this momentum should be leveraged by clinical psychology. A good example of this is that in alternative systems to the DSM, such as the Research Domain Criteria, there is increasing recognition that adaptive, but also maladaptive, functioning cannot be understood without taking positive emotions into account.

Another important change in recent years is the accumulating evidence that there are effective interventions to increase psychological well-being. Research on healthy people and people with physical and mental problems has shown that there is a growing panoply of interventions that can significantly improve well-being and might be cautiously incorporated into the clinical setting. Positive emotions and cognitions should not be a foreign element of clinical psychology. The desire to have better lives and flourish is not foreign to people who have mental problems. The traditional clinical approach based exclusively on reducing symptoms and alleviating difficulties may be sufficient to define "empirically validated" treatments but it may not be sufficient to fulfil the aspirations of those with mental health problems to live better lives and flourish. Thus, although the goal of clinical psychology is to reduce psychological distress, or perhaps precisely because this is its goal, the role that positive emotions play in people's lives and the potential for those emotions to be a platform for change can no longer be ignored.

The point of view of my presentation is that for clinical psychology to be closer to the true nature of the psychological problems it should incorporate in its baggage the accumulated evidence of basic and applied research on well-being. In addition, this renewed clinical psychology should also be sensitive to the legitimate aspirations for growth and thriving that many people with mental problems have. In this presentation, I will briefly review some of the achievements that have been made in the last two decades in the field of research on positive aspects of basic psychological functions (e.g., attention, and memory) that could be relevant for clinical psychology. Furthermore, I will discuss the efficacy of some selected positive interventions in the clinical field. Although incorporating wellness domains into research and clinical practice is an exciting challenge, it is not without risk. I will present some of the most important methodological and conceptual challenges that the field of positive psychology, in my opinion, will have to face for it to be incorporated into the mainstream of clinical psychology.

In sum, positive emotions and well-being are serious things. Knowing their taxonomy, their determinants, and how we can intervene to improve them and achieve fuller lives, will allow us to have more solid and complete clinical psychology and, incidentally, a more humane one.

Keynote Address 4**Compassion as an integrative process in psychotherapy**

Paul Gilbert, University of Derby, UK

It is well recognised that psychotherapy involves helping people with a range of psychophysiological processes. These include their motivations, emotions, core beliefs and behavioural dispositions. In addition, most therapies have a range of interventions that include: the therapeutic relationship, specific forms of guided discovery, various exposure and behavioural experiments. Compassion focused therapy shares these basic dimensions of psychotherapy but highlights the importance of motivation orientation. The talk will explore how different motives influence these processes. It will also explore the evolution of caring behaviour and how and why caring behaviour creates a between person and within person context for the ability to tolerate and integrate difficult or avoided processes.

Keynote Address 5**Re-thinking the future: Strategies to maximize the global impact of the CBTs**

Keith Dobson, University of Calgary, Canada and President, World Confederation of Cognitive and Behavioural Therapies

The cognitive behavioral therapies have grown dramatically in scope and complexity since their origination in the 1970s. The CBTs as a group now represent the dominant approach to psychotherapy globally and have been incorporated into many national and professional standards for training. At the same time, the field of the cognitive behavioral therapies continues to experience several tensions, which may limit its potential impact in the field of mental health. In this keynote address some of the pivotal strengths of the field are first noted, including the broad range of applications, the theoretical complexity of models, and the strong and growing evidence base for the use of the CBTs. The presentation will then discuss the remaining issues in some detail. In particular, some of the poignant challenges include the consequences of manualization, plurality amongst the various models within CBT, the development of "schools" within the broad CBT framework, lack of clarity with respect to training standards for fidelity, dissemination and delivery in the global context, public education, and the need for ongoing political advocacy. This address will provide several suggestions for the ongoing future development of the CBTs and how to maximize their global impact.

Keynote Address 6**Can Cognitive Behaviour Therapy for psychosis be safe and effective without concurrent antipsychotic medication?**

Tony Morrison, University of Manchester, UK

Antipsychotics have traditionally been the first line of treatment for people with first episode psychosis (FEP) and schizophrenia. However, they are not effective for everyone, and are often associated with unpleasant and/or dangerous side effects; as a result, there are high levels of non-compliance. Cognitive behaviour therapy for psychosis (CBTp) has a robust evidence base as an intervention when delivered in combination with antipsychotics, but there has been little evidence regarding the effectiveness of CBTp. This has led national treatment guidelines for psychosis and schizophrenia to recommend offering both treatments. However, the attitudes of clinicians are often opposed to this, and access to CBTp is often difficult or unavailable. Several pilot randomised controlled trials will be described that examine CBTp in people who have chosen not to take antipsychotics (n=74) and adults (n=75) and adolescents (n=61) with FEP who consent to be randomised to CBTp alone, antipsychotics alone, or the combination. The results of these trials suggest that CBTp without antipsychotics is a safe and acceptable treatment option, and there are encouraging signals regarding effectiveness. There is little evidence that it is associated with adverse effects or that receiving CBTp without antipsychotics disadvantages people with psychosis. An individual participant data meta-analysis combining data from our adult and adolescent three-arm trials suggests that there is little difference between antipsychotics alone and CBTp alone, and that the combined treatment may be the most effective, in terms of both psychiatric symptoms and service user defined recovery. The implications of these clinical trials for clinical practice, treatment guidelines and future research will be considered. A definitive trial comparing these interventions is warranted in order to inform service users' treatment choices.

Keynote Address 7**Trauma-focused treatments for Post-traumatic Stress Disorder in refugees and asylum seekers**

Kerry Young, Woodfield Trauma Service, CNWL NHS Foundation Trust, London, UK and Oxford Rose Clinic, John Radcliffe Hospital, Oxford, UK

Most countries in Europe have seen a dramatic increase in the number of asylum seekers arriving in the last few years. We know that PTSD is the most common diagnosis in treatment seeking refugees and asylum seekers. Because they have experienced multiple traumatic events in their country of origin and during their escape, they often present to services with a complex PTSD presentation. This is characterized by high levels of dissociation and nightmares and flashbacks to many different events. Clinicians are often confused about how best to treat PTSD in this client group.

In this presentation, I will summarize the literature about treating PTSD in refugees and asylum seekers. Then, I will suggest an evidence-based pathway for clinicians to follow during treatment.

Keynote Address 8

Internet-delivered CBT: state of the art and future challenges

Gerhard Andersson, Linköping University, Karolinska Institute, Sweden

Internet-delivered cognitive behaviour therapy (ICBT) has existed for more than 20 years and there are now a large number of controlled trials for a range of problems. I have three aims with this talk. *First*, I will describe the treatment format and the fact that CBT lends itself very well for guided self-help programs. *Second*, I will focus on recent studies and meta-analytic reviews of the literature and present the findings from an umbrella review. In that review we found moderate to large effects reported for panic disorder, social anxiety disorder, generalized anxiety disorder, posttraumatic stress disorder, and major depression. The growing number of meta-analytic reviews of studies now suggests that ICBT works and can be as effective as face-to-face therapy. Moreover, studies have reported long-term effects and effectiveness in real world settings. In fact, we may already now have a situation in research where there is stronger support for some conditions (at least in terms of number of studies and their size, and also independent replications) for ICBT than the traditional formats (face-to-face, group etc). The role of the clinician in ICBT is important in order to get good results and I will comment on the role of alliance, guidance and why we still cannot delegate everything to the computer. *Third*, I will present new studies and approaches. I will cover outcomes of studies using factorial designs, different languages, novel ways to select treatment components and target problems, and finally different ways to provide support. The talk will end with future possible directions in research innovation and clinical practice.

Keynote Address 9

A (wo)man is not alone on an island: the sustainability of our interventions and why it is time to 'zoom' out.

Claudi L.H. Bockting, University of Amsterdam, the Netherlands

Common mental health disorders (depressive-, and anxiety disorders) are a worldwide epidemic and there is no evidence that the epidemic is subsiding. The COVID-19 pandemic further increased the prevalence worldwide with estimated adverse lifelong effects (Lokman&Bockting, in press). Depression is a major contributor to the overall global burden of disease (WHO, 2019). Evidence for leading theories that explain the onset and maintenance of depression is fragmented, mostly focusing on a single etiological factor (Kennis et al., 2020, Brouwer et al., 2019, Fu et al., 2021). Whereas, mental health conditions are the result of the interplay of mental-, biological, stress related- and societal factors that can change over time (Holmes et al., 2018). In this presentation you will be invited to 'zoom' out. Alternative routes will be discussed that do incorporate the interplay between relevant factors, including societal factors, that contribute to mental health conditions in order to explore new targets for prevention and treatment. This has been successfully applied in other fields of science with help of complex systems science and more recently in our field using for example network analyses (Bringmann, et al., 2022). Assuming that mental health is a complex system, doesn't necessarily mean that our interventions have to be complex as well. Examples will be given of simple interventions that have sustainable effects in treatment of depression and for relapse prevention (Breedvelt et al., 2021, Arjadi et al., 2018, Bockting et al., 2018). Implications for the future of CBT will be discussed.

Keynote Address 10

Targeting neuroticism in psychological treatment: A Unified Transdiagnostic Approach

Todd Farchione, Boston University, USA

I will begin by describing an approach to anxiety, depressive, and other common mental health disorders characterized primarily by dysfunction in the interpretation and regulation of emotion (i.e., what have become known as "emotional disorders") based on a functional model that considers the underlying temperament of neuroticism, and associated temperamental characteristics, as being central to the development and maintenance of these frequently co-occurring conditions. I will then provide an overview of a unified transdiagnostic treatment that emerged from this model and was developed to directly target shared mechanisms associated with neuroticism, specifically, negative evaluation and avoidance of intense emotional experience. Data from select research studies that we conducted at Boston University on this psychological intervention will be presented, including results from a large randomized clinical trial. I will conclude the presentation by highlighting some of our current and upcoming studies examining this treatment approach.

Keynote Address 11

Integrating emotion regulation training in the treatment of adolescents

Caroline Braet, Ghent University, Belgium

During adolescence, young people undergo significant developments that make them emotionally vulnerable, resulting in increased emotional reactivity to negative emotions. As we cannot and should not ask them to avoid emotional experiences, it seems especially important to pay attention to how young people deal with or regulate challenging emotions. While researching emotion regulation processes over the past 10 years, we were faced with many questions and new insights. For example, we researched the antecedent role of emotional awareness, how basic skills (e.g. tolerance) differ from strategies (e.g. cognitive reappraisal, problem solving) and how to distinguish healthy and rather unhealthy ways of emotion regulation. Interesting 'unhealthy' is a dynamic construct and refers to both within-person processes (e.g. cognitive control/flexibility, resting HRV, temperament) as well as the role of family processes (e.g. parents as emotional coaches). This led us to an integrated model that can be helpful in every case-formulation for understanding how unhealthy emotion regulation processes develop or persist.

Are these insights leading to a paradigm shift in stipulating our treatment? According to recent research on emotion regulation within psychopathology, emotion regulation can be considered as a transdiagnostic process underlying a broad range of psychological problems (e.g. anxiety, depression, addiction, behavioural problems). Starting from recent theoretical models and numerous preliminary studies, I will discuss how a transdiagnostic emotion regulation training should look like and which successive steps are indicated. I will bring the current status of studies evaluating this approach and answer some pertinent questions on the prominent role of transdiagnostic interventions within cognitive behavioural therapy.

Keynote Address 12

Somatic complaints and the Body: A New Look on their relationship

Omer van den Bergh, University of Leuven, Belgium

How does the experience of physical symptoms come about? Afferent information from the peripheral body is an important source, but a variety of interoceptive processes can make the relationship between symptoms and physiological dysfunction vary from almost perfect to zero. When the latter happens, which is all too often, symptoms cannot or poorly be related to physiological dysfunction, frustrating both the doctor and the patient and leading to excessive health care consumption. We will review experimental evidence demonstrating when symptoms are closely related to peripheral physiology and when and why they are not. Processes related to negative affect play a prominent role in this, suggesting why psychopathology co-occurs often with somatic symptoms. The reviewed evidence prompts a new way to understand symptom perception. Much as in visual perception, symptom perception is conceived of as a dynamic constructive process balancing afferent peripheral input and information generated by the brain: under some conditions, the eventual percept of a symptom closely reflects the afferent input, while in other conditions it may more closely reflect (implicit) prior expectations. In both cases, however, symptoms rely on the same constructive mechanisms and have the same phenomenal quality of “trueness”. This view suggests that current clinical interventions in somatization should broaden their scope. Rather than mainly focusing on treating symptom-related distress (worrying, rumination, attentional and interpretation biases), interventions are needed that may change the perceptual processes themselves.

Keynote Address 13

Rethinking and revisualising: Mental imagery and mental health science

Emily Holmes, Uppsala University, and Karolinska Institutet’s Department of Clinical Neuroscience, Sweden

From a cognitive science perspective, mental imagery involves an experience like perception in the absence of a percept: seeing in our mind’s eye, for example. Imagery has extremely interesting properties - recruits similar brain areas to actual perception, enhances memory and learning and, compared to verbal processing, mental imagery has a more powerful impact on emotion. From a clinical practice perspective, intrusive, affect-laden images cause distress across psychological disorders. Imagery-based intrusive memories and so called “flashbacks” to a past trauma are the hallmark of post-traumatic stress disorder (PTSD). Intrusive mental imagery can also occur of the future, such as ‘flashforwards’ to suicidal acts or manic pursuits in bipolar disorder. We need to know how to work with dysfunctional imagery, and promote adaptive imagery using imagery-focused cognitive psychotherapy techniques. We will explore both “rethinking and revisualising” our techniques to reduce the reoccurrence of intrusive images. We will further consider the future of mental health science and treatment innovation.

Keynote Address 14

Clinical interventions for persistent symptoms: transdiagnostic or symptom focused

Trudie Chalder, Kings College, London, UK

Persistent physical symptoms (PPS) are described in the context of medically unexplained syndromes and long term conditions. Symptoms/syndromes include fibromyalgia, irritable bowel syndrome (IBS), chronic fatigue syndrome (CFS), dizziness, non-cardiac chest pain and tension headaches to name but a few. They are seen in all secondary care settings including rheumatology, gastroenterology, cardiology, respiratory medicine and neurology. The severity of symptoms can vary widely from relatively mild symptoms to multiple/chronic debilitating symptoms. Fatigue is one such example of a ubiquitous symptom which can be unexplained but is also associated with many chronic diseases, including autoimmune rheumatic diseases, multiple sclerosis and post-stroke. From a transdiagnostic perspective, the cognitive and behavioural responses to fatigue and other symptoms may be similar across different diseases / illnesses. Transdiagnostic theory suggests that by targeting these common processes the same treatment can be used across different symptom clusters with flexibility to address symptom specific issues. Interventions that target transdiagnostic processes have the potential to use less resources than targeted interventions. Furthermore, a transdiagnostic approach may be more appropriate and acceptable in a clinical setting where patients often have heterogeneous problems. The issue as to whether transdiagnostic treatment is as effective as targeted treatment remains unanswered. The aim of this lecture is to describe transdiagnostic CBT as well as targeted CBT and to describe some of the research evidence.

Keynote Address 15

Shifting psychotherapy research from brands and categories to active ingredients

Ioana Cristea, University of Padova, Italy

The keynote argues for a systematic, comprehensive and reproducible approach for decoding, classifying and evaluating the active ingredients of psychological interventions to enable a radically novel look at mental disorders treatment. A profound shift in perspective from psychotherapy packages towards active ingredients and their combinations has the potential to upend how psychological treatments are developed, tested and delivered. Medications come in packages with lists of ingredients, we need the same for psychotherapies. Psychological interventions, as stand-alone options or combined with pharmacotherapies, are effective and safe treatments, particularly for common mental disorders like depression and anxiety, though also for more severe ones, like psychotic disorders. However, despite tremendous efforts, mechanisms of change and predictors of treatment response, key for improving effectiveness and for precision medicine, remain mostly unknown. The lack of progress can be traced back to the complexity of psychological treatments, developed, studied and implemented as “packages”. These packages consist of multiple, distinct, likely interacting, components: an array of practices, spanning behavioural, interpersonal, cognitive and emotional domains. The package (or “brand”) level of evaluation is too broad and imprecise to answer more targeted, specific questions about mechanisms of change or personalization, particularly when there is no clear understanding of which elements compose the package. The discussion of components has been long polarized by the longstanding debate as to whether psychological treatments work through specific factors described in manuals (e.g., cognitive restructuring or exposure) or common ones (e.g., working alliance, expectations). But whether factors are specific or common is irrelevant if we do not even know which they are. Thus, the greatest barrier is our current approach to psychological interventions as “brands” or categories, without knowledge of active ingredients, and particularly of which ingredients are effective.

The keynote draws on three main lines of scientific inquiry: (1) Dismantling complex interventions for mental disorders into their active ingredients; (2) Building a taxonomy of elements that compose interventions; (3) Evaluating complex interventions at the granular level of the components.

Shifting the focus from intervention packages to components could boost the effectiveness of psychotherapies by offering a way to overcome the stalemate in treatment personalization, as some patients might be more responsive to certain techniques or combinations and refractory to others. This radically different perspective could also identify beneficial components for conditions where the current intervention packages are ineffective, like anorexia nervosa. Deciphering treatment components and their effects, independently and in combinations, are also critical prerequisites for understanding mechanisms of change. Cognitive and affective neuroscience and computational psychiatry approaches could direct efforts to elucidating techniques and components, instead of trying to explain whole interventions. This change in focus could propel the mechanistic development of new therapeutic techniques, for example by developing experimental paradigms of components and exploring modifications. Finally, it would support treatment dissemination, particularly in contexts of scarcity of resources or of specialized mental health professionals, by directing training efforts to effective components across intervention categories and perhaps even disorders.

SYMPOSIA

Symposium 1:

Re-thinking Beck: confirming and extending propositions from Beck's original and generic cognitive model.

Chair, Janna Vrijzen, Radboud University Medical Center & Pro Persona Mental Health Care, Nijmegen, the Netherlands

What happens in the past, stays in the future: Investigating the effects of a smartphone-based autobiographical memory training in dysphoria

N. Imani^{1,2,3}, L. Bovy², L. van de Kraats¹, M. Dresler, I. Tendolkar^{1,2}, & J. Vrijzen^{1,3}

¹ Department of Psychiatry, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, The Netherlands, ² Donders Institute of Cognition and Behaviour, Radboud University Medical Center, Centre for Cognitive Neuroimaging, Nijmegen, The Netherlands, ³ Depression Expertise Centre, Pro Persona Mental Health Care, Nijmegen, The Netherlands

Negative memory bias includes enhanced recall of negative memories and plays an important role in the development and maintenance of depression. Hence, the modification of memory bias in attempts to ameliorate depressive symptoms has received increasing attention. However, in doing so, it is important to consider bias modification as a dynamic – rather than static – process, in which biases continuously interact with fluctuations in mood and contextual changes. We investigated the effects of a smartphone-based autobiographical memory training to increase positive memory recall and thereby alter negative memory bias. The sample included 96 dysphoric (≥ 13 BDI-II) participants, who were randomized to a positive memory training, sham memory training or no training condition. The memory bias modification training was conducted using experience sampling method (ESM) with a smartphone app over a period of six days, including eight training prompts a day. Results showed that for both the positive and sham conditions, positive memory bias significantly increased from pre- to post-training, but no transfer effects to memory specificity, implicit memory bias or depressive symptoms were found. Interestingly, exploratory follow-up measurements during the initial COVID-19 crisis demonstrated a buffering effect of the memory training in the context of a natural stressful period. Importantly, these findings emphasize that the interplay of bias, mood and context lends itself as a dynamic predictor of bias modification training effects, but also of symptom development over the course of treatment.

Moment-to-moment interplays between negative cognitive biases and affective states during daily life functioning: A novel experience sampling approach

Alvaro Sanchez-Lopez*, Teresa Boemo, Oscar Martin-Garcia, Ana Mar Pacheco-Romero & Ivan Blanco
Complutense University of Madrid (Spain) (*Presenter)

Background. Cognitive biases comprising tendencies to attend to negative information and to interpret ambiguous information in a negative manner are framed within Beck's model as key mechanisms of emotion dysregulation and increased risk for depression and anxiety disorders. Yet, no studies have modelled the interplays among cognitive biases, emotion regulation use and affective states as they occur during daily life functioning. This step is necessary to clarify potential causal mechanisms implicated in emotion dysregulation and increased vulnerability to emotional disorders. In our study, we built a novel experience sampling method (i.e., ESM) that integrated ecological momentary assessments of affective experiences as well as of biased manifestations of attention and interpretation as they unfold during daily life functioning.

Methods. The sample comprised 103 participants (mean age= 20.12 years, 87.62% women) who completed a new ESM procedure in their mobile phones. Daily dynamics of positive and negative affect, use of emotion regulation strategies (i.e., rumination, reappraisal, dampening) and cognitive biases were monitored during ten consecutive days, with three assessments per day. Self-reported use of emotion regulation was measured in relation to the previous most negative (rumination, reappraisal) or positive (dampening) event occurring since the last assessment. Momentary affect was self-reported at the moment of completing each assessment. At each survey, participants also completed an online variant of the scrambled sentence test assessing momentary tendencies to attend and interpret ambiguous information in positive vs. negative ways (20 trials per beep, time limit: 10 sec for each trial).

Results. Multilevel models were used to determine a) the influence of previous (t-1) and ongoing (t) affect states in cognitive bias levels (t), as well as b) the role of previous cognitive bias levels (t) in predicting subsequent emotion regulation use and affective states (t+1). Using this advanced methodology, supporting evidence concerning Beck's model predictions was found on the role of both previous and ongoing negative and positive affect levels on higher and lower momentary manifestations of negative interpretation biases, respectively. Further, higher momentary negative interpretation biases predicted subsequent higher use of rumination and dampening and, ultimately, higher negative and lower positive affect levels.

Discussion. Our study is the first to demonstrate a dynamic interplay between cognitive biases, emotion regulation and momentary affect as they unfold moment-to-moment in daily life. The relations observed in our study support Beck's framework predictions and offer new venues to study and intervene cognitive mechanisms implicated in vulnerability to emotional disorders.

Memory bias predicts increase in mental problems and decrease in positive mental health

Pascal Fleurkens^{a, b, *}, Mike Rinck^{a, c}, Indira Tendolkar^{d, e}, Bauke Koekoek^{b, f}, William J. Burk^a, Agnes van Minnen^{a, g} Janna N. Vrijzen^{b, d}

^aBehavioural Science Institute, Radboud University, Nijmegen, The Netherlands, ^bPro Persona Mental Health Care, Nijmegen, the Netherlands, ^cRuhr-University, Bochum, Germany, ^dDonders Institute for Brain, Cognition, and Behavior, Department of Psychiatry, Radboud University Medical Centre, Nijmegen, The Netherlands, ^eLVR-Hospital Essen, Department for Psychiatry and Psychotherapy, Faculty of Medicine, University of Duisburg-Essen, Germany, ^fResearch Group Poorly Understood Behaviour and Society, Hogeschool Arnhem Nijmegen University of Applied Science Nijmegen, & Police Academy Apeldoorn, The Netherlands, ^gPsychotrauma Expertise Centrum (PSYTREC), Bilthoven, The Netherlands

Objective: Both on a theoretical and empirical level, focus is shifting from the identification of disorder-specific markers to valuing the importance of studying generic markers that are relevant for a broader spectrum of mental health problems and adaptive functioning (e.g. the Generic Cognitive Model (GCM); Beck & Haigh, 2014). In line with this, there is substantial evidence that negatively biased memory of

self-referential information is characteristic of depression and beyond, with emerging documentation for negative memory bias in other mental disorders such as ADHD, anxiety disorders, substance use disorders, and borderline personality. Moreover, there is evidence that the strength of negative memory bias (or: a lack of positive bias) prospectively predicts depressive symptom levels and recurrence. Importantly, optimal mental health is considered more than the mere absence of mental health problems (WHO, 2004). Interest in the relationship between cognitive biases and positive outcomes is increasing, with recent preliminary evidence for the association between negative memory bias and positive mental health (Parsons et al., 2021). In two subsequent studies in the same sample, we investigated the predictive value of negative memory bias, and mental health problems (study 1) and positive mental health (study 2).

Method: With a prospective 4-year follow-up design, in study 1 we investigated the associations between negative memory bias strength (measured with the Self-Referent Encoding Task, SRET) as predictor and level of mental health problems (with the Outcome Questionnaire-45, OQ-45). In study 2, we examined the associations between negative memory bias strength and positive mental health (Mental Health Continuum, MHC).

Because co-morbidity between mental disorders is more the rule than the exception in clinical practice, we included a naturalistically sampled heterogeneous psychiatric patient sample with broad mental health problems (N=250).

Results: The strength of negative self-referential memory bias predicts an increase in mental health problems after four years, even after controlling for depression status and childhood trauma (study 1). Furthermore, the strength of negative self-referential memory bias predicts a decrease in positive mental health after four years, even when controlling for depression status, childhood trauma, and baseline mental health problems (study 2).

Conclusions: Less negative memory bias may be a potential transdiagnostic marker for both mental health problems and positive mental health. This is a powerful transdiagnostic confirmation of Beck's model predictions. After replications, these results may provide possible targets for personalized treatment provision selection.

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A new, easy to administer, and innovative measure of automatically-activated beliefs: The MT-PEP (Recorded)

Jamie Cummins, Ghent University, Belgium

Clinical researchers investigating thoughts, beliefs, and feelings typically assess these phenomena through the use of self-report measures. However, in the last 25 years, researchers have also moved towards the use of so-called “implicit measures” – that is, measures which assess thoughts/beliefs/feelings emitted under one or several conditions of automaticity (i.e., without awareness, without intention, without control). These measures have made contributions to theoretical accounts of clinical phenomena such as alcohol (mis)use, addiction, depression, and anxiety, to name a few. However, a common issue with many of these implicit measures is that they are *associative* in nature. For instance, in the Implicit Association Test (IAT; the most used implicit measure) participants’ *implicit attitudes* may be assessed by examining differences in how quickly participants can pair attitude-objects with positive vs. negative words. However, such associations provide much nuance than self-report measures. Combining this with the fact that an ever-growing body of evidence suggests that automatically-activated thoughts/feelings/beliefs can be relational in nature, researchers have now begun to develop *relational* implicit measures which can accommodate more complex information into their assessments. In this talk, I will discuss the mousetracking-based Propositional Evaluation Paradigm (MT-PEP) in the context of assessing complex automatically-activated thoughts/feelings/beliefs. I will describe a series of studies which demonstrate that (i) the MT-PEP captures beliefs, (ii) that the beliefs captured in the MT-PEP are at least somewhat automatic in nature, (iii) that the MT-PEP is sensitive to relational information, (iv) that the MT-PEP is psychometrically-sound, and (v) that the MT-PEP exhibits convergent validity with other constructs of interest in multiple clinically-relevant domains.

Symposium 2

Involving mental imagery in the assessment and treatment of emotional disorders in children and adolescents

Convenor and Chair: Marjolein Thunnissen, University of Groningen, the Netherlands

Characterising negative mental imagery in adolescent social anxiety

Kenny Chiu, University of East Anglia; Eleanor Leigh, University of Oxford

Background: Understanding the role of self-imagery in the development of social anxiety in adolescence holds promise for improving intervention. Cross-sectional studies indicated that certain imagery characteristics, namely observer-perspective and vividness, are associated with social anxiety symptoms, however, prospective studies in this area are lacking, and the content of negative self-imagery in adolescents remains unclear.

Methods: Negative self-imagery and social anxiety symptoms were assessed using questionnaires at baseline and at 4–6-month follow-up in a community sample of 616 adolescents aged 11–15 years. A series of multiple linear regression analyses were performed to see if observer-perspective and vividness predict concurrent and prospective social anxiety symptoms. We used topic modelling, an unsupervised machine learning approach, to infer common themes in negative images reported.

Results: Observer-perspective and vividness significantly predicted concurrent social anxiety symptoms beyond the influence of age and gender. Observer-perspective significantly predicted prospective levels of social anxiety symptoms beyond the influence of age, gender, baseline social anxiety symptoms, and baseline depressive symptoms. Social anxiety-related negative self-images cluster around two themes: the fear of appearing anxious, and the fear of being judged or viewed as unacceptable by others.

Conclusions: Specific characteristics and contents of negative self-images may be particularly relevant to the development of adolescent social anxiety.

Is future mental imagery associated with reduced impact of the COVID-19 pandemic on negative affect and anhedonic symptoms in young people?

Taryn Hutchinson^a, Laura Riddleston^a, Victoria Pile^a, Alan Meehan^a, Meenakshi Shukla^b, Jennifer Lau^c

^aDepartment of Psychology, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK, ^bDepartment of Psychology, University of Allahabad, Prayagraj, India, ^cYouth Resilience Unit, Queen Mary, University of London, UK

Background: Difficulties with prospective mental images are associated with adolescent depression but are often overshadowed in current treatments by verbal techniques. Current treatments also largely focus on reducing negative affect (e.g., low mood) rather than enhancing positive affect, despite symptoms of anhedonia being present in adolescents. We investigated the concurrent relationships between the vividness of negative and positive prospective mental imagery and negative affect and positive affect; and examined whether negative and positive prospective mental imagery moderated the impact of recent stress (COVID-19-linked stress) on negative and positive affect.

Methods: 2602 young people (12-25 years) completed the Prospective Imagery Task and self-reported on symptoms of negative affect, anhedonia and the emotional impact of COVID-19.

Results: Increased vividness of negative future mental imagery *and* reduced vividness of positive future mental imagery were associated with increased negative affect, whereas only reduced vividness of positive future imagery was associated with increased symptoms of anhedonia. Increased vividness of negative future images amplified the association between stress associated with COVID-19 and negative affect, while increased vividness of positive future images attenuated the association between stress associated with COVID-19 and anhedonia.

Limitations: The data is cross-sectional, meaning we cannot determine the temporal direction of these relationships. As the Prospective Imagery Task is self-report, we do not know the extent to which this translates into actual imagery capacity.

Conclusions: In understanding how negative and positive future mental imagery are differentially associated with negative and positive affect, we suggest novel mechanisms to improve psychological treatments for young people.

Interventions targeting negative mental imagery in social anxiety: a systematic review and meta-analysis of characteristics and outcomes

Maaïke Nauta, Professor in Clinical Psychology, Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, the Netherlands; Accare, Child Study Center, University Centre for Child and Adolescent Psychiatry, Groningen, The Netherlands

Co-authors: Marjolein Thunnissen, MSc, and Prof Dr Peter de Jong (University of Groningen), Dr Marisol Voncken and Prof Dr Marleen Rijkeboer (Maastricht University)

Negative mental imagery frequently occurs in individuals with social anxiety, and seems to play an important role in the persistence of social anxiety. Therefore, it would be valuable to evaluate the possibilities and effects of imagery-based interventions focused on targeting negative mental images in social anxiety. The current review and meta-analysis focuses on describing and evaluating the different interventions that have been applied to target negative imagery in social anxiety and on evaluating the outcomes with regards to social anxiety and imagery characteristics. We aim to answer the following research questions: What are the characteristics of interventions targeting negative mental imagery in social anxiety? Do those interventions change imagery characteristics such as distress and vividness, as well as social anxiety? We included all studies that reported on an intervention aimed at changing negative imagery in social anxiety, for all age groups, providing quantitative data in controlled or uncontrolled designs. Main outcomes included intervention characteristics and change in social anxiety and imagery characteristics from pre- to post-intervention. Based on a systematic search in relevant databases, we identified 231 potential studies, of which 39 full texts were screened for eligibility. After evaluation by two independent reviewers and consensus, 18 studies were included. Studies included the following interventions: imagery rescripting, EMDR, other competing tasks, and imaginal exposure. We found only studies on adults and none in minors. The duration of intervention sessions ranged from a few minutes (such as in the experimental studies with competing tasks) to 90-100 minutes. Interventions targeted memories related to recurrent imagery, autobiographical memories or other imagery (such as flashforward imagery or intrusive imagery). 14 studies provided data for calculating pre- to post-intervention effects, of which seven studies had a randomized controlled design with control groups that did not focus on targeting negative imagery. These studies were included in further meta-analyses. The imagery-based interventions were significantly more effective in reducing social anxiety symptoms than the control groups, with medium effect sizes, based on six studies. In line, imagery distress reduced with a medium effect size, based on five studies. Change in vividness was only reported in four studies and was not significantly different between imagery and control groups. In all, we only found 18 studies reporting on a variety of imagery-based interventions in social anxiety disorder, of which only seven were included in meta-analyses. None were conducted in youth. Negative imagery may be a good target for treating social anxiety, since imagery-based interventions changed distress related to imagery (but not vividness), and also reduced social anxiety symptoms. Future studies should further examine which imagery can be targeted most effectively by which intervention(s), and if these interventions can also be applied to youngsters.

Negative 'flashforward' imagery in children and adolescents with social anxiety disorder: A pilot study of an imagery interview and an EMDR intervention

Marjolein Thunnissen, MSc, Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, The Netherlands; Accare, University Centre for Child and Adolescent Psychiatry, Groningen, The Netherlands

Co-authors: Prof Dr Maaïke Nauta and Prof Dr Peter de Jong, University of Groningen; Dr Marisol Voncken and Prof Dr Marleen Rijkeboer, Maastricht University; Jiska Weijermans and Leonieke Vet (Accare)

Social anxiety disorder (SAD) is a prevalent disorder in children and adolescents. Treatment for SAD with CBT is currently less effective than for other anxiety disorders, leaving room for improvement. Mental imagery has been identified as an important maintaining factor by fueling social anxiety and avoidance. However, most studies on imagery features have considered adults rather than young people. Similarly, treatments incorporating imagery have also not been extensively evaluated. Adding interventions as EMDR (eye movement desensitization and reprocessing) to target vivid and distressing negative imagery could possibly dampen detrimental effects on anxiety symptoms. We will present our pilot study on the phenomenology of negative future imagery (i.e., flashforward imagery of feared future catastrophe) in children and adolescents with SAD, and the effects of a short EMDR intervention targeting this negative imagery on both imagery features and anxiety symptoms. We aimed to examine the feasibility and preliminary outcomes of an imagery interview, protocol

for EMDR flashforward, and associated measures in 6 young people with SAD. After a 1-week baseline period, participants had a pre-intervention assessment and then received three EMDR flashforward sessions followed by post-intervention and follow-up assessments. Primary outcomes were social anxiety and avoidance related to participants' three most feared social situations. Secondary outcomes included vividness, distress and appraisal of their flashforward imagery related to these three social situations, and more general social anxiety and avoidance. We found that almost all (6 out of 7) interviewed adolescents reported negative flashforward imagery that was experienced as distressing and vivid, and appraised negatively. The EMDR intervention in the 6 participants with flashforward imagery (aged 14-17 years old) was followed by a decrease in social anxiety and a similar trend in avoidance. General social anxiety and avoidance showed a similar trend as well, while during the baseline period, no notable changes were observed. Furthermore, the intervention was followed by a decrease in image distress, vividness and negative appraisal. Feasibility appeared satisfactory but we suggested adaptations based on feedback and measure completion rates. Although the current study concerned a small pilot without control group, results suggest that vivid and distressing flashforward imagery is prevalent and that targeting such negative imagery with a short EMDR intervention may aid young people with SAD in daring to face social situations. This may hold promise for future successful treatment additions. Further (experimental) research on the effectiveness and integration of imagery assessments and interventions into current treatments is necessary.

Symposium 3

Imagery Rescripting: Clinical applications and Underlying Mechanisms

Chair: *Sophie Rameckers, University of Amsterdam, the Netherlands*

Treating PTSD with Imagery Rescripting in underweight eating disorder patients: A multiple baseline case series study

Marieke C. ten Napel-Schutz^{1,2}, Simona Karbouniaris³, Suzanne H.W. Mares¹, Arnoud Arntz⁴ & Tineke A. Abma⁵

¹ Department of Eating Disorders (Amarum), GGNet Mental Health, Warnsveld, The Netherlands., ² Radboud Centre Social Sciences, Radboud University, Nijmegen, the Netherlands, ³ Utrecht University of Applied Sciences, Utrecht, the Netherlands and Leiden University Medical Centre, Leiden, the Netherlands, ⁴ Department of Clinical Psychology, University of Amsterdam, Amsterdam, the Netherlands, ⁵ Leiden University Medical Centre, Dept. of Public Health and Primary Care, Leyden Academy on Vitality and Ageing, Leiden, the Netherlands

Currently, it is against the advice of the eating disorders guidelines to treat posttraumatic stress disorder (PTSD) during an underweight state. The reason is that, during this underweight state, it is unclear whether there is sufficient emotional experience, attention, and concentration, to enter a psychotherapeutic treatment. The aim of the study was to explore whether treating PTSD, using imagery rescripting (ImRs), is feasible? and effective in reducing PTSD symptoms in underweight anorexia nervosa (AN) and other specified eating disorder-AN (OSFED-AN) patients. Ten patients in clinical eating disorder treatment participated. All were diagnosed with PTSD, AN or OSFED-AN and had a body mass index (BMI) between 14 and 16.5. A multiple randomized baseline design was used. After the baseline period, a 6-week treatment phase followed with biweekly sessions of 90 minutes ImRs. Two follow-assessments were administered: three weeks and three months after treatment was completed. The data were analyzed with mixed regression models. The findings revealed significant decreases of PTSD symptoms as well as on eating disorder symptom severity with large effect sizes. It can be concluded that there were strong effects of reducing PTSD symptoms with ImRs without interfering with the eating disorder treatment.

The Working Mechanisms of Imagery Rescripting and Eye Movement Desensitization and Reprocessing

Sophie A. Rameckers¹, Arnold A. P. van Emmerik¹, Katrina Boterhoven-de Haan², Margriet Kousemaker³, Eva Fassbinder⁴, Chris Lee², Mariel Meewisse⁵, Simone Menninga⁶, Marleen Rijkeboer⁷ & Arnoud Arntz¹

¹ Department of Clinical Psychology, University of Amsterdam, The Netherlands, ² Faculty of Health and Medical Sciences, University of Western Australia, Australia, ³ ARQ Centrum'45, The Netherlands, ⁴ Department of Psychiatry and Psychotherapy, Christian-Albrechts-University Kiel, Germany, ⁵ Abate, The Netherlands, ⁶ PsyQ Beverwijk, Parnassiagroep, The Netherlands, ⁷ Department of Clinical Psychological Science, Maastricht University, The Netherlands

The theorized mechanisms for Eye Movement Desensitization and Reprocessing (EMDR) and Imagery Rescripting (ImRs) as treatments for posttraumatic stress disorder (PTSD) have not yet been fully researched and confirmed in clinical studies. Based on previous research and the theoretical models of each of the two treatments, it was hypothesized that EMDR works via changes in the vividness of memories and that ImRs works via changes in encapsulated beliefs. As both treatments have led to changes in the negative valence it was additionally explored if changes in vividness were a change mechanism for these treatments. In addition, differences in the change in these three factors were studied as well. The present study is a secondary analysis of the IREM study, and RCT in which patients with childhood-related PTSD (Ch-PTSD) ($N = 155$) received a maximum of 12 sessions EMDR or ImRs. The vividness, negative valence and encapsulated beliefs related to the index trauma (i.e., worst event) were measured with the Imagery Interview (II). PTSD severity was assessed with a self-report questionnaire and a clinical interview. Mixed regressions and Granger causality analyses were conducted. The results indicated that the changes in vividness, negative valence and encapsulated beliefs were initially larger for EMDR compared to ImRs, but only for negative valence superiority of EMDR was retained until the last follow-up assessment. No evidence for vividness as an underlying change mechanism was found as changes in vividness followed changes in PTSD severity. The relationships of negative valence and encapsulated beliefs to PTSD severity at the next assessment were stronger for ImRs. Thus, changes in the negative valence and encapsulated belief strength preceded subsequent changes in PTSD during ImRs but not during EMDR. These findings suggest that EMDR treatment leads to faster changes in the vividness, valence and encapsulated beliefs than beliefs. So, while results supported the hypothesized mechanisms of ImRs, no support was found for the hypothesized mechanisms of EMDR. This study provides more insight into the relative effectiveness and underlying working mechanisms of EMDR and ImRs and is one of the first to directly examine their proposed change mechanisms relative to each other. ImRs, while in contrast to EMDR, changes in PTSD severity during ImRs are caused by changes in the negative valence and the strength of encapsulated

Future-Oriented Imagery Rescripting and Imaginal Exposure for Social Anxiety Symptoms: Mechanisms and Outcomes in an Analog Study

Snir Barzilay¹, Tal Furstenberg¹, Hila Sorka¹, Elad Zlotnick¹, David A. Moscovitch² & Jonathan D. Huppert¹

¹The Hebrew University of Jerusalem, Israel ² University of Waterloo, Canada

Introduction: Individuals with social anxiety disorder often report experiencing negative future-related mental imagery when anticipating participating in anxiety provoking social event. Research shows that these mental simulations contribute to the maintenance of anxiety, avoidance, and suffering. Imagery-rescripting (IR) and imaginal exposure (IE) have both been demonstrated as effective interventions for treating anxiety disorders. In IE, the individual is asked to repeatedly imagine the negative image (past memories or future-related) often focusing on the most catastrophic and emotionally salient outcomes. In contrast, in IR the individual is asked to imagine the negative mental scenario (usually past memories), and then to enact changes in the image by rescripting the scenario. However, to date, studies examining IR only rescripted past memories and not future imagery. Therefore, there are unanswered questions regarding efficacy of IR when addressing future-related negative imagery. This study aims to examine the mechanisms and outcomes of IE and IR for social anxiety-related future negative imagery.

Method: In this pre-registered randomized study, a single session intervention was administered to 60 individuals with high social anxiety. Participants with high social-anxiety symptoms (score > 30 on the Social Phobia Inventory; Connors, et al., 2000) were randomly assigned to either IE or IR. The study included three sessions (pre-intervention, intervention and follow-up) in a multiple-baseline design. Following every session, self-report questionnaires that measure social-anxiety symptoms, thought-fusion, thought suppression and core beliefs about the self and others were administered. Changes in these pre-registered mechanisms will be presented.

Hypotheses: We predict that both treatments will be similarly effective in reducing symptoms at follow-up. However, mechanisms of change in each intervention will be different. For IR, changes in core beliefs will mediate symptom reduction, whereas in IE, changes in thought fusion will mediate symptom reduction. Data will be presented on the sample collected to date.

Results: Participants in both interventions demonstrated significant improvements in symptoms, thought fusion, and thought suppression from pre-intervention to follow-up. Core beliefs about the self and others did not change across time. Changes in thought fusion and thought suppression covaried with symptom change for both interventions.

Discussion: Single-session, future oriented imagery interventions appear to improve symptoms, whether via exposure or rescripting. Thought fusion was related to the reduction in symptoms in imaginal exposure and imagery rescripting. Counter to our prediction, we did not find a significant change in core beliefs the IR condition. Future studies should examine these processes in other populations.

Training Therapists Based in Kurdistan To Use Cognitive Restructuring and Imagery Modification (CRIM) To Treat Yazidi Women Reporting Feelings Of Being Contaminated Following Sexual Assault

Sameena Akbar¹, Madih Hamasalih² & Kerry Young³

¹ Woodfield Trauma Service, United Kingdom, ² Madih Hamasalih, University of Duhok, Iraq, ³ Kerry Young Clinical Lead, Woodfield Trauma Service and University of Duhok, United Kingdom

Richa et al. (2020) have found high rates of posttraumatic stress disorder (PTSD) and trauma exposure in Yazidi refugees now residing in the Iraqi Kurdistan region. Local therapists working with Yazidi women noticed that the women reported pervasive feelings of being contaminated (FBC) following sexual assaults by ISIS members. FBC is a common phenomenon in survivors of childhood sexual abuse (CSA). Jung and Steil (2013) developed CRIM (Cognitive Restructuring and Imagery Modification), a two-session treatment which has been found to reduce FBC and PTSD in adult survivors of CSA. Local therapists thought that this could be a short, useful intervention for Yazidi women following enslavement by ISIS. These feelings of contamination have strong negative consequences for the women, who feel unable to be part of their communities and to rebuild their lives. Due to the pandemic, training and supervision in CRIM in person was impossible. We therefore trained and supervised two local therapists in the Kurdistan region via videoconference who went on to treat seven patients by offering them three sessions each. The therapists were already qualified psychotherapists experienced in working with trauma. Supervision was provided by clinical psychologists in the United Kingdom (UK) fortnightly over a three-month period. The therapists themselves actively contributed to the development of the training and materials to ensure that local culture, communities and contexts were considered. Encouraging preliminary results have been reported in reduction of FBC in this population suggesting that CRIM can be taught relatively easily to therapists who can then provide a short yet useful intervention for feelings of being contaminated. Furthermore, it was very culturally acceptable to clients and clinicians alike due to the short nature of the intervention. Finally, a reduction in feelings of shame, loss of honour and dignity were also reported. There are high rates of suicide in this group because of these factors so any intervention which reduces this could be very valuable.

Symposium 4

gameChange virtual reality (VR) cognitive therapy: from housebound to the world outside

Chair: Daniel Freeman, University of Oxford, UK

Agoraphobic avoidance in patients with psychosis: presentations, assessment, and understanding

Laina Rosebrock, University of Oxford

The anxious avoidance of everyday situations such as public transport, shops, or crowds – agoraphobia – occurs across many different mental health disorders. Avoidance can be due to a variety of fears, including concerns about negative social evaluation, panicking, and harm from others. The result is inactivity and isolation. Our survey work indicates that nearly two-thirds of patients with psychosis attending mental health services are experiencing avoidance at agoraphobia levels. In this talk common presentations will be described. A new, easy to use assessment scale – the Oxford Agoraphobic Avoidance Scale (O-AS) (Lambe et al, 2021) – will be introduced that is designed to guide clinical practice. A cognitive perspective on these difficulties is that threat cognitions lead to the safety-seeking behavioural response of agoraphobic avoidance. Therefore we also developed the Oxford Cognitions and Defences Questionnaire (O-CDQ) (Rosebrock et al, 2022), which is a new self-report assessment designed to capture these cognitive processes. The social withdrawal of many patients with psychosis has typically been viewed as indicative of negative symptoms, such as diminished social motivation or experience of pleasure, or difficulties in general functioning. This agoraphobia perspective on social functioning difficulties of patients with psychosis opens up new cognitive treatment possibilities that gameChange was designed to test.

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Developing an automated VR cognitive treatment for psychosis: gameChange VR therapy

Sinéad Lambe, University of Oxford

The automation of virtual reality therapy has the potential to revolutionize the delivery of evidence based care. VR creates immersive, interactive computer simulations, which elicit responses similar to the real world. This engaging medium provides a safe space for the experimentation and experiential learning that are key to successful cognitive therapy. It is also possible to embed powerful psychological techniques in VR through the use of a virtual coach. If automated, and using the latest consumer kit, VR treatment can substantially scale-up the delivery of psychological therapy. However, the success of automated virtual reality therapy requires the right psychological theory and techniques to be implemented in a way that is accessible and engaging for patients.

This talk will describe the process of developing gameChange, an automated cognitive therapy targeting agoraphobic avoidance by people with psychosis. A person centered design process was used bringing together people with lived experience, psychologists, artists, designers, and software developers (Lambe et al 2020; Knight et al., 2021). Workshops and user testing sessions were held throughout the design process with over 500 hours of input from people with lived experience of psychosis.

The result is a six-session VR therapy that consists of six everyday scenarios: a street, a bus, a café, a pub, a doctor's waiting room, and a shop. Each scenario has five levels of difficulty. Every level provides an opportunity to test out fearful cognitions while limiting the use of defence behaviours. This allows patients to build confidence at their own pace. Learning is facilitated by a virtual coach, Nic, who guides patients through the programme. As such, gameChange does not need to be delivered by a trained therapist but can be supported by various members of staff. gameChange can be delivered in people's home or in clinical settings.

Usability data indicates that gameChange VR therapy is easy to use and highly engaging for patients. In addition, data on the multi-site randomised controlled trial (Freeman et al., 2022) testing gameChange found high levels of uptake (~95%) further supporting acceptability of the treatment. gameChange is an effective and highly engaging therapy for people with psychosis and agoraphobic avoidance.

Automation will allow services to substantially scale up provision, increasing access to psychological therapy and improving the lives of people with psychosis.

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Does gameChange work? Results of a multicenter, randomised controlled trial evaluation with mediation and moderation analyses.

Daniel Freeman, University of Oxford

We evaluated the efficacy of gameChange – a six-session automated VR cognitive therapy - for treating the anxious withdrawal of patients with psychosis, how it may work, and for whom it may work (Freeman, Lambe et al, 2022). A multicentre, parallel group, single-blind, randomised controlled trial with planned mediation and moderation analyses was conducted to test the effects of gameChange VR therapy when added to usual care. The trial took place in nine UK National Health Service trusts. 346 patients with psychosis participated.

Outcomes were assessed at 0, 6 (primary endpoint), and 26 weeks. The primary outcome was agoraphobic avoidance of everyday social situations and distress in them. Outcome analyses were done in the intention-to-treat population. The trial is registered with the ISRCTN registry, ISRCTN17308399. Compared with usual care, gameChange led to significant end of treatment reductions in agoraphobic avoidance and distress. The greater the severity of anxious avoidance the greater the treatment benefits. The treatment was especially effective for patients with severe difficulties, who had moderate to large improvements that persisted over six months. Patients with severe difficulties also had reductions in paranoia and improvements in recovering quality of life. Reductions in threat cognitions and within-situation defence behaviours mediated treatment outcomes. There were few side effects that did not interfere with VR therapy (Freeman, Rosebrock et al, 2022). gameChange VR therapy has the potential to increase the provision of effective psychological therapy, especially for patients who find it difficult to leave their home, visit local amenities, or use public transport.

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A safe place to learn: the patient experience of automated virtual reality (VR) therapy.

Felicity Waite, University of Oxford, UK

Automated virtual reality (VR) therapy has the potential to increase access to evidence-based psychological treatments substantially. The results of a multi-centre randomised controlled trial show that gameChange VR cognitive therapy reduces the agoraphobic avoidance of people diagnosed with psychosis, especially for those with severe avoidance. In this presentation, we will discuss the results of a peer-led qualitative investigation to explore the participant experience of gameChange VR therapy.

Peer research is steered and conducted by people with relevant lived experiences. Peer methods have the potential to facilitate greater depth and more nuanced data collection and analysis by enhancing rapport and levelling power. In this study, peer researchers interviewed

twenty people with a diagnosis of psychosis who had received gameChange. Data were analysed, in collaboration with the gameChange Lived Experience Advisory Panel, using Interpretative Phenomenological Analysis and Template Analysis. Participants reported the significant impact before the VR intervention of anxious avoidance on their lives, leaving some housebound and isolated. Those who were struggling the most with agoraphobic avoidance expressed the most appreciation for and gains from the gameChange therapy. The VR scenarios provided 'a place to practise'. Immersion within the VR scenarios triggered anxiety, yet participants were able to observe this and respond in different ways to usual. The 'security of knowing the VR scenarios are not real' created a safe place to learn about fears. The 'balance of safety and anxiety' could be calibrated to the individual. The new learning made in VR was 'taken into the real world' through practise and distilling key messages, with support from the delivery staff member. Automated VR can provide a therapeutic simulation that allows people diagnosed with psychosis to learn and embed new ways of responding to the situations that challenge them. An important process in anxiety reduction is enabling presentation of stimuli that induces the original anxious fears yet allows learning of safety. In gameChange the interaction of anxiety and safety could be calibrated to provide a safe place to learn about fears and build confidence. This navigation of therapeutic learning can be successfully managed by patients themselves in an automated therapy, with staff support, that provides users with personalised control. The clinical improvements for people with severe anxious avoidance, the positive experience of VR, and maintenance of the sense of control are likely to facilitate implementation.

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Delivering gameChange VR therapy – two case examples

Kate Chapman, Avon and Wiltshire Partnership NHS Foundation Trust, UK

gameChange VR therapy requires the staff deliverer to work with the service user and a virtual coach. This presentation discusses the balance between the staff deliverer's support and the VR coach to maximise the VR experience. Using two case examples of participants in the gameChange trial the learning from VR delivery will be discussed.

Symposium 5

The developing role of the Resilience Hub model in supporting health, social care, and emergency services staff

Chair: Gita Bhutani, Lancashire and South Cumbria NHS Foundation Trust & University of Liverpool, UK

An overview of the Resilience Hub model; during the pandemic and beyond

Gita Bhutani, Lancashire and South Cumbria NHS Foundation Trust and University of Liverpool

Alan Barrett, Pennine Care NHS Foundation Trust and University of Salford

The Greater Manchester Resilience Hub (GMRH) was initially set up in response to the Manchester Arena Attack in 2017. It provided an outreach, screening, and facilitation into individual therapy offer. In addition, it provided facilitated peer support, advice and consultation (e.g. schools, colleges) as well as an offer to whole families. This was made available to any member of the public as well as professionals affected by the attack. At the commencement of the Covid-19 pandemic, both the GMRH and the Lancashire & South Cumbria Resilience Hub (LSCRH) were mobilised to provide support to the health and care systems. The LSCRH drew on the GMRH model and included a directly-provided intervention and support offer. Staff in scope for both Hubs included NHS and care sector staff, emergency services personnel and immediate families. The service delivery model and resources required will be described. These include screening, assessment, facilitated access to individual therapy, support, and psychological interventions offered on an individual basis. The Hubs also offer team-based support. These will be outlined including the benefits and challenges of this approach.

As the immediate impact of Covid-19 has receded, the Hubs are developing more systemic approaches to support psychological wellbeing in the workplace. This is in response to new commissioning guidance that recognises the need for staff wellbeing and the impact on staff of the Covid-19 pandemic. The importance of psychological safety in the workplace in this context will be highlighted and this includes preventative and protective measures. The development of emerging models of service delivery for the Hubs will be highlighted. The challenges of engaging multi-agency partners to deliver this will be described alongside emergent themes of the role that the Hubs can play in the future. These include major events as well as specific staff and service wellbeing requirements. These will include the identification of the key requirements to deliver flexible and responsive services. The opportunities for staff health and wellbeing Hubs will also be described.

Evaluating the Resilience Hub model

Filippo Varese, University of Manchester and Greater Manchester Mental Health NHS Foundation Trust, Kate Allsopp, Greater Manchester Mental Health NHS Foundation Trust and University of Manchester, Hannah White, Greater Manchester Mental Health NHS Foundation Trust

Background: During the pandemic, NHS England funded 40 wellbeing and resilience hubs to provide support to health and social care staff across the country. This study, funded by the UK's National Institute of Health Research, sought to evaluate the Resilience Hub model across four Hubs.

Method: The aim of the study was to conduct a mixed methods evaluation to provide recommendations for the refinement of an existing model of outreach, mental health screening, and facilitation of keyworker access to psychosocial support. Data will be presented from several work streams: 1) demographic, occupational and mental health data of health and social care keyworkers accessing the Hubs for individual psychological support, routinely collected upon self-referral to the Hubs; 2) follow-up questionnaire data exploring satisfaction with the Hubs and services accessed following registration with the Hubs; and 3) interview data with Hub clients, keyworkers who did not access Hub support despite being eligible, staff working within the Hubs, and wider stakeholders such as human resources and occupational health leads across the system.

Results: An overview of the demographic and occupational groups accessing Hubs will be provided from 1973 Hub clients. Mental health need, predictors of mental health severity, proportion of Hub clients accessing additional mental health support, and satisfaction with the

Hubs will be presented. Qualitative data summarising findings from interviews with 39 keyworkers and 20 Hub staff and wider stakeholders will demonstrate barriers and enablers to support uptake by keyworkers from individual, Hub, and organisational perspectives, as well as barriers and enablers to the implementation of the Hubs. Mixed methods integration of the above data will be used to demonstrate the ways in which the qualitative data may explain the quantitative and health economic findings.

Conclusions: Overall study findings are used to inform recommendations to Resilience Hubs to develop these services and help resolve barriers to support access and uptake. Recommendations are also made to the wider health and social care system to improve preventative and responsive measures to support staff. Research recommendations will also be described.

Building resilience in teams

Hein Ten-Cate, Lancashire and South Cumbria NHS Foundation Trust, Debra Malkin, Lancashire and South Cumbria NHS Foundation Trust, David Keane, Lancashire and South Cumbria NHS Foundation Trust

The National Institute for Clinical Excellence guidance (United Kingdom) for Post-Traumatic Stress Disorder predominantly focuses on patients within a healthcare service context and while a lot of the guidance can help guide organisational practice, it is still concerned primarily with the treatment of symptoms. New evidence has emerged that more directly addresses organisational and employee needs and highlights interventions that essentially promote good management practices following workplace trauma experiences. In this presentation, two proactive outreach team-focused resilience approaches delivered by the Lancashire and South Cumbria Resilience Hub will be described in more detail.

The first team-focused approach, Workplace Trauma Support (WTS), draws on evidence on the effectiveness of specific clinical interventions for the treatment of trauma-related symptoms, in particular trauma-focused CBT and EMDR as well as evidence on overall responses to traumatic situations, and evidence specific to organisations on good trauma management practices. The model emphasises a preventative and proactive approach to trauma management. It is a 4-tiered approach that provides a layered support system that focuses on workplace well-being awareness, a system of immediate and ongoing personal support (delivered by team leaders/managers as well as trained peers embedded within the team/service) and enhanced care, support and treatment pathways for those individuals requiring specialist support and treatment.

The second team-focused approach was introduced following the onset of the Covid pandemic. For this team-focused approach the Workplace Trauma Support model has been modified by the Resilience Hub, specifically the workplace wellbeing awareness component. The team-focused approach is being delivered to diverse teams across different partnership organisations in the wider health and care system health and focuses on validating and normalising individuals' and teams' experiences of distress, team and individual wellbeing awareness, and helping to identify and resolve challenges in the specific context of each team or service. There has been a growing demand for these team-based sessions which aim to validate and normalise the range of experiences from staff and therefore proactively enabling and supporting the adaptive processing of distressing events by individuals.

Evaluating the implementation of Workplace Trauma Support

Kate Allsopp, Greater Manchester Mental Health NHS Foundation Trust and University of Manchester, Sally Wright, Lancashire and South Cumbria NHS Foundation Trust, Hein Ten-Cate, Lancashire and South Cumbria NHS Foundation Trust, David Keane, Lancashire and South Cumbria NHS Foundation Trust, Filippo Varese, University of Manchester and Greater Manchester Mental Health NHS Foundation Trust

Background: The Workplace Trauma Support (WTS) model described by Hein Ten Cate was developed as a team-based, preventative approach to trauma management to proactively prepare teams to respond to workplace incidents. WTS was adapted at the start of the COVID-19 pandemic, and uses a 'Train the Trainer' model of cascading information, training, and support throughout staff teams. To date, approximately 125 professionals have been trained as WTS trainers.

Methods: All professionals who had completed the WTS Trainer training were invited to complete an evaluation survey to explore their experiences of the training itself, and their experiences of implementing the WTS model within the teams in which they work, including raising awareness amongst staff teams around psychological wellbeing and traumatic incidents within work, training managers and team-based practitioners in the model, and holding regular reflective practice sessions to support teams in their adoption of the approach. Following this service evaluation, a proportion of WTS Trainers were then invited to take part in a qualitative interview further exploring the enablers and barriers to implementing the WTS model across teams. Interview topic guides and analysis were informed by Normalization Process Theory, a framework exploring the ways by which new processes or approaches become embedded into standard practice.

Results: Findings will be presented from 29 WTS Trainers who completed the service evaluation survey, including ratings on the accessibility of the approach, and utility of the training, as well as data on the extent to which trainers had been able to implement the model within their teams. The findings from analysis of qualitative interviews with a subset of WTS Trainers will demonstrate key barriers, challenges, and facilitators to the implementation of the WTS model, and potential means of improving its impact.

Conclusions: Overall findings from the service evaluation and qualitative study will be drawn together to inform recommendations for how the WTS model may be improved and adapted, and to inform how organisations may be better prepared to undertake the WTS model, including assessment of readiness and management involvement.

Symposium 6

Recent advances in the search for predictors and mechanisms of response in cognitive-behavioral therapy for anxiety-related disorders

Chair: Carles Soriano-Mas, Bellvitge Biomedical Research Institute-IDIBELL, Barcelona, Spain

Right prefrontal cortical thickness is associated with response to cognitive-behavioral therapy in children with obsessive-compulsive disorder

Sara Bertolin^{1,14}, Ignacio Martínez-Zalacain¹, Premika S. W. Boedhoe^{2,3}, Pino Alonso^{1,14}, Brian P. Brennan^{4,5}, Kate D. Fitzgerald^{6,7}, Yoshiyuki Hirano⁸, Marcelo Q. Hoexter⁹, Chaim Huyser¹⁰, Gerd Kvale¹¹, Luisa Lazaro^{12,13,14}, Rachael Marsh^{6,7}, H. Blair Simpson^{6,7}, Pedro Morgado^{15,16}, Erika L. Nurmi¹⁷, Joseph O'Neill¹⁷, Evelyn Stewart¹⁸, Susanne Walitza¹⁹, on behalf of the ENIGMA-OCD working group, Paul Thompson²⁰, José M. Menchón^{1,14}, Dan Stein²¹, Odile A. van den Heuvel^{2,3}, Carles Soriano-Mas^{1,14,22}

¹Department of Psychiatry, Bellvitge University Hospital, Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain; ²Department of Psychiatry, Amsterdam University Medical Centers (UMC), Vrije Universiteit Amsterdam, Amsterdam Neuroscience, Amsterdam, Netherlands; ³Department of Anatomy and Neurosciences, Amsterdam University Medical Centers, Vrije Universiteit Amsterdam, Amsterdam Neuroscience, Amsterdam, Netherlands; ⁴Department of Psychiatry, McLean Hospital, Harvard Medical School, Belmont, Massachusetts, United States; ⁵Biological Psychiatry Laboratory, McLean Hospital, Belmont, Massachusetts, United States; ⁶Columbia University Medical College, Columbia University, New York, NY, United States; ⁷The New York State Psychiatric Institute, New York, NY, United States; ⁸Research Center for Child Mental Development, Chiba University, Chiba, Japan; ⁹Departamento de Psiquiatria, Faculdade de Medicina, Instituto de Psiquiatria, Universidade de São Paulo, São Paulo, Brazil; ¹⁰Department of Child and Adolescent Psychiatry, Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, Netherlands; ¹¹Department of Mental Health, Haukeland University Hospital, Bergen, Norway; ¹²Department of Child and Adolescent Psychiatry and Psychology, Hospital Clinic Universitari, Institute of Neurosciences, Barcelona, Spain; ¹³Institut d'Investigacions Biomèdiques Agustí Pi i Sunyer (IDIBAPS), Barcelona, Spain; ¹⁴Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Barcelona, Spain; ¹⁵Life and Health Sciences Research Institute (ICVS), School of Health Sciences, University of Minho, Braga, Portugal; ¹⁶Department of Psychiatry, Hospital de Braga, Braga, Portugal; ¹⁷Department of Psychiatry and Biobehavioural Sciences, University of California, Los Angeles, CA, United States; ¹⁸British Columbia Mental Health and Addictions Research Institute, University of British Columbia, Vancouver, Canada; ¹⁹Department of Child and Adolescent Psychiatry and Psychotherapy, Psychiatric Hospital, University of Zurich, Zurich, Switzerland; ²⁰Imaging Genetics Centre, Keck School of Medicine of the University of Southern California, Mark and Mary Stevens Neuroimaging and Informatics Institute, Marina del Rey, CA, United States; ²¹MRC Unit on Risk & Resilience in Mental Disorders, Department of Psychiatry, University of Cape Town, Cape Town, South Africa; ²²Department of Social Psychology & Quantitative Psychology, University of Barcelona, Spain

Background: Cognitive behavioral therapy (CBT) is considered a first line treatment for obsessive-compulsive disorder (OCD) in pediatric and adult populations. Nevertheless, there are patients showing partial or null response. The identification of predictors of CBT response may allow optimizing clinical management of patients. Here we aimed to identify structural MRI predictors of CBT response in two large series of adults and children with OCD from the worldwide ENIGMA-OCD consortium.

Methods: Data from 16 datasets from 13 international sites were included in the study. We assessed which variations in cortical thickness, cortical surface area and subcortical volume predicted response to CBT (percentage of baseline to post-treatment symptom reduction) in two samples of 168 children/adolescents and 318 adults with OCD. Mixed linear models with random intercept were used to account for potential cross-site differences in imaging values.

Results: Significant results were exclusively observed in the pediatric sample. Right prefrontal cortex thickness was positively associated with the percentage of CBT response. In a post-hoc analyses, we observed that the right prefrontal changes accounting for this relationship concerned the higher thickness of the rostral middle frontal gyrus and the frontal pole. We observed no significant effects of age, sex or medication on our findings.

Conclusion: Higher cortical thickness in specific right prefrontal cortex regions may be a putative biomarker of CBT response in children with OCD. Our findings suggest that the right prefrontal cortex plays a relevant role in the mechanisms of action of CBT in children.

Pharmaco- and cognitive-behavioral therapy have common and specific effects on brain activity in obsessive-compulsive disorder

AL van der Straten MD¹⁻³, WB Bruin¹⁻³, LA van de Mortel¹⁻³, F ten Doesschate^{1,4}, M Merckx PhD⁵, PP de Koning MD PhD¹⁻², NCC Vulink MD PhD¹⁻², M Figeer MD PhD⁶, D Denys MD PhD¹⁻³, GA van Wingen PhD¹⁻³

¹ Amsterdam UMC, University of Amsterdam, Department of Psychiatry, Amsterdam Neuroscience, Amsterdam, Netherlands, ² Amsterdam Brain and Cognition, University of Amsterdam, Amsterdam, Netherlands, ³ Spinoza Centre for Neuroimaging, Royal Netherlands Academy for Arts and Sciences, Amsterdam, Netherlands. ⁴ Rijnstate hospital, Department of Psychiatry, Arnhem, Netherlands, ⁵ HSK group, obsessive-compulsive disorder expertise center, Netherlands, ⁶ Icahn School of Medicine at Mount Sinai, New York, United States

Background: For the treatment of obsessive-compulsive disorder (OCD), current treatment options currently consist of pharmacological treatment (selective serotonin reuptake inhibitors, SSRI) or cognitive behavioral therapy (CBT). While these treatments are generally successful in reducing OCD symptoms, we currently do not know what the biological working mechanism is behind these treatments, although this knowledge could be used to determine the optimal treatment beforehand and work towards individual-based prediction of treatment success.

In this study, we investigated the effect of SSRI's and CBT over a four month (sixteen week) period and compared brain activity during a symptom provocation and stop-signal behavioral inhibition task before and four months after the start of their treatment.

Methods: We conducted a controlled study including thirty-four individuals with a verified OCD diagnosis which were treated with either CBT or pharmacological therapies and underwent functional magnetic resonance imaging scans with behavioral paradigms (symptom provocation, stop-signal task) at the start of their treatment and at follow-up after sixteen weeks. To account for test-retest effects, this longitudinal data was compared to that of twenty healthy controls scanned within the same time interval.

Results: Both CBT and SSRIs successfully reduced OCD symptoms. Compared to healthy controls, OCD patients displayed a reduction in insula activity during symptom provocation at follow-up. When comparing CBT and SSRIs, a global pattern of brain activity increases in the CBT group and activity decreases in the SSRI group was found after sixteen weeks. These changes were seen in the insula, prefrontal and

occipital regions, and cerebellum, as well as subcortical regions such as the caudate nucleus and hippocampus across the different behavioral paradigms.

Conclusion: This study is the first to compare the effect of pharmacological and psychological treatments on brain activity in OCD, and the first to report opposing directional changes for CBT and SSRIs in the treatment of OCD located in regions previously indicated to be involved in OCD. This suggests that both therapies work through different distinct pathways that may be important for determining optimal treatment outcome.

Neural predictors of cognitive-behavior therapy outcome in anxiety-related disorders: a meta-analysis of task-based fMRI studies

Maria Picó-Pérez^{1,2,3}, Miquel A. Fullana^{4,5}, Anton Albajes-Eizagirre^{5,6}, Daniel Vega^{7,8}, Josep Marco-Pallarés^{9,10}, Ana Vilar¹¹, Jacobo Chamorro¹², Kim L. Felmingham¹³, Ben J. Harrison¹⁴, Joaquim Radua^{5,15,16}, Carles Soriano-Mas^{17,18,19}

¹Life and Health Sciences Research Institute (ICVS), University of Minho, Braga, Portugal; ²ICVS/3B's, PT Government Associate Laboratory, Braga/Guimarães, Portugal; ³Departamento de Psicología Básica, Clínica y Psicobiología, Universitat Jaume I, Castelló de la Plana, Spain; ⁴Adult Psychiatry and Psychology Department, Institute of Neurosciences, Hospital Clinic, Barcelona, Spain; ⁵Imaging of Mood- and Anxiety-Related Disorders (IMARD) Group, Institut d'Investigacions Biomèdiques August Pi I Sunyer (IDIBAPS), CIBERSAM, Barcelona, Spain; ⁶Opticks Security, Barcelona, Spain; ⁷Psychiatry and Mental Health Department, Consorci Sanitari de l'Anoia & Fundació Sanitària d'Igualada, Igualada, Barcelona, Spain; ⁸Unitat de Psicologia Mèdica, Departament de Psiquiatria i Medicina Legal & Institut de Neurociències, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain; ⁹Department of Cognition, Development and Educational Psychology, Institute of Neurosciences, University of Barcelona, Barcelona, Spain; ¹⁰Cognition and Brain Plasticity Unit, Bellvitge Biomedical Research Institute (IDIBELL), Barcelona, Spain; ¹¹Institut de Neuropsiquiatria i Addiccions, Hospital de Dia Infanto Juvenil Litoral Mar, Parc de Salut Mar, Barcelona, Spain; ¹²Anxiety Unit, Institute of Neuropsychiatry and Addictions, Parc de Salut Mar, Barcelona, Spain; ¹³School of Psychological Sciences, University of Melbourne, Melbourne, Australia; ¹⁴Department of Psychiatry, Melbourne Neuropsychiatry Centre, The University of Melbourne and Melbourne Health, Carlton, Victoria, Australia; ¹⁵Department of Clinical Neuroscience, Centre for Psychiatric Research and Education, Karolinska Institutet, Stockholm, Sweden; ¹⁶Department of Psychosis Studies, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK; ¹⁷Bellvitge Biomedical Research Institute (IDIBELL), L'Hospitalet de Llobregat, Barcelona, Spain; ¹⁸CIBERSAM, Barcelona, Spain; ¹⁹Department of Psychobiology and Methodology of Health Sciences, Universitat Autònoma de Barcelona, Barcelona, Spain

Background. Cognitive-behavior therapy (CBT) is a well-established first-line intervention for anxiety-related disorders, including specific phobia, social anxiety disorder (SAD), panic disorder/agoraphobia, generalized anxiety disorder, obsessive-compulsive disorder (OCD), and posttraumatic stress disorder (PTSD). Several neural predictors of CBT outcome for anxiety-related disorders have been proposed, but previous results are inconsistent. Here, we present the results of a meta-analysis of neural predictors of CBT outcome in anxiety-related disorders as assessed across task-based fMRI studies. Our goal was to identify patterns of pre-treatment brain activation and/or deactivation that most consistently predict CBT outcome across anxiety-related disorders, as well as to assess the robustness of these results.

Methods. We conducted a systematic review and meta-analysis of task-based functional magnetic resonance imaging (fMRI) studies investigating whole-brain predictors of CBT outcome in anxiety-related disorders (17 studies, $n = 442$). We focused on three processes that are conceptually related to the mechanisms of action of CBT, and the most frequently used to predict response to CBT in the literature (emotion processing, emotion regulation, and inhibition/interference). The Seed-based d Mapping with Permutation of Subject Images (SDM-PSI) software, version 6.21 (www.sdmproject.com) was used to generate voxel-wise (random effects) effect size maps corresponding to the analyses and contrasts of interest. SDM-PSI is a neuroimaging meta-analytic approach that is capable of combining tabulated brain statistical results (i.e. cluster peak statistic and coordinate information) with actual voxel-wise brain statistical maps. Specifically, we obtained original brain statistical maps of the contrast of interest from eight independent datasets, while for the remaining datasets, peak regional coordinates and t-statistics were extracted from the original manuscripts.

Results. Across different tasks, we observed that brain response in a network of regions involved in salience and interoception processing, encompassing fronto-insular (the right inferior frontal gyrus-anterior insular cortex) and fronto-limbic (the dorsomedial prefrontal cortex-dorsal anterior cingulate cortex) cortices was strongly associated with a positive CBT outcome. Separate meta-analyses for OCD ($n = 4$, 77 patients), SAD ($n = 6$, 161 patients), and PTSD ($n = 4$, 100 patients) were also performed. The main results were maintained in the OCD and SAD sub-analyses, while there were no significant results for the PTSD meta-analysis.

Conclusions. Our results suggest that there are robust neural predictors of CBT outcome in anxiety-related disorders that may eventually lead (probably in combination with other data) to develop personalized approaches for the treatment of these mental disorders.

Modeling and predicting changes in fear during exposure therapy

Tiago V. Maia, Instituto de Medicina Molecular, Universidade de Lisboa, Portugal; Ana Portêlo, Instituto de Medicina Molecular, Universidade de Lisboa, Portugal; Youssef Shiban, Department of Psychology (Clinical Psychology and Psychotherapy Research) (YS), PFH Private University of Applied Sciences, Germany

Exposure is the cornerstone of successful behavioral treatment of phobias, obsessive-compulsive disorder, and other disorders. During exposure, fear ratings (or other subjective units of discomfort) tend to follow qualitatively predictable patterns both within and across exposure sessions: fear increases early in the exposure session and tends to decrease later in the session, and fear is greater early in treatment and tends to decrease later in treatment. We have recently shown that these patterns of fear change throughout treatment can be predicted quantitatively, with great precision, at the level of individual patients, using a simple mathematical model. This model has only two parameters that are readily interpretable clinically and that we can estimate for an individual patient after only two exposure sessions. With these parameters, we can predict, with uncanny accuracy, the pattern of fear ratings in future sessions for the patient. One of these parameters also helps to predict ultimate treatment outcome.

Symposium 7

Advances in parenting interventions for parents with mental health difficulties: A life span perspective with the potential to address intergenerational problems

Convenor and Chair: Anja Wittkowski, The University of Manchester & Greater Manchester Mental Health NHS Foundation Trust, UK

Could a parenting intervention be acceptable and even beneficial to mothers with severe mental health problems as well as their infants? Preliminary findings from a feasibility study

Anja Wittkowski, Richard Emsley, Penny Bee, Elizabeth Camacho, Rachel Calam, Kathryn Abel, Paula Duxbury, Paula Gomez, Kim Cartwright and Holly Reid: The University of Manchester, UK

Background: Approximately 1-2% of mothers may experience severe mental illness (SMI) requiring admission to an inpatient Mother and Baby Unit (MBU). MBUs aim to provide mental health assessment and treatment and strengthen the mother-infant relationship, essential for infant development. However, despite improvements in mental health in mothers admitted to these units, treatment of the mother's symptoms does not necessarily translate into better interactions with her baby.

Baby Triple P is a positive parenting intervention preparing parents for their transition into parenthood by providing them with knowledge and skills to promote a secure attachment with their new baby, to improve the quality of partner support alongside wider social support and to increase coping resources to reduce parental distress. As various studies examined this intervention's acceptability and applicability in various settings with different groups of parents, including mothers with postnatal depression, we wanted to examine if Baby Triple P was acceptable to mothers and to MBU staff and if its delivery was feasible.

Method: This multi-site, parallel-group, single-blind pilot randomised controlled trial compared Baby Triple P versus usual care in mothers recruited from two MBUs in England. Clinical outcomes including maternal parenting competence, bonding and mental health outcomes were assessed at baseline, post-baseline/intervention (10 weeks) and six-month follow-up. Data were analysed using descriptive statistics and linear regression models. An economic feasibility analysis was also conducted. Interviews with staff and mothers were also conducted.

Results: Thirty-four mothers were randomised, with 21 being retained to final follow up. Clinical outcomes indicated potential improvements in maternal parenting competence, mood and other mental health symptoms as well as bonding. Women and staff reported noting positive changes.

Conclusions: This was the first trial of a parenting intervention in this particular perinatal mental health setting. Although this was only an acceptability and feasibility study, these initial findings were encouraging. This particular parenting intervention, once tested in a full trial, could easily be an additional intervention being offered to mothers and their infants in MBUs or within other perinatal settings.

The Triple P Positive Parenting Programme for parents with a diagnosis of psychosis

Lauren Wolfenden, Rachel Calam, Richard Drake and Lynsey Gregg, The University of Manchester, UK

Background: Caring for children alongside coping with poor mental health can be extremely difficult for parents with psychosis. Symptoms and medication side effects can reduce parental responsiveness, as well as interfering with important family routines. Poor parental mental health may also reduce the use of effective parenting strategies, negatively impacting child behaviour and resulting in a more stressful home environment which may ultimately serve to worsen parental mental health further. Parenting interventions have the potential to disrupt this cycle, improving outcomes for parents and children alike, however, they have not yet been properly evaluated for parents with psychosis. We report on the first study to evaluate an evidence-based parenting intervention for parents with psychosis.

Method: A guided version of the Triple P Positive Parenting programme's "Every Parent's Self-Help Workbook" was evaluated with ten parents experiencing psychosis in a multiple baseline case series study. Sessions were weekly and home-based. Outcome measures examined aspects of parenting, including parenting self-efficacy, child behaviour and parental mental health, including psychosis symptoms. Semi-structured interviews were conducted as part of the follow up to allow in-depth exploration of parents' experiences of the intervention, and to elicit their reflections on its impact.

Results: Five participants (50%) completed all ten sessions of Triple P and for these five, clinically significant change (>25% improvement) was observed in multiple domains. Parental mental health was improved, self-reported parenting efficacy was increased and children were reported to be behaving better by their parents post-intervention. These improvements were maintained at 3 and 6 month follow up. Interviews with those who completed the programme revealed it to have been transformative: parents reported positive changes in parenting style; they were empowered regarding their parenting and had a greater sense of control over their mental health.

Conclusions: This is the first evaluation of an evidence-based parenting intervention for parents with psychosis. It provides preliminary evidence that self-directed Triple P might be able to improve family functioning and reduce the symptoms of psychosis in parents who engage with it. Findings have been used to inform a feasibility trial of Triple P for parents with psychosis within adult mental health services in the UK.

Open feasibility trial of Family Life Skills Triple P for parents of children with early onset conduct problems

Matthew R Sanders, The University of Queensland, Australia

This presentation will present findings from an open feasibility trial of a new variant of the Triple P system, Family Life Skills Triple P. Creative adaptations of this intervention during COVID-19 showed how parents with complex trauma histories can benefit personally as well as their offspring when parents develop their self-regulatory capacities.

This single arm, open feasibility trial delivered through regular health services provided very encouraging preliminary evidence that a parenting program (Group Triple P) broadened to include additional targeted life skills training for parents was associated with significant and clinically meaningful improvements in child behaviour, positive parenting skills and confidence, risk of child maltreatment, parents' self-regulation skills and wellbeing, and family adjustment.

Despite the disrupted delivery due to COVID-19, it was associated with very high level of consumer satisfaction. Furthermore, the study extends the existing literature on Triple P by showing that changes in the hypothesised mechanism of change, namely parental self-regulation, occurred consistent with the program's conceptual model. This study also extends the existing literature on the effects of Group Triple P on parenting practices and child behaviour by including measures of parental child abuse potential, parental emotion regulation, household disorganisation and chaos, and compassion.

Family Life Skills Triple P is a promising and feasible parenting and family life skills support program for vulnerable parents. The program was well accepted and viewed as helpful by both parents and practitioners and was successfully delivered via videoconferencing. The strength of findings justifies moving to a large scale randomised clinical trial of the intervention.

Empower-Autism: A new psycho-educational and psycho-therapeutic group-based programme for parents/carers of children recently diagnosed with autism

Kathy Leadbitter, Louisa Harrison and the REACH-ASD Team (Hilary Beach will present for the team), University of Manchester, UK

Background: Parents/carers of autistic children face many practical, emotional, and social challenges. The post-diagnosis period can be particularly challenging and responses to the diagnosis are diverse and often complex. 20-50% of parents show clinically-elevated mental health needs during this period and on an ongoing basis. UK best practice guidelines recommend provision of timely post-diagnostic family support. Current provision is patchy, a source of increasing dissatisfaction, lacks evidence of effectiveness, and seldom directly addresses parental mental health. Our objective was: (a) to develop a manualised group-based post-diagnostic programme, blending autism psycho-education with Acceptance & Commitment Therapy (ACT), to address the diverse needs of caregivers, with a particular focus on caregiver mental health; (b) to evaluate the acceptability of the programme to participants

Methods: Two approaches formed the foundation of the intervention development: the Manchester Post-diagnostic Workshop and a Brief ACT for Parents programme. Iterative stages of consultation and co-design were undertaken with stakeholder groups to integrate and further develop the foundational approaches, and to blend them into one comprehensive manualised programme.

A diverse sample of 29 caregivers of children (2-15 years) recently diagnosed with autism was recruited from a UK publicly-funded autism clinic. Participants were invited to attend one of three intervention programmes (two in-person; one online). Acceptability was assessed through attendance and satisfaction ratings. Qualitative feedback was obtained through post-session feedback forms and post-programme interviews.

Results: Empower-Autism is composed of 5 x 3-hour sessions, deliverable in-person or via video-conferencing, integrating 1) autism psycho-education, 2) ACT content and philosophy and 3) social support and validation.

Attendance: 22/29 participants attended ≥ 3 sessions (3 sessions=satisfactory dosage). 3 participants attended <3 sessions and 4 participants attended none. Non-attendance was due to external circumstances (illness, caring responsibilities, employment).

Satisfaction: 72% of sessions were rated 'very satisfied' and 28% of sessions 'satisfied'. Ratings looked similar across sessions and delivery modes.

Feedback and interview data were analysed with thematic analysis. Five main themes were identified: (1) a positive experience for all; (2) the richness of the therapeutic approach; (3) the value and impact of peer support; (4) resources and technology; (5) room for improvement.

Conclusion: Empower-Autism is feasible and acceptable to deliver in-person or online within a UK clinical context. Attendance was satisfactory; satisfaction was excellent. Parents described beneficial processes and outcomes. Constructive criticism served to further modify the programme. The programme is now being tested within a large randomised-controlled effectiveness trial.

Symposium 8

Using innovative technology to enhance psychotherapy practice and research

Chair: Danilo Moggia, University of Trier, Germany

Enhancing CBT with self-identity exploration using EYME-Explore Your Meanings: A digital platform using Virtual Reality *Guillem Feixas, Alejandro García Gutiérrez, & Miquel Alabèrnia-Segura, Universitat de Barcelona*

Explore Your Meanings (EYME) is a technology platform (eyme-vr.com) based on the repertory grid technique devised to capture the patient's mental map for construing self and others. It begins with an automatized, structured interview for identifying significant others, eliciting the characteristics (constructs or descriptors) used to describe them, and a rating task in a user friendly interface. EYME provides a graphical representation of the person's construal in both navigable 3D and Virtual Reality (VR) that allows the therapist to guide patients through a transformative exploration of their values and perceptions as applied to self and significant others. EYME is conceived as a technology to assist professionals in exploring their patients' sense of personal identity and to explore possible routes for development and change. Exploring personal meanings about self and others in an immersive VR environment is usually experienced by patients as a powerful opportunity not only to discover who they are but also to experiment possibilities for change, guided by a professional in the safety of the therapeutic relationship. A research protocol for young people with mild-to-moderate depressions will be presented.

Can you turn into your own therapist?

Brenda E. Ryan^{1,2}, Gizem Senel^{2,3} and Mel Slater^{2,3}

¹Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain, ²Event Lab, Faculty of Psychology, University of Barcelona, Barcelona, Spain. ³Institute of Neurosciences of the University of Barcelona, Spain

Sometimes when a friend turns to us for advice about a personal problem, it seems that we can see and understand their situation clearly and offer them good advice,

However, do we see the solution so easily when it comes to our own personal problems?

If your answer to this question was negative, this may be due to a phenomenon called "Solomon's paradox", according to which people are better at understanding and recommending solutions to other people's problems than to their own.

Osimo et al., (2015) tested this phenomenon using virtual reality (VR). This involved creating a virtual copy of the participants' body and embodied as themselves maintaining a conversation with another avatar that looked like Sigmund Freud, switching bodies between the two avatars. Therefore, the interesting part here was that Freud and the lookalike body were both embodied by the participants who, by turns, were able to explain and give counselling about their own problems to themselves. As a result, participants' mood improved and in general, they rated their problems as less important after the session. A further study (Slater et al., 2019) showed that it was the capability to switch between the two different bodies, maintaining a self-conversation, that accounted for this result.

The possibility of embodying other bodies, in this case allowing people to give advice to themselves from the embodied perspective of another, is very unique to VR and is now being explored for different psychological applications. For example, one of our current studies aims to address addiction; another is assessing body image distortions; and a third one assesses the use of this perspective for the treatment of anxiety and depression. In this talk we will illustrate this system, and describe our experimental results in these areas. Funding. This work is partly funded by the SOCRATES project, under the European Union's Horizon 2020 research and innovation programme under grant agreement No 951930. BR is funded by ISCIII; Aid IFI21/00007 financed by the Instituto de Salud Carlos III (ISCIII) and co-financed by the European Social Fund Plus (FSE+). GS is funded by 'la Caixa' Foundation (ID 100010434) with Fellowship code LCF/BQ/DR19/11740007.

What makes us trust virtual agents: the role of childhood trauma and person beliefs along the paranoia continuum

Miriam Fornells-Ambrojo¹, Melissa Hobban¹, Hayley Dolan¹, Kathryn Watchorn¹, Chris Barker¹, David Swapp¹, Aitor Rovira, Maaïke Elenbaas¹ & Mel Slater²

¹ University College London, UK, ² Event Lab, Faculty of Psychology, University of Barcelona, ³ University of Oxford, UK

Background and aims: Childhood trauma is associated with the risk of psychosis and beliefs about the self and others partly mediate this relationship. Paranoia, one of the most distressing and common symptoms of psychosis, has been investigated using virtual reality, showing that feelings of mistrust towards virtual agents are both influenced by individual differences and manipulations in the virtual world. We aim to investigate if: (i) childhood trauma and person beliefs predict subjective trustworthiness and trusting behaviour towards a pleasant virtual agent; (ii) person beliefs mediate the impact of childhood trauma on trust; and if (iii) contingency avatar behaviour moderated these relationships. **Method:** 92 participants (22 people with psychosis reporting persecutory beliefs and 70 non-clinical volunteers) completed measures of paranoia, childhood trauma, beliefs about self and others before being randomly allocated to have a social interaction with a pleasant virtual human (avatar) programmed to be highly responsive or not (high/low contingency). Perceived trustworthiness and trusting behaviour (distance kept from the avatar) were recorded. The results will be discussed in relation to cognitive models of psychosis and trauma-informed care.

Treatment Personalisation and Clinical Decision Support Systems: From Outcome Predictive Models to the Prediction of Process-Outcome Associations

Moggia, D., Schwartz, B., Bennemann, B., Lutz, W. University of Trier, Germany

"Does psychotherapy work?", "how does it work?" and "what works for whom?" are three questions that identify three main research lines in psychotherapy: outcome research, process research, and patient-focused research and treatment personalisation. Historically, patient-focused research and treatment personalisation has been developed twinned with outcome research in developing predictive models based on patients' characteristics (individual differences that work as moderators of treatment outcome). Nevertheless, in recent years, patient-focused research and treatment personalisation has approached the study of psychotherapy processes and change mechanisms, not only to unpack psychotherapy ("how does it work?"), but to personalise psychotherapy at the clinical strategy, procedures, and process level. Computerised clinical decision support systems that incorporate this framework have been developed. One of these systems is the Trier Treatment Navigator (TTN), developed at the university outpatient psychotherapy clinic of the University of Trier, Germany. The TTN incorporates a clinical strategy recommendation (based on strategy-outcome associations) and adaptive recommendations for patients at risk for treatment failure (based on routine outcome monitoring, a feedback system and clinical support tools). The effect of using the TTN in clinical practice was evaluated prospectively in a randomised controlled trial. The trial showed a differential effect for therapists who followed the recommended treatment strategy in the first 10 sessions. No main effects were found for feedback. Nevertheless, therapists' attitude, confidence and usefulness of feedback resulted in significant moderators of the feedback effect on outcome. How to address these implementation issues regarding therapists' attitudes and perceived usefulness will be discussed. The study of process-outcome associations to unpack psychotherapy and enhance these systems by incorporating time-wise dynamic recommendations will be presented.

Symposium 9

Adapting CBT and beyond; Scalable interventions delivered by non-professional helpers to address common mental disorders across the globe

Chair: Marit Sijbrandij, VU University, Amsterdam, Netherlands

A controlled trial of a lay provider delivered behavioural intervention for Syrian refugees and their children

Richard Bryant, Luana Giardinelli, Ahmad Bawaneh, Manar Awwad, Hadeel Naser, Claire Whitney, Marit Sijbrandij, & Aemal Akhtar

Refugees are exposed to many distressing events, including detention in refugee camps, and have higher rates of mental disorders. The World Health Organization has developed Problem Management Plus (PM+) as a group behavioural program to reduce psychological distress after trauma and adversity. This study reports the first evaluation of PM+ delivered by lay providers in a refugee camp. The study randomized 480 adult Syrian refugees in the Azraq Refugee Camp in Jordan to either group PM+ or Enhanced Usual Care (EUC). Participants were independently assessed prior to the program, immediately following the program, 3 months (primary outcome), and 12 months. Primary outcomes included anxiety and depression, and secondary outcomes were functioning, posttraumatic stress, grief, and also refugees' children's mental health. There were 624 refugees screened for eligibility, 462 (74.0%) screened positive, of whom 204 were assigned to gPM+ and 206 to EUC. Intent-to-treat analyses indicated that at follow-up participants in gPM+ showed greater reduction in depression than those receiving EUC (mean difference, 3.69 [95% CI 1.90 to 5.48], $P = .001$; effect size, 0.40). There was no difference between conditions in anxiety. Relative to EUC, participants in gPM+ had greater reductions in severity of personally identified problems and inconsistent disciplinary parenting. There were no significant differences between conditions for changes in PTSD, disability, grief, or childhood mental health outcomes. Mediation analysis indicated the change in inconsistent disciplinary parenting was associated with reduced attentional and internalising problems in children. No adverse events were attributable to the interventions or the trial. At the 12-month follow-up there were no differences in anxiety and depression. These findings suggest that a brief, lay-provider can reduce depression in refugees but there is a need to develop strategies to sustain these goals.

Effectiveness of a peer-refugee provided behavioral intervention for Syrian refugees in the Netherlands

Anne M. de Graaff,¹ Pim Cuijpers,¹ Ceren Acarturk,² Theo Bouman,³ Richard Bryant,⁴ Katie Dawson,⁴ Mariam Elsayy,¹ Daniela C. Fuhr,⁵ Nour Gorgis,⁶ Pernille Hansen,⁷ Sam Hunaidy,¹ Mark Jordans,⁸ Barbara Kieft,⁹ Christina Knaevalsrud,¹⁰ Miriam Lommen,³ David McDaid,¹¹ Naser Morina,¹² Hanspeter Morgeli,¹² A-La Park,¹¹ Bayard Roberts,⁵ Jos Twisk,¹² Peter Ventevogel,¹³ Nana Wiedemann,⁷ Aniek Woodward, and Marit Sijbrandij¹ on behalf of the STRENGTHS consortium

¹ Department of Clinical, Neuro- and Developmental Psychology, WHO Collaborating Center for Research and Dissemination of Psychological Interventions, Amsterdam Public Health Research Institute, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands; ² Koc University, Department of Psychology, Istanbul, Turkey; ³ Clinical Psychology and Experimental Psychopathology, University of Groningen, The Netherlands; ⁴ School of Psychology, University of New South Wales, Sydney, Australia; ⁵ London School of Hygiene and Tropical Medicine, Department of Health Services Research and Policy, London, UK; ⁶ i-Psy, Parnassia Groep, Almere, The Netherlands; ⁷ International Federation of Red Cross and Red Crescent Societies Reference Centre for Psychosocial Support, Copenhagen, Denmark; ⁸ Research and Development Department, War Child Holland, Amsterdam, The Netherlands & Amsterdam Institute of Social Science Research, University of Amsterdam, Amsterdam, the Netherlands; ⁹ ARQ National Psychotrauma Centre, ARQ International, Diemen, The Netherlands; ¹⁰ Division of Clinical-Psychological Intervention, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany; ¹¹ Care Policy and Evaluation Centre, Department of Health Policy, London School of Economics and Political Science, London, UK; ¹² University Hospital Zurich, Department of Consultation-Liaison Psychiatry and Psychosomatic Medicine, Zurich, Switzerland; ¹³ Department of Epidemiology and Data Science, VU Medical Center, Amsterdam, The Netherlands; ¹⁴ United Nations High Commissioner for Refugees, Public Health Section, Genève, Switzerland; ¹⁵ KIT Health, KIT Royal Tropical Institute, Amsterdam, The Netherlands

Background: Ongoing since 2011, the civil war in Syria has led to an unprecedented number of forcibly displaced individuals. The mental health burden among Syrian refugees is. Problem Management Plus (PM+) is a scalable psychological intervention for communities affected by adversity that can be delivered by non-specialist helpers.

Objective: The aim of this study was to evaluate the effectiveness of PM+ in alleviating symptoms of common mental disorders in Syrian refugees in the Netherlands.

Methods: We conducted a randomized controlled trial (RCT) among Syrian refugees aged 18 years and above. Participants were included if they reported elevated levels of psychological distress (Kessler Psychological Distress Scale (K10) >15 and WHO Disability Assessment Schedule (WHODAS 2.0) >16). Participants were randomized into PM+ or care as usual (CAU), and re-assessed at 1 week and 3 months after the intervention. Primary outcomes included anxiety and depression (Hopkins Symptom Checklist-25), and secondary outcomes included functioning (WHODAS 2.0), PTSD (PTSD Checklist for DSM-5; PCL-5), and self-identified problems (PSYCHLOPS).

Results: Out of the 236 individuals screened, 206 (62% male, mean [SD] age = 36.5 [11.72]) were included in the study. Participants were randomized into PM+ (n=103) or CAU (n=103). Among them, 84 and 92 participants completed the 3-month follow-up assessment, respectively. At baseline, the PM+ and CAU groups did not differ on any of the outcome variables. Three months after the intervention, the HSLC-25 score was significantly lower for PM+ compared with CAU (adjusted mean difference (AMD) -0.254; 95% CI -0.385, -0.122, $p=0.0001$; $d=0.41$). In terms of secondary outcomes, the PM+ group scored significantly lower on the PCL-5 (AMD -6.49; 95% CI -10.150, -2.834; $p=0.0005$; $d=0.40$) and PSYCHLOPS (AMD -1.38; 95% CI -2.597, 0.154; $p=0.027$; $d=0.27$), but not on WHODAS 2.0 (AMD -1.64; 95% CI -3.489, 0.214; $p=0.084$; $d=0.21$).

Conclusion: PM+ is an effective intervention to reduce symptoms of common mental disorders and self-identified problems in Syrian refugees. This is the first RCT on PM+ for refugees in a high-income setting. Longer follow-up is needed to evaluate the intervention's effectiveness over time.

Testing and scaling-up problem management plus with Arabic-speaking refugees in Switzerland – results from a randomized controlled trial

Naser Morina, Matthis Schick, Hanspeter Morgeli, Monique Pfaltz, Ulrich Schnyder, Julia Spaaij (presenter), on behalf of the STRENGTHS consortium

Background: There are around 131,000 officially registered refugees in Switzerland. An increase in asylum applications is expected in the coming years. Refugees are vulnerable to the development of common mental disorders, but face several barriers in accessing mental health care. Cost-effective psychological interventions are needed to provide them with appropriate treatment options. Problem Management Plus (PM+) is an evidence-based psychological intervention delivered by trained, non-specialist 'helpers'. The aim of this RCT was to test the effectiveness of PM+ with Arabic-speaking refugees in Switzerland.

Methods: We performed a single-blind definitive RCT with Arabic-speaking refugees with elevated levels of psychological distress and impaired psychological functioning (K10 >15 and WHODAS 2.0 >16). They were randomized to the intervention condition, receiving five sessions of PM+, or the enhanced treatment as usual (ETAU) condition. Participants were assessed at baseline, 1 week, 3 months and 12 months after the intervention.

Results: We faced several challenges during the recruitment. N=54 Arabic-speaking refugees were randomized in the intervention condition (n=25) or the ETAU condition (n=29). Preliminary results show promising results.

Discussion: The findings suggest that PM+, delivered by non-specialist helpers might be an effective treatment option for refugees and asylum seekers in Switzerland. Challenges in the recruitment will be addressed and chances of scaling-up PM+ in Switzerland will be discussed.

Comparing mindfulness-based stress reduction versus escitalopram for anxiety

Eric Bui¹, Naomi M. Simon², Mihriye Mete³, Mary Ann Dutton⁴, Amanda W. Baker⁵, Elizabeth A. Hoge⁴

¹ University of Caen Normandy & Caen University Hospital, avenue de la Cote de Nacre, 14000 Caen, France, ² New York University Grossman, School of Medicine, Department of Psychiatry, New York NY 10016, USA, ³ Medstar Health Research Institute, Hyattsville, MD, USA, ⁴ Georgetown University Medical Center, Department of Psychiatry, Washington, DC, 20007, USA, ⁵ Massachusetts General Hospital / Harvard Medical School, Department of Psychiatry, Boston, MA 02114, USA

Anxiety disorders including agoraphobia, panic, social anxiety, and generalized anxiety disorders, are common, highly distressing, and impairing conditions. Although effective treatments exist, many patients do not access or fully respond to them. Mindfulness-Based Stress Reduction (MBSR) is popular, standardized, widely available mind-body approach, that has been shown to decrease anxiety, however, little is known about how it compares to standard, first-line treatments. We conducted the first non-inferiority randomized, controlled trial

comparing MBSR to a first-line pharmacotherapy (escitalopram) for anxiety disorders. Adults with anxiety disorders (N=276; 75% females) were 1:1 randomized to 8 weeks of MBSR or escitalopram, and were assessed by blinded evaluators at baseline and weeks 4, 8 (endpoint) and follow-up (weeks 12, and 24). The a priori non-inferiority margin was set to 0.495 points for change at endpoint on the primary outcome, the Clinical Global Impression of Severity (CGI-S). The primary completer non-inferiority sample consisted of 208 patients (n=102 MBSR, n=106 escitalopram). At endpoint, the CGI-S was reduced by 1.43 (SD=1.17) for escitalopram and by 1.35 (SD=1.06) for MBSR. The between group difference was -0.07 (SE=0.16, p=0.65; 95% CI -0.38 to 0.23), with the lower bound of the confidence interval falling within the non-inferiority margin. Our results indicate that MBSR was non-inferior to escitalopram for treating anxiety disorders, suggesting that MBSR may be a scalable intervention that could be delivered to patients with anxiety disorders in settings where traditional mental health services are scarce.

Symposium 10

Reactions to social challenges in social anxiety: Sensitivity and reactivity to social status and affiliation signals and events across the developmental continuum

Convenor and chairs: Idan Aderka & Eva Gilboa-Schechtman

Children's social anxiety and their perception of likeability by peers

Mike Rinck, Radboudt University, Nijmegen, the Netherlands

Jeanine Baartmans¹, Francisca van Steensel², Lynn Mobach^{3,4}, Tessa Lansu³, Geryal Bijsterbosch³, Iris Verpaalen³, Ronald Rapee⁴, Natasha Magson⁴, Susan Boegels¹, Anke Klein^{1,3}

¹ Developmental Psychology, University of Amsterdam, The Netherlands, ² Child Development and Education, University of Amsterdam, The Netherlands, ³ Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands, ⁴ Centre for Emotional Health, Macquarie University, Sydney, New South Wales, Australia

We investigated the discrepancy between self-reported and peer-reported likeability among children, and their relation with social anxiety, depression, and social support. In total, 532 children between 7 and 12 years completed questionnaires about social anxiety symptoms, depressive symptoms, and social support, estimated their own likeability, and indicated how much they liked their classmates. Children with higher levels of social anxiety or depression overestimated their likeability less or even underestimated their likeability. Social anxiety symptoms, but not depressive symptoms, were significant predictors of the discrepancy. Social support was positively related to likeability and negatively related to social anxiety, but did not moderate the association between social anxiety symptoms and perception accuracy of likeability. These results are in line with cognitive theories of childhood social anxiety, and they stress the importance of using multi-informant measures when studying the relation between social anxiety and social functioning in children.

The longitudinal link between social status and social anxiety across adolescence

Eni S. Becker, Lisan A. Henricks, Wolf-Gero Lange, Maartje Luijten¹

¹Behavioural Science Institute, Radboud University, The Netherlands

Social anxiety is one of the most common and very debilitating psychological disorders in adolescent. At this age peers and social status are becoming increasingly important. Both low social status and heightened social anxiety are associated with victimization, feelings of loneliness, and depressive symptoms, but surprisingly little is known of the association between social anxiety and social status. Low social status may increase social anxiety as problematic peer relationships are stressful, or social anxiety might lead to lower social status, due to social deficits. Furthermore, social anxiety as well as social status has to be looked at with more differentiating. Social anxiety has more cognitive components, fear of negative evaluation and more behaviour one, e.g. avoidance. Status has more than one dimension, popularity and likability. We will present two longitudinal studies that took a closer look at the links between status and social anxiety. In study one data of 274 adolescents were collected with two waves with a 6-month interval. The social anxiety and status were relatively stable, and we found gender differences: Girls who were seen as less popular by their classmates avoided social situations more frequently and experienced more distress during such situations over time. Study two followed 1741 adolescent with 3 yearly assessments. We found evidence for a transactional relationship of social anxiety and status. Unpopularity predicted more withdrawal and vice versa. Regarding likability socially withdrawn adolescents were less liked over time. It is important to distinguish different social status components and social anxiety symptoms to thoroughly investigate their interplay

Swipe right, swipe left: initial interactions among individuals with SAD

Naama Rozen & Idan M. Aderka, University of Haifa, Israel

The presentation will focus on a study of romantic relations, and specifically, the pre-interaction stages of dating such as application use. Such interactions include the potential for rejection as well as for rejecting others. In that 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. 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.

The scarring impact of status loss in social anxiety: an evolutionary perspective

Roy Azoula and Eva Gilboa-Schechtman, Bar Ilan University, Ramat Gan, Israel

Evolutionary models suggest that social anxiety (SA) is associated with sensitivity to status loss. These models make several additional predictions concerning the strength as well as the specificity of the association between post-event distress (PED) following status losses and SA. First, the strength of this association is postulated to be enhanced in men, especially following status losses inflicted by other men (intra-male status losses). Second, given the evolutionary postulated relationship between social status and physical fitness, sensitivity to status loss in SA is expected to extend to physically threatening events. We examined these predictions in four online samples (total N = 1123; 59% females, 27% above the cutoff for clinically elevated SA). In all studies, participants recalled social status-loss events and rated the emotional and distressing impact of these experiences. In two samples, participants also identified and recalled physically threatening events. Our findings were consistent with evolutionary predictions. SA was associated with PED following social status-loss events ($\beta = 0.27$). This association was stronger in men than in women ($\beta = 0.40$, $\beta = 0.16$, respectively). Moreover, the SA-PED association was especially enhanced following intra-male, compared to intra-female and inter-gender, status losses ($\beta = 0.47$, $\beta = 0.26$, and $\beta = 0.17$, respectively). Furthermore, SA was uniquely associated with PED following physically threatening events, over and above PED following social status-loss events ($\beta = 0.21$). Our data highlights the significant impact of socially and physically threatening events and delineates the scarring signature of such events in SA.

Symposium 11

Physical activity as augmentation strategy for Cognitive Behavioural Therapy

Chair: Eline Voorendonk, Radboud University Nijmegen and Research Department PSYTREC, the Netherlands

Feasibility of exercise as augmentation strategy for cognitive behavior therapy

Michèle Schmitter^{1,2}, Mikael Rubin³, Miriam M. A. van den Berg¹, Sofie E. Reijnen¹, Elianne D. de Ruiter-Blijdorp¹, Jasper A. J. Smits³, Jan Spijker^{1,2} & Janna N. Vrijzen^{1,4}

¹ Depression Expertise Center, Pro Persona Mental Health Care, Nijmegen, The Netherlands, ² Behavioural Science Institute, Radboud University Nijmegen, The Netherlands, ³ Department of Psychology & Institute for Mental Health Research, University of Texas at Austin, Austin, TX, USA

⁴ Department of Psychiatry, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, The Netherlands

Background: Despite the variety of evidence-based treatments for MDD available, approximately 40% of patients do not adequately respond. Hence, there is an urgent need to improve clinical outcomes. Physical exercise is effective both as mono- and adjunct treatment for depression. Due to its direct neuroplasticity benefits, exercise increases learning and memory. Hence providing exercise directly before therapy sessions could enhance the uptake and hence clinical benefits of common guideline-conform therapies e.g. group-based cognitive behavior therapy (CBT). The present pilot study examined the feasibility of exercising before CBT sessions by comparing it to CBT without exercise.

Methods: Participants were 33 outpatients within Dutch specialized mental health care diagnosed with MDD who either received 12 weeks of group-based CBT alone or exercise+CBT, based on a stepped wedge design. Professionally supervised exercise sessions (45 min, at moderate intensity, running or indoor cycling) were delivered by a psychomotortherapist directly before the weekly CBT sessions. Patients were stimulated to exercise at home twice per week. A FitBit activity tracker was provided so patients could monitor the exercise intensity. We considered exercise+CBT feasible if 1) retention rates did not differ between conditions, 2) the majority (>65%) of eligible patients participated in the study, and 3) if exercise was provided according to guidelines for at least six sessions, with at least 50% of sessions on moderate intensity. The effect of the treatment conditions on depressive symptom reduction was modeled to explore the proposed clinical superiority of exercise+CBT over CBT alone.

Results: We found no meaningful difference in dropout between the exercise+CBT and the CBT only condition at the 12-week posttreatment assessment, $b = -0.01$, 95% CI [-0.35, -0.34]. In addition, 48% of all eligible patients participated in the present study which was lower than expected. No adverse events were reported. The exercise+CBT condition on average participated in 7.5 supervised sessions of which 72% were at moderate-vigorous intensity. They exercised on average 1.35 times/week at home. There was no meaningful difference in depressive symptoms reduction between the conditions, $b = -3.83$, CI [-8.07, 0.43], BF=0.31. However, depressive symptoms on average decreased more in the exercise+CBT condition.

Discussion: The present study showed that proving exercise as CBT augmentation strategy for depression is feasible within specialized mental health care. There are no reasons against real-time combined exercise+CBT, although the clinical effects are likely small. This pilot study deems well-powered research into exercise as CBT augmentation feasible, although recruitment might be challenging.

Community-based smoking cessation treatment for adults with high anxiety sensitivity: a randomized clinical trial

Jasper A J Smits, Michael J Zvolensky, David Rosenfield, Richard A Brown, Michael W Otto, Christina D Dutcher, Santiago Papini, Slaton Z Freeman, Annabelle DiVita, Alex Perrone, Lorra Garey

Background and aims: People with anxiety disorders are more likely to smoke and less likely to succeed when they try to quit. Anxiety sensitivity may underlie both phenomena, such that people with high anxiety sensitivity react to interoceptive distress by avoidance. This study aimed to test the efficacy of an exercise program that induced interoceptive distress and thereby created tolerance to this distress in a safe environment.

Design, setting and participants: Randomized clinical trial at four YMCA branches in Austin, Texas, USA. Participants [$n = 150$; 130 (86.7%) white; 101 (67.3%) female; mean_{age} = 38.6, standard deviation (SD)_{age} = 10.4] were adult, daily smokers with high anxiety sensitivity motivated to quit smoking, who reported no regular moderate-intensity exercise.

Interventions: Participants were assigned a YMCA personal trainer who guided them through a 15-week intervention aerobic exercise program. Participants assigned to the personalized intervention trained at 60-85% of their heart rate reserve (HRR), whereas participants assigned to the control intervention trained at 20-40% of their HRR. Participants in both groups received standard behavioral support and nicotine replacement therapy.

Measurements: The primary outcome was biologically verified 7-day point prevalence abstinence (PPA) at 6-month follow-up.

Findings: Sixty-one per cent of participants were available at the 6-month follow-up. PPA at 6 months was higher in the personalized intervention than the control intervention [27.6 versus 14.8%; odds ratio (OR) = 2.20, 95% confidence interval (CI) = 1.28, 3.80, $P = 0.005$], assuming missing at random. Anxiety sensitivity declined in both groups with no evidence that this differed between groups.
Conclusions: An exercise program of high intensity increased abstinence from smoking in people with high anxiety sensitivity, but may not have done so by reducing anxiety sensitivity

An online mental health informed physical activity intervention for emergency service workers and their families: A stepped-wedge trial

Grace McKeon, Ruth Wells, Zachary Steel, Dusan Hadzi-Pavlovic, Scott Teasdale, Davy Vancampfort, Simon Rosenbaum, Faculty of Clinical Medicine, UNSW Sydney, Australia*

Background: Emergency service workers are at an increased risk of experiencing poor mental health including posttraumatic stress disorder due to prolonged, repeated exposure to potentially traumatic events. Promoting healthy lifestyle behaviours including physical activity and diet may help to mitigate some the consequences of emergency service work. This study aimed to evaluate the impact of an online physical activity and diet intervention on levels of psychological distress among emergency service workers and their nominated support partner e.g., spouse, family member.

Methods: We delivered a 10-week intervention via a private Facebook group facilitated by exercise physiologists, a dietitian and peer-facilitators. Weekly modules on topics including overcoming barriers to exercise, reducing sedentary time, self-monitoring of activity and nutrition were delivered. Weekly group telehealth calls were conducted and participants were provided with a physical activity tracking device (Fitbit). A stepped-wedge design was applied to compare levels of psychological distress (Kessler-6) during baseline, to intervention by comparing slopes of change. Separate slopes were modelled for a) baseline; b) intervention slope 1; c) intervention slope 2; d) change in level of knot points. Secondary outcomes included a pre-post assessment of mental health symptoms, physical activity levels, quality of life, sleep quality and suicidal ideation.

Results: In total, $N=90$ participants ($n=47$ emergency service workers and $n=43$ support partners) were recruited in 4 separate cohorts (mean age 42.3(SD=11.5) years, 51% male). Levels of psychological distress did not change significantly during the baseline (control) slope, while during the first 6 weeks of intervention (intervention slope 1) levels reduced significantly. The difference between baseline and intervention slopes were significant, $b=-0.351$, $p = 0.003$, (i.e., the trajectories of change were significantly different) and improvements plateaued until the 4-week follow up (intervention slope 2). Retention was high (92%) and participation was associated with improvements in mental health symptoms, weekly minutes of physical activity, sedentary time and quality of life.

Conclusions: A 10-week physical activity intervention delivered via social media is feasible and effective in improving psychological distress among emergency service workers and their support partners.

Effectiveness of physical activity added to an intensive trauma-focused treatment programme for patients with post-traumatic stress disorder (PTSD)

E.M. Voorendonk^{1,2}, S.A. Sanches³, M.S. Tollenaar⁴, A. De Jongh^{1,5,6,7} and A. Van Minnen^{1,2}

¹ Research Department, PSYTREC, Bilthoven, The Netherlands., ² Radboud University Nijmegen, Behavioural Science Institute (BSI), The Netherlands., ³ Phrenos Centre of Expertise for severe mental illness, Utrecht, the Netherlands., ⁴ Clinical Psychology and the Leiden Institute of Brain and Cognition, Leiden University, the Netherlands, ⁵ Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and VU University Amsterdam, The Netherlands., ⁶ School of Psychology, Queen's University, Belfast, Northern Ireland., ⁷ Institute of Health and Society, University of Worcester, United Kingdom.

New intensive trauma-focused treatment programmes that incorporate physical activity have been developed for people with post-traumatic stress disorder (PTSD; Van Woudenberg, et al. 2018). This development is based on research showing that regular psychological treatments with extra physical activity sessions lead to a stronger decrease in PTSD symptoms than psychological treatments alone (Davis, et al., 2021; Rosenbaum, et al. 2015). These positive augmentation effects of physical activity may be attributed to the physical activity itself, but may also be explained by non-specific factors, such as receiving more attention. In fact, the unique contribution of physical activity within intensive trauma-focused therapy has never been investigated in studies using an active control condition. The current randomized controlled trial therefore investigated the effectiveness of physical activity added to an intensive trauma-focused treatment programme. Individuals with PTSD were randomly allocated to two conditions: a physical activity ($N=60$) or a non-physical active control condition ($N=60$). All participants received the same intensive trauma-focused treatment lasting eight days within two consecutive weeks, in which daily prolonged exposure and EMDR therapy sessions and psycho-education were combined. Only the amount of physical activity differed per condition. While the physical activity condition induced daily physical activities with moderate intensity, in the non-physical active control condition no physical activity was applied, but instead, a controlled mixture of guided (creative) tasks was performed. Physical activity intensity was individually monitored and checked in both conditions at every timeslot with heart rate monitors and a subjective perception rating scale. The change in PTSD symptoms from pre- to post-treatment and at 6-month follow-up was measured with the Clinician-Administered PTSD Scale (CAPS-5), and the PTSD Checklist for DSM-5 (PCL-5). Additionally, self-reported sleep problems, symptoms of depression, emotion regulation, dissociation symptoms and anxiety sensitivity were assessed. Preliminary results reveal no significant difference in the decrease in PTSD symptoms over time between the physical activity and non-physical active control condition. Comprehensive analyses of the data are currently performed and the results on all outcome measures will be shared at the conference. As this is the first study to compare the added effect of physical activity to an active control condition, within an intensive trauma-focused treatment format, it is to be expected that the results of this study strongly contribute to the research field of augmentation strategies for PTSD treatment worldwide. The treatment implications of these results will be discussed.

Symposium 12

Trauma, dissociation, and psychosis: From the lab to clinical practice

Convenors and Chairs: Wencke Donath and Rafaële Huntjens University of Groningen, the Netherlands

Me, Myself, and I: sense of self in schizophrenia spectrum and other psychotic disorders – a systematic review

Pijnenborg GHM¹, Van der Meer EM¹, Nguyen, T, Huntjens, R²

¹Dept of clinical and developmental neuropsychology, faculty of BSS, University of Groningen, The Netherlands, ²Dept of experimental and clinical psychology, faculty of BSS, University of Groningen, The Netherlands

Background: The self has been defined as: *The mental processes that provide one with feelings of singularity, coherence, individuality, and unity that define one as a unique and particular human being.*

Several aspects of the self appear to be impaired or fragmented in psychotic disorders.

Aim: This study systematically reviewed the empirical evidence underlying a presumed disturbed sense of reflective aspects of the self in schizophrenia spectrum disorders (SSD).

Method: PsycINFO, PubMed, and Web of Science were searched for relevant literature and evaluated against preformulated inclusion and exclusion criteria.

Results: Twenty-five studies were selected for the review. Evidence reviewed indicated relatively consistent findings of impairments in structural and content components of the self-concept and disturbed perceptions of self-coherence in SSD. Results are somewhat more mixed with regard to self-continuity.

Discussion: Impairments were found in most aspects of the reflective self. Interventions targeting identity and self-reflection are indicated for people with SSD.

Differences in self-concept structure between individuals with Dissociative Identity Disorder, Psychosis, and non-clinical adults

Wencke Donath^a, Rafaële J. C. Huntjens^a, Martin J. Dorahy^b, Rosemary J. Marsh^b, Peter J. de Jong^a

^aClinical Psychology and Experimental Psychopathology, University of Groningen, The Netherlands, ^bDepartment of Clinical Psychology, University of Canterbury, New Zealand

Our self-concept is our answer to the question: "Who am I?". We organize it through multiple, interrelated *self-aspects*, which can represent a variety of roles (student), types of activities (cooking), or relationships (caretaker) and which are associated with different *attributes* (e.g., hard-working, disorganized). That our self-concept is related to our psychological well-being becomes clear when considering dissociative identity disorder (DID), a severe dissociative disorder characterized by identity fragmentation. People with DID report having multiple identity states with different thoughts, feelings, behaviors, and memories. It remains unknown whether the identity fragmentation reported by people with DID results in a structural organization of self-knowledge distinct from other clinical and non-clinical groups. The current study compared the self-concept structure in DID to that of the comparison groups of non-clinical adults and people with psychosis (i.e., a relevant clinical comparison group experiencing identity confusion but not fragmentation). Both a direct measure (Self-Concept Clarity Scale) and a more indirect measure (i.e., Self-Descriptive Card Sorting Task) of self-concept structure were used. As hypothesized, those with DID reported a less coherent and stable understanding of themselves compared to the other groups on the direct measure. On the indirect measure, however, they did not show a more compartmentalized self-view. Thus, those with DID subjectively report greater difficulties in clearly understanding and defining who they are beyond what is reported by those with psychosis or non-clinical adults. Determined with a more indirect and objective measure, however, they do not show more identity fragmentation compared to the other groups. Interestingly, both the DID and psychosis group did describe their self-aspects using more negative attributes. Clinical practice could benefit from increasing the subjective coherence of self-views in DID (e.g., by discussing commonalities between self-views in different domains of life). Further, it is crucial to reduce the influence of negative self-evaluations in both DID and psychosis and to establish a more positive self-understanding across the different life domains.

Brain scans prove dissociative identity disorder?

Ante Schlesselmann and Vera De Vries, University of Groningen, the Netherlands

According to the DSM-5 diagnostic criteria DID is defined by two core features: a) patients demonstrate separate identity states (alters) and b) experience "recurrent gaps in the recall of everyday events, important personal information, and for traumatic events that are inconsistent with ordinary forgetting". Within the field of research, the separate processing of memories by identity states and lack of shared autobiographical information between them has been coined interidentity amnesia.

Producing indisputable evidence for either separate identity states or interidentity amnesia is difficult as it remains almost impossible to verifiably reveal an individual's inner world by designs which require a participant's direct response. Yet, in a rather recent development, neuroscientific evidence was advocated to be capable of rendering the invisible, visible. More specifically, imaging methods were advocated as a potential validator for the existence of alters that specifically harbor memories of trauma in DID. As such, it has been proposed that comparing brain imaging data of dissociative patients to those of simulators and healthy controls might contribute to the understanding of the disorder and its etiology. Discovering neuronal correlates might not only carry theoretical underpinnings, but is also proposed to aid diagnosis, by providing objective biomarkers at the single-subject level.

Yet, close examination of the available neuroimaging studies does not support strong claims as there is considerable heterogeneity regarding the potential role of brain regions as biomarkers for the core features of DID. This heterogeneity may result from variations in research methodology and imaging methods, but also differences in quality of the research.

In this presentation, we discuss a systematic review on the methodology of functional neuroimaging studies in DID for the last four decades. We will move along the common issues identified to be present in neuroscientific studies, with a particular focus on the boundaries for the implications of the resulting data and its contributions to the question of separate identity states and interidentity amnesia. The results of this review are aimed to paint a clear picture of the status quo and to inform the discussion on choosing a way forward in this matter. Lastly, a recommendation on the basis of the strength and shortcomings of the current field is sought after and expressed through the question "What are the methodological characteristics a future study on neurobiological evidence for core features of DID requires to produce sound evidence?"

To prepare or not? Phase-based treatment versus direct trauma-focused treatment in patients with a PTSD related to childhood abuse.

Noortje I. van Vliet^a, Rafaele J. C. Huntjens^b, Maarten K. van Dijk^a, Nathan Bachrach^{c,d}, Marie-Louise Meewisse^e, Sietske van Haren^f, Mark Huisman^g, and Ad de Jongh^{h,i,j}

^aCorresponding author, Dimence Mental Health Group, Pikeursbaan 3, 7411GT Deventer, the Netherlands. Telephone number: +31(0)570-604064. E-mail: n.vanvliet@dimence.nl; ^bDepartment of Experimental Psychotherapy and Psychopathology, University of Groningen, Grote Kruisstraat 2/1, 9712 TS Groningen, the Netherlands. E-mail: r.j.c.huntjens@rug.nl; ^cGGZ Oost Brabant, Wesselmanlaan 25a, 5707HA Helmond, the Netherlands; ^dTilburg University, Tilburg, The Netherlands. E-mail: n.bachrach@ggzoostrabant.nl; ^eAbate Center of Expertise in Anxiety and Trauma Het Voert 11, 1613KL Grootebroek, the Netherlands. E-mail: m.l.meewisse@abate.nl; ^fPiet Roordakliniek Forensic Addiction Clinic, Verlengde Ooyerhoekseweg 30, 7207BJ Zutphen, the Netherlands. E-mail: s.vanharen@tactus.nl; ^gDepartment of Sociology, University of Groningen, Grote Kruisstraat 2/1, 9712 TS Groningen, the Netherlands. E-mail: j.m.e.huisman@rug.nl; ^hDepartment of Social Dentistry and Behavioral Sciences, University of Amsterdam and Vrije Universiteit. E-mail: a.d.jongh@acta.nl; ⁱSchool of Health Sciences, Salford University, Manchester, United Kingdom; ^jInstitute of Health and Society, University of Worcester, United Kingdom

Patients with PTSD related to a history of childhood abuse are vulnerable for the development of Complex PTSD symptoms. There is a long-lasting debate about the treatment of these patients as it has been argued that these individuals may be insufficiently stable to tolerate immediate trauma-focused treatment (for example evidence-based treatments like EMDR or prolonged exposure). Therefore, phase-based treatment is often recommended for these patients instead of direct trauma-focused treatment. In a phase-based treatment the trauma-focused element is preceded by a preparation phase, such as the well-evaluated program Skills Training in Affect and Interpersonal Regulation (STAIR). This program aims to ensure the patient's safety by teaching the patient emotion regulation skills and interpersonal skills.

In this RCT, adult individuals with PTSD related to childhood abuse were randomly assigned to either a phase-based treatment condition (sixteen sessions EMDR therapy preceded by eight sessions STAIR; $n = 57$) or to a direct trauma-focused treatment condition (sixteen sessions EMDR therapy; $n = 64$). Participants were assessed on PTSD symptoms, symptoms of Complex PTSD, dissociative symptoms, and other forms of psychopathology. The assessments took place before, during, and after treatment, and at three and six-month follow-ups. Both the phase-based treatment and the trauma-focused treatment were effective in the reduction of symptoms. However, no significant differences between the two treatments on any variable at post-treatment or follow-up were found, although a phase-based treatment involves more treatment sessions than a trauma-focused treatment. The dropout rate did not differ significantly between the two conditions.

Regarding dissociative phenomena, dissociative experiences at baseline did not predict worse PTSD treatment outcome and the course of decline for dissociative experiences was comparable for both treatments. Based on these results we can conclude that direct trauma-focused treatment is a safe treatment for patients with a PTSD related to childhood abuse and the treatment choice between a phase-based treatment and a trauma-focused treatment should not depend on the presence of dissociative experiences at baseline.

Theoretical misunderstandings and new insights in treating dissociative identity disorders

Rafaële J. C. Huntjens, *Clinical Psychology and Experimental Psychopathology, University of Groningen, The 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.

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Symposium 13

Understanding and predicting change in anxiety treatment

Chair: *Elske Salemink, Utrecht University, the Netherlands*

Violation and change of threat expectancy: a core mechanism of exposure-based treatment for anxiety disorders?

Jürgen Hoyer, Dresden, Ingmar Heinig, Dresden & Andre Pittig, Erlangen-Nürnberg, Germany

Background. Only a few clinical studies have observed the process of expectancy violation during in vivo exposure exercises and examined its role for treatment success in anxiety disorders. In this study, based on the large Germany-wide project (Providing Tools for the Effective Care and Treatment of Anxiety Disorders; PROTECT-AD), we documented the threat beliefs before and after exposure sessions and investigated their predictive value for treatment outcome.

Methods. From 8484 standardized exposure records of 605 patients with different anxiety disorders, learning indicators were derived: Expectancy violation (as mismatch between threat expectancy before exposure and threat occurrence), expectancy change (as difference between original and adjusted expectancy after exposure), and prediction-error learning rate (as extent to which expectancy violation

transferred into change). Throughout sessions, high initial threat expectancy but low occurrence and adjusted expectancy indicated violation and change of threat beliefs by exposure.

Results. Expectancy violation, change, and learning rate substantially varied between patients. Not expectancy violation itself, but higher learning rate and expectancy change predicted better treatment outcome.

Conclusion. Successful exposure thus requires not only expectancy violation, but it also needs to induce actual expectancy change, supporting learning from prediction error, a potential transdiagnostic mechanism underlying successful exposure therapy.

Destabilization patterns as a necessary condition for clinical change?

Anna Lichtwarck-Aschoff, Groningen University, the Netherlands

Coauthors and Affiliations: Ralf Cox, PhD, University of Groningen, the Netherlands, Isabela Granic, PhD, McMaster University, Canada, Fred Hasselman, PhD, Radboud university Nijmegen, the Netherlands, Debra Pepler, PhD, York University, Canada, Marieke van Rooij, PhD, University of Twente, Netherlands

Psychopathology is a state of tight configurations of affect, cognition, behavior and somatic functioning that has evolved over the course of an individual's life. Unifying across disorders this state can be defined as rigid, a jailhouse with little movement, which is called an attractor in dynamic systems terms. The general goal of therapy is to break this rigid state and shake loose old patterns, to trigger a qualitative shift towards more healthy and flexible patterns of functioning. This destabilization is called a phase transition in dynamic systems terms. Here, two studies will be presented that investigate the general hypothesis of destabilization as a necessary condition for clinical change. Both studies employed categorical recurrence quantification analysis to investigate the temporal structure and dynamic organization of real-time behaviors over the course of treatment. The first study examined profiles of change in repeated mother-child interactions over a 12-week treatment period for childhood aggression. Treatment was a combination of parent management training and child focused CBT and 41 mother-child dyads participated. The majority of the children was male with a mean age of 9 years. The aim was to investigate whether it was possible to detect the characteristic profile of change of a destabilization and whether this profile was associated with positive treatment outcomes. Results showed that a treatment-related destabilization pattern in real-time behaviors was related to better treatment outcomes (rated by clinicians). In the second study patterns of turn-taking in therapy sessions were investigated for anxious children following a 12-week protocolized CBT program. Fifty-three children participated, the majority was female with a mean age of 9,5 years. Children entering treatment were stuck in a state of withdrawn and inhibited conversational behavior. Children that became less repetitive and deterministic over time had better treatment outcomes (rated by mothers). Last, the hypothesis that the positive relation between the breaking of rigid communication patterns and treatment outcome would be mediated by increases in children's proactive conversational behaviours was only partly supported.

Together, these studies' results support the hypothesis that destabilization may be a prerequisite of clinical change. While destabilization periods characterized by high variability and turbulence in a client's psychological state might seem obstructive for psychotherapy, a dynamic systems approach to psychopathology predicts that these periods are actually beneficial as they indicate possibilities for reorganization within the client system. Hence, inclusion of the process of destabilization as a self-contained, intermediate aim in interventions seems warranted.

Affect recovery after videofeedback as a dynamic predictor for development of social anxiety

Lynn Mobach & Elske Salemink, Department of Clinical Psychology, Utrecht University, the Netherlands

Background. Despite considerable research efforts, consistent predictors for which individuals will develop a social anxiety disorder (SAD) are scarce. A dynamic focus on individual symptom reactivity patterns may show promise in individualized prediction of symptom development. Hence, the goal of this study was to investigate whether individuals who show a faster affect recovery after an anxiety-reducing training (videofeedback; i.e., quicker return to higher anxiety state or in other words, benefit less from the training) develop more social anxiety symptoms after 6 months.

Methods. The study included a longitudinal (6 months) intensive repeated-measures design. Fifty individuals with heightened presentation anxiety and SAD symptoms (\Rightarrow 30 on SPIN-NL) responded to ten experience-sampling (ESM) questionnaires a day via their phone reporting their social context and social anxiety symptoms (i.e., safety behaviours, anxious affect, psychophysiological symptoms, fear of negative evaluation, perceived control) in three ESM-phases: a baseline period of 14 days and 2x7 days spaced across the 6-month period. Participants received two online video feedback trainings with cognitive preparation in which they were required to give a 5-minute presentation about a topic unknown before the session in the first day of the latter two ESM phases. The videofeedback training targeted their primary anxious (presentation anxiety-related) expectation. Belief ratings on anxious expectations about the presentation were obtained before and after the videofeedback. Anxiety ratings were obtained before, during and after the presentation and videofeedback. Participants additionally filled out trait-questionnaires (month 1, month 2, month 3, month 6) about their social anxiety symptoms, trait anxiety, presentation anxiety symptoms and depressive symptoms.

Results. Data were analyzed with dynamic time series analyses in Mplus8. Preliminary results show that participants who showed a quicker return to their higher anxiety baseline and hence benefitted less from the training reported higher social anxiety symptoms at 6-month follow-up. Definite results will be presented during the talk.

Conclusion. This preliminarily shows that individualized predictors for the development of social anxiety in the long term can be identified when focusing on individual symptom reactivity patterns in response to a short anxiety-reducing training.

Change in interpretation bias as dynamic predictor of treatment outcome in fear of public speaking

Vera Bouwman, Utrecht University, the Netherlands

Co-authors: Lynn Mobach, Utrecht University, the Netherlands, Bethany Teachman, University of Virginia, USA, Elske Salemink, Utrecht University, the Netherlands

Introduction. Cognitive Behavioral Therapy (CBT) with exposure is the recommended treatment for anxiety disorders. However, not everyone benefits from CBT (Loerinc et al., 2015). Studies looking for predictors of treatment outcome so far only focused on static predictors that are measured on one occasion. The current study focusses on a dynamic predictor. Namely, 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'. Based on the Dynamic Systems theory it is expected that individuals who hold on longer to positive interpretations, show

more positive change in subsequent anxiety treatment (Hayes & Andrews, 2020). This 'push' can be used as a paradigm to predict who is ready for treatment.

Method. Female participants ($N = 100$, M age = 23.13, $SD = 3.89$) with subclinical public speaking anxiety took part in this study. Participants 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 (Lindner et al., 2021). Before treatment, one day, one week, and two weeks after treatment, participants filled in a questionnaire to measure public speaking anxiety severity.

Results. Preliminary analyses revealed that the positive interpretations training (vs. the control condition) did not result in differential change in interpretations. The subsequent exposure treatment was associated with significant reductions in public speaking anxiety. Interestingly, more carry-over effect from one interpretation measurement to the next was associated with lower public speaking anxiety after treatment, but not with treatment change.

Discussion. The interpretation training was not strong enough to elicit a differential change in interpretation bias and this hampered the measurement of recovery. Based on these preliminary analyses, there are some indications that measuring interpretations can be a promising tool to predict anxiety after treatment.

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Symposium 14

Mechanism-based innovative interventions in psychotherapy – translational potentials and challenges

Convenor: Elisabeth Leehr, Institute for Translational Psychiatry, Münster, Germany

Chair: Kati Roesmann, University of Siegen, Germany

Fear conditioning and generalization – on associations with later treatment outcomes to exposure therapy and its modifiability by non-invasive brain stimulation

Kati Roesmann (presenting author), Institute of Clinical Psychology and Psychotherapy, University of Siegen, Germany
Julius Toelle, Institute for Biomagnetism and Biosignalanalysis, University of Münster, Germany, Thomas Kroker, Institute for Biomagnetism and Biosignalanalysis, University of Münster, Germany, Elisabeth J. Leehr, Institute for Translational Psychiatry, University of Münster, Germany, Ulrike Lueken, Department of Psychology, Humboldt-Universität zu Berlin, Germany, Udo Dannlowski, Institute for Translational Psychiatry, University of Münster, Germany, Thomas Straube, Institute of Medical Psychology and Systems Neuroscience, University of Münster, Germany, Markus Junghöfer, Institute for Biomagnetism and Biosignalanalysis, University of Münster, Germany

Models of anxiety disorders and the rationale of exposure therapy (ET) are grounded on classical fear conditioning. Yet, it has remained unclear whether behavioral and neural markers of fear conditioning and generalization would predict responses to ET. In study #1 [1,2], 90 spider phobic patients underwent a classical fear conditioning and generalization paradigm prior to a one-session virtual reality ET. Magnetoencephalographic signatures of pre-treatment differences between conditioned threat (CS+) vs. safety stimuli (CS-), as well as characteristics of generalization gradients on a behavioral and neural level predicted phobic symptom changes (pre vs. post ET). Treatment responders were characterized by stronger responses to safety cues (i.e., CS-, and perceptually similar generalization stimuli) in dorsolateral and ventromedial prefrontal brain structures (dlPFC, vmPFC). Those regions have previously been linked with fear inhibitory functions.

In study #2 [3], three groups of healthy participants received excitatory ($n=27$), inhibitory ($n=26$), or sham ($n=26$) transcranial direct current stimulation (tDCS) of the vmPFC after fear conditioning and before a fear generalization phase. After inhibitory (compared with excitatory and sham) vmPFC stimulation, we observed a reduced performance in perceptual discrimination and relatively weaker responses to the safety-signaling CS- (vs. generalization stimuli and CS+) in frontal structures. Yet, fear and shock-expectancy ratings remained unaffected by stimulation. These findings tentatively suggest that (tDCS-induced) vmPFC hyporeactivity may serve as a model for some aspects of pathological fear generalization (reduced discrimination, impaired fear inhibition via frontal brain structures). Further basic and clinical research on the potential of targeted brain stimulation to modulate processes that are linked with exposure outcomes (e.g., fear conditioning and generalization) are needed in the translational endeavor to develop and optimize mechanism-based treatment strategies. Roesmann K, Toelle J, Leehr EJ, Wessing I, Böhnlein J, Seeger FR, et al. Neural correlates of fear conditioning are associated with treatment-outcomes to behavioral exposure in spider phobia - evidence from magnetoencephalography. *NeuroImage Clin* 2022;103046. <https://doi.org/10.1016/j.nicl.2022.103046>.

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Optimization of exposure therapy by enhancing inhibitory learning mechanisms – Investigation of spider-phobic non-responders to virtual reality exposure therapy

Elisabeth J. Leehr, Elisabeth Schrammen, Joscha Böhnlein, Kati Roesmann, Markus Junghöfer, Fabian Breuer, Ulrike Lueken, Udo Dannlowski

Exposure-based cognitive behavioral therapy (CBT) is a first-line treatment for anxiety disorders with medium to large effect sizes. Still, response rates to exposure therapy indicate a clinically significant improvement only in about two-thirds of patients. Recent studies demonstrate relatively high rates of treatment dropout and relapse. Thus, over one-third of patients may be left as “non-responders” toward a first-line standard treatment or experience resurgence of fear with severe consequences for patients and increasing costs for societies. These figures underline the pressing need for intensified research efforts to better understand the mechanisms of exposure-based CBT, to identify markers predicting treatment response and to optimize treatment accordingly.

In the present study we re-invited patients with specific phobia (spider phobia) who were classified as responders or non-responders to a one-session of a virtual reality exposure therapy (VRET). We were able to recruit n=34 non-responders, n=16 responders and n=67 healthy controls. After a first diagnostic assessment comprising the SCID and a behavioral avoidance test with a bird spider, all participants were included in a magnetic resonance imaging (MRI) measurement. MRI measures contained structural as well as functional MRI with an affect labeling as well as an emotion regulation task. Non-responders received an optimized form of exposure therapy, which aimed at enhancing inhibitory learning mechanisms. All participants repeated diagnostic as well as MRI measurements after several weeks.

Cross-sectional analyses regarding the neurobiology of emotion processing of non-responders to a first-line treatment compared to responders and healthy controls target the identification of significant impairments, which might be indicative for treatment modifications. Data analyses is in progress and first results will be presented at the conference.

Further, the proposed study aimed at investigating feasibility, efficacy and acceptance of an optimized form of treatment for non-responders focusing on inhibitory learning mechanisms. Exposure procedures and the targeted mechanism of inhibitory learning will be introduced at the conference.

Concluding, the study might elucidate the role of inhibitory learning in exposure-based psychotherapy and establish starting points to improve exposure-based CBT by targeting specific mechanisms.

Psychopathology and plasticity of the social brain

Philipp Kanske, Technische Universität Dresden, Germany

The neural networks associated with socio-affective (empathy, compassion) and socio-cognitive processes (mentalizing/Theory of Mind) have been well-characterized over the last years. The goals of the present talk are (1) to explore the separability of these functions during online social understanding on a subjective, behavioral and on a neural level, (2) to investigate the selectivity of impairments in these capacities in psychopathology and (3) to probe the potential for plasticity. To this end, I will present behavioral and neuroimaging data (fMRI) during a novel social video task participant and a large-scale meta-analysis, behavioral data from clinical populations and comprehensive, longitudinal data from a nine-month training study. We observed distinct neural networks during empathizing and Theory of Mind. Interestingly, the propensity to share others' affect and the capacity to mentalize were uncorrelated, both on a behavioral and neural level, suggesting independence. Similarly, we found selective impairment of empathy, but not Theory of Mind in a group of hyper-aggressive men. Separate training modules focusing on social affect or cognition within the ReSource project also had distinct effects on either the reported compassion or Theory of Mind performance and structural markers of the underlying neural networks. The data argue against a general capacity for social cognition, but suggest distinct functions underlying our ability to feel with and understand others, which seems relevant for understanding deficits in social interaction and intervention studies.

An imagery-competing task intervention and mental health science: translational potentials and challenges

Emily Holmes, Uppsala University, Sweden

Mental health science is an umbrella term to cover the many different disciplines, including psychology, psychiatry, clinical medicine, social sciences, and neuroscience, that will need to work together and with people with lived experience of mental health problems to improve interventions. We will briefly discuss mental health science priorities for the Covid-19 pandemic and beyond (Holmes et al, 2020, Lancet Psychiatry) and for psychological treatment innovation specifically (Holmes et al, 2018, Lancet Psychiatry). Our team has been interested in the interplay between mental imagery and science-driven treatment innovation. We explore intrusive, emotional mental imagery after psychological trauma to illustrate one example of a mental health science approach. This generated ideas for a novel intervention approach - the idea of working with intrusive mental images of trauma using concurrent tasks, while moving ideas between the lab and the clinic. This experimental approach is being used to develop a remotely delivered intervention innovation. For example, a brief and repeatable intervention approach under pandemic conditions for healthcare staff facing repeated and ongoing trauma working with COVID-19 patients. The talk will present experimental as well as clinical data on an imagery-competing task intervention for intrusive memories. We will discuss its potential as a symptom-targeted intervention aiming at a reduction of intrusive mental images, including under pandemic conditions.

Symposium 15

Psychosocial impact of the COVID-19 pandemic

Chair: *Stephanie Rek, LMU University Hospital Munich, Germany*

How does the coronavirus pandemic affect our mental health? a case-control study in psychiatric inpatients and non-clinical controls

Stephanie V. Rek^{1,2}, Daniel Freeman³, Matthias A. Reinhard¹, Markus Bühner⁴, Sofie Grosen, Peter Falkai¹, Kristina Adorjan¹, Frank Padberg¹

¹Department of Psychiatry and Psychotherapy, University Hospital, LMU, Nussbaumstraße 7, 80336, Munich, Germany, ²International Max Planck Research School for Translational Psychiatry (IMPRS-TP), Munich, Germany, ³Department of Psychiatry, University of Oxford, Oxford, United Kingdom, ⁴Department of Psychology, LMU Munich, Munich, Germany

Background. The coronavirus pandemic has altered our lives. From the beginning of the pandemic, measures to decrease face-to-face contact were recommended or mandated to reduce virus spread (e.g., stay-at-home orders) and these measures likely have profound societal and economic impact for many individuals. Some groups may be particularly vulnerable to the psychosocial stressors posed by the pandemic such as those with a pre-existing mental disorder. However, empirical evidence to support this hypothesis has been scarce. Our objective was to examine if psychiatric inpatients experienced more psychiatric symptoms specifically due to the COVID-19 pandemic and associated governmental restrictions and recommendations compared to non-clinical controls.

Methods. To this end, we applied a cross-sectional case-control design of 108 psychiatric inpatients and 108 age-, sex-, and employment-status matched non-clinical individuals from the general population. Further, we developed a new questionnaire, the COVID-19 Pandemic Mental Health Questionnaire. The non-clinical control sample was recruited online using social media advertisements and the psychiatric inpatients participated in the Ludwig-Maximilians-University (LMU) Biobank study. Assessments of multiple important psychosocial constructs (anxiety, depression, stress, rumination, paranoia, rumination, resilience, & well-being) and a newly created index of COVID-19-specific stressors covering quarantine/curfew, small accommodation/home-office, financial difficulties, childcare responsibilities, and physical health concerns were conducted. Linear regression analyses were applied to assess the effects of group on different psychosocial outcomes.

Results. Contrary to our hypothesis and applying different multiple regression techniques, stratified analyses, and non-parametric and other sensitivity analyses, we found that i) COVID-19-specific stressors were more abundant in non-clinical than in clinical respondents, ii) COVID-19-specific stressors did not affect the psychosocial functioning of psychiatric inpatients more detrimentally than that of non-clinical individuals overall, and iii) non-clinical individuals who experienced the greatest level of COVID-19-specific stressors exhibited mental health difficulties similar to psychiatric inpatients.

Conclusions. These findings are clinically relevant for two reasons. First, they can reassure clinicians that their patients may not suffer from pandemic-related symptom exacerbation contrary to widespread concerns. Second, they are concerning as they show that individuals from the general population who were hit hardest by the pandemic exhibited mental health difficulties similar to individuals with serious mental health disorders. These individuals may require targeted prevention and treatment efforts.

Competing interests

The authors do not have any competing financial or other interests relating to the content of this study

Catastrophic cognitions about coronavirus: understanding and measurement

Laina Rosebrock, Warneford Hospital, Oxford, UK

Cognitive appraisals – the way people think – are key determinants in the development and maintenance of mental health disorders. It is likely that particular appraisals of the coronavirus pandemic will have explanatory power for mental health outcomes in the general public. In this talk, specific appraisals of the pandemic will be discussed. A new assessment scale – The Oxford Psychological Investigation of Coronavirus Questionnaire (TOPIC-Q) – will be introduced that is designed to identify key cognitions linked to six different mental health outcomes: depression, social anxiety, agoraphobia, paranoia, panic disorder, and PTSD. The questionnaire consists of seven different types of cognitions about the pandemic, relating to safety and vulnerability (“The only way to survive is not to leave the house”), negative long-term impact (“The pandemic has made everything hopeless”), having the virus (“If I cough, I’m certain I have the virus”), negative self (“I deserve to get coronavirus”), social judgment (“People will judge me badly because of my response to coronavirus”), spreading the virus (“I have spread the virus and caused other people to die”), and being targeted (“The virus is particularly going after me”). The questionnaire has been validated with a sample of over 12,000 participants from the UK general public and has excellent psychometric properties. Associations between these factors and mental health symptoms will be discussed, including implications for the assessment of long-term mental health outcomes and the delivery of cognitive behavioural therapies in the wake of the pandemic.

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Concerns about the speed of COVID-19 vaccine development and how these may be overcome: a qualitative investigation

Poppy Brown, University of Oxford, UK

Rationale: The speed of COVID-19 vaccine development has been identified as a central concern contributing to hesitancy in acceptance. We conducted qualitative interviews to gain a greater understanding of people’s concerns specifically about the speed of vaccine development and to identify what might address them.

Method: Twelve qualitative interviews were conducted in March 2021 with participants identifying as hesitant for COVID-19 vaccination and reporting concern about the speed of vaccine development. Participants were recruited from respondents to a UK national survey, the Oxford Coronavirus Explanations, Attitudes, and Narratives Survey (OCEANS)-II. Interviews were analysed using Interpretative Phenomenological Analysis (IPA).

Results: Concerns about the speed of vaccine development comprised the linked themes of i) difficulty understanding the pace, and ii) worry about the implications for vaccine safety, such as adverse effects on health and fertility. Uncertainties concerning the pandemic led to a notable desire for credible and understandable information regarding the vaccines, which many participants felt was not available. Four routes to resolving uncertainty about whether to be vaccinated were identified. First, waiting for more information about the vaccines, such as about their contents and impact on transmission. Second, a growing perception that the vaccines must be safe given the large numbers already vaccinated. Third, viewing the vaccines as necessary – even if unappealing – for ending the pandemic. Finally, a feeling that there would be no choice but to have a vaccine. Specific examples of what might reduce hesitancy were given by participants, such as interviews with vaccine developers and knowing others of similar age having safely had the vaccine.

Conclusions: The pace of development broke expectations set earlier in the pandemic. This was interpreted negatively due to a perceived lack of credible information. Many hesitant individuals could envisage ways their concerns could be resolved, enough for them to have a vaccine.

COVID-19 vaccine hesitancy in the UK: the Oxford coronavirus explanations, attitudes, and narratives surveys.

Sinéad Lambe, Warneford Hospital, Oxford, UK

The COVID-19 pandemic presented a unique challenge requiring a collective response. Decisive action by government controlled the spread of the virus, but had a grave impact on daily life. It is not surprising that in this context we saw the proliferation of conspiratorial thinking and increased vaccine hesitancy. Such beliefs weaken the collective actions necessary to minimise harm to the population. Oxford coronavirus explanations, attitudes, and narratives surveys (OCEANS) were a series of studies conducted throughout the pandemic, which sought to better understand the causes of vaccine hesitancy and guide future information campaigns.

In May 2019, OCEANS I (Freeman et al., 2020) examined the impact of conspiracy thinking on compliance with government guidelines and willingness to take a COVID-19 vaccine. 2501 adults in England, quota sampled for age, gender, and income, were asked to rate their belief in forty-four COVID-19 conspiracy statements. Endorsement of conspiracy beliefs was associated with lower compliance with government guidelines and less willingness to receive a vaccine. At this time, a substantial minority (28.3%) were very unsure or unwilling to take a future COVID-19 vaccine.

In September 2020, OCEAN II (Freeman et al., 2021) sought to identify the causes of vaccine hesitancy with the aim of informing future vaccine campaigns. 5114 adults in England, quota sampled to be representative, completed an online survey examining 43 different factors. Once again, a significant minority (27.3%) were very unsure or rejecting of the COVID-19 vaccine. Vaccine hesitancy was relatively evenly spread across the population. Those who were hesitant about a COVID-19 vaccine tended to be people who were less aware of the public health benefits of vaccination, did not consider themselves at high risk of illness, doubted the efficacy of a vaccine, worried about potential side-effects, or feared that it had been developed too quickly.

These insights informed OCEANS III (Freeman et al., 2022), a single-blind, parallel-group, randomised controlled trial aimed at testing the impact of different written information on the willingness to take a vaccine. 15,000 adults in the UK, quota sampled to be representative, were randomly assigned to ten information conditions. For those strongly hesitant about COVID-19 vaccines, provision of information on personal benefit reduced hesitancy to a greater extent than information on collective benefits. This suggests that where perception of risk from vaccines is most salient, decision-making becomes centred on the personal. As such, messaging that stresses the counterbalancing personal benefits is likely to prove most effective.

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Symposium 16

Advances in technological depression treatments: Randomized controlled trials of digital interventions and attention bias modification training

Chair: Björn Meyer, Gaia Group, Research Department, Hamburg, Germany and Christopher Beevers, University of Texas at Austin, USA

Development and effectiveness of a digital health application (amiria) to reduce depressive symptoms in multiple sclerosis: Results of an international randomized controlled trial

Stefan M. Gold^{2,3}, Tim Friede⁴, Björn Meyer¹, Rona Moss-Morris⁵, Joanna Hudson⁵, Susanna Asseyer³, Judith Bellmann-Strobl³, Andreas Leisdon², Leonie Ißels², Hayley Pomeroy¹¹, Sharon G. Lynch¹², Julia S. Cozart¹², Joanie Huebner¹², Cristina A.F. Román¹³, Margaret Cadden¹³, Erin Guty¹³, Stephanie Lau⁶, Jana Pöttgen⁶, Caren Ramien⁶, Susan Seddiq-Zai⁶, Anna-Maria Kloidt⁶, Johannes Wieditz⁶, Iris-Katharina Penner⁷, Friedemann Paul^{8,9,10}, Nancy L. Siccotte¹¹, Jared Bruce¹², Peter A. Arnett¹³, Christoph Heesen⁶

¹ Gaia Group, Hamburg, Germany, ² Charité — Universitätsmedizin Berlin, Klinik für Psychiatrie und Psychotherapie, Campus Benjamin Franklin, Berlin, Germany, ³ Charité Universitätsmedizin Berlin, Medizinische Klinik m.S. Psychosomatik, Campus Benjamin Franklin, Berlin, Germany, ⁴ Institut für Medizinische Statistik, Universitätsmedizin Göttingen, ⁵ Department of Psychology, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK, ⁶ Institut für Neuroimmunologie und MS (INIMS), Universitätsklinikum Hamburg-Eppendorf, Hamburg, Germany, ⁷ Department of Neurology, Medical Faculty, Heinrich-Heine-University Düsseldorf, Düsseldorf, Germany, ⁸ Experimental and Clinical Research Center, Max Delbrück Center for Molecular University Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany, ⁹ Neurocure Clinical Research Center, Charité — Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany, ¹⁰ Klinik für Neurologie mit Experimenteller Neurologie, Charité — Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany, ¹¹ Multiple Sclerosis and Neuroimmunology Program, Department of Neurology, Cedars-Sinai Medical Center, Los Angeles, CA, USA, ¹² Department of Biomedical and Health Informatics, University of Missouri–Kansas City School of Medicine, Kansas City, MI, USA ¹³ Department of Psychology, the Pennsylvania State University, State College, PA, USA

Background: Depression risk is 3-4 fold increased in many neurological and inflammatory disorders compared to the general population. As a case in point, major depressive disorder (MDD) has a 12-month prevalence of approx. 30% in multiple sclerosis (MS), is associated with lower quality of life, and predicts faster disease progression, higher morbidity, and all-cause mortality. Despite its profound clinical impact, treatment options for MS-associated depression remain limited, and large confirmatory trials are lacking. Meta-analyses have suggested that cognitive behavior therapy (CBT) may be effective at ameliorating depression in MS, but barriers such as reduced mobility and shortages of trained therapists prevent many patients from accessing MS-specific CBT. Digital CBT interventions delivered via the internet (iCBT) could help to bridge existing treatment gaps in this population, in principle. However, because the content, safety and efficacy of such interventions varies widely, each iCBT program ought to be examined separately in methodologically sound trials.

Methods: We developed a digitally delivered, cognitive behavioral therapy (CBT) depression treatment program, which contains a broad range of therapeutic techniques and was adapted to include MS-specific challenges. After initial pilot-testing, an international multicenter randomized controlled phase III trial of a stand-alone or therapist-guided version of this program (amiria) was conducted. Patients with neurologist-confirmed diagnosis of MS and self-reported elevated depressive symptoms were randomized 1:1:1 (no stratification, no blocking) to the two versions of the program (stand-alone vs. guided), which were offered adjunctively to treatment-as-usual (TAU), or to a TAU/waitlist control condition for 12 weeks. The primary endpoint of the trial was severity of depressive symptoms as measured by the Beck Depression Inventory – II at week 12 after randomization (primary endpoint).

Findings: Between June 1, 2017 and November 30, 2020, n=279 participants were enrolled.

Drop-out rate at week 12 was 17.9%. No new occurrence of suicidality, the pre-defined safety measure, was observed during the trial.

Clinically relevant worsening of depressive symptoms was observed in 3 participants in the control group and 1 vs. none in the two active arms. Both versions of the program reduced depressive symptoms significantly more than TAU alone.

Interpretation: This trial provides confirmatory evidence for safety and effectiveness of an

MS-specific online CBT program as a stand-alone or guided intervention to reduce depressive symptoms in MS over a 12 week period, compared to a TAU/waitlist control condition.

Funding: National Multiple Sclerosis Society (NMSS)

Trial registration: [clinicaltrials.gov NCT02740361](https://clinicaltrials.gov/NCT02740361)

Efficacy of an internet-based self-guided program to treat depression (Deprexis) in a sample of Brazilian users

Rodrigo CT Lopes, Department of Clinical Psychology and Psychotherapy, University of Bern, Gustavo Chapetta Universidade Católica de Petrópolis, Björn Meyer, Gaia Group, Germany, Thomas Berger, Department of Clinical Psychology and Psychotherapy, University of Bern.

Deprexis is a web-based program to treat depressive symptoms based on empirically supported integrative and cognitive-behavioral therapy. Evidence from several previous trials supports Deprexis' effectiveness in German-speaking countries and the United States of America, but as far as we know, no study has yet been conducted using this treatment program in countries with low literacy rates and big social disparities.

Aim: To evaluate the efficacy of a Portuguese version of Deprexis with a sample of Brazilian users.

Methods: We have screened 2305 candidates and randomized 189 moderately and severely depressed participants to the experimental group (treatment as usual [TAU] plus immediate access to Deprexis for 90 days, n = 94), or to a control group (TAU and delayed access to Deprexis, after 8 weeks, n = 95).

Results: ITT analysis using a linear mixed model shows that participants who received Deprexis improved significantly more on the depression measure than the control group ($F_{1,173.5} = 19.85, p < 0.001$, for the time by condition interaction), with a large between-group effect size of $d = 0.80$ (95% CI: 0.51-1.10). Of all ITT samples, 21.3% achieved remission (change greater > 6, post-treatment score < 10) against 7.4% in the control group ($p < 0.0001$). Analysis with CORE-OM (secondary outcome measure) also shows significant symptomatic

improvement and large effect sizes. Participants reported a medium to a high level of satisfaction.

Conclusions: These results replicate previous findings by showing that Deprexis can facilitate symptomatic improvement over 3 months. It also extends previous research by replicating the RCT design with a culturally different population.

Does context matter? Study findings of a factorial trial investigating four supportive factors in an internet-based self-help intervention for individuals with mild to moderate depressive symptoms

Oliver Thomas Bur^a, Tobias Krieger^a, Steffen Moritz^b, Jan Philipp Klein^c, Thomas Berger^a

^aDepartment of Clinical Psychology and Psychotherapy, University of Bern, Bern, Switzerland, ^bDepartment of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ^cDepartment of Psychiatry and Psychotherapy, Luebeck University, Luebeck, Germany

Internet-based self-help interventions for individuals with depressive symptoms are efficacious. However, dropout rates of internet interventions are usually high, and effect sizes vary considerably across different studies. These differences in effect sizes and adherence rates might emerge because of the manner how internet interventions are conveyed.

Our study investigated whether the context of support, in which an internet intervention is embedded, influences outcomes. Therefore, we manipulated and tested the effects of four potentially supportive contextual factors on outcome and adherence with a randomized factorial trial. Two factors were provided through human contact (guidance and a diagnostic interview), and two factors were provided without human contact (a motivational interviewing module and automated emails).

We recruited 316 adults with mild to moderate depressive symptoms (Patient Health Questionnaire–9 score: 5–14). All participants received access to a problem-solving therapy program. Participants were randomized across the four experimental factors (present or absent), resulting in a 16-condition design. The primary outcome was depressive symptoms post-treatment. The secondary outcome was program adherence.

Of the four factors, human guidance had a positive impact on outcomes. At post-treatment, guided participants reported significantly lower depressive symptoms and showed higher program adherence than unguided participants. To some extent, the working alliance with the treatment providers mediated the effect of guidance on depressive symptom reduction. Interestingly, the remaining three factors did not improve outcomes. On the contrary, the motivational interviewing module and the diagnostic interview negatively influenced outcomes. Implications of our findings will be discussed.

Attention bias modification for adult depression

Christopher G. Beevers, Kean J. Hsu, Jason Shumake, Jasper Smits, University of Texas at Austin

Attention bias modification training (ABMT) is purported to reduce depression by targeting and modifying an attentional bias for sadness-related stimuli. However, few rigorous tests of whether ABMT is effective for depression have been completed. In this randomized clinical trial, 145 adults (77% female, 62% white) with at least moderate depression severity [i.e. self-reported Quick Inventory of Depressive Symptomatology (QIDS-SR) ≥ 13] and a negative attention bias were randomized to active ABMT, sham ABMT, or assessments only. The training consisted of two in-clinic and three (brief) at-home ABMT sessions per week for 4 weeks (2224 training trials total). The pre-registered primary outcome was change in QIDS-SR. Secondary outcomes were the 17-item Hamilton Depression Rating Scale (HRSD) and anhedonic depression and anxious arousal from the Mood and Anxiety Symptom Questionnaire (MASQ). Primary and secondary outcomes were administered at baseline and four weekly assessments during ABMT. Intent-to-treat analyses indicated that, relative to assessment-only, active ABMT significantly reduced QIDS-SR and HRSD scores by an additional 0.62 ± 0.23 ($p = 0.008$, $d = -0.57$) and 0.74 ± 0.31 ($p = 0.021$, $d = -0.49$) points per week. Similar results were observed for active v. sham ABMT: a greater symptom reduction of 0.44 ± 0.24 QIDS-SR ($p = 0.067$, $d = -0.41$) and 0.69 ± 0.32 HRSD ($p = 0.033$, $d = -0.42$) points per week. Sham ABMT did not significantly differ from the assessment-only condition. No significant differences were observed for the MASQ scales. Contemporaneous longitudinal simplex mediation indicated that change in attentional bias early in treatment (measured with eye tracking) partially mediated the effect of ABMT on depression symptoms. Specificity analyses indicated that reaction time assessments of attentional bias for sad stimuli (mean bias and trial level variability) and lapses in sustained attention did not mediate the association between ABMT and depression change. When effective, ABMT may improve depression in part by reducing an attentional bias for sad stimuli, particularly early on during ABMT.

Symposium 17

Disgust in Eating Disorders

Chair: Paula Von Spreckelsen, University of Groningen, the Netherlands

Self-disgust as a key factor in anorexia nervosa - A theoretical model

Klaske A. Glashouwer^{1,2} & Peter J. de Jong¹

¹ Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, the Netherlands; ² Department of Eating Disorders, Accare Child and Adolescent Psychiatry, Groningen, the Netherlands

Anorexia nervosa (AN) is a severe and life-threatening disorder for which the effectiveness of current treatments is limited. One of the most enigmatic features of AN is the excessive restriction of food intake. How do individuals with AN succeed in opposing the strong biological urge to eat, where common dieters typically fail? We propose a theoretical model that points to disgust-induced avoidance as a mechanism that can help explain the persistent and excessive food restriction in individuals with AN.

Disgust is such an intense aversive feeling that it not only results in a strong urge to escape situations that elicit disgust, it also drives the avoidance of potential disgust elicitors to prevent future negative experiences. Once something has acquired disgusting properties, it becomes inherently revolting. This makes disgust highly robust to corrective information and therefore very difficult to change through rational arguments. This critical feature of disgust makes sense considering its evolutionary role in preventing infection from pathogens that are omnipresent but invisible to the naked eye. When it comes to life or death, it is "better to be safe than sorry". However, in the context of AN, this inherent power of disgust might have a paradoxical effect: when eating, or even the prospect of eating, elicits overwhelming feelings of disgust in individuals with AN, this could explain why food avoidance persists even when someone is in a state of starvation.

The core hypothesis reflected in this model, is that the source of disgust is not the food per se, but the implied impact of food on the own body (i.e. "becoming fat"). Disgust is not only elicited by external objects; it can also become directed to stable features of the self. So, when individuals experience their own shape and weight as too fat, the confrontation with the own body can elicit intense self-disgust. Individuals with AN engage in several body-related avoidance behaviours, such as hiding their body in wide clothing or showering with the lights off. Following this theoretical model, such avoidance behaviours essentially serve to decrease or prevent intense and overwhelming feelings of revulsion that are automatically elicited by the confrontation with their body. The core of this model is the assumption that food restriction also serves the avoidance of self-disgust by preventing (perceived) appalling changes in body size. Thus, when eating or the prospect of eating elicits disgust in individuals with AN, this may explain why food avoidance persists even when someone is in a state of starvation.

Current evidence for this theoretical model will be discussed as well as future research directions. Finally, clinical implications and potential interventions to decrease self-disgust in individuals with anorexia nervosa will be addressed.

Reference

Glashouwer, K. A., & de Jong, P. J. (2021). *The revolting body: Self-disgust as a key factor in anorexia nervosa*. *Current Opinion in Psychology*, 41, 78-83. <https://doi.org/10.1016/j.copsyc.2021.03.008>

Repeated exposure to disgust-eliciting memories of the own body

Paula von Spreckelsen¹, Ineke Wessel¹, Klaske Glashouwer^{1,2}, Peter de Jong¹

¹ Clinical Psychology and Experimental Psychopathology, University of Groningen, ² Department of Eating Disorders, Accare Child- and Adolescent Psychiatry

Research suggests that eating disorder symptoms, particularly body image concerns, are linked to increased levels of self-disgust (SD) directed at the own body. Because of the close relationship between one's autobiographical memories and the self-concept, we would expect that individuals with heightened levels of SD have a bias towards disgust-related memories of the own body. In two previous studies we indeed found that women with heightened SD levels recalled autobiographical memories of their bodies that were more disgust-related and disgust-eliciting compared to women with low SD levels (von Spreckelsen et al., 2021 & 2022). Importantly, because disgust is highly defensive it triggers avoidance of disgust-eliciting stimuli. In our studies, we found that women with high SD reported higher habitual tendencies to prevent experiencing disgust in response to the own bodies and showed a higher motivation to escape from disgust-eliciting memories compared to women with low SD levels. Such an avoidance can be detrimental because it diminishes the chance to process corrective information or habituate to disgust, thus decreasing the chance to update negative appraisals of the own body. In the current study, we examined the causal effect of disgust-induced avoidance by investigating whether counteracting avoidance would result in a decrease in disgust responses (i.e., habituation) and an increase in more neutral/positive evaluations of the own body (e.g., body acceptance). We asked women with high SD levels to recall memories in which they felt disgusted by their own body and neutral memories. During the subsequent experimental session, we repeatedly exposed the participants to recordings of these memories in a within-subjects repeated measures design. We hypothesized that self-disgust and avoidance would decrease and body acceptance would increase following repeated exposure to disgust-eliciting compared to neutral memories. In addition, we hypothesized that a decrease in self-disgust would be associated with a decrease in avoidance and with an increase in acceptance in the repeated disgust exposure session. Lastly, we will explore disgust trajectories over repeated measurement occasions.

"If I feel disgusted, I will become fat"- disgust-based emotional reasoning in anorexia nervosa

Peter J. de Jong & Klaske A. Glashouwer, University of Groningen, Accare Department of Eating Disorders

Disgust towards food and one's own body is a common feature of eating disorders. Disgust may not only be a symptom of eating disorders, but may also further reinforce weight and shape concerns. In line with this, anorexia patients typically associate disgust to feelings of fullness and fear of becoming fat. In three subsequent studies we tested if feelings of disgust may indeed promote the generation of fearful concerns (e.g., fear of gaining weight) in individuals with subclinical and clinical levels of eating disorder problems. If disgust is taken to signal a greater risk of gaining weight/becoming fat this may strengthen eating disorder behaviours that serve to decrease/avoid disgust (e.g., food restriction, vomiting). To index disgust-based reasoning we designed a series of food intake scenarios that systematically varied in the presence/absence of a disgust response. To explore whether emotional reasoning within the context of eating disorders would be especially relevant when objective threats are low (disgust following eating a small amount of food, low in caloric value), the scenarios also systematically varied in food quantity and caloric value. Emotional reasoning was measured by the difference in fear of gaining weight/becoming fat between the scenarios with and without a disgust response. In Study 1, we compared women with high ($n = 36$) versus low ($n = 32$) scores on the Eating Disorder Examination Questionnaire (EDE-Q). Specifically the high EDE-Q group inferred a heightened risk of becoming fat when scenarios implied disgust feelings following food intake. The impact of disgust was especially pronounced for scenarios referring to the intake of small amounts of food. These findings were replicated in Study 2 ($N = 346$) using the same measures within a correlational approach. Specifically disgust-based reasoning within the context of low caloric foods (i.e. low objective threats) was associated with eating disorder symptoms. To examine if these findings also generalize to clinical samples, Study 3 compared the strength of emotional reasoning in youth who applied for treatment with a diagnosis of anorexia nervosa ($n = 64$) and an age/education matched comparison group without an eating disorder ($n = 64$). Data-acquisition for the third study is just finished, and preliminary outcomes will be presented during the conference.

Eating disorders, disgust and the anorexic voice

John R.E. Fox, Georgette Morrison, Harriet Davies, Harriet Collie, Catherine Jones, and Marc Williams, Cardiff University, UK

Eating Disorders are notoriously hard to treat, and current treatment models only show moderate recovery rates. It is argued that current models of treatment of eating disorders, especially AN, need further theoretical development. This presentation will present several studies that use either qualitative or quantitative methodologies to explore how disgust and self-disgust may interplay within eating disorders/ body image. In one study, inducing anger led to significant increase in reported levels of disgust, whilst in another, inducing anger led to increases in body weight perception. Interestingly, these studies suggest that anger and disgust may work in a 'coupled way' (SPAARS-ED, Fox et al, 2012). Experimental data shall also be presented that highlight how inducing disgust also appeared to lead to an increasing thin-ideal within participants, irrespective of eating disorder diagnosis (Davies et al, Submitted). Although this finding needs to

be replicated, it does have interesting implications about how self-disgust may be an important factor in leading to poor body image and risk of eating disorders (see Fox et al. 2015).

Findings shall be presented that discuss qualitative findings that highlight how self-disgust may be linked to the 'anorexic voice' (Tierney & Fox, 2010), which has been linked to trauma (Morrison et al. in press) and poor compliance to CBT (Collie et al, in press). Across these studies, emotions, including self-disgust, appear to become operationalized as a 'voice' that is directed at the self as an 'anorexic voice'. This presentation will present some new ideas about treatment and how working with the 'anorexic voice' may be a fruitful area for improving efficacy of existing treatments.

Symposium 18

Advances in Low intensity (LI) CBT with CYP and Families

Chair: Markku Wood, Northumbria University and TEVV NHS Trust, UK

Prof Peter Fonagy – University College London, Prof Catherine Gallop - Exeter University. Dr Mike Turnbull – Northumbria University/Tees Esk and Wear Valley NHS Trust., Dr Susanna Payne and Dr Lili Ly – Kings College London and University College London , Dr Markku Wood - Northumbria University/Tees Esk and Wear Valley NHS Trust

With increasing levels of mental health need globally and universal challenges to the available workforce, we need imaginative solutions to close the 'treatment gap'. Low intensity (LI) CBT for children, young people and their families is fast establishing itself as a key area of evidence based psychological practice in the treatment of mild to moderate mental health difficulties. Largely due to the continued expansion of the CYP-MH workforce including the innovative roles of the Children's Well-being Practitioner (CWP) and the Education mental health practitioner (EMHP). As fast as the evidence base expands in this area, so too does the scope for delivery in new settings with opportunities to develop new interventions for a growing number mental health difficulties. This symposium with focus on an overall theme of new data and developments in the training of specialist LI practitioners and how they are delivering meaningful and effective interventions in challenging conditions.

We will describe the successful implementation of a national training programme following a carefully chosen national curriculum – reaching an estimated 70,000 CYP and Families per year. You will hear from leading academics, researchers and practitioners on the theme of evidence for new interventions in LI CBT, widening accesses to training. You will also hear how these LI practitioners have expanded in to new settings, increasing accessibility of psychological therapies to CYP services who historically will not have had equal access to mental health services in England.

On the theme of developing this valued workforce you will hear about the new roles and innovations including taking LI CBT to crisis and inpatient settings as well as developing senior LI roles and training so that this workforce can progress in career and in clinical expertise.

On the theme of clinical expertise, you will hear new data on the efficacy of these roles in multiple settings and how these practitioners are now working in MDTs to manage more complex and varied presentations.

In summary this symposium will discuss new data around efficacy of the how these valued psychological practitioners are moving into new areas of expertise and see how they are and will develop, as a workforce.

Symposium 19

Unified Protocol for transdiagnostic treatment of emotional disorders in Europe: Feasibility and efficacy studies in Denmark, Germany, Portugal, and Spain

Chair: Jorge Osma, Universidad de Zaragoza e Instituto de investigación Sanitaria de Aragón, Teruel, Spain

An introduction for the Unified Protocol for Transdiagnostic Treatment of emotional disorders

Elizabeth H. Eustis, Center for Anxiety and Related Disorders, Boston University

This talk will provide a brief introduction to the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (UP) for adults (Barlow et al., 2011; Barlow et al., 2018). The UP is a transdiagnostic, emotion-focused cognitive-behavioral therapy (CBT) that targets neuroticism, a personality dimension that represents the primary shared processes underlying all of the emotional disorders (e.g., anxiety, depression, and related disorders; Bullis et al., 2019). The UP consists of eight modules, including five core modules based in various CBT skills (i.e., mindful emotion awareness, cognitive flexibility, countering emotional behaviors, interoceptive exposure, and emotion exposure). A strong body of literature supports the efficacy of the UP in the treatment of anxiety and depression (e.g., Barlow et al., 2017; Sakiris & Berle, 2019; Casiello-Robbins et al., 2020). A large randomized equivalence trial found that the UP improved symptom severity to the same degree as gold standard single-diagnosis CBT protocols for principal anxiety disorders (Barlow et al., 2017). In addition, a recent meta-analysis on the UP that examined 15 studies with 1,244 participants found large effect sizes for anxiety and depression when the UP was delivered both individually and in group format. Additional research is needed to examine the implementation of the UP in a range of settings and to determine whether transdiagnostic treatment in these settings can increase access to care, increase cost-effectiveness, and offer advantages in terms of clinician training. This introductory talk will provide a brief overview on the conceptual model of the UP, the specific modules and techniques, and the existing evidence-base. This will provide a strong foundation for the subsequent talks in this symposium which will present data from studies examining implementing the UP for adults and the UP for children adolescents (Ehrenreich-May et al., 2017) in Denmark, Germany, Portugal, and Spain in various settings.

The Unified Protocol in Danish Mental Health Services – from the clinic to research and back again

Nina Reinholdt,^{1,2} Morten Hvenegaard,⁹ Anne Bryde Christensen¹, Anita Eskildsen⁴, Carsten Hjorthøj^{6,8}, Stig Poulsen³, Mikkel Berg Arendt⁴, Nicole Kristjansen Rosenberg², Jasmin Rejaye Gryesten¹, Ruth Nielsen Aharoni², Anja Johnsen Alrø⁴, Clas Winding Christensen², Sidse Marie Arnfred^{1,2,5}

1. Unit for Psychotherapy & Psychopathology, Mental Health Service West, Copenhagen University Hospital – Psychiatry Region Zealand, Slagelse, Denmark; 2. Mental Health Center Copenhagen, Copenhagen University Hospital, Copenhagen, Denmark; 3. Department of Psychology, Faculty of Social Sciences, University of Copenhagen, Copenhagen, Denmark; 4. Department of Affective Disorders, Aarhus University Hospital, Aarhus, Denmark; 5. Department of Clinical Medicine, Faculty of Health and Medical Science, University of Copenhagen, Copenhagen, Denmark; 6. Copenhagen Research center for Mental Health - CORE, Mental Health Center Copenhagen, Copenhagen University Hospital, Copenhagen, Denmark; 7. Faculty of Health and Medical Science, University of Copenhagen, Copenhagen, Denmark. 8. Department of Public Health, Section of Epidemiology, University of Copenhagen, Copenhagen, Denmark; 9. Competency Center for Rehabilitation and Recovery, Mental Health Center Ballerup, Ballerup, Denmark.

Background: Danish mental health services (MHS) provide free evidence-based time-restricted standardized group treatment programs for common non-psychotic mental disorders. These services are facing limited resources, long waiting lists, and complex symptoms among patients. Potentially, the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (UP) could address complex symptoms, reduce waiting time for patients, and simplify therapist training. Therefore, our research group has adapted a UP group version into the Danish MHS; implementation has begun.

Objective: To adapt, pilot, and test a UP group version in Danish MHS aiming at the implementation of evidence-based treatment tailored to the specific needs of these services.

Methods: We adapted the UP into a 14-session group version. We piloted the preliminary UP group version in a Phase-II observational, single-group, pre-post effectiveness trial (the TRACT-I study) and tested the final version in a Phase-III pragmatic, single-blinded, non-inferiority, randomized controlled trial (the TRACT-RCT study).

Results: Results from the TRACT-I study indicated that 47 patients with primary anxiety disorders experienced moderate to large improvements in well-being, symptoms, and functioning over the course of group UP in a Danish MHS clinic. Notably, patients with high levels of comorbidity profited as much from the UP as patients with lower levels of comorbidity. In the TRACT-RCT study (2016-19), we found that UP was non-inferior to CBT in improving well-being, symptoms, and functioning at end-of-therapy for 291 patients with primary anxiety disorders or depression receiving group treatment in three MHS clinics (World Health Organization Five-Items Well-being Index mean difference, -2.94; 95% CI, -8.10 to 2.21). Results at a 6-month follow-up were inconclusive for the primary outcome but indicated non-inferiority of UP and CBT groups on all other outcomes. Patients evaluated the UP and CBT groups equally high and they attended both treatments to the same degree. A similar proportion of patients responded to treatment and remitted from their primary diagnosis following the UP and CBT groups.

Discussion: Overall, the findings indicate that UP should be considered a viable alternative or supplement to standard CBT in the group treatment of anxiety disorders and depression in Danish outpatient MHS. However, longer-term follow-up regarding patients' well-being needs adequate testing. Based on these promising results, we have outlined a Phase-IV post-trial effectiveness study with efficient app-based patient-reported outcome data collection to solidify the evidence base for - and prospectively monitor - the ongoing UP implementation across Danish MHS clinics.

Benefits and barriers of applying the Unified Protocol as an internet-based intervention in Germany

Carmen Schaeuffele¹ (Speaker), Christine Knaevelsrud¹, Babette Renneberg¹, Johanna Boettcher²

¹ Freie Universität Berlin, Berlin, Germany, ² Hochschule Berlin, Berlin, Germany

Background: The Unified Protocol is a transdiagnostic treatment aimed at treating emotional disorders. While originally developed for individual face-to-face therapy in the US, the Unified Protocol has been adapted to different groups and settings. Applying the Unified Protocol as an Internet-based treatment has the potential to address treatment gaps: Internet-based treatments can be provided flexibly and independently of time and place, using comparatively few resources.

Method: The Unified Protocol was adapted as a 10-week guided Internet-based intervention in Germany. 129 participants with different disorders participated in a randomized controlled trial that compared the intervention to waitlist. At the end of treatment, we conducted client change interviews with a subpopulation of participants ($n = 21$) who either did or did not respond to treatment.

Results: We will present our experiences in applying the Unified Protocol as an Internet-based intervention from a researcher and clinician perspective. Further, we will discuss the benefits and barriers that participants reported in the qualitative interviews. This included aspects in relation to the Internet-based setting, the UP treatment protocol as well as external reasons.

Discussion: Dissemination of transdiagnostic Internet-based interventions is promising: As scalable interventions, they are suitable for a wider range of patients. To facilitate dissemination and implementation efforts and increase effectiveness and adherence, gaining a better understanding of the barriers and hindering aspects are crucial.

Results of a feasibility study of the Unified Protocol for children among Portuguese children

Cristina Canavarro, University of Coimbra, Portugal

The Unified Protocol for Transdiagnostic Treatment of Emotional Disorders in Children (UP-C) is a cognitive-behavioral and transdiagnostic 15-session group intervention for children aged 6 to 12 years with emotional disorders (ED; i.e., anxiety and mood disorders) and their parents. UP-C aims to reduce the children's anxiety and/or depression by addressing shared mechanisms underlying these disorders. The present study aims to assess the acceptability and feasibility of the UP-C among Portuguese children using a single-armed design. Participants were 32 children (6-12 years; 53.3% males) with at least one ED as a primary diagnosis, and their parents. Participants completed a set of self-report questionnaires at baseline, mid-treatment, post-treatment and three months after the UP-C intervention (follow-up). The results of the present study suggest that UP-C is a feasible and acceptable treatment for the Portuguese population, as indicated by the low dropout rates, excellent rates of treatment adherence, high involvement in homework, and high satisfaction with the program. Moreover, the results also indicate that children's anxiety and depression levels reduced over time and these gains were maintained after 3 months of follow-up. These results suggest that the UP-C is a feasible and acceptable treatment among the Portuguese population and warrant to be replicated in a randomized controlled trial.

Long-term effectiveness of the Unified Protocol for the transdiagnostic treatment of emotional disorders in group format in Spain: Results at 12-Months follow-up.

Jorge Osma*, Óscar Peris-Baquero, Vanesa Ferreres-Galán, M. Ángeles Torres-Alfosea, Cristina Robert-Flor, Ana Sánchez-Guerrero, Luisa Pérez-Ayerra, Amparo Malea-Fernández, Jordi de Luna, Cristina Díaz, Deborah Fuentes, Laura Arenas, Laura Camacho, José Fernando Venceslá, M^a José Gómez, Cristina Pena, Francisca Muriel, Gloria Estebaranz, M^a José Cabrera, Amelia Villena, M^a Carmen Díaz, Ana Calvo, M^a Carmen Alcaide, Jon Belaunzarán, & Marian Yañez
*osma@unizar.es

The versatility and transdiagnostic character of the Unified Protocol (UP) allow its application in group format, which makes it a possible efficient solution for the current saturation of the Spanish Public Mental Health System. The objective of this non-inferiority RCT was to compare the efficacy of UP applied in a group format compared to Treatment as usual (TAU, non-protocolized cognitive behavioral treatment in individual format) in different Public Mental Health Units in Spain. In this communication, we will present effectiveness results after 12 months of follow-up, with a sample of 533 participants, with a mean age of 42.00 years ($SD = 12.62$, range 18-77), of which 77.3% of the participants were women ($n = 412$). All of them were patients with a principal diagnosis of EDs, randomized to UP in group format ($n = 279$) and TAU in individual format ($n = 256$). The results of this study showed that, over the course of the treatment and follow-ups (15 months), participants assigned to the group UP condition received a mean of 13.65 sessions ($SD = 2.61$, range 7 - 20) and participants in the TAU condition received a mean of 7.69 sessions ($SD = 3.03$, range 2 - 15). Linear mixed model analyses showed a statistically significant effect of time in both treatment conditions, with reductions in depressive ($F = 10.19$, $p < .001$, $dof = 1115.64$, $Cohen's d = 0.28$) and anxious symptomatology ($F = 7.55$, $p < .001$, $dof = 1128.58$, $Cohen's d = 0.24$), neuroticism ($F = 3.83$, $p = .004$, $dof = 1160.25$, $Cohen's d = 0.17$) and improvements in quality of life ($F = 6.08$, $p < .001$, $dof = 1151.17$, $Cohen's d = 0.21$). However, effect sizes were higher in the UP condition ($Cohen's d$ between 0.36 to 1.03 for the UP condition, and between 0.16 to 0.72 for the TAU condition, comparing pre-treatment scores with the assessment at 15 months). In addition, statistically significant effects of time for the variable extraversion were only found in the UP condition ($F = 17.30$, $p < .001$, $dof = 590.82$, $Cohen's d = 0.36$), showing an increase over time. The results will be discussed in depth during the communication, including the rest of the variables evaluated in the study, and we will focus on the clinical implications of these outcomes to the Spanish Public Mental Health System.

Symposium 20

Optimizing the assessment and treatment of childhood anxiety

Chair: Lynn Mobach, Utrecht University, the Netherlands

Improving access to evidence-based interventions for child anxiety problems

Tessa Reardon^{1,2} & Cathy Creswell^{1,2}

^{1,2}Department of Experimental Psychology, University of Oxford, Oxford, UK, ^{1,2}Department of Psychiatry, University of Oxford, Oxford, UK

Anxiety problems are common among primary-school aged children, but few of these children access evidence-based interventions. Parents report difficulties identifying anxiety in children, concerns about the help-seeking process, and a lack of available support. Systematic screening for child anxiety, and offering and delivering a brief evidence-based intervention for children identified as likely to benefit would minimise key barriers. Findings from a series of three studies will be presented that aim to 1) develop a short screening tool for child anxiety, 2) co-design procedures for identification-to-intervention for anxiety in primary schools, and 3) test the feasibility of these procedures. In the first study, children ($n=463$; 8-11 years) across 19 primary schools, and their parents/carers/teachers completed a pool of candidate questionnaire items designed to assess child anxiety symptoms and associated interference. In parallel, diagnostic assessments (ADIS-C/P) were administered to identify the presence/absence of a child anxiety disorder. We then developed alternative candidate child-, parent-, and teacher-report short questionnaires including 'optimal' items, and evaluated their ability to discriminate between children with and without an anxiety disorder on the basis of the ADIS-C/P. Neither child- nor teacher-report questionnaires were sufficiently accurate for screening purposes (sensitivity/specificity $< .7$). Several alternative parent-report questionnaires (2-9 items) achieved similar accuracy. We prioritised brevity and selected a 2-item parent-report questionnaire that achieved 76%-sensitivity and 80%-specificity to use as a screening tool in our identification-to-intervention procedures. In a parallel second study, we worked with children, parents/carers/school staff and others to develop procedures for 1) administering screening questionnaires in schools, 2) sharing screening outcomes with families and 3) delivering a brief, parent-led, therapist-supported online intervention for children who 'screen positive' for anxiety. Following initial interviews and discussion groups, we administered an initial version of the identification-to-intervention procedures (three primary schools), and collected feedback on participants' experiences to refine procedures. In the third study, we then tested the feasibility of these co-designed identification-to-intervention procedures, incorporating our 2-item parent report screening tool (six primary schools). A summary of feasibility outcomes will be presented, including qualitative findings providing support for the procedures' acceptability, and pre-post intervention questionnaire responses that indicate positive effects. We are now evaluating our identification-to-intervention approach in a large cluster-randomised controlled trial; an overview of the trial design will be presented. If effective, our procedures for identification-to-intervention for child anxiety through schools would improve access to evidence-based interventions for child anxiety and reduce negative consequences for children, their families and society.

The role of distorted cognitions in mediating treatment outcome in children with social anxiety disorder: A preliminary study

Lynn Mobach^{1,2}, Ronald M. Rapee¹, Anke M. Klein^{2,3}

¹ Centre for Emotional Health, Department of Psychology, Macquarie University, Australia

² Department of Clinical Psychology, Behavioural Science Institute, Radboud University, the Netherlands

³ Institute of Psychology, Unit Developmental and Educational Psychology, Leiden University, the Netherlands

This study examined whether distorted cognition changes during Cognitive Behavioural Therapy (CBT) in children ($N=61$; aged 7-12) with Social Anxiety Disorder (SAD) and whether changes in distorted cognition from pre- to post-treatment predict SAD at six-month follow-up. Baseline distorted cognition was also examined as a predictor of post-treatment outcome. Multiple informant SAD-measures were

obtained pre-treatment, post-treatment and at six-month follow-up. Children reported on interpretation bias and dysfunctional beliefs. A decrease in interpretation bias and dysfunctional beliefs was prospectively related to greater SAD change between post-treatment and six-month follow-up. Child-reported SAD-change at post-treatment predicted greater change in dysfunctional beliefs at six-month follow-up. Higher baseline interpretation bias predicted greater change in SAD-severity at post-treatment. Children with greater distorted cognition reductions during treatment, showed greater treatment gains at six-month follow-up. Children who do not show this reduction may require additional efforts focused on distorted cognition to maximally benefit from treatment.

No parents - no success? On the role of parental involvement in exposure treatment of children with anxiety disorders

Silvia Schneider¹, Verena Pflug¹, Michael Lippert¹, Hanna Christiansen², Tina In-Albon³, Brunna Tuschen-Caffier⁴, Stefan Goerigk⁵

¹ Research and Treatment Center for Mental Health, Ruhr University Bochum, ² Faculty of Psychology, Philipps University of Marburg, ³ Clinical Child and Adolescent Psychology and Psychotherapy Unit, University of Koblenz and Landau, Landau, Germany, ⁴ Department of Clinical Psychology and Psychotherapy, Institute of Psychology, University of Freiburg, ⁵ Department of Psychology, Ludwig-Maximilians-University of Munich

Background: Anxiety disorders are among the earliest and most common mental disorders in childhood and adolescence and are pacemakers for the development of mental disorders in adulthood. Successful approaches in psychotherapeutic treatment of childhood anxiety disorders include exposure interventions as a central therapeutic component. However, a hot topic with unclear data is the benefit of involving parents in exposure treatment of children with anxiety disorders. The aim of the present multicenter collaborative project was to examine for the first time in a sample with sufficient power whether there are disorder-specific effects of involving parents in intensified exposure treatment of anxiety disorders.

Methods: At 6 sites (Bochum, Dresden, Freiburg, Landau, Marburg, and Würzburg, all Germany), a total of 391 children with a primary disorder involving separation anxiety (N=149), specific phobia (N=110), or social anxiety disorder (N=132), aged 8-16 years, were included in the study. Children were randomly assigned to one of two treatment conditions: Exposure treatment with (EXP+) or without parent involvement (EXP-, 11 sessions each). Treatment efficacy was measured using a multiple-informant approach at the end of therapy and 6 months after therapy completion. The primary outcome measures were severity of primary diagnosis and Global Assessment of Success. A disorder-specific superiority of the EXP+ over EXP- condition was expected in the separation anxiety disorder group. In addition, EXP+ was expected to have stronger positive effects in younger children than in older children.

Results: Across both therapy conditions, dropout rates during therapy are 5% and nonparticipation rates 6 months after therapy completion are 9%. Both therapy conditions show large effect sizes on disorder-specific outcome measures (Cohen's d: 1.04-1.73) across all anxiety disorders in child- and parent-reports. Superiority of the EXP+ condition for children with separation anxiety disorder showed up only selectively in the parent-report at the end of therapy and no longer at the 6-month catamnesis. The child-report did not show differences between the two therapy conditions at any time point. Robust age effects could neither be observed at the end of therapy nor at 6 months after the end of treatment.

Discussion: Contrary to hypotheses, no sustained superiority of EXP+ over EXP- condition was demonstrated for children with separation anxiety disorder or better efficacy of EXP+ for younger children. There are also no differences in efficacy between EXP+ and EXP- for the other anxiety disorders studied here. The significance of the study results and implications for practice are discussed.

Interpretation training as a pre-treatment for cognitive behavioral therapy for obsessive-compulsive disorder in youth: A randomized controlled trial

Elske Salemink¹, Lidewij Wolters^{2,3}, Annelieke Hagen^{2,3}, Vivian op de Beek^{2,3}, Pascale Dol^{2,3}, Else de Haan^{2,3}

¹ Department of Clinical Psychology, Utrecht University, the Netherlands, ² Amsterdam UMC, Department of Child and Adolescent Psychiatry, Meibergdreef 5, 1105AZ, Amsterdam, the Netherlands, ³ Academic Center for Child and Adolescent Psychiatry, de Bascule, Meibergdreef 5, 1105AZ, Amsterdam, the Netherlands

Background: Cognitive behavioral therapy (CBT) is recommended as first line treatment for pediatric obsessive-compulsive disorder (OCD). Although CBT is an effective treatment for OCD, not all children profit sufficiently. Long waitlists and wide variations in improvement rates ask for new interventions. Given the important role of misinterpretations in OCD, a promising new intervention might be Cognitive Bias Modification-Interpretation (CBM-I) training. We examined the effectiveness of a Cognitive Bias Modification-Interpretation (CBM-I) training that was offered during the waiting period for CBT. We tested 1) whether the CBM-I training is an effective intervention during a waitlist period for CBT, and 2) whether augmenting CBT with CBM-I improves treatment effect.

Methods: Participants (74 children with OCD, 8-18 years) were randomly assigned to either a CBM-I training (12 sessions) or a waitlist, both followed by CBT (16 sessions).

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.

Conclusion: These findings indicate that CBM-I training could be an easy to implement, helpful intervention during a waitlist period. However, replications in larger samples and comparisons to active control conditions are needed.

What will you do in the face of anxiety? - Development of a state emotion regulation questionnaire targeting anxiety in adolescence

Nadine Vietmeier¹, Brunna Tuschen-Caffier², Julian Schmitz³, Matthias Ziegler¹, Julia Asbrand¹

¹ Humboldt-Universität zu Berlin, ² University of Freiburg, ³ University of Leipzig

Emotion regulation (ER) includes all efforts to influence what emotions are experienced, when they occur, and how they are perceived and expressed. Successful ER is crucial in the face of socio-emotional development while ER problems often concur with psychopathology (Aldao et al., 2010). Usually, ER is assessed as a trait variable which requires highly reflective skills (e.g., generalization across multiple situations and emotions). This is particularly difficult for children and adolescents. Thus, we aimed to establish a state ER questionnaire using anxiety case vignettes in adolescents. We chose a focus on anxiety-evoking situations as a clear emotional set-up for the case vignettes. Further, anxiety disorders are one of the most prevalent mental disorders in youth (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015) and a case vignette needs a clear emotional set-up. Several ER strategies have been considered as relevant for anxiety (Aldao et al.,

2010). Addressing the idea of ER flexibility as functional (Aldao, 2013), we included different behavioral and cognitive strategies (reappraisal, acceptance, distraction, avoidance, rumination). For each strategy, six items were derived from theory (e.g., Aldao et al., 2010) and trait questionnaires (e.g., Grob & Smolenski, 2005) and assessed in a previous pilot study with young adults. The current study aimed to reduce the number of items per strategy, test the factor structure, validity and retest-reliability. The online study included n = 107 adolescents aged 10 to 17 years. After consenting to the study (both parent and adolescent), participants completed trait measures on anxiety, depression and trait ER. They were then confronted with two potentially anxiety-based vignettes in both written and oral form (e.g., „You sit in a group. The others briefly introduce themselves. In a moment, you are to introduce yourself.“) based on earlier studies (e.g., Carthy et al., 2010). They were asked to imagine how they would feel if they were experiencing this situation. Participants were then asked how good they felt afterwards (valence) and how relaxed they were (arousal). They further completed the state ER questionnaire after each vignette. Currently, the data is being analyzed to reduce the number of items per strategy and provide a final version of a state ER questionnaire. Further, we will critically discuss how future studies can include state assessment of ER and how treatment might potentially benefit from assessing ER during sessions (e.g., exposure).

Symposium 21

The Feeling Safe programme: the most effective psychological treatment for persecutory delusions

Chair: Daniel Freeman, University of Oxford, UK

Treating persecutory delusions: the spirit, style, and content of the Feeling Safe programme

Felicity Waite, University of Oxford, UK

The Feeling Safe programme is a cognitive therapy developed to improve outcomes for individuals with persecutory delusions. It is theoretically driven, modular, and personalised, with differences in therapeutic style and content compared to first generation cognitive-behavioural therapy for psychosis. This talk will give an insight in to the content and style of the Feeling Safe programme, including learning from a peer-led qualitative study of the patient experience.

The spirit, style, and content of the 20-session Feeling Safe Programme has emerged from theoretical understanding, together with lived experience involvement including patient feedback, and our own clinical experience. The approach has a specific clinical focus: to help people feel safer, happier, and to get back to doing more of the things they enjoy. These positively framed goals are popular with patients, enhance engagement, and embed the mechanism of change – developing feelings of safety – from the outset. The clinical strategy is first to limit common psychological maintenance factors – including excessive worry, disrupted sleep, low confidence, anomalous experiences, and defence behaviors. Then enable patients to enter their feared situations in order to learn that they are now safe enough. To achieve this, the programme has a distinct therapeutic style: we are intensive, active, and work alongside patients with a spirit of discovery to make changes in the everyday situations that matter to the individual. This style emerges from the explicit values of the approach: collaboration, patient choice, and optimism for patients.

Using a peer research approach, we set out to understand the participant experience of the Feeling Safe programme. In a qualitative study employing Interpretative Phenomenological Analysis, semi-structured interviews were conducted by peer researchers with six people who had received the Feeling Safe programme as part of the clinical trial. Participants spoke of feeling ‘unsafe’ in their daily lives before the intervention. Openness to the intervention, facilitated by identification with the programme name, and willingness to take an active role were considered important participant attributes for successful outcomes. The therapist was viewed as a professional friend who cared about the individual, which enabled trust to form and the opportunity to consider new knowledge and alternative perspectives. Doing difficult tasks gradually and repeatedly to become comfortable with them was important for change to occur. The intervention helped people to do ordinary things that others take for granted.

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Feeling Safe: the development of the programme

Daniel Freeman, University of Oxford, UK

The ambition was to produce a psychological therapy that would lead to recovery in persecutory delusions for 50% of patients for whom anti-psychotic medication had not succeeded. That half of patients would no longer believe that their fears were true. The Feeling Safe programme, developed over the past decade in close consultation with people with lived experience, is the result of that effort. The theoretical basis of the work is that at the core of the delusion is a threat belief: a conviction that everyday situations are dangerous (Freeman, 2016). Everyday situations have become associated with danger. The threat beliefs are sustained by several maintenance factors: for example, spending lots of time worrying, sleeping poorly, feeling inadequate, and avoiding the situations we fear. Feeling Safe is fundamentally an effort to counteract and supersede memories of danger by helping the person to relearn that they are safe. To do that, we first tackle the key maintenance factors. We help people, for example, worry less, sleep better, and feel more self-confident. Then, ultimately, it’s about spending time in the feared situations with one’s defences lowered, fully engaged in the moment and experience. By so doing, the person can learn that they are, in fact, safe. In this presentation, the theoretical model is outlined, key experimental tests described, and clinical trials highlighted that evaluated with hundreds of patients with persecutory delusions the individual elements comprising the programme. The extremely positive results will be reported of the main clinical trial testing the full treatment against an alternative psychological approach (Freeman et al, 2021).

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The physical activity profiles of patients with persecutory delusions and the application of the Feeling Safe programme approach to increasing activity

Rowan Diamond, University of Oxford, UK

Background: Severe paranoia is likely to limit engagement in physical activities. We set out to examine for the first time the activity profiles of patients with current persecutory delusions and the associations with psychiatric symptoms.

Method: Seventy-five patients with persecutory delusions in the context of non-affective psychosis wore a pedometer for seven days. Participants completed measures of meaningful activity, mobility, and psychiatric symptoms. Latent class analysis was used to identify physical activity profiles.

Results: Three distinct activity profiles emerged: a mobile but inactive group ($n=47$, 63%) (mean daily step count= 6453, $SD=3348$), an immobile and inactive group ($n=20$, 27%) (mean daily step count=4205, $SD=2442$), and a mobile and active group ($n=8$, 11%) (mean daily step count=18396, $SD=5715$). The groups did not significantly differ in their levels of paranoia, anhedonia, psychological wellbeing, insomnia, beliefs about self or others, or safety-seeking behaviours. There were significant group differences in depression and number of physical health appointments, with the immobile and inactive group showing higher levels of both. There were indications of group differences in body mass index, hours worked, hallucinations, and worry.

Conclusion: There are likely to be different physical activity profiles for patients with current psychotic experiences. The majority of people with persecutory delusions are physically inactive, but a small minority are highly active. In those patients who have low activity levels, there is a potentially important distinction in self-reported mobility, which warrants further investigation. Treatments designed to improve physical activity levels may need to tailor by activity profile.

The Feeling Safe programme approach to therapy is a highly active one, in which therapists use a range of different techniques to maximise engagement in meaningful activity, whatever a person's mobility level. This includes engagement in physical activity.

Feeling Safe in action: case examples

Louise Isham, University of Oxford, UK

In this talk we will illustrate the clinical use of the Feeling Safe programme with patients. The overall goal of the programme is to help people experiencing persecutory delusions to re-learn safety so that they can feel safer, happier, and be able to do more of the things that they want to do. This is achieved by targeting key mechanisms that maintain the threat belief, using a manualised approach that is individualised to each client.

Therapy typically occurs on a weekly basis for approximately 20 sessions with additional support between sessions. Using case examples, we will illustrate, step-by-step, the therapy process from start to finish. We will talk through how clients are supported to identify personally meaningful goals and to choose which treatment target they would like to work on at each stage of the therapy. We will give practical examples of how persecutory delusion maintenance factors such as worry, low self-confidence, sleep difficulties, distressing anomalous experiences, and defence behaviours may be addressed. The importance of doing sessions 'out and about' will be emphasised, and examples given of how to do this in practice. We will also talk through relapse management strategies to support clients to maintain the progress they have made.

Via these clinical illustrations, we will make the practical application of the Feeling Safe programme transparent and accessible to clinicians so that they can begin to learn how to use this approach within their own work.

The Feeling Safe-NL Programme

Eva Tolmeijer^{1,2}

¹Department of Clinical Psychology, VU University and Amsterdam Public Health Research, van der Boechorststraat 7, 1081 BT Amsterdam, the Netherlands ²Parnassia Psychiatric Institute, Zoutkeetsingel 40, 2512 HN The Hague, the Netherlands

Background: Recovery involves more than the absence of mental health problems and concerns a highly personal process of enhancing resilience. To this end, we build on the translational Oxford Feeling Safe Programme (Freeman et al., 2021) by combining it with peer support and innovative visual feedback. This will now be tested as the Feeling Safe-NL Programme (trial registration number: ISRCTN25766661), which aims to promote wellbeing by synergistically reducing the causal factors that hamper recovery, while concurrently addressing personal recovery with peer-support. We will test whether this new translational, recovery-oriented, transdiagnostic, modular, and peer-supported therapy is more (cost-)effective in improving wellbeing and reducing threat beliefs than the guideline intervention cognitive behavioural therapy for psychosis (CBTp).

Methods/design: A two-armed single-blind pragmatic superiority randomised controlled trial ($n=190$) to test whether Feeling Safe-NL helps patients improve their wellbeing and feel safer more effectively than CBTp. We will include out-patients with low wellbeing and threat beliefs that are held with at least 60% conviction. Recruitment started in March 2022. Participants will be randomised (1:1) to Feeling Safe-NL or the gold-standard CBTp (protocolized, formulation-based), both provided over a period of 6 months. In line with the treatment protocols, participants in both conditions are offered the possibility to monitor their recovery process. Data will be visualised in a novel and patient-friendly way to enhance usability for both patients and therapists. Standard care will continue as usual and be monitored. Blinded assessments will be conducted at 0, 6- (post-treatment), 12- and 18-months follow-up. The primary and secondary outcome are wellbeing and the level of conviction of the main threat belief, respectively. Mediation analyses will be used to assess mechanisms of therapeutic change. The project also includes qualitative assessments of the experiences of participants, therapists, and experts by experience with the Feelings Safe-NL programme.

Discussion: The Feeling Safe-NL study will provide an evaluation of a new translational, recovery-oriented, transdiagnostic, modular, and peer-supported treatment to achieve wellbeing and feeling safer.

Symposium 22

Interpretation biases and self-referential processes in social anxiety disorder

Chairs: Rikah Ginat-Frolich and Jonathan Huppert, The Hebrew University, Jerusalem, Israel

Social fears in adolescence: A new social picture task to assess interpretation bias

W.-G. Lange, L.A. Henricks, M. Luijten, & E.S. Becker, Behavioural Science Institute, Radboud University Nijmegen, The Netherlands

Prominent models of Social anxiety disorder (SAD) suggest that negative interpretations of ambiguous social cues (interpretation biases [IBs]) may maintain and maybe even cause the condition. Over the years numerous tasks have been developed to assess IBs and although social situations are typically of a more visual nature, the majority of these tasks asks participants to imagine and interpret textually described ambiguous scenarios (vignettes). Particularly for adolescence, a phase of life in which SAD tends to develop, we felt that a more ecologically valid, visually appealing version is needed. In the picture task, we developed, ambiguous social pictures were presented, followed by a positive and negative interpretation. In the present study, we examined how the new task relates to an established vignette task and how the new pictorial task relates to social fears in adolescents. The sample consisted of 329 adolescents aged 12 to 18 years. IBs were assessed with the newly developed pictorial task and with more traditional textual vignettes. Social fears were measured with self-report questionnaires. The results suggest that the pictorial task was able to assess IBs comparable to the textual vignettes. The picture task could identify IBs in adolescents with increased levels of fear of negative evaluation, the core symptom of social anxiety, but not for adolescents with social anxiety symptoms in general.

Interpretation biases in social anxiety and callous-unemotional traits

Anna Dapprich¹, Laura Derks^{1,2}, dr. Wolf-Gero Lange¹, prof. Maaïke Cima¹, prof. Tanja Legenbauer², prof. Eni Becker¹

¹Behavioural Science Institute, Radboud University, The Netherlands, ²LWL-University Hospital Hamm for Child and Adolescent Psychiatry, Psychotherapy and Psychosomatics, Ruhr-University Bochum, Germany

Objective: Interpretation biases have a causal maintaining role in psychopathology but some research suggests that different biases are not specific to internalizing or externalizing problems. Aligning the content of interpretations to *emotional* characteristics of internalizing and externalizing disorders might help to understand which biases are involved in which problems. We developed a paradigm to assess threatening, self-blaming and hostile, other-blaming interpretations in the same social situations (Study 1). Furthermore we assessed this paradigm in a clinical sample to investigate whether interpretation biases are uniquely related to self-reported social anxiety and callous-unemotional (CU) traits (Study 2).

Method: In study 1 and 2, 390 students and 401 inpatients were included, respectively. In both studies, the newly developed Ambiguous Social Scenario Task was used to measure interpretation biases. It consists of 10 verbal vignettes describing ambiguous, mildly negative situations, with each 3 interpretations (hostile, threatening, neutral), which all have to be rated. Social anxiety and CU-traits were assessed by means of self-report questionnaires.

Results: Study 1 showed separate factors for both threatening and hostile interpretations with good internal consistency, as well as convergent and discriminant validity. Study 2 showed that in inpatients, higher social anxiety predicted more threatening interpretations, whereas higher CU-traits predicted more hostile interpretations. Social anxiety and CU-traits correlated significantly negative, but did not correlate with the respective other interpretation bias. Interpretation biases did not correlate with each other either.

Conclusion: Interpretations of social situations were specific to emotional characteristics of internalizing and externalizing disorders, respectively, and did not co-occur. Interpretation bias modifications might be tailored to an individual's self-reported emotional symptoms.

Interpretation bias in social anxiety: The use of multiple measures,

Rivkah Ginat-Frolich¹, Asher Strauss¹, Yogev Kivity¹, Yoni Elizur¹, Michal Weiss¹, Lior Cohen¹, Jonathan Huppert¹

¹The Hebrew University, Jerusalem Israel

There is strong evidence that high socially anxious (SA) individuals tend to negatively interpret ambiguous social information. Indeed, interpretation bias has been proposed as a maintenance process of social anxiety disorder (SAD) and it can be assessed in both experimental and treatment-based studies of SA. However, measurements of interpretation bias vary greatly. In this talk, we will present findings from a series of three studies assessing whether multiple measurements of interpretation bias specifically correlate with SA in adults. The first study examined a group of 50 highly SA ($n = 25$) and low SA ($n = 25$) adults; in the second study 155 highly SA ($n = 79$) and low SA ($n = 72$) adults were assessed; and the third study examined 72 adults with SAD and 35 healthy controls. In all three studies, three measures were examined: in a **grammatical decision task**, ambiguous social and non-social sentence stems (e.g., "As you finish your performance, you see that the audience thinks that you are") were presented aloud, with the last word of the sentence (e.g., "incompetence") appearing on a computer screen. Participants were asked to determine whether the last word grammatically completed the sentence or not and their reaction times were assessed. In a **sentence completion task**, participants were asked to provide as many final words as possible to some of the same ambiguous sentences describing a social situation. Thereafter, participants were asked to endorse the word they felt best completed the sentence. All responses were coded by independent raters as neutral, positive, negative, or other. Finally, participants were asked to provide **self-appraisals** regarding the same sentences used in the previous tasks, such that each sentence stem was provided twice, with a positive and a negative resolution. Individuals were asked to rate how much the sentence characterizes them (e.g., "As you finish your performance, you see that the audience thinks that you are fantastic"). Preliminary analyses suggest variability over the three studies in terms of differences in reaction times to positive grammatical and negative grammatical words on the grammatical decision task. However, the coded answers on the sentence completion task consistently showed both a lack of positive bias and the presence of a negative bias in both within and between group analyses. Questionnaire data were less consistent, with the first study only showing the presence of a negative bias in between group analyses. After revising the measure for the second and third studies, differences in both positive and negative appraisals were found in both within- and between-group analyses. Further analyses will examine the correlations among the three interpretation measures and the unique contributions of each measure in distinguishing high versus low SA individuals. These analyses will help us understand the relationship of different stages in interpretation bias from initial evaluation, to generation of alternatives, to final appraisals.

Self- and other-related cognitions following threats to status and belongingness in social anxiety

Roy Azoulay, Bar-Ilan University, Ramat Gan, Israel

Negative self-cognitions play a role in the maintenance of social anxiety (SA). Such cognitions emerge especially following negative social situations. To examine which type of social stressors evoke these negative cognitions most strongly, we conducted two studies in which vignettes concerning belongingness- and status threats were presented. Following each vignette, participants endorsed self-related (shame) and other-related (anger) cognitions. In Study 1 ($N=143$) we found that high SA women, but not men, endorsed more self-cognitions following belongingness- as compared to status threat vignettes. In Study 2 ($N=251$) we found that SA in both men and in women was more strongly associated with self-cognitions following status- as compared to belongingness-threats events. Results are discussed from the perspective of the cognitive-evolutionary theory of SA.

Self-beliefs in social anxiety: distinct patterns for social-rank and affiliation information

Reut Zabag¹, Einat Levy-Gigi^{2,3} & Eva Gilboa-Schechtman^{1,2*}*

¹Department of Psychology, Bar-Ilan University, ²Gonda Multidisciplinary Brain Center, Bar-Ilan University, ³Faculty of Education, Bar-Ilan University

Negative self-beliefs are at the heart of social anxiety disorder. However, the mechanisms underlying the persistence of these negative beliefs are not fully understood. Recent theories suggest that the responsiveness to evaluative feedback - enhanced negative updating and reduced positive updating plays a central role in preserving these beliefs. Importantly, self-beliefs are comprised of multiple representations. A growing body of research on self-beliefs distinct between two central domains of sociality: social rank (i.e., power, dominance, status) and affiliation (i.e., warmth, communality). Evolutionary theories suggest that while people usually activate both social rank and affiliation systems, individuals with SAD tend to over-activate the social rank system. The current research aimed to delineate the scope and specificity of negative self-beliefs and the alterations in negative and positive updating of these self-beliefs in the social rank and affiliation domains. In three independent studies, participants (clinical sample: $n=137$; analog samples: $n=272$; $n=563$) completed a self-belief updating task. First, they learned that an evaluator perceives them negatively in the social rank and affiliation domains; later, the evaluation was changed, and the evaluator perceives them positively. Participants had to adjust their beliefs according to the evaluation. All studies revealed a similar pattern of results - social anxiety was associated with an initial negative social-rank self-belief. Hence - individuals with higher levels of social anxiety thought the evaluator perceived them as inferior and submissive. However, social anxiety was not associated with enhanced negative updating or decreased positive updating. Theoretical and clinical implications will be discussed

Symposium 23

Cognitive bias modification as a way of changing dysfunctional behaviours

Chair: Nienke Jonker, University of Groningen, the Netherlands

Modifying attentional and approach biases for energy drinks

Eva Kemps, Marika Tiggemann, Mikaela Cibich and Aleksandra Cabala, Psychology, Flinders University, Adelaide, Australia

Energy drink consumption is increasing worldwide, especially among young adults, and has been associated with negative health outcomes, ranging from headaches and anxiety, to fatal caffeine toxicity. In two experiments, we tested the prediction that energy drink consumption is in part driven by automatic cognitive processes (attentional and approach biases), with a view to modifying these to reduce consumption. Young adults (18-25 years) who regularly consume energy drinks completed the dot probe (Exp.1; $N=116$) or approach-avoidance task (Exp.2; $N=110$) to measure attentional and approach bias for energy drink cues, respectively. They then underwent a cognitive bias modification protocol where they were trained to direct their attention away from pictures of energy drink cans (Exp.1), or to push a joystick away from themselves in response to these pictures (Exp.2). Following a post-training assessment of attentional (Exp.1) or approach bias (Exp.2), energy drink consumption was measured by an ostensible taste test. Regular energy drink consumers showed both an attentional and an approach bias for energy drink cues. Cognitive bias modification successfully reduced both biases. However, neither attentional nor approach bias modification significantly reduced energy drink intake. The results lend some support to incentive sensitisation theory which emphasises the role of automatic processing.

Retraining of automatic action tendencies in individuals with obesity: a randomized controlled trial

Eni S.Becker, Behavioural Science Institute, Nijmegen, The Netherlands, Hannah Ferentzi, Behavioural Science Institute, Nijmegen, The Netherlands, Hannah Scheibner, Behavioural Science Institute, Nijmegen, The Netherlands, Reinout Wiers, University of Amsterdam, The Netherlands, Johannes Lindenmeyer, salus Klinik, Lindow, Germany, Sylvia Beisel, salus Klinik, Lindow, Germany, Mike Rinck, Behavioural Science Institute, Nijmegen, The Netherlands

Obesity is a major health concern. So far, treatment success is very low, this might be partly due to the automatically activated tendency to (over)-eat, that triggers behavior under little cognitive control. Recent research suggests that an effective way to counteract automatic approach tendencies in unhealthy consumption behavior might be approach bias modification. We conducted an RCT, with an approach-avoidance training 189 patients with obesity of a psychosomatic inpatient clinic who were participating in a nutrition advice program. Patients in the active training group were trained to avoid unhealthy food pictures and approach positive pictures, while the control group received sham training (approaching and avoiding both picture types). Approach-avoidance bias, body mass index, eating pathology and food-specific implicit associations were assessed before and after the training. In line with our hypothesis, approach-avoidance bias improved in the active training group after the training, in comparison to the sham training group. Moreover, this effect generalized to new, untrained stimuli. However, no effects of the training were found in a food-specific Single-Target Implicit Association Test, or on eating pathology questionnaires or body mass index. While the training results are promising, the effect of approach-avoidance bias modification on relevant behavior in obesity has yet to be established before it may be implemented as an add-on treatment.

Decreasing attentional bias for food cues in satiated women with obesity: a pilot study

Nienke C. Jonker, Renske W. de Jong & Peter J. de Jong, University of Groningen, Department of Clinical Psychology and Experimental Psychopathology, The Netherlands

Although many of us tend to have an attentional bias for food cues when we are hungry, women with obesity seem to still have this bias when they have just eaten. This constant temptation even when food is not needed may help explain why it is so difficult to restrict food intake, let alone lose weight. In this pilot study, we examined the feasibility and acceptability of an attentional bias modification training during satiation for women with obesity. Participants were 25 women with obesity and a dieting intention. During a pre-test attentional bias was assessed while participants were satiated. Following this, they performed an attentional bias modification training for 10 minutes every day for three weeks. During a post-test, again while satiated, attentional bias was re-assessed. Most importantly, participants completed a questionnaire and interview about the feasibility and acceptability of the training. Findings show that participants evaluated the training as acceptable and feasible. For example, 85% of participants completed more than 80% of the training sessions, there was no evidence for an adverse effect on food craving, and participants rated the acceptability of the training between neutral and slightly positive. Participants significantly improved their performance on the training. Furthermore, they showed a decrease in attentional bias after the three week training period, as assessed with an attentional bias assessment task. During the conference the implications of these findings will be discussed.

Webbased approach-avoidance training for cannabis related cues in adolescents with cannabis use disorder: a randomized controlled trial (UnDope)

Tanja Legenbauer, Ruhr University Bochum, Germany, Claudia Lambrechts, Pia Steden, Martin Holtmann, Reinold Wiers & Natalie Deux

Cannabis use disorder (CUD) is the most relevant cause of adolescent substance use inpatient treatment in Germany. CUD comes along with high relapse rates and severe future psychosocial impairments. Innovation in treatment is highly needed. Cognitive bias modification (CMB) represents a promising approach. Evidence from CBM-adult / alcohol research laid the basis for the present study.

A web-based cannabis approach avoidance task (CAAT) was created and delivered either via tablet/classic PC. Stimuli include 400 pictures with either cannabis-related content or neutral objects matched in color and shape. They were shown at random in 6 training or sham-training session. The instruction was indirect (push/pull pink or blue frame). A pre/post and a three-months follow-up assessment were conducted. N= 137 inpatients during CUD treatment and N=28 healthy controls (HCG) were included (HCG: comparison baseline data and CAAT validation only).

Of the 142 patients enrolled in the study, N=57 performed pre and post-test-assessments and the training ((n=30) /no-training (n=27) conditions. We were not able to identify an avoidance bias in patients at baseline. No significant changes over time independent of training condition occurred.

Results will be discussed in relation to methodological issues and sample characteristics.

An experimental manipulation of drinking identity using the relational responding task

Helle Larsen¹, Bram Van Bockstaele², Nele Martens³, Emma Wills¹, Reinout Wiers¹.

¹Department of Psychology, University of Amsterdam, Amsterdam, the Netherlands., ²Department of Child Development and Education, University of Amsterdam, Amsterdam, the Netherlands., ³Department of Public Health and Primary Care, Leiden University Medical Centre, Leiden, the Netherlands.

Heavy drinking remains a serious problem among young adults and studies demonstrate that drinking identity plays a role. We investigated the efficacy of a training in altering drinking identity and explored the role of drinking identity in the urge to drink and amount of alcohol consumed in a taste task. We hypothesized that participants in an abstainer identity training group would report less urge to drink and would drink less alcohol than participants in a drinker identity training group.

Young adults ($N=100$, $M_{age}=20.6$, $SD=2.7$) were randomized to one of the two (abstainer+me vs. drinker+me) training conditions in an adaptation of the Relational Responding Task (RRT). Pre- and post-assessments of implicit drinking identity, self-reported drinking identity, urge to drink, and observed alcohol use were measured. Data were analysed using mixed measures ANOVAs and hierarchical regression analyses.

We found no interaction between Time and Training Condition on drinking identity, $F(1, 97)=1.26$, $p=.264$ or urge to drink, $F(1, 96)=2.41$, $p=.124$. Consumed alcohol in the taste task did not differ between training conditions, $U=1078.00$, $p=.303$. Exploratory analyses indicated that the interaction between Training Condition and drinking identity at post-assessment significantly predicted consumption of alcohol in the taste task. Simple slope analyses indicated that in the abstainer identity training group condition, post-training identity was not a significant ($p = .96$) predictor of alcohol consumption, but in the drinker identity training group condition, post-training identity did significantly ($B=.33$, $p=.01$) predict alcohol consumption.

Our hypotheses were not confirmed with no differences between training conditions in drinking identity, urge to drink, or amount of consumption in the taste task. While we failed to alter implicit drinking identity, drinking identity predicted urge to drink and observed alcohol consumed in the drinker identity training group condition.

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Symposium 24

Effects of mindfulness on emotion regulation and emotional memory processing

Chair: Tim Schoenmakers, University of Amsterdam, the Netherlands

The role of emotion regulation and mindfulness in the etiology of posttraumatic intrusions and cognitions

Judith Schäfer, Technische Universität Dresden, Germany

Introduction: Emotion regulation is seen as a fundamental process in adaptive human behavior. Models of emotion regulation differentiate between abilities and strategies (such as mindfulness and attentional control). Theories strengthen the role of emotion regulation in the etiology and perseverance of posttraumatic stress disorder (PTSD). Empirical evidence based on cross-sectional studies supports these theoretical accounts. However, there is a lack of longitudinal studies testing the predictive values and interrelations of difficulties in emotion regulation, attentional control and mindfulness in the development of posttraumatic stress symptomatology.

Method: In a trauma analogue study, healthy participants ($n=117$ age= 23.3 ± 3.7 years, 53.9% female) completed questionnaires asking for previous traumatic experiences, difficulties in emotional regulation, attentional control and mindfulness. Then, they watched a distressing movie scene showing a brutal rape. In the following week, they recorded their intrusive memories regarding the movie in a daily diary. After one week, they reported film-related posttraumatic cognitions.

Results: In all analyses, I adjusted for previous traumatic experiences and gender. Preliminary findings suggest that only mindfulness predicted posttraumatic intrusions (no significant association with attentional control and difficulties in emotion regulation). Mindfulness (significant by trend) and difficulties in emotion regulation predicted posttraumatic cognitions (no significant association with attentional control). Neither interactions between attentional control, mindfulness, and difficulties in emotion regulation, respectively, did predict posttraumatic intrusions nor did the interactions between attentional control and difficulties in emotion regulation / mindfulness, respectively, predict posttraumatic cognitions. The interaction between difficulties in emotion regulation and mindfulness predicted posttraumatic cognitions, i.e. the positive association between difficulties in emotion regulation and posttraumatic cognitions becomes increasingly stronger with higher levels of mindfulness (significant by trend).

Discussion: In line with theoretical accounts, findings suggest that pre-trauma mindfulness and difficulties in emotion regulation may play a pivotal role in the etiology of posttraumatic stress symptomatology. These findings may encourage preventive interventions, i.e. practicing mindfulness and improving emotion regulation abilities may support psychological adjustment in case of being exposed to traumatic experiences.

Boosting first-line mental health care for Youngsters suffering from chronic conditions with Mindfulness – the You.Mind! study

Kock, M.^{1†}, Van Hoecke, E.², Onghena, P.¹, Raes, F.^{1*}, & Van der Gucht, K.^{1*}

† MK is presenting author, * FR and KVDG are joint senior authors.

¹ Faculty of Psychology and Educational Sciences, KU Leuven, ² Department of Internal Medicine and Pediatrics, University Hospital Ghent

Adolescents with chronic conditions are at increased risk for psychopathology such as anxiety, depression, or stress, which has a substantial impact on their quality of life. Mindfulness-based interventions (MBIs) have been shown to improve emotional distress in various clinical and non-clinical populations. Recent reviews suggest that MBIs are a promising intervention to also support adolescents with chronic diseases, but more robust research is needed to replicate these findings. Previous studies lacked randomisation, they mainly focused on chronic pain patients, and often did not include online components that would improve acceptability of the intervention. We aimed to address this gap by investigating the effects of an MBI on emotional distress and quality of life in adolescents with various types of chronic conditions using a randomised staggered within-subjects design. Twenty-two adolescents (14-19 years) with a chronic condition were randomised to a baseline phase of 14–28 days followed by an MBI, consisting of four online group sessions and online support spread over 8 weeks. Outcomes were assessed by short, repeated measurements throughout the baseline, intervention, and follow-up phases and by standardised questionnaires and experience sampling measures before randomisation, at postintervention and at 3-months follow-up. Data will be analysed using multilevel mixed effects models.

Data analyses have not yet been completed but are ongoing at the moment. This talk will present findings on the effects of a blended care MBI on emotional distress and quality of life in this vulnerable sample of adolescents with chronic conditions and discuss implications for future research.

Mindfulness vs. EMDR and aversive memory processing; exploring the working mechanisms of two promising new trauma interventions

Marianne Littel, Clinical Psychology, Erasmus University Rotterdam, littel@essb.eur.nl

Tim Schoenmakers, Clinical Psychology, University of Amsterdam, t.m.schoenmakers@uva.nl

Introduction: Avoidance behaviours are a hallmark symptom of PTSD. Although avoidance of trauma reminders including avoidance of associated painful internal experiences might offer some immediate comfort, this is highly counterproductive in the long run. Avoidance increases intrusive thought, intensifies the negative emotional experience, and reinforces the notion that the person cannot handle recalling the traumatic event, all leading to continuation of avoidance behaviours. The present study investigates two relatively new interventions that might be particularly suited to interrupt the 'behavioural loop' of avoidance by allowing a person to contact the painful memory while staying grounded in the present moment.

The first is EMDR, which involves recalling a distressing memory while simultaneously making eye-movements (EM). It has been proposed that dual taxation of working memory (recall+EM) limits its capacity to elaborate on the memory, which is then reconsolidated in a less elaborate form. Additionally, the dual taxation might help the person to not become overwhelmed by the memory but to stay present in a more detached way, and subsequently reappraise its content. Interestingly, mechanisms of EMDR would then be overlapping with mindfulness practice, which entails purposefully paying attention to experiences in the present moment in a non-reactive, non-judgemental way. Key elements are decentering (observing the experience from a more distanced perspective) and emotion regulation (e.g., acceptance and reappraisal). Although research is still in its infancy, first meta-analyses indicate that mindfulness-based interventions effectively reduce PTSD symptoms. The current experimental study aims to compare the effectiveness and working mechanisms of EMDR and mindfulness in the processing of aversive autobiographical memories in healthy participants.

Methods: Participants ($N=150$) were randomly assigned to recall+EM, recall+mindfulness, or recall only conditions. In the recall+EM condition, participants recalled two vivid, emotional hotspots of a distressing memory for 6 times 1.5-s each, while making rapid horizontal EM. In the mindfulness condition, participants were verbally guided to attune to the bodily sensations activated by memory retrieval and to investigate and allow them with a kind and curious attitude (similar to the procedure by Schoenmakers, same symposium). In the recall only condition the memory was recalled without intervention. Memory unpleasantness, arousal and vividness were measured at pretest, posttest and 3-day follow-up. Perceived stress, affect, and intrusions and avoidance were measured at baseline and follow-up. Self-reported decentering, willingness to feel emotions, and emotion regulation were included as mediators.

Results: Preliminary analyses indicate that memory arousal and unpleasantness, negative affect, intrusions, avoidance, and stress were significantly reduced in all conditions. Memory vividness was most strongly reduced after EM, followed by mindfulness, but not after recall only. Furthermore, decentering and willingness to feel emotions were increased after all interventions, whereas maladaptive emotion regulation was diminished. Positive reappraisal, however, was only increased after mindfulness; acceptance only after recall+EM. Mediators are being analyzed and will be discussed.

Conclusion: Brief recall and exposure to aversive memories decreases their distressing properties and impact and helps regulate the physical and emotional sensations that accompany them. Adding EM or mindfulness instructions seems to uniquely increase some of the

An acceptance-based and emotion-focussed somatic treatment for complex grief.

Tim Schoenmakers, University of Amsterdam, the Netherlands, t.m.schoenmakers@uva.nl

Introduction: Whereas many therapies target emotional processing through cognitive and behavioral strategies, we tested a method that primarily focusses on feelings. The method is an acceptance-based, experiential exercise for emotional processing, based on mindfulness and Acceptance and Commitment Therapy. The exercise starts with a brief imaginary exposure to a painful memory. Subsequently, a therapist verbally guides the participant to fully allow and accept the bodily sensations which have been activated by the exposure. Goal of the study was to explore the feasibility and potential effects of this method in people experiencing symptoms of complicated grief.

Method: We used a mix of qualitative and quantitative methods to test feasibility and effects. We included 14 participants who (a) were grieving over the passing away or break up/divorce with a close one, and (b) who had complicated grief problems and felt stuck in their grief process.

Each participant received two therapeutic sessions on two consecutive days. We selected three to five of their most painful memories associated with their loss. During each session, the exercise was performed 3 times, each time with a different memory. Before and after the intervention, we measured participants' emotion response to the memories and willingness to experience their emotions. In a semi-structured qualitative interview, we asked participants about their experience during the sessions, and about perceived effects, a week after the intervention. One month after the intervention, participants filled out a questionnaire on grieve experiences/problems.

Results: Analyses showed decreases in the intensity of emotional reactions toward the memories. We also found decreases in grieve experiences one week and one month after the procedure. In the qualitative interviews, participants felt overall positive about the exercise and did not find it distressful. They reported insights in how to deal with emotions without getting overwhelmed by them. Various effects were reported during the interviews, such as: broadening of memories, a positive view on formerly negative memories, a sense of relieve, a change in the type of emotion (e.g., from sadness to anger).

Conclusion & Discussion: Although we have included pre- and post-tests, the study was uncontrolled and effects may therefore, partly, be explained by mere attention or exposure effects. Notwithstanding, this method seems promising. After the intervention, most participants showed positive changes in grief experiences. Additionally, it seemed to have helped the processing of their loss as indicated by various self-reported effects on affect, cognition, and behaviour.

Symposium 25

Affective dynamics and symptom fluctuations in (the treatment of) anxiety and depression

Chair: Nessa Ikani, Pro Persona / Radboud University Medical Centre, the Netherlands

The best of both worlds? General principles of psychopathology in personalized assessment

Merlijn Olthoff¹, Fred Hasselman¹, Benjamin Aas², Daniela Müller², Silvia Scholz², Nora Daniels-Wredenhagen², Els Weinans³, Guido Strunk⁴, Günter Schiepek⁵, Anna M. T. Bosman¹, Anna Lichtwarck-Aschoff⁶

¹Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands, ²Systemios Health Center Academy, Siedelsbrunn, Germany,

³Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology, Eindhoven, The Netherlands, ⁴Complexity Research, Vienna, Austria; FH Campus Vienna, Vienna, Austria and Technical University Dortmund, Dortmund, Germany., ⁵Institute of Synergetics and Psychotherapy Research, University Hospital of Psychiatry, Psychotherapy and Psychosomatics, Paracelsus Medical University, Salzburg, Austria; Department of Psychology, Ludwig Maximilian University of Munich, Munich, Germany, ⁶Department of Child and Family Welfare, University of Groningen, Groningen, The Netherlands

A complex systems approach to psychopathology proposes that general principles lie in the dynamic patterns of psychopathology, that are not restricted to specific psychological processes like symptoms or affect. Hence, it must be possible to find general change profiles in time series data of fully personalized questionnaires. In the current study, we examined general change profiles in personalized self-ratings and related these to treatment outcome. We analyzed data of 404 patients with mood and/or anxiety disorders who completed daily self-ratings on personalized questionnaires during psychotherapy. For each patient, a principal component analysis was applied to the multivariate time series in order to retrieve a one person-specific time series. Then, using classification and regression methods, we examined these time series for the presence of general change profiles. The change profile classification yielded the following distribution of patients: no-shift ($n = 55$; 14%), gradual change ($n = 52$; 13%), one shift ($n = 233$; 58%), reversed shift ($n = 39$; 10%) and multiple shifts ($n = 25$; 6%). The multiple-shifts group had better treatment outcome than the no-shift group on all outcome measures. The one shift and gradual-change group had better treatment outcome than the no-shift group on two of four outcome measures. Overall, this study illustrates that person-specific (idiographic) and general (nomothetic) aspects of psychopathology can be integrated in a complex systems approach to psychopathology, which may combine 'the best of both worlds'.

“It goes up and down” – Dynamics of avoidance and perceived control during cognitive behavior therapy for social anxiety disorder

Nessa Ikani, Pro Persona / Radboud University Medical Centre, the Netherlands, F. van der Meer, G. Hendriks, & F. Hasselman

Avoidance is a hallmark feature of anxiety disorders, involved in both their onset and maintenance. As such, it forms an important treatment target that is at the core of Exposure Therapy for anxiety disorders. Although the dynamic nature and context dependency of avoidance is intuitive, research on avoidance and its relationship with treatment outcomes, however, has predominantly studied avoidance as a static process. In order to capture day-to-day fluctuations in state avoidance and anxiety, as well as the impact of treatment, we conducted an intensive longitudinal single-case series (N=1) design. In specific, we investigated symptom development, experiential avoidance and perceived control of a patient with social anxiety disorder over the course of Cognitive Behavior Therapy (Hofmann & Otto, 2017, 14-week protocol), with the goal of characterizing their dynamics – not estimating their specific associations. Experience sampling method (ESM) data was collected twice a day (morning/evening) over a baseline, CBT and post-treatment period (total > 100 days). This included information about (up-coming or past) social events that day, perceived control regarding the social event and self-reported experiential avoidance and anxiety symptoms. The dynamic change profiles of social anxiety symptoms, perceived control and avoidance during treatment were analysed using a recurrence network approach. A general decreasing trend was observed for symptoms and avoidance, whereas perceived control increased – reflected by several major state shifts in these constructs. The findings of the current longitudinal observational study highlight the importance of adopting dynamic approaches to symptom development and clinical improvement over the course of treatment, and are particularly promising with regards to personalized-treatment calls and real-time treatment monitoring.

Measuring and understanding cognitive maladaptive schemas in daily life

Bob Baxendell¹, Indira Tendolkar², Jan Spijker¹, Janna Vrijzen^{1,2}

¹ Depression Expertise Center, Pro Persona Mental Health Care, Nijmegen, The Netherlands ² Department of Psychiatry, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, The Netherlands

Background: Schema Therapy is a widely used evidence-based treatment for personality disorders. More recently, its transdiagnostic relevance has been proposed and explored. For example, and in line with the widely used cognitive models by Beck and Young, maladaptive schemas are thought to contribute to the development and maintenance of depression. Schema Therapy is hence gaining popularity within clinical care for chronic disorders such as chronic Major Depressive Disorder (cMDD). However, there is a growing but still small body of research on the effectiveness and mechanisms of change of Schema Therapy for cMDD. Research on Schema Therapy is hampered by limited valid assessment methods of key elements of Schema Therapy, including the central Early Maladaptive Schemas (EMS). We aimed to develop a daily life measure of EMS by assessing its association over time with clinically relevant and theory-based constructs such as rumination and depressotypic negative mood.

Methods: Based on clustering analyses on the Yong Schema Questionnaire-80 (YSQ-80) – the current golden standard to measuring EMS – we created 16 in-the-moment questions assessing variation in activation of the 16 EMSs. In an unselected sample (N = 90), the YSQ- 80 was assessed after which a five-day at-home Experience Sampling Method (ESM) data collection phase started. Participants were prompted five times per day to answer the EMS questions, as well as assessments of negative mood, state rumination, and possible schema- activating events.

Results: Implementing multilevel modelling, we found level of schema activation to be positively associated with strength of negative mood, state rumination and unpleasant events. Effects were corrected for autocorrelation, time, and day. Lagged effect could not be modelled, as these models did not converge. As indication of its validity, both the total and EMS-specific scores of the ESM-based questions showed collinearity with the YSQ-80 scores.

Discussion: Measuring in-the-moment schema activation using ESM seems feasible within an unselected sample. There was ample variability within the variable, co-varying as expected with negative (depressotypic) mood, state rumination and activating events. Moreover, this new daily life measure of EMS seems to capture the same constructs as the established and widely-used YSQ questionnaire. Expecting more variation within cMDD samples, this measure could provide a research and clinical assessment tool for capturing clinical effects of Schema Therapy and its dynamics within changing contexts.

The link between affect dynamics and cognitive factors in depression

Brage Kraft, PhD, Diakonhjemmet Hospital and University of Oslo, Norway

Depression is associated with aberrant cognitive functioning, such as reduced executive functioning and biased cognition. Reduced cognitive functioning is among the diagnostic criteria for depression, and have been implicated in the etiology and maintenance of symptoms. Importantly, however, depression symptoms differ from each other in their risk factors. Cognitive factors may also be differentially related to specific symptoms and their dynamics, and examining this more closely can improve our understanding on what role cognitive factors might play in depression. Results from three studies examining the links between cognitive factors and symptom dynamics of depression are presented. In study 1, associations between executive functioning and specific depression symptoms in a mixed sample were examined using cross-sectional network analysis. Analyses focused on identifying symptoms which bridge executive functions with depression. Study 2 and 3 drew on a clinical sample reporting depression with and without comorbid disorders. In study 2, individual network models of depression symptoms were estimated based on intensive longitudinal data (two weeks of experience sampling). Based on these models, we estimated which symptoms were most central to each individual (and assumed to be more influential in maintaining other symptoms). Analyses focused on whether centrality of specific symptoms were linked with attentional functioning. Study 3 examined the association between three cognitive factors (attentional functioning, negative attentional bias, interpretation bias) and the dynamics (i.e., the "ebb and flow") of positive and negative affect. All three studies showed that cognitive factors were mainly related to the dynamics of anhedonia and sickness-related symptoms.

Preventative cognitive control training for remitted depressed patients: effects on emotion regulation dynamics

Kristof Hoorelbeke^a, Rudi De Raedt^a, Casper J. Albers^b, Marieke C. Wichers^c, & Ernst H. Koster^a

^a Ghent University, Ghent, Belgium, ^b University of Groningen, Groningen, The Netherlands, ^c University of Groningen, University Medical Centre Groningen (UMCG), Groningen, The Netherlands

Introduction: Cognitive control training (CCT) recently yielded promising effects in remitted depressed patients (RMD), where a randomized controlled trial suggests that CCT exerts beneficial effects on depressive symptomatology via emotion regulation. However, it remains to be tested how CCT impacts emotion regulation dynamics, which is key to increasing our understanding of the working mechanisms of CCT.

Methods: Using time-series data derived from an extensive experience sampling procedure (28 days), we modeled immediate effects of CCT (vs. an active control condition) on deployment and efficacy of emotion regulation in N=92 RMD patients.

Results: RMD patients showed improvements in deployment of rumination throughout the ESM period. We also observed effects of CCT on efficacy of emotion regulation. Comparison of effects of the experimental manipulation of cognitive control on network structures suggest changes in the relation between rumination and use of positive appraisal in the CCT condition.

Discussion: Our findings indicate the causal impact of cognitive control on emotion regulation dynamics. Throughout the training procedure participants in the CCT condition became less likely to deploy rumination. Interestingly, the findings pertaining efficacy of emotion regulation suggest that CCT may benefit from being combined with emotion regulation training or other interventions.

Symposium 26

Repetitive negative thinking as a transdiagnostic maintaining factor and potential treatment target

Chair: Frances Meeten, King's College, UK

Repetitive negative thinking as a transdiagnostic risk factor – a longitudinal study using structural equation modelling

Julia Funk¹, Keisuke Takano¹, Hannah Schumm¹, Thomas Ehring¹

¹ Ludwig-Maximilians-Universität, LMU München, Lehrstuhl für klinische Psychologie und Psychotherapie, München, Bayern, Deutschland

Background: Different forms of repetitive negative thinking (RNT) have traditionally been conceptualized as being distinctly linked to specific disorders, e.g., rumination to depression and worrying to generalized anxiety disorder. However, emerging evidence suggests that different forms of RNT share a common process, which might also explain the link between RNT and psychopathology. To investigate whether different forms of RNT share a common factor we analyzed the factor structure of different RNT scales using structural equation modelling. Furthermore, we examined whether the common RNT factor and scale-specific RNT factors predicted later depression and anxiety.

Methods: A community sample (N = 523) completed an online assessment at baseline and three months later. The assessment comprised different RNT measures including a rumination and worrying scale as well as measures of depressive and anxiety symptoms. We compared three different structural equation models assuming (a) a common factor across different RNT measures (single-factor model); (b) scale-specific factors for each RNT measures (separate-factor model); and (c) both a common and scale-specific factors (bi-factor model). We additionally tested how these models performed when predicting depression and anxiety at the second time point.

Results: The bi-factor model showed the best fit to the data among the three models. The common RNT factor in the bi-factor model predicted depression and anxiety at the second time point while controlling for baseline symptoms. Next to the common RNT factor, some, but not all scale-specific RNT factors in the bi-factor model additionally predicted depression and anxiety.

Discussion: The results support transdiagnostic concepts of RNT and suggest that similar processes could explain the effect of different RNT form on different types of psychopathology. Thus, the current findings highlight the potential of interventions that cut across traditional diagnostic categories by addressing RNT as a transdiagnostic process.

Toward a better understanding of how rumination maintains obsessive-compulsive symptoms

Karina Wahl, University of Basel, Switzerland, Martin Kollárik, Carlotta V. Heinzl, Stefan Koch, Ulrich Voderholzer, and Roselind Lieb

The factors involved in the maintaining effects of rumination on obsessive-compulsive (OC) symptoms are not clear. We used moderator analyses to investigate whether cognitive and/or affective factors or vividness of the obsessive thought are involved in these effects. We reanalyzed Wahl et al.'s (Wahl et al., 2021) data and explored in a sample of 145 individuals diagnosed with obsessive-compulsive disorder (OCD) whether (1) depressive symptoms, indicative of mainly affective factors, and/or (2) the tendency to misinterpret unwanted intrusive thoughts as meaningful, indicative of mainly cognitive factors, moderated the observed effects of rumination on OC symptoms. Additionally, we explored whether OC symptom severity and trait rumination moderated the effects of rumination on OC symptoms. Finally, changes in the vividness of an obsessive thought after rumination in comparison to distraction were explored. The tendency to misinterpret unwanted intrusive thoughts but not depressive symptoms moderated the immediate and intermediate effects on OC symptoms, indicating rumination exerts an influence on OC symptoms mainly via cognitive factors. Neither OC symptom severity nor trait rumination emerged as a vulnerability factor. Additionally, vividness of the obsessive thought was maintained by rumination. Our analyses suggest that interventions targeting dysfunctional cognitions are appropriate in individuals with OCD and high levels of rumination.

Internet-delivered interpretation Training reduces worry and rumination, anxiety, and depression in people with generalized anxiety disorder and depression

Colette R Hirsch, King's College London, UK, Charlotte Krahé, University of Liverpool, UK, Jessica Whyte, University of Glasgow, UK, Hannah Krzyzanowski, King's College London, UK, Frances Meeten, University of Sussex, UK, Sam Norton, King's College London, UK, Andrew Mathews, University of California, Davis, USA

Worry and rumination, prevalent across psychological disorders, are forms of transdiagnostic repetitive negative thinking (RNT) that predict and maintain anxiety and depression. Across a series of theory driven experimental studies we established the causal role of transdiagnostic interpretation bias in maintaining worry, rumination, anxiety and depression. Working with people with lived experience

we developed an RNT focused interpretation training, successfully testing it in people with Generalised Anxiety Disorder (GAD) or depression, before refining and testing it in individuals with high levels of worry and/or rumination. The enhanced form of training was adapted to form an entirely online intervention. Individuals with GAD (with or without depression) were randomly allocated to either enhanced interpretation training or control conditions, completing ten RNT focused interpretation training or control sessions across one month. As predicted, participants in the interpretation training condition generated more positive interpretations bias post-training, and lower levels of trait-worry, weekly-worry, rumination, trait-RNT, anxiety and depression after training and at 1-month follow-up compared to the control condition. All effects except trait RNT were sustained at 3-months follow-up. Effects were mediated by interpretation bias. This online approach could be used as a stand-alone transdiagnostic low-intensity intervention or as an adjunct to transdiagnostic CBT.

Does single-session interpretation bias training reduce repetitive negative thinking among individuals with OCD

Rachel White, King's College London and South London & Maudsley NHS Foundation Trust, UK

Worry and rumination (types of repetitive negative thinking) are a key feature of many psychological disorders, including OCD. Evidence indicates that not only do these processes maintain psychological distress, but that they can also interfere with successful treatment and are a risk factor for relapse, making them an important target for treatment. Evidence from research on GAD shows that worry and repetitive negative thinking is maintained by negative interpretation biases, which are also prevalent in individuals with OCD. Previous research has shown that interpretation bias training changed OCD-related interpretations although this did not translate to behavioural proxies. Drawing on previous research with individuals with GAD and depression, we investigated whether an online single session of OCD-related interpretation bias training i. changed subsequent interpretations and ii. reduced scores on a behavioural proxy of repetitive negative thinking. Results will be presented, and implications discussed.

Symposium 27

Innovative CBT for youth with selective mutism, OCD, tic and misophonia: treatment at school, (short intensive) group treatment and parent-stand-alone treatment.

Chair: Elisabeth Utens, University of Amsterdam, the Netherlands

Behavioral treatment of selective mutism

Chaya Rodrigues Pereira, Levvel, Amsterdam, the Netherlands on behalf of the selective mutism research group: C. Rodrigues Pereira, J. B. M. Ensink, M. G. Güldner, E. Wippo, K. J. Kan, M. V. de Jonge, R. J. L. Lindauer, E. M. W. J. Utens.

Background: Selective mutism (SM) is a rare anxiety disorder (prevalence 0.2-1.9%) in which children consistently refuse to speak in certain situations (e.g., at school) while they speak freely in other situations (e.g., at home). This greatly impacts the daily functioning of children and their families. Little research has been conducted into the effectiveness of behavioral therapeutic treatment for SM.

Methods/Results: In our institution an innovative treatment protocol was developed for behavioral therapy in the school setting, where the problem is most urgent. In this presentation results of a randomized controlled trial (RCT, N=83, ages 3-18y) into the effectiveness of this protocol will be discussed. The data gathering was recently finished and at present results are being analyzed. The RCT comprises of direct treatment (N=41) and a waiting list control group (N=42). Children were assessed at three timepoints: T1: at baseline, T2: after 12 weeks, T3: post treatment. Randomization was stratified based on age, gender and bilingualism. Primary outcome: SM symptomatology, secondary outcomes: anxiety and mood symptoms, self-image and quality of life.

Conclusion: Validated diagnostics and evidence-based treatment are important to improve early detection of SM and adequate care for these children. This project is the first research in the Netherlands in this field, providing insight in SM and related problems in a large and culturally diverse sample. With proven effectiveness, this project offers an evidence-based behavioral therapeutic treatment protocol for the treatment of SM.

The selective mutism project is funded by Fonds Stichting Gezondheidszorg Spaarneland.

Tackle your Tics, a brief, intensive group-based exposure therapy programme for children with tic disorders

Annet Heijerman-Holtgreffe, Chaim Huyser, Cara Verdellen, Jolande van de Griendt, Laura Beljaars, Kees-Jan Kan, Ramón Lindauer, Daniëlle Cath, Pieter Hoekstra, Lisbeth Utens, Levvel, Amsterdam, the Netherlands

Tourette syndrome and chronic tic disorders are prevalent neurodevelopmental disorders, characterised by the presence of sudden motor movements (e.g., eye blinking, head jerking, throwing) or vocalizations (e.g., throat clearing, screaming, repeating words: echolalia). Tics and comorbid problems can have considerable impact on the daily lives of children and their families. Behavioural treatment is the first-line, evidence-based intervention for tic disorders, but tic reduction and treatment availability remain relatively low. Patient associations stress the need for more accessible treatments, that also focus on improving quality of life.

This presentation explains the design and study of the Tackle your Tics programme, a four-day intensive group-based intervention for children and adolescents (9-17 years) with Tourette syndrome or chronic tic disorder. This intervention offers exposure and response prevention treatment and additional supporting components: coping strategies workshops by young adults with tics, relaxation exercises and parent support. We will discuss the results of our pilot study into Tackle your Tics and experiences, both for youngsters and parents, as well as for experts by experience and therapists, during our ongoing randomised controlled trial (N=106).

References:

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Brief intensive group-based CBT (BIG-CBT) for youth with OCD: two international pilot studies. (Pre-recorded)

Ball, J.¹, Mailänder Zelger, V.¹, Walitza, S.¹, Bus, M.², Utens, L.², Huijser, C.²

¹ University Hospital for Child and Adolescent Psychiatry Zurich Switzerland., ² LEVVEL Amsterdam The Netherlands.

E-mail: juliane.ball@pukzh.ch

Introduction: Evidence of efficacy for intensive treatment using the method of exposure with response prevention can be found mainly for the adult setting (Abramowitz et al, 2003, Davíðsdóttir et al, 2019, Havnen et al, 2014, Hansen et al, 2018, Storch et al, 2008), but also in the paediatric setting (Riise et al, 2016, 2018, 2019). This Brief intensive group cognitive behavioral therapy protocol (BIG-CBT) was developed in Amsterdam LEVEL and consists of 5 consecutive days of group CBT, exposure and response prevention were core ingredients.

Methods: Two international pilot studies into brief intensive CBT (BIG-CBT) for pediatric OCD investigated treatment outcome of BIG-CBT in two countries. A retrospective study was executed in the Netherlands (N=59), a prospective study in Switzerland (N=28). BIG-CBT consisted of 5-day CBT in a group format (usually 4-8 participants), with a maximum 2:1 ratio participants-therapists. Exposure and response prevention is the main element of treatment.

Results: Both studies showed a significant decrease from pre- to post-treatment on the Children's Yale-Brown Obsessive Compulsive Scale mean scores. Both studies showed a significant decrease from pre- to post-treatment in OCD symptoms. The newest results (including the 3 months follow-up) will be presented and discussed.

Conclusion: We consider the present findings to be promising, indicating that (BIG)-CBT could have added value to standard clinical care for youth with OCD.

"Dad, can you please stop breathing?" Trial design of an innovative group treatment protocol for misophonia in children and adolescents.

L. R. Rappoldt, MSc (Levvel, Amsterdam UMC); dr. N.C.C. Vulink (Amsterdam UMC); prof. dr. D. A.J.P. Denys (Amsterdam UMC); prof. dr. E.M.W.J. Utens (Levvel, University of Amsterdam/Amsterdam UMC).

Misophonia is a disorder of decreased tolerance to specific sounds or stimuli associated with sounds. Sounds and stimuli (e.g. eating or breathing) elicit extreme anger or disgust in individuals suffering from misophonia. Misophonia often starts in childhood, and it might lead to serious consequences. There is an urgent need for treatment. However, currently, no evidence-based treatment protocol for children exists worldwide. This presentation discusses the RCT design of an innovative group treatment protocol for misophonia, specifically for children and adolescents.

Supportive parenting for anxious childhood emotions (SPACE) for youth with an obsessive-compulsive disorder

Chaim Huijser, MD, PhD Levvel, Amsterdam, the Netherlands; Margo van der Stelt, MSc, Luuk Stapersma, MSc, PhD; Marija Maric, MSc, PhD; Eli Lebowitz, MSc PhD; Lisbeth Utens, MSc, PhD.

Obsessive compulsive disorder (OCD) in children is a prevalent disorder (0.5-2%), which has a disruptive effect on daily life (school absenteeism, loneliness, loss of social contacts). The obsessions and compulsions can control the whole family life and often forces parents to make major adjustments. This mechanism of family accommodation has a significant impact on prognosis and treatment success. First line treatment in pediatric OCD is cognitive behavioral therapy. However, 40-50% of the patients do not reach remission with individual delivered CBT.

This presentation explains the methodology of the innovative Supportive Parenting for Anxious Childhood Emotions (SPACE) program. SPACE is based on cognitive behavioral therapy (CBT) and Nonviolent Resistance and is delivered to parents only. SPACE offers parents concrete tools to support their child in tackling the OCD behavior and anxiety and focuses specifically on family accommodation and supportive parenting. Children/adolescents who are too limited by their OCD to come for individual treatment themselves, can thus be treated through their parents. In the United States, SPACE as a 'parent stand-alone' intervention was found to be as effective as CBT for children ('child alone treatment') with anxiety (Lebowitz et al., 2020). SPACE has not previously been studied in a randomized way in children/adolescents with OCD.

The methodology of SPACE, the first experiences and the design of a pilot study on SPACE in children /adolescents with OCD will be explained. The innovative questionnaires child and parent version of a family accommodation scale-anxiety questionnaire (FASA) and the parent questionnaire on Coercive Disruptive Behaviour in children with obsessive compulsive disorder will be discussed. This innovative study is the first in which SPACE is used in children/adolescents with treatment resistant-OCD.

References:

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Symposium 28

New frontiers in mixed reality: Impact on treatment

Chair: Sara Freedman, Bar Ilan University, Ramat Gan, Israel

Improving the Exposure Therapy through projection-based augmented reality for the treatment of cockroach phobia: A multiple-baseline single case study.

Soledad Quero^{1,3}, María Palau-Batet¹, Jorge Grimaldos¹, Carlos Suso-Ribera¹, Diana Castilla², Azucena García-Palacios^{1,3} & Juana Bretón-López López^{1,3}

¹ Universitat Jaume I, ² Universidad de Valencia, ³ CIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN)

Animal phobia is one of the most prevalent subtypes of specific phobia (SP) (3.8%). Augmented Reality (AR) offers advantages to deliver exposure therapy for SP compared to traditional treatments, highlighting access and acceptability. The few studies available showed that participants with animal phobia in the AR condition significantly improved both at post-treatment and at follow-up on outcome measures. However, these studies used a head-mounted display that, in addition to being uncomfortable during long exposure sessions, could limit

communication between the patient and the therapist. Projection-based AR exposure therapy (P-ARET) developed by our group may improve these limitations by allowing the patient to confront the animal directly without intrusive hardware and varying the phobic stimulus in a controlled manner, being the “variability” of stimulus one of the factors that can maximize the effectiveness of the exposure technique. The aim of this study is to explore the feasibility (in terms of participants’ preferences) of varying phobic stimuli during P-ARET using a multiple stimuli (MS) versus single stimulus (SS) condition in participants diagnosed with cockroach phobia. Preliminary efficacy of P-ARET will be also tested. The study design was a single case multiple-baseline AB design. Four participants with a diagnosis of cockroach phobia (DSM-5), were randomly assigned to different baselines (between 8 and 14 days). An app (*Emotional Monitor*) was used to daily assess the symptoms related to the SP (degree of fear, avoidance, and negative thoughts related to a cockroach) and the self-efficacy to cope with cockroaches of different size, color and shape from the beginning of the base line until the end of the treatment. The intervention was composed of 6 1-hour weekly sessions. The main components were: psychoeducation, exposure to the feared object, modeling, cognitive challenge, reinforcement and relapse prevention. The results showed that all participants considered the MS condition to be more effective but also more aversive than SS condition. In addition, the adherence to the assessment through the mobile app was 83% for 3 of the four participants and 55% for the fourth participant. Finally, a decrease in the SP symptoms at the post-treatment assessment with moderate-to-large effects of the intervention (calculated with the non-overlapping index of all pairs) was observed. This study aimed to offer preliminary results in the line of overcoming the main limitation of in vivo exposure, low acceptability, and optimization of exposure therapy using the variability of the stimuli available in the projection-based AR system.

The use of Virtual Reality to practice mindfulness in people with psychological and physical disorders

María Vicenta Navarro Haro, University of Zaragoza, Teruel, Spain; Hunter Hoffman, University of Washington, Seattle, United States; Azucena García Palacios, Jaume I University, Castellón, Spain; Eva Baillès, Hospital Vall d’Hebron, Barcelona, Spain

Mindfulness based interventions have shown efficacy in managing mental and physical health symptoms and reducing the impact of the disorder in patients with emotional and physical disorders. However, populations with severe problems or mobility difficulties who need to learn mindfulness skills still have difficulty concentrating and find the practices difficult, so adherence to mindfulness practice is often low. We will present results of acceptability and effectiveness of the use of Virtual Reality (RiverWorld) to practice Mindfulness to improve emotional symptoms and adherence to the intervention in several studies conducted by our team. Results of a randomized controlled trial in Spain (Navarro et al., 2019) comparing a Mindfulness-based Treatment (n=20) with Mindfulness-based treatment+ weekly Virtual Reality (VR) session (n=19) in patients with generalized anxiety disorder found that both groups showed significant improvements in GAD symptoms, depression, emotion regulation difficulties, and various aspects of mindfulness and interoceptive awareness. However, participants in VR group were significantly more adherent to treatment. Two case series studies (Flores et al., 2018; Gómez et al., 2017) in patients suffering from acute pain in USA that practiced VR mindfulness during hospitalization improved positive and negative emotions and accepted the tool. Finally, preliminary results of a study (Baillès et al., non-published) that is being carried out in Spain with patients diagnosed of cancer receiving chemotherapy, showed that the three participants who received VR mindfulness through RiverWorld positively accepted the intervention and augmented awareness skills and reduced the intensity of anxiety and sadness during chemotherapy. In conclusion, the use of virtual reality to practice mindfulness has shown good acceptability and preliminary efficacy to reduce negative emotions, emotion regulation difficulties, and awareness during mindfulness practice as well as adherence to the intervention in patients suffering from psychological and physical disorders.

Virtual Embodiment: How changing your body can change your mind

Sara A Freedman, Bar Ilan University, Renana Eitan, Tel Aviv Medical Center, Udi Dayan, Sonarion, Snir Spigel, Jerusalem Mental Health Center, Amjad Badarna, Jerusalem Mental Health Center.

Virtual Embodiment (VE) is an emerging technology that uses a Virtual Reality platform and allows people to inhabit a different body., Studies from social psychology have shown that VE can lead to changes in implicit biases. Since cognitive change is an important etiological and maintaining factor in psychiatric disorders, the possibility exists that VE might help alleviate psychiatric symptoms.

This series of pilot studies study examines Virtual Embodiment Treatment (VET), a VE environment that allows the participant to inhabit a "superperson" body that can carry out myriad tasks that go beyond physical real-life barriers.

Method: The VET environment used an Oculus Rift headset with hand controls. Participants entered a virtual room and could to see 'themselves' in a virtual mirror. The virtual figure was sex matched, with the shape of a "superperson". After orientation, subjects were told to look at themselves in the virtual mirror, wave their hands and put them above their head, and then to use their hands to push over various objects on the countertop in front of them. Participants were then asked to carry out various tasks in the room.

Pilot Study 1 included 30 healthy adult subjects, who were randomized either to VET or to a regular VR. Measures of self-esteem and self-efficacy were taken before and after using the VET. Results indicated relatively large feelings of embodiment. Women in the VET group showed significantly larger changes in self-efficacy.

Pilot Study 2 examined the feasibility of using VET with six adult psychiatric in-patients, who took part in the study on three or four days over the course of one week. Questionnaires (demographics, dissociation, self-esteem and self-efficacy) were filled out before using the VET, after using it for the first time, and after the last use. Participants used the VET for an average of 10 minutes each day. Results indicated no change in self-esteem or self-efficacy.

Pilot Study 3 recruited 15 healthy subjects and 6 patients on an in-patient psychiatric ward, who were assessed before and after using VET, and then at one week follow up. Results indicate a significant increase in self-esteem immediately following use of VET, with no difference between healthy and non-healthy participants.

These studies suggest that VET may have potential for helping changing cognitions. Challenges in using VET in patients with a psychiatric disorder will be examined.

Symposium 29

Providing parents with strategies to help prevent or treat anxiety in their children.

Chair: *Monika Walczak, University of Copenhagen, Denmark*

Preventing anxiety in children of parents with anxiety disorders

Samantha Cartwright-Hatton, University of Sussex, UK

Other authors: Donna Ewing, Suzanne Dash, Zoe Hughes, Ellen J Thompson, Cassie Hazell, Andy Field.

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 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.

Preliminary effects of a randomized clinical trial investigating the effects of a self-help “Get a grip on anxiety” program with and without therapist-led workshops.

Sonja Breinhols and Monika Walczak, University of Copenhagen, Denmark

Introduction. The aim of the present study was to conduct a randomized clinical trial testing the effects of a parent-based self-help intervention called “Get a grip on anxiety”. The intervention is parent-delivered and is based on a 10-week self-help program for families of children with anxiety, aged 7–12 years. It builds on cognitive behavior therapy. The intervention targets families with children having up to moderate levels of separation anxiety disorder, generalized anxiety disorder, social phobia or specific phobia. The program focuses on the parental and child mechanisms maintaining anxiety.

Methods. The trial included two active intervention arms. The first arm involved the original intervention, where both parents participate in two 2-hour therapist-led workshops (at week 1 and week 6) in groups of eight families. Workbooks for the parents and child, respectively, are distributed to parents at the first workshop. In the second arm, the parents only receive the workbooks, and are asked to follow the program without attending the workshops. We aimed to examine the effects of both forms of interventions, and predictors of outcomes, to identify which child and parent factors predict positive treatment outcomes, to investigate which families could benefit from the workbook only intervention, to optimize the use of therapist resources. 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.

Results. A total of 327 families showed interest in participating in the study, and 272 participated in at least the first diagnostic assessment at intake. Data will be analyzed using the Intention-to-treat principle. Preliminary results and discussion of the findings will be presented.

Predictors and moderators of the effects of a self-help “Get a grip on anxiety” program with and without therapist-led workshops.

Monika Walczak and Sonja Breinhols, University of Copenhagen, Denmark

Introduction. The aim of the present study was to investigate predictors and moderators of the data collected for the RCT presented by Sonja Breinholst. The aim of the study was to examine predictors of outcomes, to identify which child and parent factors predict positive treatment outcomes, and moderators, to investigate which families could benefit from the workbook only intervention, to optimize the use of therapist resources. **Methods.** The trial included two active intervention arms, one including two 2-hour therapist-led workshops, and one where the parents only received the workbooks, and completed the program without attending the workshops. The families were assessed at intake, post-intervention, 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.

Results. A total of 272 families participated in at least the first diagnostic assessment at intake. Data will be analysed using intent-to-treat analysis (ITT), where the last observation was carried forward in cases where the child was lost to a follow-up. The PROCESS macro will be used to conduct the moderation analyses, and binary logistic regression models will be used to assess predictors of treatment outcomes. Preliminary results and discussion of the findings will be presented.

Symposium 30

Kill two birds with one stone or one bird with two stones? Innovating CBT by combining it with interventions that target other mechanisms

Chair: *Claudi Bockting, Amsterdam UMC, University of Amsterdam, the Netherlands*

Short-term effectiveness of neurocognitively-enhanced online cognitive behavioural therapy for mild to moderate depression

Maria Semkovska, University of Southern Denmark, Odense, Denmark

Neurocognitive impairments in attention, memory and executive functioning are characteristic of major depression. Most of these neurocognitive deficits persist following remission and worsen with repeated depressive episodes. These deficits are recognised as one of the strongest predictors of functional outcomes in adults, that include lower occupational functioning and lower quality of life. Neurocognitive impairment negatively interferes with the antidepressants' treatment efficacy and is a significant predictor of relapse. While many effective psychological treatments exist for depression, none of the established interventions addresses the treated individuals' neurocognition.

Computerised, or online, neurocognitive remediation therapy (oNCRT) has been consistently shown to improve attention, memory and executive function in diverse neurological and psychiatric populations. In depression, several meta-analyses have shown that oNCRT is linked to improved neurocognitive function, independently from mood variations, both during a depressive episode and following remission. Cognitive behavioural therapy (CBT) is an established psychological treatment for depression, with meta-analytical evidence suggesting online CBT delivery to be as effective as the traditional, face-to-face CBT delivery. We aimed to assess if enhancing an established interventions for depression, namely CBT, with oNCRT will improve cognition in community-dwelling people presenting with mild to moderate depression.

Following a baseline psychopathological and neurocognitive assessment, 94 participants were randomly assigned to five weeks of either online CBT alone or online CBT enhanced with NCRT targeting selective attention, visual working memory, verbal working memory, long-term memory and planning. Assessments of mood and neurocognitive function were assessed at the end of treatment and are ongoing for the 3- and 6-months follow-ups. Intention-to-treat analyses suggest that online CBT and neurocognitively (oNCRT)-enhanced online CBT are equally effective for depression. However, participants in the oNCRT+CBT arm showed significantly better selective attention, working memory, and long-term memory than participants in the online CBT alone arm. Participants will be followed to determine if neurocognitive gains are maintained at the 3- and 6-months follow-ups.

Online NCRT is a promising add-on to CBT to improve functional outcomes in individuals treated for depression.

Interventions for partial remitted depression: a systematic review and meta-analysis

Joost Gülpén, Marlies E. Brouwer, Gert J. Geurtsen, Damiaan A.J.P. Denys, &Claudi L.H. Bockting.

Amsterdam UMC location University of Amsterdam, Department of Psychiatry, Amsterdam Public Health, The Netherlands.

Importance. Major depressive disorder (MDD) is highly prevalent and one of the leading causes of disease burden worldwide. While treatment for depression has been shown to be beneficial for some patients, approximately one thirds of treated patients achieve no more than partial remission from MDD. Partial remission from MDD has been shown to be a serious debilitating and distressing clinical phase, and is associated with a broad range of short- and long-term adverse outcomes, including a higher risk of relapse.

Objective. To conduct a systematic review and meta-analysis assessing the effectiveness of pharmacological and non-pharmacological interventions for partial remission of depression. **Data Sources.** PubMed, Embase, SCOPUS and PsychInfo were systematically searched for articles published from their origin through February 2022.

Study Selection. Randomized clinical trials (RCTs) comparing all treatment interventions (pharmacological and non-pharmacological interventions) to any control group, in patients in partial remission from depression.

Data Extraction and Synthesis. Closely following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) and recommendations from the Cochrane Handbook, multiple independent reviewers performed literature searches, screened and selected studies, extracted the data and evaluated the risk of bias. A random-effects model was used to calculate Hedges' g and several subgroup analyses were performed using mixed models.

Main Outcomes and Measures. The primary outcome was post-treatment severity of depressive symptomatology (both clinician-rated and/or through self-report). Secondary outcomes were rates of relapse and remission.

Results. We identified 4929 records and included 32 eligible RCTs. In this preliminary analysis we included 15 RCTs reporting on 19 comparisons and including 1427 patients in partial remission from MDD. Pharmacological and non-pharmacological treatment was associated with a superior outcome on depression severity compared to control interventions (Hedges' $g = 0.36$, 95% CI 0.13-0.60, $I^2 = 69\%$). There were no significant effects on depressive symptomatology severity at first available follow-up. Over a follow-up period up till 104 weeks, relapse was almost half as likely ($k = 10$, OR = 0.43, 95% CI 0.28-0.65) and remission was twice as likely ($k = 8$, OR = 2.36, 95% CI 1.45-3.82) following treatment, as compared to the control condition.

Discussion. In this meta-analysis of RCTs comparing all forms of pharmacological or non-pharmacological treatment with control conditions, treatment (mostly cognitive behavioral therapy and its derivatives) was found to lower the severity of depressive symptoms, reduce the risk of relapse and increase the chance of reaching full remission. While preliminary, these findings underscore the need for continued and improved treatment for patients suffering from partial remission of MDD. During this presentation, implications for clinical practice as well as the potential of targeting other underlying mechanisms using add-on treatments – including cognitive remediation therapy targeting cognitive deficits as a vulnerability factor – will be discussed.

Treatment response following adaptive PASAT training for depression vulnerability: a systematic review and meta-analysis

Yannick Vander Zwalmen^a, Eveline Liebaert^b, Kristof Hoorelbeke^a, Constance Nève de Mévergnies^a, Chris Baeken^b, Nick Verhaeghe^{c, d}, & Ernst H. W., Koster^a

^a Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium, ^b Department of Head and Skin, Ghent University Hospital, Ghent, Belgium, ^c Department of Public Health and Primary Care, Ghent University, Ghent, Belgium, ^d Research Group Social and Economic Policy and Social Inclusion, HIVA, KU Leuven, Leuven, Belgium

In recent years, cognitive control training (CCT) has gained momentum as an intervention to remediate cognitive impairments and decrease depressive symptoms. One promising operationalization to train cognitive control is the adaptive Paced Auditory Serial Addition Task (aPASAT). In a systematic review and meta-analysis of aPASAT training, the efficacy of the intervention and potential moderators were examined. Electronic databases were searched for studies examining aPASAT training for depressive symptomatology or rumination. Nineteen studies (n=1257) were included, comprising of depressed patients, remitted depressed patients, at-risk, and healthy participants. We found small significant effects directly after training for both depressive symptomatology and rumination, with similar effect sizes at follow-up. Subgroup analyses suggest a significantly higher mean effect of aPASAT training in non-healthy populations for rumination immediately following training, but not for depressive symptomatology. The amount of training sessions did not moderate effects of CCT. It is currently unclear how many sessions are required for sustained effects due to heterogeneity in training dosage and absence of sufficient trials. Our results suggest that aPASAT training may be most effective for at-risk, remitted- and clinically depressed populations. Key challenges for the clinical implementation of CCT, including exploration of moderators of training effects and necessary conditions under which CCT could be optimally administered are discussed, such as dose requirements and how CCT could interact with, or augment existing treatments of depression, to optimize prevention of depression.

Improving exposure-based therapy for anxiety disorders by reducing negative mental imagery.

Eva A.M. van Dis, Bart Endhoven, Muriel A. Hagens, & Iris M. Engelhard, Utrecht University, the Netherlands

Introduction: Exposure-based therapy is the treatment of choice for patients with anxiety disorders, but full remission is only achieved by about half of the patients. One explanation for poor treatment response is that mental imagery of threat may hamper extinction learning during exposure. It remains unclear, however, whether interventions aimed at modulating negative mental imagery may improve exposure therapy outcomes for patients with anxiety disorders. We first examined in a fear conditioning study among undergraduate students whether repeatedly imagining threat may increase distress and threat expectancy to a safe novel stimulus (Study 1). In a clinical trial (Study 2), we examined whether eye movements desensitization and reprocessing (EMDR) therapy, relative to supportive counselling, reduces the emotionality and vividness of threat-related mental imagery, and distress and credibility of threat beliefs during a behavioral experiment (Study 2).

Methods: In Study 1, 120 students first completed a fear learning phase, in which one of two pictures was followed by an aversive sound (human scream). Then, the sound was presented 11 times at an increasing (threat inflation) or constant volume (no threat inflation). Finally, a novel stimulus was presented, and some participants were asked to vividly imagine the last sound (threat rehearsal) and others were not (no threat rehearsal). In Study 2, patients with panic or social anxiety disorder first completed an interview related to mental imagery of threat. They then underwent four 90-minute sessions of EMDR therapy or supportive counselling, followed by a second interview on mental imagery. Finally, patients completed a behavioral experiment.

Results: In Study 1, Bayesian informative hypotheses tests indicated that mental imagery of threat increased threat expectancy to a novel safe stimulus. When combined with threat inflation, it also resulted in stronger distress to this stimulus. For Study 2, we will present preliminary data on the effects of EMDR, relative to supportive counselling, on characteristics of mental imagery of threat as well as distress and credibility of threat beliefs during a behavioral experiment.

Conclusion: We demonstrated that mental imagery of threat maintains or increases threat expectancy and, in case of inflated threat, it also increases distress to a novel stimulus. Findings of Study 2 will be discussed at the conference. Future studies should examine whether modulating threat imagery may improve treatment for anxiety disorders.

Symposium 31

Evidence-based positive interventions in mental disorders: from the laboratory to the clinic

Chair: Carmelo Vázquez, Complutense University at Madrid, Spain

Positive CBT in the treatment of major depressive disorder: a randomized order within-subject comparison with traditional CBT

Nicole Geschwind^a, Fredrike Bannink^b, Arnoud Arntz^{a, c}, Frenk Peeters^a, Emke Bosgraaf^{a, d}

^a Department of Clinical Psychological Science, Faculty of Psychology and Neuroscience, Maastricht University, the Netherlands

^b Owner Therapy, Training, Coaching and Mediation Practice Amsterdam, the Netherlands, ^c Department of Clinical Psychology, Faculty of Social and Behavioural Sciences, University of Amsterdam, the Netherlands, ^d MetGGZ, Maastricht, the Netherlands

Background and objectives: Previous research suggests that a stronger focus on positive emotions may improve the efficacy of Cognitive Behavioral Therapy (CBT). Two strategies were employed to enhance an explicit and systematic focus on positive emotions and positive mental health within a CBT framework, (i.e., “positive CBT” (Bannink & Geschwind, 2021). First, CBT was integrated with solution-focused brief therapy, such that the content of therapy structurally and persistently reinforced attention to positive features, both during sessions as well as in homework exercises. Second, positive psychology interventions explicitly addressed themes such as optimism and well-being during treatment). Objectives of the research were to compare differential improvement of depressive symptoms (primary outcome), positive affect, and positive mental health indices during positive CBT versus traditional, problem-focused CBT for major depressive disorder.

Method: Forty-nine patients with major depressive disorder (recruited in an outpatient mental health care facility specialized in mood disorders) received two treatment blocks of eight sessions each (cross-over design, order randomized). In addition to collecting quantitative data, we collected qualitative data by conducting in-depth interviews with the first twelve individuals, and observing treatment trajectories and supervision sessions. To analyze the quantitative data, we used mixed regression modelling. We also calculated

clinically significant change per treatment and per phase. To analyze the qualitative data, we adopted a constructivist grounded theory approach. This approach blends inductive (bottom-up) data collection with theory-driven (top-down) interpretation.

Results: Intention-To-Treat mixed regression modelling indicated that depressive symptoms improved similarly during the first, but significantly more in positive CBT compared to traditional CBT during the second treatment block. Rate of improvement of the less-frequently measured secondary outcomes was not significantly different. However, positive CBT was associated with significantly higher rates of clinically significant or reliable change for depression, negative affect, and happiness. Analysis of the qualitative data indicated that most clients were sceptic about positive CBT at the start of the treatment. After treatment, they preferred positive CBT and indicated experiencing a steeper learning curve during positive, compared to traditional, CBT for depression.

Conclusion: Overall, findings suggest that positive CBT: 1) efficiently counters major depressive symptoms, 2) leads to more clinically significant change than traditional CBT, and 3) is favored over traditional CBT by clients with moderate to severe and largely treatment-resistant depression. Future research is needed to investigate follow-up and relapse-prevention effects.

Clinical and cognitive changes after CBT vs positive psychology interventions for clinical depressed women

Carmelo Vázquez^a, Irene López-Gomez^a, Covadonga Chaves^a, Almudena Duque^b, Gonzalo Hervás^a, Iván Blanco^a and Teodoro Pascual^c

^a Department of Clinical Psychology, School of Psychology, Complutense University. Madrid, Spain., ^c School of Psychology, Pontificia University. Salamanca, Spain., ^b Department of Psychology, School of Education and Health, Camilo José Cela University. Madrid, Spain.

Background and objectives: This presentation shows data from a 2-year longitudinal study comparing the efficacy of a manualized protocol of a positive psychology intervention (PPI-Depression, Chaves et al., 2019)) compared to a standard cognitive-behavioral therapy (CBT) protocol.

Methods: Participants were 128 adult women with a DSM-IV diagnosis of major depression or dysthymia. They were blindly allocated to a 10-session PPI (n = 62) or CBT (n = 66) group therapy condition and were assessed at 6 months (including an eye-tracking task to assess selective attention biases) and after 2 years after finishing their respective treatments. A mixed-model repeated measures ANOVA was used.

Results: Both interventions were similarly effective in reducing clinical symptoms and increasing well-being. At the end of the treatment and at follow ups there were no significant differences between groups in either main outcomes or secondary ones. At 6 months there was a sustained improvement in selective attention indexes towards positive facial stimuli.

Conclusions: Positive interventions can have sustainable effects in clinical depression and seem to be at least as efficacious as gold-standard protocols as the CBT. The implications of these promising results for the clinical field will be discussed.

A positive group intervention for treating geriatric depression in older adults

Chiara Ruini¹, Elliott Friedman², Carol Ryff³

¹ Department of Psychology, University of Bologna, Italy, ² Department of Public Health, Purdue University, USA, ³ Institute on Aging, University of Wisconsin, USA

Background and aims: positive interventions are often delivered in group settings, but few interventions were addressed to address depression in community dwellers. Furthermore, long-term follow-up evaluations of those interventions are scarcely available in the literature. The aim of this presentation is to illustrate the implementation of a positive intervention delivered in group-community setting, addressed to depressed older adults.

Method: 169 older adults (older than 60 years) were recruited in aging communities centers. They received a positive intervention consisting of 6 weekly group sessions (120 mins each) where subjective and psychological well-being were discussed and promoted. Homework assignments were prescribed between sessions. Geriatric depression, sleep, psychological well-being and life satisfaction were assessed before and after the program and at 6-month follow up.

Results: older adults assigned to the group intervention reported significantly increased self-acceptance and personal growth and lower levels of depression, which were maintained 6 months later. Participants with lower levels of life satisfaction and poorer sleep at baseline benefited the most from the intervention.

Conclusions: this positive intervention delivered in a group format can have sustainable beneficial effects in depressed older adults and the results are maintained in the long-term follow-up.

Cultivating wellbeing and resilience in people with severe psychiatric conditions

Carmen Valiente^a, Regina Espinosa^b, Alba Contreras^c, Almudena Trucharte^a, Rocío Caballero^a, Vanesa Peinado^a

^a Department of Clinical Psychology, School of Psychology, Complutense University. Madrid, Spain., ^b Department of Psychology, School of Education and Health, Camilo José Cela University. Madrid, Spain., ^c Psychological Sciences Research Institute, Université Catholique de Louvain, Belgium

Introduction: Psychological interventions for people with schizophrenia reflect a small treatment effect on well-being outcomes, suggesting that improvement in symptoms or functioning does not necessarily lead automatically to an improvement in welfare (Valiente et al., 2019). Specific measures that directly address well-being should be incorporated into psychiatric rehabilitation practices (Fava and Tomba, 2009), as this would facilitate recovery (Slade, 2010) and make such services more humane. The aim of this talk will be to describe the theoretical foundation of a multicomponent protocol, as well as the evidence of its feasibility, efficacy and effectiveness.

Method: A two-arm randomized and outcome-blinded trial with pre-post and 6-month follow-up evaluations was conducted to assess the intervention. A total of 141 participants were allocated to either the experimental condition or the waiting list group receiving TAU. A mixed-effect model was used to examine the efficacy of the intervention and a repeated-measures Student's t-test for the follow-up effectiveness analysis.

Results: The intervention protocol was highly acceptable for therapist and participants that reported a significant improvement in self-acceptance and environmental mastery. These positive changes were maintained in the follow-up assessment after 6 months.

Discussion: We will reflect on how wellbeing-focused interventions can support the recovery process and resilience of people with severe psychiatric conditions.

Symposium 32

Novel approaches to repetitive negative thinking: Understanding mechanisms, and improving assessment and intervention

Convenor and Chair: Thomas Ehring, Munich, Germany

Reduced attention towards accomplishments mediates the effect of self-critical rumination on counterfactual thinking

Jens Allaert^{1,2,3}, Rudi De Raedt³, Alvaro Sanchez-Lopez⁴, Hanne September^{1,2}, Marie-Anne Vanderhasselt^{1,2}

¹ Department of Head and Skin, Ghent University, University Hospital Ghent (UZ Ghent), Ghent, Belgium · ² Ghent Experimental Psychiatry (GHEP) lab, Ghent University, Ghent, Belgium · ³ Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium · ⁴ E-Motion Lab, Universidad Complutense de Madrid, Department of Clinical Psychology, Madrid, Spain

The habitual use of rumination (i.e., repetitive negative self-referential thoughts in response to distress) is associated with an increased propensity to experience counterfactual cognitions (CFT) and emotions (e.g., regret), but mechanisms that underlie this association remain uninvestigated. Rumination is characterized by attentional biases to emotional information, and it has been shown that focusing attention towards either accomplishments or lost opportunities modulates the experience of CFT and regret. In view of this, the goal of the current study was to investigate the association between trait self-critical rumination and attentional deployment towards accomplishments and lost opportunities, and how this may underlie the link between rumination and CFT and regret. To this end, hundred healthy female participants with varying self-critical rumination tendency levels performed a sequential risk-taking task while a) attentional deployment towards accomplishments and lost opportunities, and b) psychophysiological and self-report indices of CFT and regret, were measured. The results showed that participants focused more on accomplishments (compared to lost opportunities), but this tendency was less strongly present among individuals with high (versus low) rumination tendencies. Furthermore, the reduced focus towards accomplishments in individuals with high (versus low) self-critical rumination mediated the association between rumination and CFT. These results provide empirical evidence for the role of reduced attentional deployment towards accomplishments as an underlying mechanism in the rumination-associated predisposition to counterfactual thinking and regret, and suggest that interventions could target this attentional bias for therapeutic benefit.

Repetitive negative thinking in daily life predicts psychopathology: validation of an ecological momentary assessment paradigm

Thomas Ehring¹, Tabea Rosenkranz¹, Anika Schiller², Keisuke Takano¹, Andreas Mühlberger² & Edward R. Watkins³

¹ LMU Munich (Germany), ² University of Regensburg (Germany) ³ University of Exeter (UK)

Repetitive negative thinking (RNT) is a transdiagnostic process and a promising target for prevention and treatment of mental disorders. RNT is typically assessed via self-report questionnaires. However, responses to such questionnaires may be biased by memory and metacognitive beliefs. Recently, Ecological Momentary Assessment (EMA) has been employed to minimize these biases. We present two studies aiming to develop and validate an EMA paradigm to measure RNT as a transdiagnostic process in natural settings. In *Study 1*, an item pool was created based on theoretical and empirical considerations encompassing RNT content and processes. Model fit of (1) a content-related and (2) a process-related model for assessing RNT as an individual difference variable was established, followed by investigating the reliability and construct validity of the proposed scale(s), and exploration of the optimal sampling design. One hundred fifty healthy participants received 8 semi-random daily prompts assessing RNT over 14 days, and filled in questionnaires on rumination, worry, RNT, symptoms of depression, anxiety, and stress before and after the EMA phase. Multilevel confirmatory factor analysis revealed excellent model fit for the process-related model but unsatisfactory fit for the content-related model. Different hybrid models were additionally explored, yielding one model with satisfactory fit. Both the process-related and the hybrid scale showed good reliability and good convergent validity and were significantly associated with symptoms of depression, anxiety, and stress after the EMA phase when controlling for baseline scores. Further analyses found that a sampling design of 5 daily assessments across 10 days yielded the best tradeoff between participant burden and information retained by EMA. In *Study 2*, the process-related and hybrid scales were cross-validated. Two hundred-twenty students filled out baseline questionnaires (trait RNT, symptoms of depression, generalized anxiety, stress, and mental well-being) and then completed the EMA-based RNT assessment five times daily across ten days on their smartphone at the start of their semester. At the end of the semester, students again filled out the same questionnaires during a high stress period (exam period). Favorable results were found for the process-related RNT scale assessing the three core processes of RNT and subjective burden. This scale showed high reliability within and between persons. Daily-life RNT significantly predicted symptoms of depression and anxiety after three months over and above baseline symptoms and trait RNT.

Conclusion: Findings from both studies support the reliability and validity of the process-based measure of RNT in daily life.

Countering repetitive negative thinking using positive memory specificity training

Eline Belmans¹, Hendrik-Jan De Vuyst¹, Keisuke Takano² & Filip Raes¹

¹ University of Leuven (Belgium), ² LMU Munich (Germany)

Individuals at risk for depression exhibit a decreased ability to disengage from negative thoughts, especially when those negative thoughts are self-referent. Such persistent repetitive negative thinking (RNT) may originate through positive and negative reinforcement learning mechanisms. The question arises whether we can tackle this process and thereby decrease the persistency of such negative self-thinking. In this study, we examined whether an online positive memory specificity training could counteract repetitive negative thinking (RNT) by boosting adolescents' accessibility to specific positive autobiographical memories. 68 adolescents were randomized to either a 2-week positive memory specificity training or a bogus control training. Participants in the positive memory specificity training were asked to repeatedly provide detailed autobiographical memories in response to positive cue words, thereby promoting the future retrieval positive memories and ultimately countering RNT. After the training, RNT was assessed using a behavioral, decision-making task, namely the emotional reversal-learning task. As expected, participants showed lower levels of RNT after positive memory specificity training than those who received the control training. However, this effect may be explained by outliers in the control group who showed extremely high levels of RNT. No changes were observed for secondary outcomes such as symptoms of depression, perhaps as a result of the

relatively low dose of the intervention. These preliminary results suggest that positive memory specificity training may have some potential to positively impact RNT.

Reducing worry and rumination in young adults via a mobile phone app

Daniel Edge¹, Alexandra Newbold¹, Thomas Ehring², Tabea Rosenkranz², Mads Frost³ & Edward R. Watkins¹

¹ University of Exeter, UK, ² LMU Munich, Germany, ³ Mosenso ApS, Denmark

Background: Improving the mental health of adolescents and young adults has been identified as a global priority. Preventative mobile-based interventions which target known risk factors such as worry and rumination, also known as Repetitive Negative Thinking (RNT), could help achieve this aim.

Objective: The primary objective of was to test whether an RNT-targeting self-help mobile phone application (MyMoodCoach) could reduce levels of worry and rumination in young adults. A secondary objective was to test whether the app could achieve similar reductions in symptoms of anxiety and depression, as well as improve well-being.

Methods: A single blind, two-arm parallel-group Randomised Controlled Trial was conducted with N=236 people aged between 16 and 24. Participants were randomised to either an active intervention group or a waitlist control group. The primary outcome was changes in worry and rumination six weeks after randomisation. Secondary outcomes included changes in well-being and symptoms of anxiety and depression after six weeks and changes on all measures after 12 weeks.

Results: The active treatment arm (n=119) showed significantly lower levels of rumination (-2.92, 95% CI [-5.57, -.28], $p < .031$, $\eta_p^2 = .02$) and worry (-3.97; 95% CI [-6.21, -1.73], $p < .001$, $\eta_p^2 = .06$) at six-week follow-up, relative to the waitlist control (n=117). Similar differences were observed between the two arms for wellbeing ($p < .001$) as well as symptoms of anxiety ($p = .03$) and depression ($p = .04$). These improvements were maintained at the 12-week follow-up point.

Conclusions: MyMoodCoach had a positive effect on worry and rumination, well-being, anxiety, and depression in young adults, relative to waitlist controls. This provides evidence for rumination and worry as prevention mechanisms for anxiety and depression. It also supports their identification as transdiagnostic risk factors. Further research is needed to examine the effect of the app on incidence and whether it can provide longer term benefits.

Symposium 33

The role of schema therapy in the treatment of personality disorders and depression

Convenor and Chair: Johannes Kopf-Beck, LMU Munich; Max Planck Institute of Psychiatry, Munich, Germany

Effectiveness of combined individual-group Schema Therapy, predominantly group schema therapy, and optimal treatment as usual for borderline personality disorder

Carlijn J.M. Wibbelink, University of Amsterdam, the Netherlands

Coauthors: Arnoud Arntz, PhD; Gitta A. Jacob, PhD; Christopher W. Lee, PhD; Odette Manon Brand-de Wilde, PhD; Eva Fassbinder, MD; R. Patrick Harper, MSc; Anna Lavender, DCLinPsy; George Lockwood, PhD; Ioannis A. Malogiannis, DrMed; Florian A. Ruths, DrMed; Ulrich Schweiger, DrMed; Ida A. Shaw, MA; Gerhard Zarbock, PhD; Joan M. Farrell, PhD

There is an increasing popularity of group schema therapy (GST), mainly for two reasons: (1) groups are considered to be more efficient (less therapist time per patient); and (2) specific use of group dynamics is assumed to “catalyze” change processes. However, it is unknown how GST compares to (optimal) treatment as usual (TAU), except for a small RCT ran by the developers of GST, that compared GST added to TAU to TAU-only. Moreover, experts were divided about what the optimal format would be: predominantly GST (PGST), or the combination of individual and group ST (IGST). An argument for PGST was that with individual ST added, patients would keep issues out of the group, making the group suboptimal. Arguments for IGST were that adding individual would meet (unmet childhood) needs better, including the need for individual attention and attachment; and the possibility to do extensive individual work such as trauma processing. To address these questions, a multicenter, 3-arm randomized clinical trial was conducted at 15 sites in 5 countries (Australia, Germany, Greece, the Netherlands, and the UK). 495 outpatients aged 18 to 65 years who had BPD as primary diagnosis received either PGST, IGST, or optimal TAU.

At each site, cohorts of 16 to 18 participants were randomized 1:1 to PGST vs TAU or IGST vs TAU. Both ST formats were delivered over 2 years, with 2 sessions per week in year 1 and the frequency gradually decreasing during year 2. Assessments were collected by blinded assessors over a 3-year period.

The primary outcome was the change in BPD-severity over time, assessed with the Borderline Personality Disorder Severity Index (BPDSI) total score. Treatment retention was analyzed as a secondary outcome, among others (such as suicide attempts, quality of life, and functioning).

PGST and IGST combined were superior to TAU with regard to BPD severity reduction (Cohen’s $d = 0.73$; $p < .001$). However, this effect was driven by IGST being superior to TAU ($d = 1.14$, $p < .001$) and to PGST ($d = 0.84$, $p = .03$), whereas PGST did not differ significantly from TAU ($d = 0.30$, $p = .32$). Treatment retention was greater in the IGST arm than in the PGST and TAU, and there was no significant difference between TAU and PGST. IGST also had superior effects on suicidality and suicide attempts. Other secondary outcomes generally showed a similar pattern.

In conclusion, IGST was more effective, had greater treatment retention, and was safer compared to TAU and PGST. These findings suggest that IGST is the preferred ST format, with high retention and continuation of improvement in BPD severity after the completion of treatment. Future studies should compare IGST to pure individual ST for BPD.

PRO*BPD: effectiveness of outpatient treatment PROgrams for borderline personality disorder: a comparison of Schema Therapy and Dialectical Behavior Therapy (Pre-recorded presentation)

Eva Fassbinder¹, Nele Assmann¹⁺², Anja Schaich¹⁺², Philipp Herzog¹⁺², Till Wagner¹, Kamila Jauch-Chara¹, Michael Hüppe³, Arnoud Arntz⁴ & Ulrich Schweiger²

¹Department of Psychiatry and Psychotherapy, Christian-Albrechts-University, Kiel, Germany, ²Department of Psychiatry and Psychotherapy, University of Lübeck; Lübeck, Germany, ³Department of Anaesthesiology, University of Lübeck; Lübeck, Germany, ⁴ Department of Clinical Psychology, University of Amsterdam, Amsterdam, The Netherlands

Treatment for Borderline Personality Disorder (BPD) has much improved in the last decades. BPD can now be successfully treated with several psychotherapeutic methods from different therapeutic orientations that were specifically designed for BPD. These treatments include Dialectical behavior therapy (DBT) and Schema therapy (ST), which are grounded in cognitive behavioral therapy (CBT). Although there are hints of differential outcomes of these two diverse treatment options, there is no research comparing these two approaches. In addition, there is a lack of 'real world studies' that replicate positive findings in regular mental healthcare settings. Thus, the PROgrams for Borderline Personality Disorder (PRO*BPD) study compared the effectiveness of DBT and ST in structured outpatient treatment programs in the routine clinical setting of an outpatient clinic. The study design is a randomized trial with two active groups (a treatment program for a maximum of 18 months with either DBT or ST). We recruited 167 BPD patients. The primary hypothesis was that DBT and ST significantly differ in reducing BPD-severity. Secondary outcomes examined other measures of BPD including typical and general psychopathology, comorbidity, quality of life, psychosocial functioning, and participation. Data were collected prior to the beginning of therapy and every six months until the end of therapy. Follow-up data are recorded at six months and one year after the end of therapy. Statistical analyses are still in progress, but results will be ready to be presented at the EABCT conference.

Group schema therapy for cluster-C personality disorders: results of a multicenter open pilot study

Anne-Sophie Venhuizen and Carlijn J. M. Wibbelink, University of Amsterdam, the Netherlands

Co-authors: Anne-Sophie S. M. Venhuizen, Raoul P. P. P. Grasman, Nathan Bachrach, Mark A. Louter, Sandy Hudepohl, Hinde de Lange, Suzy J. M. A. Matthijssen, Arita Schaling, Simone Walhout, Karen (Renske) Wichers, Liselotte Kunst, Arnoud Arntz

Group schema therapy (GST) is increasingly popular for personality disorders (PDs), including Cluster-C PDs. Individual ST has proven to be effective for Cluster-C PD patients, while the evidence for GST is limited to non-existent. This study aimed to investigate the effectiveness of GST for Cluster-C PDs. A multicenter open trial was conducted, including 137 patients with a Cluster-C PD (avoidant PD: $n = 107$, dependent PD: $n = 11$, and obsessive-compulsive PD: $n = 19$). Patients received 30 weekly GST sessions with a maximum of 180 minutes of individual ST and five optional monthly booster sessions. Outcome measures include Cluster-C PD severity, self-ideal discrepancy, PD related beliefs, schema modes, general psychopathological symptoms, functional impairment, happiness, self-esteem, schemas, and quality of life. All outcome measures showed substantial improvements for all Cluster-C PDs. There were some indications for differences between the Cluster-C PDs in severity at baseline, change trajectories, and effectiveness of GST.

The next step is a large randomized controlled trial to further document the (cost-)effectiveness of GST compared to individual ST and treatment as usual, as well as to gain more insight into optimal matching of Cluster-C PD patients to treatment. This study is currently executed and will also be discussed.

Long term effects of schema therapy for depression: results from an inpatient RCT

Johannes Kopf-Beck, PhD, Ludwig-Maximilians-Universität München; Max-Planck-Institut für Psychiatrie München

Coauthor: Celina Müller, M.Sc., Ludwig-Maximilians-Universität München; Max-Planck-Institut für Psychiatrie München and Samy Egli, PhD, Max-Planck-Institut für Psychiatrie München

Psychotherapy of depression is still struggling with low responsivity and high rates of treatment resistance and relapse. These challenges highlight the necessity to further develop psychotherapy approaches and concepts, particularly regarding long-term outcomes. Schema therapy, originally developed for treatment non-responders and patients suffering from personality disorders, addresses Early Maladaptive Schemas and early learning experiences with the aim to modify them in order to satisfy emotional core needs in an adaptive manner. Thus, we hypothesized schema therapy to be particularly effective in assuring sustainable improvement of depressive symptoms and preventing relapse.

In this talk we will present two-years follow-up data from a large scale clinical RCT ($N=292$) comparing schema therapy for depression with cognitive behavioral therapy and non-specific supportive therapy in an inpatient and day clinical setting. All participants perceived an intense, combined treatment program of group- and single sessions of psychotherapy plus anti-depressant Medicine (ADM) over the course of seven weeks. Outcome measures were depressive symptoms, general psychopathology, global functioning, and quality of life. Preliminary analysis revealed the overall usefulness of schema therapy for moderate to severe forms of depression regarding long terms effects two years after treatment in an inpatient and day-clinic setting. Furthermore, the results give insights into the development of disorder-related aspects over time. Clinical implications and conclusions regarding psychotherapy in general and schema therapy in particular will be discussed.

Symposium 34

Emotions in social anxiety disorder: Shame, pride, and anger, and their role in maintaining the disorder

Chair: Idan Aderka, University of Haifa, Israel

Pride in Social Anxiety Disorder

Nadav Paz, University of Haifa, Israel

The present study focused on the emotional experience of pride 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 less pride compared to individuals without SAD. We also found that women experienced less pride compared to men. Finally, we found a diagnosis \times gender interaction such that the

effect of SAD on men was more pronounced than it was for women. Specifically, the diagnosis was associated with a larger decrease in pride for men compared to women. We also found that dimensions of social contexts (positivity, negativity and meaningfulness) were all positively associated with pride for individuals with SAD. Moreover, we found a Negativity \times Positivity interaction such that when negativity was low, the association between positivity and pride was positive but small, whereas when negativity was high, the association between positivity and pride was positive and large. Put differently, social situations that were perceived as both very negative and very positive resulted in the highest levels of pride. Finally, we found that for individuals with SAD (but not for individuals without SAD), the experience of pride on a given day was associated with reductions in anxiety over the following 24 hours. Thus, pride may lead to reductions in anxiety among individuals with SAD. Implications of our findings for models of psychopathology and for treatment of SAD are discussed.

Quiet Rage: Anger in Social Anxiety Disorder

Gal Werber, 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.

Shame in Social Anxiety Disorder: Gender differences and the temporal relationship with anxiety

May Rosenblum, University of Haifa, Israel

Objective: Shame has been previously linked to social anxiety disorder (SAD), a common and debilitating condition. The present study aims to broaden our knowledge of the experience of shame in SAD. Specifically, the present study examined gender differences in the experience of shame among individuals with and without SAD. In addition, we examined the temporal relationship between shame and social anxiety for men and women separately.

Method: Forty-four individuals with SAD and 44 individuals without SAD participated in a 21-day study using experience sampling measurement (ESM), which involves real-time systematic measurement of naturally occurring events as well as participants' emotional reactions to them. More specifically, we used *momentary assessment* (i.e., text messages sent at random times during the day with links to online questionnaires), in order to create a comprehensive measurement scheme for examining shame and social anxiety among men and women in their daily lives.

Results: In line with our hypothesis, individuals with SAD reported significantly more shame compared to individuals without SAD. In addition, women reported significantly higher levels of shame compared to men. Additional analyses indicated that the effect of diagnosis on reported levels of shame was greater for women than for men. Furthermore, women with SAD reported higher levels of shame compared to men with SAD, whereas no such gender effect was found among individuals without SAD. Finally, we found that for individuals with SAD, shame predicted elevated anxiety similarly for men and women, whereas for individuals without SAD, shame significantly predicted subsequent anxiety among men but not among women.

Conclusion: Our findings suggest that shame may play a role in the maintenance of SAD, such that elevated shame may lead to subsequent social anxiety. Importantly, our findings suggest that social anxiety disorder impacts women's reactions to feelings of shame (creating a similar pattern of reactivity to shame as seen among men). Our findings can inform clinical decision making as well as gender-tailored treatment and can be used to augment current interventions for SAD.

Safety behaviors in Social Anxiety Disorder: Contextual factors and effects on positive emotional experiences

Bar Oren, 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. 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.

Symposium 35

Non-suicidal self-injury: challenges and current perspectives

Chair: Daniel Vega Moreno, Consorci Sanitari de l'Anoia, Spain

Non-suicidal self-injury in college students: identifying predictors and exploring profiles of self-injury behavior using cluster analysis

Carlos Schmidt, Consorci Sanitari de l'Anoia, Spain

The college stage is a sensitive period for the emergence of mental health problems and risk behaviors in college students. Recent studies have identified Non-suicidal Self-Injury (NSSI) as an increasing risk behavior among students. Alarming, a second wave of NSSI has been identified during the first two years of college (i.e., young people who self-injure for the first time while in college). Identifying which factors predict the maintenance (or initiation) of NSSI behavior is necessary before taking preventive measures or follow-up of young people who may need psychological support. This study aimed to assess the individual and social factors that predict NSSI and to explore the different profiles of young college students who self-injure, based on their NSSI-behavior. A cross-sectional study was implemented. We assessed the prevalence of NSSI in the last year of 854 young college students in Catalonia, Spain. First, we performed logistic regression analyses to evaluate the association of individual mental health factors (borderline traits; difficulties in emotion regulation; symptoms of depression, anxiety, and stress) and social factors (perceived social support from family, friends and significant others) with an increased odds of NSSI. Second, we performed cluster analysis to explore different profiles among college students who engage in self-injury. We found that 30% of college students had at least 5 episodes of NSSI in the last year. Most NSSI-onset in adolescence, used multiple NSSI-methods and 10.5% had started self-injury for the first time in college. A multivariate final model was obtained by regression analysis, with female sex, borderline traits (BPQ) and difficulties in emotion regulation (lack of emotion regulation strategies and nonacceptance of emotions) as predictors of higher odds of engaging in NSSI, while only perceived social support from family significantly predicted lower odds of engaging in NSSI. Subsequently, by cluster analysis, a two-profile solution was obtained. Cluster 1 accounted for 49% of the sample and was characterized by more severe NSSI-behavior and Cluster 2 accounted for 51% of the sample and showed a moderate NSSI-behavior. These results are discussed in terms of risk (and protective) factors for NSSI-behavior in college students and the relevance of support for 'at risk' students in college settings.

Deliberate ingestion and insertion of foreign bodies in a sample of adolescents in a Mental Health Care Unit.

Querol, M ; de Pedro, F; González-Vallespí, L; Punsoda-Puche, P; Santellán, R; Joga, M; Ribas, M.

Child & Adolescents Mental Health Service. Sant Joan de Déu Barcelona Hospital

Deliberate ingestion and insertion of foreign bodies (DIIFB) has been described as a form of self-injury that appears in different mental disorders with different functions. The present study includes foreign bodies oral ingestion or nasal, ocular, genital, anal and subcutaneous tissues insertion.

The existing scientific literature provides few data on this topic. Moreover, there is no empirically validated or systematic intervention described. The purpose of this study is to describe the characteristics of this type of behavior in children and adolescents in a sample of inpatients in Acompanya'm Mental Health Care Center of Hospital Sant Joan de Déu.

The sample is composed of 10 patients aged between 12 and 17, 80% of them being girls. A total amount of 89 DIIFB have been registered between 2018 and 2022. In the present study, the following are assessed: mental health diagnosis, frequency, severity, lethality, intentionality, opportunity of external rescue of DIIFB, referral to the Emergency room, physical sequelae and the need for surgical intervention.

The DIIFB specific intervention consists of an initial evaluation on the Emergency Room to assess the vital risk and the medical-surgical procedure to follow. Afterwards, a psychopathological evaluation and specific psychological intervention aimed at DIIFB is carried out. The specific intervention aimed at reducing the presence of DIIFB, consists of a first stimulus reduction and individualized supervision to avoid additional risks, a clinical interview aimed at the functional analysis of DIIFB and a cognitive-behavioral approach focused on: emotional self-regulation, cognitive restructuring, acquisition of alternative coping strategies, conflict resolution and relapse prevention. The psychological intervention plan is designed based on the results of the functional analysis of behavior and emotions.

Borderline personality traits and its relationship with perceived social support and non-suicidal self-injury in a clinical sample of adolescents.

Anna Sintes, Child & Adolescents Mental Health Service. Sant Joan de Déu Barcelona Hospital

According to recent studies, Non-suicidal Self-Injury (NSSI) in adolescents is associated with Borderline personality traits (BPT). 61% adolescents with BPD incurs in NSSI.

The occurrence of NSSI often precedes a BPD diagnosis, so is considered a precursor (Ghinea et al., 2019; Groschwitz et al., 2015; Homan et al., 2017). Also, the presence of BPD symptoms (i.e., emotion dysregulation or identity disturbances) increases the risk of engaging in NSSI in adolescents (Stead et al., 2019) and the presence of a BPD diagnosis involves greater severity of NSSI (Jacobson et al., 2008; Stead et al., 2019). So, BPD features precede and interact with NSSI (Reichl & Kaess, 2021). Nevertheless additional research is needed to clarify this relationship, as approximately 50% of adolescents with NSSI do not meet diagnostic criteria for BPD (Ayodeji et al., 2015). On the other hand, emotion dysregulation (core feature of BPD) is a specific risk factor for NSSI (Wolff et al., 2019) NSSI to cope with emotional pain. Also, social factors also play a prominent role in NSSI engagement (Cipriano et al., 2017; Taylor et al., 2018) and interpersonal conflicts or feelings of rejection by peers are frequent triggers for NSSI (Briones-Buixassa et al., 2021; Klomek et al., 2016). Perceived social support (PSS) refers to an individual's perceptions of the general availability and quality of the social support available to them (Haber et al., 2007). Adolescents with high PSS exhibit better mental health and less high-risk behaviors (Lai & Ma, 2016; Reininger et al., 2012). High PSS as a protective factor for suicide and NSSI. In this communication we show recent results about the relationship between NSSI, PSS and BPT in a sample of 228 adolescents admitted to various acute units of hospitals in Barcelona area. 132 adolescents incurred in self-injury, and 96 don't. Mean age of onset of NSSI was 12.76 years self-cutting (79.4%), hitting (74.8%), and scratching (71%). Only 62,1% NSSI group meet criteria for the DSM 5 criteria. We ruled a mediation analysis to assess possible BPT mediation relationship between PSS and NSSI or a possible mediation role of the PSS between BPT and NSSI.

By carrot or by stick: mapping deficits in reinforcement learning in patients with borderline personality disorder and non-suicidal self-injury

Stella Nicolaou, Consorci Sanitari de l'Anoia & University of Barcelona, Barcelona, Spain

The current study aimed to map deficits in reinforcement learning in patients with borderline personality disorder (BPD) and non-suicidal self-injury (NSSI) by employing a modified version of the Probabilistic Stimulus Selection (PSS) task in 18 BPD patients with NSSI and 18 healthy participants (total N= 36). While undergoing an fMRI scan, participants were initially presented with three different stimulus pairs (AB, CD, EF), and they learned to choose the most-frequently reinforced stimulus from each pair using probabilistic feedback. After achieving the learning criterion in this "acquisition or learning phase," participants were then presented with the original stimuli in novel pairings in a "post-acquisition or test phase" in order to assess whether they have a bias for choosing frequently reinforced stimuli (e.g., stimulus 'A'), or for avoiding frequently punished stimuli (e.g., stimulus 'B'). As predicted, behavioral analyses showed that HC participants learned equally well from both reward and punishment, showing similar rates of Choosing A and Avoiding B in the test phase. However, as also predicted, BPD patients exhibited difficulties learning from punishment, avoiding B significantly less often than they chose A in the test phase. Most importantly, our fMRI data aligned with our behavioral data. Compared to BPD patients, HC participants exhibited increased activity in the ventral striatum (VS) when avoiding B relative to choosing A in the test phase. According to prior literature, this neural signal (activation of the VS during loss avoidance) may itself act as an intrinsic reward, serving to reinforce or inhibit actions during instrumental avoidance. Therefore, our findings suggest that failure to activate the VS when avoiding loss may underlie difficulties in learning from punishment in patients with BPD and NSSI.

Symposium 36

On the way to an evidence-based psychotherapy education: current findings on training and supervision

Chair: Ulrike Maaß, University of Potsdam, Germany

Psychotherapists' clinical challenges – applications for clinical supervision

Simon Fagernäs, Boel Edholm, Sven Alfonsson, Karolinska Institutet, Stockholm, Sweden

Background: Supervision guidelines emphasize a competency-based supervision model where the supervisee get feedback on relevant, specific, and measurable therapist behaviors. However, data on which patient behaviors and clinical situations that psychotherapists perceive as challenging, and how they can be grouped and hierarchically ordered, is lacking. A taxonomy of clinical challenges has the potential to inform supervisor training programs as well as psychotherapists personal practice.

Aim: The primary aim of this study was to comprehensively map specific patient behaviors and clinical situations that psychotherapists perceive as challenging in order to create a taxonomy useful for supervision. Furthermore, the study examined associations between domains of clinical challenges and burnout, job satisfaction, and turn-over intention since these are growing issues in the psychiatric care in Sweden.

Methods: The study used a mixed-methods design. Semi-structured interviews were held with clinical psychotherapists (n=8) working in outpatient psychiatric care with adults after they had registered clinical challenges for four weeks. Thematic analysis of the interviews and a comprehensive literature review resulted in a survey consisting of three domains: challenging patient behaviors (46 items), intra-therapist related challenges (35 items), and organizational challenges (24 items). The survey also collected data on burnout, job-satisfaction, and supervision preferences. 144 psychotherapists working in Sweden completed the survey.

Results: The data collection was finished late spring 2022. Data is currently being analyzed and will be presented.

Discussion: The results will be discussed in relation to implications for supervision and training of psychotherapists, and in relation to organizational factors.

A comparison of reliability and outcome of psychotherapy process ratings between raters of different expertise level

Heinze, Peter Eric¹, Weck, Florian¹, & Kühne, Franziska¹

¹ Clinical Psychology and Psychotherapy, University of Potsdam, Germany

Introduction: In comparison to self or patient reports, ratings of video or audio tapes by an independent third party contribute a unique perspective on therapy sessions in order to evaluate therapists' performance on constructs such as adherence, competence or alliance objectively. As ratings often focus on higher-order constructs instead of concrete observable behavior, studies often use experienced and highly-qualified raters. However, ratings are often time-consuming and expensive. In an effort to make ratings more efficient, we investigate how the raters' expertise influence rating reliability and outcomes.

Method: In the context of a psychotherapy training study, we recorded N = 359 video tapes of N = 69 psychology students performing CBT interventions with simulated patients portraying depressive symptoms. Interventions included the exploration of recent situations relevant for explaining the influence of behavior or automatic thoughts on depressive feelings, respectively, and instructing the patient to do homework. We compared ratings of n = 2 licensed psychotherapists and PhD graduates to ratings of n = 2 advanced psychology students. Ratings included competence scales such as the Cognitive Therapy Scale, alliance ratings such as the Helping Alliance Questionnaire or adherence ratings. All raters received the same training before and during the ratings in regular intervals irrespective of their expertise level. We compared inter-rater reliabilities between raters of different expertise levels and investigated differences in mean ratings across all measures.

Results: Overall, inter-rater reliabilities across all measures and expertise levels ranged from moderate to good ($M_{ICC} = .73$, $SD_{ICC} = .07$, range = .61 - .85). Inter-rater reliabilities did not differ significantly between raters of different expertise levels. However, raters within the same expertise level differed significantly from one another, i.e. one rater rated sessions consistently better than the second rater within the same expertise level.

Discussion: Our results show that advanced psychotherapy students are able to provide reliable ratings of therapy process variables. However, as a prerequisite, we recommend that raters with less psychotherapy expertise receive training before and during data acquisition. We discuss advantages and disadvantages of using raters of different expertise levels for research and training. However, our results are limited to role-plays with simulated patients rather than entire therapy sessions with actual patients.

Conclusion: Despite some limitations, less experienced raters can achieve similarly reliable ratings as professional raters. Researchers need to consider the advantages and disadvantages of different expertise levels of ratings carefully with regards to their study design and resources.

Efficacy of live supervision - a randomized controlled trial

Ulrike Maaß, Franziska Kühne, Destina Sevde Ay, Peter Eric Heinze, & Florian Weck, University of Potsdam, Germany

Background: International supervision guidelines emphasize the importance of feedback to psychotherapy novices based on direct observation. One approach that follows this recommendation is the so-called live supervision (LS). In LS, the supervisor observes the novice's session (e.g., via camera) and provides direct support (e.g., via text messaging). Despite promising findings related to therapeutic skill improvement, most findings to date are still based on qualitative studies or have a number of methodological problems (e.g., small samples, no independent assessment of competence).

Aim: The present randomized-controlled trial (RCT) compared the efficacy of LS to a control group (i.e., task repetition, CG) in two simulated therapy sessions with standardized patients (SP).

Method: Sixty-nine psychology students (mean age 24.93, 82.60% female, 81.16% studying at Bachelor level) were randomly assigned to LS or CG. Their task was to conduct the beginning of a therapeutic session with a SP (Session 1; 20 minutes; set agenda, discuss homework). In session 2, all subjects repeated the task but only one group received LS from a licensed psychotherapist. Both sessions were videotaped. Two independent, trained, blinded raters assessed therapeutic skills using the Cognitive Therapy Scale (CTS), the Clinical Communication Skills Scale (CCSS-S), and the Helping Alliance Questionnaire (HAQ). In addition, therapists completed the CCSS-S, CTS, the test anxiety inventory (TAI) to assess state anxiety and state self-efficacy, and evaluated the quality of live feedback.

Results: Students in the LS group received significantly better competence ratings from raters than students in the CG, with large effect sizes ($d_s \geq 0.91$) for all variables (CCSS-S, CTS, HAQ). However, therapists in the LS group perceived improvements only in communication skills (CCSS-S; $d = 0.52$). Linear mixed-models showed that all therapists reported lower state anxiety ($B_{Time} = -0.19, p = .001$) and increased state self-efficacy ($B_{Time} = 0.14, p = .010$) scores in the course of the experiment, without significant group differences ($ps \geq .152$). Overall, therapists were satisfied with several aspects of the live feedback (e.g., understandability, helpfulness, timing; $Ms \geq 4.88$, rating scale 1 to 6).

Conclusion: LS is able to improve therapists' skills from the perspective of independent raters. In addition, therapists are satisfied with the live feedback. However, in terms of increasing self-efficacy and self-assessed general skills, LS has no significant advantage over just practicing and repeating the task. Future studies should examine LS in comparison to other supervision methods, in longitudinal studies, and with more advanced trainees.

A randomized controlled trial of an online deliberate practice course for cognitive-behavioral therapists

Per Carlbring, Håkan Lagerberg, James F. Boswell, Michael J. Constantino, George Vlaescu, & Gerhard Andersson, Stockholm University, Sweden

Background: Deliberate Practice has been proposed for improving therapist effectiveness. Deliberate Practice emphasizes the importance of feedback, expert mentorship, repetition, and individualized learning objectives. The primary analysis tested whether an online, 8-week Deliberate Practice course for cognitive-behavioral therapists would influence patient-rated working alliance compared to a waiting list.

Methods: Therapists ($n=37$) with an undergraduate diploma in cognitive behavior therapy were recruited using social media and the mailing lists of the Swedish Association of Behaviour Therapy ("Beteendeterapeutiska föreningen"). For two weeks before and two weeks after the intervention, therapists in both groups recruited their adult patients in individual therapy to complete the Session Alliance Inventory anonymously. Delayed responses the week after this period were included.

Therapists were randomized to Deliberate Practice or Waitlist. The Deliberate Practice intervention consisted of one 75-minute zoom weekly workshop over eight weeks. Each workshop specified a therapist's skill and related skill criteria (e.g., Responding to client resistance) and involved 50 minutes of focused role-plays with repetition and feedback.

Results: A linear mixed model found a trend ($p < .06$) towards a significant group and time interaction effect. The interaction was unexpected: the Deliberate Practice group decreased their composite Session Alliance Inventory scores ($d = -.40$), and the waitlist group increased their scores ($d = .49$).

Discussion: This pioneering randomized controlled study combined a comprehensive and online-based Deliberate Practice course with a patient-rated working alliance scale. Surprisingly, a close-to-significant effect indicated that the intervention had a negative impact, while the waiting list had a positive outcome. However, power requirements were not met, and methodological issues such as attrition and bias were limitations. Recommendations for future research are presented.

Symposium 37

How are compulsive episodes started and maintained? Exploring the respective role of low confidence in cognitive processes, alertness, and cognitive biases

Chair: Karina Wahl, University of Basel, Switzerland

The role of alertness and chronotype in OCD

Eyal Kalanithroff, The Hebrew University of Jerusalem, Israel

It has been suggested that response inhibition (RI), a key executive function, plays a crucial role in stopping compulsive behaviors. Simultaneously, in several recent investigations, researchers argued that alertness modulates OCD symptom severity. The present research explores the relationships among alertness, RI, and OC symptoms. We predict that higher levels of alertness will be associated with lower OC symptoms, and that this connection will be mediated by RI.

In Study 1, 26 patients with OCD underwent a week of daily monitoring wherein participants reported on their OC symptom severity throughout the previous day. Participants also completed a questionnaire regarding their Morningness/Eveningness preference (MEQ; Morning/Evening Questionnaire). In Study 2, 47 participants with a score above a 10 on the PADUA Inventory Contamination subscale completed a task intended to elicit the urge to engage in a cleansing behavior, and were asked to estimate how long they could wait before

washing their hands. Participants were split into either a high-caffeine group (200 mg espresso drink) or a no-caffeine group (decaffeinated espresso drink). In Study 1, there was a significant and negative correlation between MEQ scores and average Morning-Night symptom severity ratings. A general estimating analysis (AR1) indicated that the MEQxTime interaction was significant, so that an evening person was more likely to experience worsened symptoms in the morning, and vice versa. In Study 2, results indicated that participants in the high-caffeine group were able to resist the urge to wash their hands for twice as long as those in the no-caffeine group and that participants in the no-caffeine group experienced a significantly higher urge to wash after touching the stimulus and while waiting to engage in the cleansing behavior. Furthermore, in the participants in the high-caffeine group exhibited better inhibition, as evident by shorter stop-signal reaction times (SSRT). The current findings indicate that increased arousal improves our ability to resist compulsive behaviors, as OCD patients from study 1 tended to experience increased symptom severity during times of low alertness, and participants from study 2 who experienced increase arousal due to caffeine were able to resist their urge to engage in compulsive washing for longer.

Does responsibility for potential harm attenuate automatization and the effects on meta-memory during a repeated checking task?

Karina Wahl, University of Basel, Switzerland

Introduction: Repeated checking has large and robust effects on meta-memory variables such as a decline in confidence, vividness and details of memory. It has been suggested that gradual automatization of the checking procedure accounts for these effects. Previous studies resulted in inconclusive findings regarding the “automatization hypothesis”. Importantly, none of the previous studies used a context in which participants were responsible for potentially dangerous consequences of faulty checking. To further clarify the role of automatization in the effects of repeated checking on meta-memory variables, we used an improved version of the virtual checking paradigm (virtual checking task 2.0) that allows us to test the automaticity hypothesis more directly. Additionally, we created a context in which participants feel responsible for potentially dangerous consequences of faulty checking, thereby mirroring cognitive processes of individuals with OCD.

Methods: The virtual checking task 2.0 was administered in the context of a cover story. A start-up company SmarteHome pretendedly developed an app to remote control household appliances, including gas stoves. Perceived responsibility was manipulated asking participants to sign a self-agreement in which they either took responsibility for potentially dangerous consequences of checking or delegated responsibility to the experimenter. Participants (N = 164) were randomly allocated to one of four experimental groups: relevant checking/high responsibility (n = 40), relevant checking/low responsibility (n = 42), irrelevant checking/high responsibility (n = 43), irrelevant checking/low responsibility (n = 39).

Results: The credibility ratings and manipulation checks showed that we successfully managed to create a context of perceived danger and that participants in the high responsibility group felt responsible for the potential harm. Regarding the meta-memory variables, we replicated previous findings of large reductions in memory confidence, vividness and details of memory after relevant checking compared to irrelevant checking. Unexpectedly, these effects occurred irrespective of perceived responsibility (high or low). Additionally, reaction times for checking decreased to a large degree from the first to the final checking trial, indicating increasing automatization of checking across the trials. This automatization was larger for participants in the relevant checking task compared to irrelevant checking. Unexpectedly, automatization occurred irrespective of perceived responsibility for potential harm.

Conclusions: Results show that responsibility for perceived harm does not attenuate either automatization of the checking task or the effects on meta-memory. Findings are compatible with the idea that automatization is the underlying mechanisms of the effects of repeated checking on meta-memory.

Are people with obsessive-compulsive disorder under-confident in their cognitive performance? a review and meta-analysis

Reuven Dar, Noam Sarna, Gal Yardeni, Amit Lazarov School of Psychological Sciences, Tel Aviv University

People with obsessive-compulsive disorder (OCD) tend to distrust their memory, perception, and other cognitive functions, and many OCD symptoms can be traced to diminished confidence in one’s cognitive processes. For example, poor confidence in recall accuracy can cause doubt about one’s memory and motivate repeated checking. At the same time, people with OCD also display performance deficits in a variety of cognitive tasks, so their reduced confidence must be evaluated in relation to their actual performance. To that end, we conducted an exhaustive review and meta-analysis of studies in which OCD participants and non-clinical control participants performed cognitive tasks and reported their confidence in their performance. Our search resulted in 19 studies that met criteria for inclusion in the quantitative analysis, with all studies addressing either memory or perception. We found that both performance and reported confidence were lower in OCD than in control participants. Importantly, however, confidence was more impaired than performance in participants with OCD. These findings suggest that people with OCD are less confident in their memory and perception than they should be, indicating a genuine *under-confidence* in this population. We discuss potential mechanisms that might account for this finding and suggest avenues for further research into under-confidence and related meta-cognitive characteristics of OCD.

The development and assessment of an Ambiguous Scenarios Test (AST) for interpretation bias in obsessive-compulsive disorder

Eva Bun, Behavioural Science Institute, Radboud University, The Netherlands and Eni Becker, Behavioural Science Institute, Radboud University, The Netherlands

Biased interpretation may play a role in the development and maintenance of the disorder. However, studies that aim to identify and specify interpretation biases in OCD are relatively scarce and diverse in the types of biases they focus on. Most studies target the direct link of neutral stimuli with danger (e.g. dirt as a threat), but it is also interesting to look at underlying cognitive schemas that might drive OCD, like intolerance of uncertainty or inflated responsibility. Therefore, an Ambiguous Scenarios Test (AST) was developed for OCD, targeting those cognitive domains. The AST consists of 42 scenarios based on the seven underlying cognitive domains often mentioned in OCD literature (catastrophizing, uncertainty intolerance, moral thought-action fusion, likelihood thought-action fusion, inflated responsibility, perfectionism & memory distrust), with for each scenario a positive, neutral and negative interpretation on a 0-100 slider bar. The current study aimed to assess the psychometric properties of the AST for OCD, testing construct validity, internal reliability, and criterion validity. 177 (non-clinical) participants filled out an online survey including the AST and scales measuring neuroticism, metacognition, obsessive beliefs, and OC-symptom severity per dimension (contamination, harm responsibility, unacceptable thoughts & incompleteness). While for

positive and neutral interpretations, construct validity and internal reliability were questionable, for negative interpretations, it was acceptable to good, just as the construct validity. Exploratory analyses with negative interpretations showed significant differences between participants low ($n=135$) and high ($n=42$) in OC symptoms. Preliminary results also showed different OC symptom dimensions to be related to different specific interpretation biases. The discussion provides improvements needed for the AST and highlights limitations that need to be considered. Overall, the AST may be a promising measurement tool to identify specific biases within individual OCD patients as to their specific symptoms.

Symposium 38

Cognitive and behavioural approaches for older adults with mental health problems

Chair: Gert-Jan Hendriks, Pro Persona and Radboud University, Nijmegen, the Netherlands

CBT and 3rd generation CBT in older people with anxiety disorders and anxiety-related disorders - a Cochrane systematic review and meta-analysis

Gert-Jan Hendriks, Pro Persona and Radboud University, Nijmegen, the Netherlands

Anxiety disorders and anxiety-related disorders (obsessive-compulsive disorder, post-traumatic stress disorder) are the most common mental disorders, even in old age. CBT is the first choice psychotherapy for anxiety disorders. The last systematic review and meta-analysis for CBT in the elderly was conducted 10 years ago. This talk will update the state of the art on CBT in the elderly with anxiety disorders. It will assess the effectiveness of CBT and 3rd generation CBT on the severity of anxiety symptoms compared to other forms of psychotherapy in older adults aged 55 years and older with anxiety disorders and anxiety-related disorders.

Method: The literature review, screening of abstracts, extraction of data and analysis are described in the published study protocol.

Results: We screened 6392 abstracts after literature review. Of these, 6319 were not relevant. Forty-six studies were included for full-text screening. Of these, 22 were included after full-text screening and 23 were excluded based on the selection criteria as described in the study protocol. The results of the meta-analysis and the conclusions will be presented and discussed during the lecture.

Reference

Hendriks GJ, van Zelst WH, van Balkom AJ, Uphoff E, Robertson L, Keijsers GPJ, Oude Voshaar RC. Cognitive behavioural therapy and third wave approaches in older people (Protocol). *Cochrane Database of Systematic Reviews* 2021, Issue 1. Art. No.: CD007674. DOI: 10.1002/14651858.CD007674

Behavioural activation by mental health nurses for depressed older adults in primary care: a cluster-randomised effectiveness trial

Noortje Janssen, Radboud University Medical Center, the Netherlands

M J H Huibers, Department of Clinical Psychology, Utrecht University, Utrecht, The Netherlands, P Lucassen, Department of Primary and Community Care, Radboud University Medical Centre Nijmegen, Nijmegen, The Netherlands, f R C Oude Voshaar, University of Groningen, Department of Psychiatry, University Medical Centre Groningen, Groningen, The Netherlands, D Ekers, Mental Health and Addictions Research Group, University of York, York, UK, T Broekman, Bureau Bêta, Nijmegen, The Netherlands, J E Bosmans, Department of Health Sciences, VU University, Amsterdam, The Netherlands, H van Marwijk, Department of Primary Care and Public Health, Brighton and Sussex Medical School, Brighton, UK, J Spijker, Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands; G J Hendriks, Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands

Background Effective non-pharmacological treatment options for depression in older adults are lacking.

Aims To evaluate the effectiveness of behavioural activation (BA) by mental health nurses (MHNs) for depressed older adults in primary care compared with treatment as usual (TAU).

Methods In this multicentre cluster randomised controlled trial, 59 primary care centres (PCCs) were randomised to BA (30 PCCs) and to TAU (29 PCCs). Consenting older (≥ 65 years) adults ($n=161$) with clinically relevant symptoms of depression participated in the study. Interventions were an eight-week individual BA-programme by a primary care MHN and unrestricted TAU. The primary outcome was self-reported depression (QIDS-SR16) at 9 weeks and at 3, 6, 9 and 12-month follow-up.

Results Data of 96 participants from 21 PCCs in BA and 65 participants from 16 PCCs in TAU, recruited between July 4th 2016 and September 21st 2020, were included in the intention to treat analyses. At the end of treatment, BA participants reported significantly fewer depressive symptoms than TAU participants (QIDS-SR16 difference = -2.77, 95% CI = -4.19 to -1.35), $p < 0.001$; between group effect size = 0.90; 95% CI = 0.42-1.38) and this difference persisted up to the three-month follow-up (QIDS-SR16 difference = -1.53, 95% CI = -2.81 to -0.26), $p = 0.02$; between group effect size = 0.50; 95% CI = 0.07-0.92).

Conclusions BA leads to a greater symptom reduction of depressive symptoms in older adults, compared to TAU in primary care, at post-treatment and three-month follow-up.

Age related differences in symptom networks of overall psychological functioning in a sample of anxiety, OCD, and PTSD patients.

Melissa Guineau^{1,2}, Nessa Ikani^{1,2}, Marjolein Fokkema³, Richard Oude Voshaar⁴, Bea Tiemens^{1,2,5}, Gert-Jan Hendriks^{1,2}

¹ Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands, ² Pro Persona Research, Pro Persona Institute for Integrated Mental Health Care, Wolfheze, the Netherlands, ³ Leiden University, Leiden, the Netherlands, ⁴ University of Groningen, University Medical Centre Groningen, Groningen, the Netherlands, ⁵ Indigo, Utrecht, the Netherlands

Background. Anxiety disorders, obsessive compulsive disorders (OCD), and posttraumatic stress disorder (PTSD) are among the most prevalent mental disorders across the lifespan. Even though prevalence rates are comparable across younger and older adults, there is emerging evidence suggesting that older adults experience different symptoms of anxiety compared to younger adults. These studies, however, used different cut-off scores (i.e., 55, 60, or 65) to differentiate between younger and older adults.

Methods. We used network tree analysis in a sample of 27386 adult patients (age > 17 years) presenting for treatment for an anxiety disorder, OCD, or PTSD to identify a cut-off age at which younger adults and older adults show a different symptom network of overall psychological functioning. The network comparison test was used to test for significant differences across the networks.

Results. The results show two significant age splits in the symptom network. Moreover, there were significant differences between the networks in overall net

work structure. There were also statistically significant differences in the strength and expected influence of some specific edges and nodes.

Discussion. These results challenge the commonly used cut-off of 55, 60 or 65 years to differentiate younger adults from older adults. Moreover, this study shows that feeling weak and feeling nervous are highly central, regardless of age.

Schema Therapy + Psychomotor Therapy vs treatment as usual in regular old age psychiatry (RCT)

Silvia Van Dijk, University Medical Centre Groningen, the Netherlands

Several types of psychotherapy have been proven successful in the treatment of personality disorders in younger age groups. Nonetheless, studies among older patients are lacking. Therefore, we have set-up the first randomized controlled trial worldwide to evaluate the effectiveness of psychotherapy to modify personality functioning in older patients with cluster B or C personality disorders. To this end, we have randomised 145 older (≥ 60 years) patients with a cluster B or C personality disorder to either group schema therapy enriched with psychomotor therapy or to usual care. We will present the results on the primary outcome (overall psychopathology as measured with the Brief Symptom Inventory) and secondary outcomes (positive mental health, personality functioning, and satisfaction with life), as well as the impact of COVID-19 on treatment outcome (due to protocol deviations of the group therapy for the last 42 patients).

Symposium 39

Mindfulness and acceptance: new settings for implementation

Chair: Albert Feliu-Soler, Universitat Autònoma de Barcelona, Spain

Effectiveness of two video-based multicomponent treatments for fibromyalgia: the added value of cognitive restructuring and mindfulness in a three-arm randomized controlled trial

Albert Feliu-Soler, Universitat Autònoma de Barcelona, Spain

Introduction. The aim of this study was to examine the effectiveness of two video-based multicomponent programs (FIBROWALK) and the Multicomponent Physiotherapy Program (MPP) for patients with fibromyalgia (FM) compared to specialty treatment-as-usual (TAU) only. We posit that FIBROWALK, due to inclusion of specific psychological ingredients (cognitive restructuring and mindfulness), can help patients with FM to experience more generalised clinical improvement than STAU or MPP alone.

Method. A total of 330 patients with FM were recruited and randomly allocated (1:1:1) to TAU only, TAU+FIBROWALK, or TAU+MPP. FIBROWALK and MPP consisted of weekly videos on pain neuroscience education, therapeutic exercise and self-management patient education, but only the FIBROWALK intervention provided cognitive restructuring and mindfulness. Both programs were structurally equivalent. Between-group differences in functional impairment, pain, kinesiophobia, anxious-depressive symptoms and physical functioning were evaluated at post-treatment following Intention-To-Treat and complete-case approaches.

Results. Compared to TAU only, individuals in the FIBROWALK arm showed larger improvements in all clinical outcomes; similarly, participants in the MPP program also showed greater improvements in functional impairment, perceived pain and kinesiophobia compared to TAU only. The FIBROWALK intervention showed superior effects in improving pain, depressive symptoms and physical functioning compared to MPP.

Discussion and Conclusion. This RCT supports the short-term effectiveness of the video-based multicomponent programs FIBROWALK and MPP for FM and provides evidence that cognitive-behavioural and mindfulness-based techniques can be clinically useful in the context of physiotherapeutic multicomponent treatment programs.

A randomized controlled efficacy trial of Acceptance and Commitment Therapy compared to Behavioural Activation for patients with chronic low back pain and depression: the IMPACT study

Juan Vicente Luciano, Universitat Autònoma de Barcelona, Spain

Introduction. Chronic low back pain (CLBP) and comorbid depression is a prevalent and complex problem that represents a challenge for health professionals. The present study compared the efficacy of two third-wave psychological therapies as well as the role of third-wave psychological constructs as mediators of treatment outcomes for people with CLBP plus depression.

Method. A total of 234 participants were randomized into three study arms: Acceptance and Commitment Therapy (ACT) plus TAU, Behavioural Activation Treatment for Depression (BATD) plus TAU, and TAU alone. The primary endpoint was pain interference (measured with the Brief Pain Inventory) and secondary outcomes included pain intensity, anxiety, depression, stress, and pain catastrophising. The differences in outcomes between groups at post-treatment assessment (primary endpoint) and 12-month follow-up were analyzed using linear mixed-effects models and mediational models through path analyses.

Results. From an intention-to-treat approach, ACT and BATD were both superior to TAU at post-treatment and at follow-up (medium to large effect sizes) for reducing mainly pain interference and pain catastrophising. ACT was modestly better than BATD at post-treatment (significant differences only in stress). Improvements produced by ACT and BATD in pain interference at 12 months were mediated by reductions in psychological inflexibility at post-treatment. We detected baseline differences between responders and non-responders to each therapy. In the case of ACT, treatment responders had less anxiety, depression, catastrophising, and inflexibility as well as more behavioral activation and acceptance at baseline. Regarding BATD, treatment responders took less antidepressants and were less depressed at baseline.

Discussion and Conclusion. These findings are discussed in relation to previous studies of psychological therapies for chronic pain and comorbid depression.

A mindful eating programme for reducing emotional eating in patients with overweight or obesity: a cluster randomized controlled trial

Jesús Montero-Marín, University of Oxford, UK

Introduction. The primary aim of this study was to analyse the efficacy of a 'mindful eating' programme for reducing emotional eating in patients with overweight or obesity.

Method. A cluster randomized controlled trial was conducted with 76 participants with overweight or obesity who were assigned to 'mindful eating' + treatment as usual (TAU), or to TAU alone. The main outcome was 'emotional eating' (Dutch Eating Behavior Questionnaire, DEBQ); other eating behaviours were also assessed along with psychological and physiological variables at baseline, posttreatment and 12-month follow-up.

Results. Compared with TAU alone, 'Mindful eating' + TAU reduced emotional eating both at posttreatment ($B=-0.27$; $p=.006$; $d=0.35$) and follow-up ($B=-0.53$; $p<.001$; $d=0.69$). 'External eating' (DEBQ) was also significantly improved by 'Mindful eating' + TAU at both timepoints. Significant effects at follow-up were observed for some secondary outcomes related to bulimic behaviours, mindful eating, mindfulness, and self-compassion. Weight and other physiological parameters were not significantly affected by 'mindful eating' + TAU.

Discussion and Conclusion. These findings support the efficacy of the 'mindful eating' + TAU programme for reducing emotional and external eating, along with some other secondary measures. However, no significant changes in weight reduction were appreciated.

Mindfulness training at the police academy: An exploratory study

Jaime Navarrete, Parc Sanitari Sant Joan de Déu, Barcelona, Spain

Introduction. Police officers are often exposed to violence, suffering, and death in the performance of their duties, which have profound consequences for their mental health. Mindfulness training seems feasible, accepted, and effective for several mental health outcomes in this population, though research in that regard is limited yet. The results presented here refer to the implementation of a 7-week mindfulness-based intervention (MBI) for trainee inspectors at the National Police Corps academy.

Method. The sample was composed of 61 trainee inspectors (80.3% men; aged between 25 to 55) of the National Police Corps Academy (Ávila, Spain) who underwent the MBI either in October, 2021 ($n = 31$) or January, 2022 ($n = 30$). The intervention was offered as one of the elective seminars of their 2nd course itinerary. A one-group pretest-posttest design was used. In the first and last sessions participants answered self-report measures of psychological distress (DASS-21), well-being (WEMWBS), mindfulness (FFMQ), body awareness (MAIA), difficulties in emotion regulation (DERS), and non-attachment (NAS).

Results. From the total sample, 42/61 participants (69%) attended to all the sessions, the rest attended at least to 5 sessions. First, a multivariate ANCOVA showed that was a statistically significant difference between cohorts on the combined dependent variables (posttest scores), suggesting that the first cohort of participants significantly improved more than the second one. When the cohorts were analysed separately, participants from the October cohort reported a statistically significant improvement in all outcomes with large effect sizes, while participants from the January cohort statistically significantly improved only their levels of body awareness with small-to-large effect sizes.

Discussion and Conclusion. The preliminary effectiveness of the implementation of this MBI at the police academy is discussed.

Efficacy of a mindfulness and compassion-based intervention in psychotherapists and their patients: Empathy, symptomatology, and mechanisms of change in a randomized controlled trial

Ausiàs Cebolla, Universitat de València, Spain

Introduction. In recent years, mindfulness, and compassion-based interventions (MCBI) have been found to beneficially influence the self-reported empathy of psychotherapists, and they are a promising way to improve their relationship with their patients. In this regard, new studies are needed to evaluate the effects of MCBI on psychotherapists and their patients and analyze the influence of these effects on the processes and outcomes of psychotherapy. In this randomized controlled trial (RCT), we evaluate the efficacy of an MCBI in improving psychotherapists' mindfulness skills and self-reported empathy, as well as its indirect effect on patients (empathy perceived in their psychotherapists, therapeutic bond, and symptomatology). Finally, we present a Multilevel Structural Equation Model (MSEM) to analyze the relationship between the improvement in these variables in the psychotherapists and their patients.

Method. A group of psychotherapists ($n = 63$) were randomized to an MCBI or an active control group (empathy diary). We assessed psychotherapists and their patients ($n = 121$) before and after the MCBI and at a four-month follow-up evaluation.

Results. Regarding psychotherapists, they showed an increase in psychotherapeutic mindfulness skills after the MCBI and at follow-up, whereas self-reported empathy improved at follow-up. Results for the patients showed an improvement in perceived empathy, therapeutic bond, and symptomatology after the MCBI. In addition, the improvements in symptomatology were maintained at follow-up. According to the MSEM, the increase in psychotherapeutic mindfulness skills in psychotherapists after the MCBI is related to an increase in patient-reported psychotherapists' empathy, which produces an improvement in the therapeutic bond and their symptomatology.

Discussion and Conclusion. These results support the benefits of introducing MCBI in psychotherapists' training to improve their bond with their patients and the psychotherapy outcomes.

Symposium 40

The dark side of the moon - Negative effects in psychological treatments

Chair: Johanna Boettcher, Psychologische Hochschule Berlin, Germany

Negative effects in internet-based interventions – who experiences which side effect and why?

Friederike Fenski¹, Carmen Schaeuffele², Manuel Heinrich², Christine Knaevelsrud², Johanna Boettcher¹

¹ Psychologische Hochschule Berlin, Clinical Psychology and Psychotherapy, ² Freie Universität Berlin, Clinical Psychological Intervention

Internet-based interventions (IBI) are known to be effective in treating depression. Most studies today are thereby focusing on the potential of IBI to alleviate emotional distress and enhance well-being. In the last years, an increasing number of studies also began to investigate possible negative effects that might be encountered by participants. However, systematic empirical data on predictors and mechanisms of change remain sparse. The current study is using data from the client pool of a German health insurance company

($n = 2300$) to fill this gap. Participants were undergoing a guided cognitive-behavioral IBI targeting mild to moderate depression over 6 weeks. By exploring multiple predictors of negative effects, the association between negative effects and outcome as well as adherence in this well-specified sample, the study contributes to identify, explain, and potentially prevent negative effects in IBI treating depression.

Adverse effects in internet-based cognitive-behavior versus psychodynamic therapy

Per Carlbring¹, Alexander Rozental², Jakob Mechler¹, Karin Lindqvist¹, Björn Philips¹, & Gerhard Andersson³

¹ Department of Psychology, Stockholm University, Stockholm, Sweden, ² Department of Psychology, Uppsala, Sweden, ³ Department of Behavioural Sciences and Learning, Linköping, Sweden

Background: Internet-based psychological treatments provide many benefits for patients with psychiatric disorders, but research also suggests that negative effects might occur from the interventions involved.

Methods: A total of 2400 participants presenting with anxiety and/or depression were randomized into 12 subgroups ($n=200$ each) based on treatment modality (Cognitive Behavior Therapy vs. Psychodynamic Therapy vs. Waitlist), duration (8 vs. 16 weeks), and moderated discussion forum (Yes vs. No). In addition to weekly measurements of the primary outcome measure (PHQ-9 & GAD-7), the Negative Effects Questionnaire was administered post-treatment. The Negative Effects Questionnaire has been proposed as a valuable instrument for investigating the negative effects of psychological treatments. An exploratory factor analysis suggested a six-factor solution: symptoms (“I felt more worried”), quality (“I did not always understand my treatment”), dependency (“I think that I have developed a dependency on my treatment”), stigma (“I became afraid that other people would find out about my treatment”), hopelessness (“I started thinking that the issue I was seeking help for could not be made any better”), and failure (“I lost faith in myself”).

Results: All 2400 participants have been recruited. However, all post-assessment data is not yet collected at the time of writing (but will be by the time of the conference). This talk will focus on the occurrence and characteristics of the potential negative effects of internet-based treatment in the 12 subgroups.

Discussion: Negative effects of psychotherapy are multifaceted, warranting careful considerations for them to be monitored and reported in research settings and routine care.

Profiling side effects of behavioural insomnia treatment in research and real world

Leonie F. Maurer, mementor DE GmbH & University of Oxford, UK

Simon D. Kyle, University of Oxford, UK, Noah Lorenz, mementor DE GmbH, Jennifer Schuffelen, Heinrich Heine University Düsseldorf, DE, Annika Gieselmann, Heinrich Heine University Düsseldorf, DE

Sleep restriction therapy (SRT) is arguably the most effective component of Cognitive behavioural therapy for insomnia (CBT-I), but also most frequently associated with side-effect reports. SRT instructs patients to restrict their time in bed (TIB), therefore inducing mild sleep deprivation. To systematically test whether SRT is associated with impairments in daytime functioning, we 1) profiled daily sleepiness and affect in a randomised-controlled trial ($N=56$, $M=40.78\pm 9.08$ years, excluding comorbid disorders) with focus on SRT (study 1, University of Oxford), and 2) investigated whether daily measures of mood and energy deteriorate with SRT during digital CBT-I implementation (*somnio*, mementor DE GmbH) in a “real-world” study sample (study 2, including comorbid mood disorders, Heinrich Heine University Düsseldorf, $N=90$, $M= 45.71\pm 14.34$ years). Both studies included daytime functioning measures as part of the sleep diary and recruited participants meeting criteria for insomnia.

Results from **study 1** showed that participants in the SRT group felt sleepier in comparison to a matched-control arm that followed regular but not restricted sleep times. Sleepiness was especially pronounced in the evening and during the first two weeks of SRT (83.20 vs 70.80 on a 0-100 visual analogue scale [VAS], $p<.001$), when large reductions in total sleep time (TST) were reported (-44 min). In contrast, there were no between-group differences in affect throughout the 4-week intervention (2.61-2.63 vs 2.68-2.75 on a scale from 1-5, $ps> 0.178$). For analysis in **study 2**, sleep diary data was grouped into clusters (each comprised of 8-9 days per participant) to compare data during acute SRT implementation with data beforehand, when no TIB instructions were given. Despite small decreases in TST (-23 min), results yielded no differences in affect (6.57 vs 6.73 on a 1-10 VAS, $p=0.28$) or energy levels (5.81 vs 5.93 on a 1-10 VAS, $p=0.61$) between sleep diary data before and after SRT implementation.

Results from both analyses indicate that despite mild sleep deprivation, SRT may not alter affect during acute implementation 1) in comparison to a matched control arm (study 1), and 2) in a “real-world” study sample, including those with comorbid mood disorders. Similarly, energy levels did not vary with SRT implementation in study 2. Perceived sleepiness, however, was found to be highest in the evening and when TST was reported to be lowest (study 1), thereby indicating that deteriorations might be time specific and temporary. Further research is needed to investigate whether daytime impairments during SRT might be associated with the amount of implemented TIB-, and thereby TST-restriction.

Does routine informed consent for psychotherapy include information about risks and side effects? A survey about psychotherapists' attitudes and practices in Germany

Leonie Gerke¹, Ann-Katrin Meyrose^{1,2}, Yvonne Nestoriuc^{1,3}

¹ Clinical Psychology, Helmut-Schmidt-University/University of the Federal Armed Forces Hamburg, Hamburg, Germany, ² Department of Child and Adolescent Psychiatry, Psychotherapy, and Psychosomatics, University-Medical Center Hamburg-Eppendorf, Hamburg, Germany, ³ Institute of Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Hamburg, Germany

A balanced information disclosure about the expected positive and negative effects of psychotherapy according to legal and ethical obligations enables patients' informed treatment decision and might boost treatment expectations and efficacy. In this talk, we present the results of a national survey about psychotherapists' attitudes and their current clinical practices regarding information disclosure about risks and side effects of psychotherapy. $N = 530$ clinicians in Germany ($n = 418$ licensed psychotherapists and $n = 112$ postgraduate psychotherapy trainees) took part in an online survey. The two most frequently reported advantages of disclosing information about risks and side effects were the creation of transparency (93%) and the strengthening of realistic treatment expectations (88%). However, one in five psychotherapists reported not informing their patients about potential risks and side effects. 60% reported feeling well or very well trained when it came to disclosing information about risks and side effects of psychotherapy. A considerable proportion reported concern about inducing anxiety in patients by disclosing information about risks and side effects (52%) and thus, discouraging patients at treatment beginning (34%). Although informing patients about potential risks and side effects of psychotherapy seems to be the rule rather than the exception in clinical practice, considerable uncertainties exist regarding how to disclose information in terms of legal, ethical, and clinical

demands. Training psychotherapists in providing comprehensive information about risks and side effects that prevents nocebo effects but enables informed decision-making might have a positive influence on treatment expectations and outcomes.

Symposium 41 - Sala Polivalente

The evolution of mindfulness (- based cognitive therapy) into new formats, populations, and contexts

Chair: Shannon Maloney, University of Oxford, UK

Effectiveness and cost-effectiveness of universal school-based mindfulness training compared with normal school provision: the MYRIAD cluster randomised controlled trials

Willem Kuyken, University of Oxford, UK on behalf of the MYRIAD Group.

The MYRIAD Group is listed here: <https://myriadproject.org/who-we-are/>

Mental health problems are one of the world's biggest causes of ill health, affecting hundreds of millions globally each year, and causing significant social and economic impacts. These problems often start in adolescence.

Developing effective interventions to support mental health is a major public health priority. And it makes sense to focus our efforts on interventions for young people.

The MYRIAD (MY Resilience In ADolescence) Project asked how we can best support the mental health of young people aged 11-16. Our previous work had shown that mindfulness training (MT) is effective in adults. We wanted to see if it could also be effective in adolescents. Specifically, we wanted to ask if schools-based mindfulness training is an effective, cost-effective, accessible and scalable way to promote mental health and well-being in adolescence?

The MYRIAD Project involved more than 28,000 children, 650 teachers, 100 schools and 20 million data points. This presentation will outline the main results and its implications.

MBCT Finding Peace in a Frantic World and MBCT for Life to improve well-being and mental health in teachers and healthcare workers: two randomised controlled trials

Jesus Montero-Marin, Research and Innovation Unit, Parc Sanitari Sant Joan de Déu, Sant Boi de Llobregat, Spain

Introduction: Schoolteachers and healthcare workers play a critical role in the education and health of a nation, yet rates of teacher and healthcare workers' stress are disproportionately high. We evaluated whether mindfulness-based cognitive therapy (MBCT), using 'Finding Peace in a Frantic World' [MBCT-FP] and mindfulness-based cognitive therapy for life [MBCT-L], could reduce stress and target a range of secondary outcomes.

Method: The first study randomly assigned secondary schoolteachers to receive instructor-led and self-taught MBCT-FP. The second study randomly assigned NHS workers to receive either MBCT-L or wait-list. We measured psychological well-being and a range of mental health variables. Mixed regressions were used. Mindfulness and compassion were explored as potential mechanisms of effects.

Results: In the first study, 206 teachers from 43 schools were randomized by school to an instructor-led or self-taught course. Both formats showed similar rates of participant expectancy and engagement, but the instructor-led arm was perceived as more credible. We found the self-taught arm showed significant pre-post improvements in well-being and self-compassion, while the instructor-led arm showed such improvements in well-being, mindfulness, self-compassion, perceived stress, anxiety, depression, and burnout. Changes over time significantly differed between the groups in all these outcomes, favouring the instructor-led arm. The instructor-led arm, compared with the self-taught, indirectly improved teacher outcomes by enhancing mindfulness and self-compassion as mediating factors. In the second study, we assigned 234 participants to MBCT-L or to wait-list. 168 (72%) participants completed the measures and of those who started the MBCT-L, 73.4% (n = 69) attended most of the sessions. MBCT-L improved well-being compared with controls. Effects were also found for stress, depression, and anxiety, but not for work-related outcomes. Mindfulness and self-compassion were mediators of effects.

Discussion: Our results suggest both instructor-led and self-taught formats of MBCT-FP are considered reasonable by secondary school teachers, but the instructor-led is more effective than the self-taught. On the other hand, MBCT-L could be an effective and acceptable part of a wider healthcare workers well-being and mental health strategy. Both mindfulness and self-compassion appeared as potential mechanisms of MBCT.

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Taking it Further compared to wait-list control in the promotion of well-being and mental health: a randomised controlled trial with graduates of MBCT and MBSR

Shannon Maloney, University of Oxford, UK

Introduction: Mindfulness-based programmes (MBPs) have demonstrated effectiveness in promoting mental health and well-being in general population samples. However, there is limited evidence on how to sustain these effects post-treatment and beyond the duration of traditional MBPs, such as mindfulness-based cognitive therapy [MBCT] and mindfulness-based stress reduction [MBSR]. MBCT—'Taking it Further' [MBCT-TiF] is a novel twelve-week MBP that was developed to help reinforce and sustain learning in those that have already completed an MBCT/MBSR programme. The primary aim of the current study was to evaluate the acceptability and effectiveness of the MBCT-TiF programme in a self-selected adult general population sample of MBCT/MBSR graduates using an online format.

Methods: A randomised controlled trial with a waitlist control group and repeated measures design was used. Two cohorts of MBCT/MBSR graduates aged 18 and above were recruited and randomly assigned to either MBCT-TiF or waitlist (WL). The majority of the WL group continued with their ongoing mindfulness practice during the study period. The primary outcome was self-reported well-being, measured with the 14-item Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Participants completed the WEMWBS three times before the

start of the intervention, twice during the intervention, and once post-intervention. Secondary outcomes included: anxiety (GAD-7), depression (PHQ-9) and psychological quality of life (WHOQOL-BREF). Measures of acceptability included: attendance, self-reported home practice, perceived expectations and credibility, teacher quality, unpleasant experiences and harm. The primary analysis was intention-to-treat using imputed data. The trial was registered with ClinicalTrials.gov (Identifier: NCT05154266).

Results: Out of the 164 MBCT/MBSR graduates recruited and randomised across two cohorts (between June and September 2021), 83 were randomised to MBCT-TiF and 81 to WL. 96.4% of the MBCT-TiF arm attended at least half of the sessions. MBCT-TiF was significantly more effective than WL at improving well-being, with large effects post-intervention ($d = 0.78$). In terms of secondary outcomes, MBCT-TiF was significantly more effective than WL at improving psychological quality of life ($d = 0.74$) and symptoms of anxiety and depression ($d = -0.44$ to -0.53), with moderate to large effects post-intervention.

Discussion: Our findings demonstrated acceptability and effectiveness of an online format of MBCT-TiF in a self-selected adult general population sample of MBCT/MBSR graduates.

The effect of mindfulness-based programmes on elite athlete mental health: a systematic review and meta-analysis

Kearnan Myall¹, Jesus Montero-Marin², Paul Gorczynski³, Nabeela Kajeel⁴, Robert Bernard⁴, Elinor Harriss⁵, Willem Kuyken¹

¹Department of Psychiatry, University of Oxford, Oxford, UK, ²Teaching, Research & Innovation Unit, Sant Joan de Research Institute, Spain,

³School of Human Sciences, University of Greenwich, London, UK., ⁴Department of Education, Concordia University, Montreal, Canada.,

⁵Bodleian Health Care Libraries, University of Oxford, Oxford, UK.

Introduction: Elite athletes face unique stressors that can place them at particular risk of experiencing mental health symptoms and disorders. Sport specific recognition and assessment tools are available, but whilst a wide range of psychological treatments show positive effects in preventing and treating mental health symptoms and disorders, few have been rigorously tested in elite athletes and the unique environments they operate in. Mindfulness meditation is becoming increasingly popular in elite sport for its potential to improve performance alongside mental health. Careful adaptation of these programmes is required when targeting specific new groups and new contexts, such as elite athletes, to maximise acceptability, effectiveness, ease of implementation, and scalability, hence, the objective of this review was to systematically evaluate the best available evidence to determine the effect MBPs had on elite athletes' mental health.

Methods: For this systematic review and meta-analysis we searched eight online databases (Embase; PsycINFO; SPORTDiscus, MEDLINE; Scopus; Cochrane CENTRAL; ProQuest Dissertations & Theses; Google Scholar), plus forwards and backwards searching from included studies and previous systematic reviews. Studies were included if they were randomised controlled trials (RCTs) that compared a MBP against a control, in current or former elite athletes. Between group differences were analysed for: (1) anxiety symptoms; (2) depression symptoms; (3) psychological wellbeing; (4) psychological distress; (5) stress; and (6) mindfulness.

Results: Of 2,386 articles identified, 12 RCTs were included in the systematic review and meta-analysis, comprising a total of 613 elite athletes (313 MBP; 300 controls). Overall, MBPs improved mental health, with large significant pooled effect sizes for reducing symptoms of anxiety (hedges $g = -0.87$, number of studies (n) = 6, $p = .02$, $I^2 = 90$), stress ($g = -0.91$, $n = 5$, $p = .01$, $I^2 = 74$), and increased psychological wellbeing ($g = 0.96$, $n = 5$, $p = .04$, $I^2 = 89$). Overall, the risk of bias and certainty of evidence was moderate, and all findings were subject to high estimated levels of heterogeneity.

Discussion: MBPs significantly improved several mental health outcomes. Given the heterogeneity between studies, high quality adequately powered trials are required in the future. These studies should emphasise intervention fidelity, teacher competence, and scalability within elite sport. Such work could broadly improve mental health, including reducing symptoms of both general and competition anxiety, highlighting the value of MBPs to support performance alongside mental health.

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Symposium 42

Identifying active ingredients in effective interventions for adolescent mental health: Prevention, intervention, and relapse management

Chair: Marc Bennett, MRC Cognition & Brain Science Unit, University of Cambridge, UK

Affective awareness: A foundational skill for the prevention and early intervention of youth depression

Joanne R Beames (presenter), Katarina Kikas, Aliza Werner-Seidler

Black Dog Institute, University of New South Wales, Randwick, Australia

Affective awareness is the ability to identify, describe and differentiate between emotions and moods. We conducted an integrated narrative review that explored whether affective awareness is a crucial candidate for protecting against and overcoming depression in young people. We viewed affective awareness through the lens of Ecological Momentary Assessment (EMA), focusing on real-time, in-the-moment experiences.

We combined information from 10 quantitative studies with expert perspectives, including 24 young people between 16-20 years and 5 psychologists. We also reviewed publicly available online data sources to identify real-life user experiences with EMA.

We found that affective awareness is important for the emotional health of young people. EMA can increase affective awareness and, in turn, decrease depressive symptoms. This presentation will focus on the key themes raised by the experts that contextualised this indirect relationship:

Affective awareness is important for building other skills (e.g., emotion regulation)

There are benefits in using EMA after depressive symptoms occur, although motivation drops when young people are feeling well

Tailored EMA approaches are necessary to suit individual needs

Experts are interested in using phone-based EMA and are going online to find out more, but it is not yet widely used in daily life or clinical practice.

What role does emotional granularity play in adolescent depression and anxiety? A scoping review

Darren Dunning^{1,2}, Gemma Wright¹, Marc Bennett¹, Rachel Knight¹, & Tim Dalgleish^{1,3}

¹ Medical Research Council Cognition and Brain Sciences Unit, Cambridge University, Cambridge, CB2 7EF, UK, ²University of Hertfordshire, Hatfield, Hertfordshire, AL10 9AB, UK, ³ Cambridgeshire and Peterborough NHS Foundation Trust, Cambridge, UK

Emotional Granularity (EG), refers to the precision with which we describe and differentiate between our emotion states. Emerging evidence suggests that having poorer EG contributes to the onset and maintenance of psychiatric conditions such as depression. The likely mechanisms of action for this being that poor EG means inferior selection and deployment of the relevant emotion regulation strategies to combat negative emotional turbulence.

The following reviews research evidence for EG in adolescents (aged 14-24), specifically: (i) how it is measured; (ii) its role in anxiety and depression; (iii) its role as a moderator between emotion regulation and anxiety/depression. In addition, we spoke to adolescent stakeholders with a lived experience of anxiety/depression to gain their insights on EG.

A literature review revealed 39 qualitative studies, however there were no studies that examined EG in adolescent populations with clinical diagnoses of anxiety or depression. In typical groups we found: (i) the most common method of measuring EG was with ecological momentary assessment methods; (ii) although there was good evidence that lower EG means greater levels of depressive symptomology, there was less evidence for EGs role in anxiety and (iii) inconclusive evidence of EG as a moderator between emotion regulation and depression/anxiety. Adolescent stakeholders had no difficulty understanding the concept of EG and believed it was one that young people would likely engage with. Importantly, they also felt it was a skill that has the potential to be improved.

In sum, although EG shows promise as an active ingredient in adolescent depression, there is insufficient evidence for it playing a role in anxiety and inconclusive evidence of it as a moderator between emotion regulation and mental ill-health. Future studies, should both test EG's role in depressed and anxious adolescent samples and investigate its potential to be improved for therapeutic purposes.

Notice, observe, step back and experience: An investigation of psychological decentering in adolescent mental health

Rachel Knight¹, MYRIAD team, Willem Kuyken², Tamsin Ford³, J. Mark G. Williams², Marc Bennett^{1} & Tim Dalgleish^{1*} (*Co-Senior Authors)*

Collaborators: MYRIAD Team: Saz Ahmed, Susan Ball, Nicola Dalrymple, Katie Fletcher, Lucy Foulkes, Poushali Ganguli, Cait Griffin, Kirsty Griffiths, Konstantina Komninidou, Suzannah Laws, Jovita Leung, Jenna Parker, Blanca Pira Pi-Sunyer, J Ashok Sakhardande, Jem Shackleford, Kate Tudor, Brian Wainman

¹ - MRC Cognition and Brain Sciences Unit, Cambridge, UK., ² - Department of Psychiatry, University of Oxford, Oxford, UK., ³ - Department of Psychiatry, University of Cambridge, Cambridge, UK.

Psychological decentering is an emotion regulation strategy that involves taking a 'step back' so as to see mental experiences (such as thoughts, feelings, or memories) for what they are – products of a busy mind that may not necessarily reflect the way the world "really is." Evidence suggests that decentering is an active ingredient in psychological intervention that attenuates maladaptive responding towards difficult mental experiences in adulthood. Psychological decentering may be a promising approach to promote adolescent mental health. However, it is unclear if psychological decentering is negatively associated with symptoms of anxiety and depression during adolescence. There is also little research into how psychological decentering can be trained during adolescence.

The current presentation will illustrate our team's research on adolescent psychological decentering. First, a secondary dataset was utilized to explore the relationships between mental health and a proxy measure of decentering, consisting of items from emotion regulation scales included in the dataset. Findings suggest that decentering is negatively associated with anxiety and depression, and positively associated with wellbeing. The relationship between decentering and wellbeing persists after controlling for depressive and anxious symptoms. To confirm this, a novel self-report inventory of adolescent psychological decentering was administered to a large sample (N = 600). Lastly, a digital mental health training programme to boost psychological decentering in adolescents was developed. The structure of this programme will be discussed, along with an on-going randomized controlled trial investigating its impact on the spontaneous use of decentering skills, as well as symptoms of anxiety and depression in at risk adolescents. The presentation will end with a discussion on how to integrate psychological decentering approaches into therapeutic settings, including example exercises that can be used with patients.

Emotion regulation as an active ingredient across interventions for depression and anxiety

Alexander R. Daros, Postdoctoral Fellow and Psychologist, Center for Addiction and Mental Health, Toronto, Ontario, Canada

Youth with elevated depression and anxiety symptoms use avoidant emotion regulation (ER) strategies (e.g., rumination, avoidance, and suppression) more often than engagement ER strategies (e.g., cognitive reappraisal, acceptance, and problem-solving). This problematic selection of ER strategies could lead to the development of depressive and anxiety disorders and/or also maintain these conditions once they begin. Psychological treatments appear to improve ER strategy selection along with depression and anxiety symptoms, regardless of their theoretical orientation. Thus, ER strategy selection has garnered support as a potential active ingredient in psychological treatments for depression and anxiety.

In this talk, I discuss one way to operationalize ER strategy selection and how that can be used to assess their role as an active ingredient in research and in practice. Then I will provide some evidence about the role of ER strategy selection in psychological treatment from a comprehensive multivariate meta-analysis in youth and an experimental study involving longitudinal analysis in adults. In both studies, I examined whether decreases in avoidant ER strategies and increases in engagement ER strategies would be associated with depression and anxiety treatment outcomes. The experimental study sought to extend the meta-analytic findings by focusing on within-person changes in ER strategies over the course of psychotherapy while controlling for between-person changes and cognitive therapy skills. Some similarities and differences were found across the two studies; however, results generally supported my hypothesis and support future research to elucidate ER strategy selection as mediators of treatment.

From these findings, I will discuss how we can broaden support for ER strategies as an active ingredient, including the relevant time points of intervention (e.g., prevention, treatment, and relapse prevention). Moreover, I will discuss how ER strategies have already been integrated into clinical practice through multiple psychological interventions (e.g., cognitive behavioral therapy; dialectical behavior

therapy; acceptance and commitment therapy). I integrate valuable insights from a group of youth who provided feedback on our meta-analysis project and contributed to the interpretation of findings from my research and the potential integration into practice.

Symposium 43 - Sala Merce Rodoreda

CBT for psychosis – new treatment targets, mechanisms, and techniques.

Chair: Felicity Waite, University of Oxford, UK

The meaning in grandiose delusions

Louise Isham, Bao Sheng Loe, Alice Hicks, Natalie Wilson, Jessica C. Bird, Richard P. Bentall, Daniel Freeman, University of Oxford, UK

Background: The content of grandiose delusions is likely to be highly meaningful. The meaning – for example, providing a sense of purpose – is likely to prove a key factor in the belief taking hold. We set out to empirically define the experience of meaning in grandiose beliefs and the sources of this meaning. We tested whether greater severity of grandiosity in clinical and non-clinical populations is associated with higher levels of meaning.

Methods: From March 2021 to March 2022, 798 patients with psychosis were recruited from NHS trusts and from August 2019 to November 2020, 13,323 non-clinical participants were recruited online. Participants completed two large item pools: one assessing the experience of meaning in grandiose delusions (Grandiosity Meaning Measure; gram) and one assessing the sources of meaning (Grandiosity Meaning Measure – Sources; grams). The gram and grams were developed using exploratory (EFA) and confirmatory (CFA) factor analysis. Structural equation modelling was used to test the associations of meaning with the severity of grandiosity.

Outcomes: The experience of meaning in relation to grandiose beliefs had three components: coherence, purpose, and significance. The sources of meaning had seven components: positive social perceptions, spirituality, overcoming adversity, confidence in self amongst others, greater good, supporting loved ones, and happiness. The measurement of meaning was invariant across clinical and non-clinical populations. In the clinical population, each person typically endorsed multiple meanings and sources of meaning for the grandiose delusion. Meaning in grandiose delusions was strongly associated with severity of grandiosity, explaining 53.5% of variance, and with belief conviction in delusional beliefs, explaining 27.4% of variance. Grandiosity was especially associated with sense of purpose, and grandiose belief conviction with coherence. Similar findings were found for the non-clinical population.

Interpretation: Meaning is inherently tied to grandiose delusions. A framework is provided for clinical and research practice to understand the different types of meaning of grandiosity. The framework is likely to have clinical use in helping patients find sources of equivalent meaning from other areas of their lives.

Funding: National Institute of Health Research

Voices of paranoia: differences in severity, cognitive processes, and cooccurrence of other delusion subtypes between paranoid delusions and persecutory voices

Mar Rus-Calafell^{1,2,3}, Frederic Berg¹, Thomas Ward^{4,5}, Amy Hardy^{4,5}, Nicola Colett^{2,3}, Alison McGourty^{6,7}, Catarina Sacadura^{6,7}, Helen Harding⁵, Richard Emsley⁸, Kathryn Greenwood⁷, David Fowler⁷, Elizabeth Kuipers⁴, Paul Bebbington⁹, Daniel Freeman^{2,3}, Philippa Garety^{4,5}

¹ Mental Health Research and Treatment Centre, Faculty of Psychology, Ruhr-Universität Bochum, Bochum, Germany, ² Department of Psychiatry, Oxford University, Oxford, UK, ³ Oxford Health NHS Foundation Trust, Oxford, UK, ⁴ Department of Psychology, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK, ⁵ South London and Maudsley NHS Foundation Trust, London, UK, ⁶ Sussex Partnership NHS Foundation Trust, Worthing, UK, ⁷ School of Psychology, University of Sussex, Brighton, UK, ⁸ Department of Biostatistics and Health Informatics, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK, ⁹ Division of Psychiatry, University College London, London, UK

Cognitive models of psychosis consider that appraisals of unusual experiences play a key role on the formation and maintenance of delusional persecutory beliefs. Individuals with persecutory delusions strongly believe that others are deliberately intending to harm them, so they feel under threat and unsafe. Often this perceived threat is circumscribed to one or several individuals, such as strangers, family relatives, friends, or even everybody, but in some instances paranoid thoughts are also bound to auditory verbal hallucinations (AVHs) or voices. Up to this date, no large-scale studies have investigated the differences in severity and psychological processes between these two types of clinical presentations. The present study aimed to examine differences in paranoia severity, worry, presence of other delusion subtypes, and reasoning biases (i.e., JTC and belief flexibility) between those with generalised paranoia (in absence of voices) and those with paranoia also bound to voices. The study's sample (n=145) was a subset of participants who were recruited for the SlowMo therapy trial (Garety et al., 2021), an eight-session digitally supported cognitive-behavioural intervention targeting reasoning biases for people with persecutory delusions. A series of unpaired t-tests (or equivalent non-parametric tests) were computed to assess differences between groups for continuous variables. Differences in the distribution of participants on categorical variables were tested using χ^2 -tests. Overall, results showed significant differences in severity and cooccurrence of other delusions subtypes between the 2 groups. Comparisons between groups regarding cognitive processes yielded diverse results. The findings of the study have implications for etiology and for the development of targeted cognitive-behavioural based treatment strategies.

Body image concerns in patients with psychosis: a new treatment target.

Felicity Waite, University of Oxford, UK

Given the high rates of obesity in patients with psychosis, body image concerns are a common clinical problem. They are distressing and may fuel other mental health problems. For example, persecutory delusions build on feelings of vulnerability that arise from negative views of the self. Yet they are often overlooked in clinical practice. In this talk, we will learn from qualitative studies of patient accounts, consider the interaction of body image concerns with psychotic experiences, and identify strategies for clinical practice.

Initial investigations of the potential importance of body image concerns in the occurrence and content of psychotic experiences will be included. This will include epidemiological data, qualitative analyses, and empirical studies with patients. Data from an epidemiological analysis of over 15,000 participants identifies the association between concerns regarding weight and paranoia. In the qualitative studies we learn from patient accounts which detail the psychological journey of weight gain. Patients describe the experience of rapid weight

gain, following antipsychotic medication use, which compounds a loss of confidence and self-worth. In this context appearance concerns arise, with further consequences on persecutory fears, content of voices, and even episodes of deliberate self-harm and suicidal ideation. Yet appearance-related distress is broader than weight gain alone and includes dissatisfaction with skin, clothing, and attractiveness. These appearance concerns leave patients feeling negative towards themselves, inferior to those around them, and vulnerable to threat from others. These qualitative accounts are consistent with the empirical data examining the relationship between body image concerns and psychotic experiences, including persecutory beliefs and voices. Voice content regarding appearance is common and for many patients occurs on a daily basis. Derogatory comments about appearance are associated with severity, distress, and disruption. Finally, new empirical data in patients with persecutory delusions examines the role of body image concerns in paranoia. Patients with current persecutory delusions have low body esteem. Body image concerns are associated with poorer physical and mental health, including more severe psychotic experiences. Improving body image for patients with psychosis is a plausible target of intervention, with the potential to result in a wide range of benefits.

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Beliefs about the self and others in paranoia.

Poppy Brown, University of Oxford, UK

Compassionate imagery may be one method of targeting the negative beliefs about the self and others that paranoid thoughts build upon. This talk presents two interventionist-causal studies testing this hypothesis, one targeting compassion for the self and one targeting compassion for others. These studies form part of the programme of work testing the manipulation of putative causal factors in paranoia, in individuals from the general population scoring highly for current paranoid ideation. Two-hundred such individuals were recruited. The studies used a randomised controlled experimental design, with embedded tests for mediation. Study one targeted self-compassion via creation of a compassionate coach image. Study two targeted compassion for others via loving kindness meditation. Individuals repeatedly entered neutral virtual reality social environments and changes in compassion and paranoia were assessed. Study one showed that, in comparison to the control group, those who practised compassionate coach imagery significantly increased in self-compassion (group difference=2.12, C.I.=1.57;2.67, $p<0.0001$, $d=1.4$) and decreased in paranoia (group difference=-1.73, C.I.=-2.48;-0.98, $p<0.0001$, $d=0.8$). Mediation analysis indicated that change in self-compassion explained 57% of the change in paranoia. Study two showed that in comparison to the control group, those who practised loving kindness meditation significantly increased their compassion for others (group difference=3.26, 95% C.I.: 2.72;3.80, $p<0.0001$, $d=1.7$), and decreased their paranoia (group difference=-1.70, C.I.=-2.51;-0.89, $p<0.0001$, $d=0.8$). Change in compassion for others explained 63% of the change in paranoia. Together, the studies suggest that targeting negative beliefs about the self and others using compassionate imagery causes reductions in paranoia, which may have benefits in clinical populations.

Post traumatic mechanisms in voice hearing

Eva Tolmeijer Department of Clinical Psychology, VU University and Amsterdam Public Health Research, van der Boechorststraat 7, 1081 BT Amsterdam, the Netherlands and Parnassia Psychiatric Institute, Zoutkeetsingel 40, 2512 HN The Hague, the Netherlands

Background: Post-traumatic mechanisms are theorised to contribute to voice-hearing in people with psychosis and a history of trauma. Phenomenological links between trauma and voices support this hypothesis, as they suggest post-traumatic processes contribute to the content of, and relationships with, voices. However, research has included small samples and lacked theory-based comprehensive assessments.

Method: Post-traumatic stress symptoms and beliefs about the causes of voices were assessed in 125 people (Tolmeijer et al., 2021) who were taking part in the Temstem trial investigating an app for people with frequent and distressing voices (Jongeneel et al., 2018). The relationship between trauma and voices was also assessed in a smaller group ($n = 73$) of people who experienced trauma prior to voice-hearing (van den Berg et al., 2022). Three types of trauma-voice links were assessed by both participants and researchers using a structured coding frame. Three types of links were assessed: relational (similar interaction with/ response to, voice and trauma); content (voice and trauma content are exactly the same); and identity (voice identity is the same as perpetrator).

Results: Most participants reported trauma in the past (97%) and PTSD symptoms were prevalent. Traumatic experiences were the most endorsed causal factor of voice-hearing (64%), followed by distress (62%). Beliefs about biological causes, including drug use (22%), were least endorsed. Those who experienced more traumatic events and more PTSD symptoms were more likely to endorse trauma as a causal factor of voice-hearing ($R^2=0.38$). Participants and researchers also frequently reported trauma-voice links (80%, 66%, respectively), most frequently relational links (75%, 64%), followed by content (60%, 25%) and identity links (51%, 22%).

Conclusion: Trauma appears to be a strong shaping force for voice content and its psychological impact. Many people also have trauma-explanations for their voices, which suggests they are likely willing to engage in trauma-informed or trauma focused therapies. The findings highlight the importance of collaboratively developing psychological case formulations of voices to understand phenomenological links between trauma and voices, which can be addressed in therapy.

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Symposium 44

New directions in examining post-traumatic symptoms following Non-criterion A Events.

Convenor: Roy Azoulay, Bar-Ilan, Ramat Gan, Israel

Chair: Eva Gilboa-Schechtman, Bar-Ilan, Ramat Gan, Israel

The role of social connection on the experience of COVID-19 related posttraumatic growth and stress

Marcela Matos et al., University of Coimbra, Center for Research in Neuropsychology and Cognitive Behavioral Intervention (CINEICC), Coimbra, Portugal.

Historically social connection has been an important way through which humans have coped with large-scale threatening events. In the context of the COVID-19 pandemic, lockdowns have deprived people of major sources of social support and coping, with others representing threats. Hence, a major stressor during the pandemic has been a sense of social disconnection and loneliness. This study explores how people's experience of compassion and feeling socially safe and connected, in contrast to feeling socially disconnected, lonely and fearful of compassion, effects the impact of perceived threat of COVID-19 on post-traumatic growth and post-traumatic stress. Adult participants from the general population (N = 4057) across 21 countries worldwide, completed self-report measures of social connection (compassion for self, from others, for others; social safeness), social disconnection (fears of compassion for self, from others, for others; loneliness), perceived threat of COVID-19, post-traumatic growth and traumatic stress. Perceived threat of COVID-19 predicted increased post-traumatic growth and traumatic stress. Social connection (compassion and social safeness) predicted higher post-traumatic growth and traumatic stress, whereas social disconnection (fears of compassion and loneliness) predicted increased traumatic symptoms only. Social connection heightened the impact of perceived threat of COVID-19 on post-traumatic growth, while social disconnection weakened this impact. Social disconnection magnified the impact of the perceived threat of COVID-19 on traumatic stress. These effects were consistent across all countries. Social connection is key to how people adapt and cope with the worldwide COVID-19 crisis and may facilitate post-traumatic growth in the context of the threat experienced during the pandemic. In contrast, social disconnection increases vulnerability to develop post-traumatic stress in this threatening context. Public health and Government organizations could implement interventions to foster compassion and feelings of social safeness and reduce experiences of social disconnection, thus promoting growth, resilience and mental wellbeing during and following the pandemic.

The traumatic impact of exclusion in social anxiety

Noa Perets, Roy Azoulay, Eva-Gilboa-Schechtman, Bar-Ilan, Ramat Gan, Israel

Exclusion events were found to engender robust consequences and are postulated to be especially distressing for individuals high in social anxiety (SA), resulting in enhanced post-traumatic distress (PTD). Females and males differ in their attainment of their social goals. Due to the greater importance females place on affiliative bonds, along with their frequent use of exclusion as a competitive strategy, females are postulated to be more impacted by exclusion. The main aim of this research was to identify factors affecting the strength of the SA-PTD association following exclusion. *First*, we hypothesized that SA will be associated with exclusion-PTD above concurrent depression severity, centrality of event, and the events' rated emotional intensity. *Second*, we predicted that gender will interact with SA to predict PTD, so that these associations will be more pronounced for women when compared with men. *Third*, we postulated that the gender of the main excluder(s) will interact with SA in predicting PTD - so that both associations will be stronger in instances of intra-female exclusion when compared with intra-men and/ or inter-gender exclusion events. To this end, we assessed the impact of exclusion in an online study (total N=343) in which participants were asked to recall an event in which they felt excluded. Participants then answered questions regarding the event including the gender of the excluder(s). They filled-out questionnaires regarding the centrality of event, emotional intensity PTD and measures of depression and SA severity. In line with evolutionary theories a main effect for gender was found, such that females showed higher PTD when compared with males - following exclusion. Moreover, in line with our first hypothesis, results showed that SA was associated with PTD. However inconsistent with our prediction, SA did not interact with gender in predicting PTD. These findings provide additional empirical support for the association between social anxiety and post traumatic distress however, further research is needed to clarify the impact of gender.

The interactive effect of repertoire and cognitive flexibility on the tendency to develop PTSD symptoms in casualty notification officers

Shirly Moas, Bar-Ilan, Ramat Gan, Israel and Einat Levy-Gigi, Bar-Ilan University, Israel

The present study aims to test the effect of repeated traumatic exposure on daily functioning and the tendency to develop PTSD symptoms in a unique population of IDF Casualty Notification Officers (CNO), who are responsible for notifying families of the loss of their loved ones in their military service. We examine two possible moderators that may play a significant role in this relationship: repertoire and cognitive flexibility. The definition of repertoire is expanded to refer not only to the range of emotional reactions but also to the ability to hold a wide range of different self-representations. Cognitive flexibility is defined as the ability to apply the existing repertoire in accordance with the situational demands and to switch between different representations as the situation changes. The study will utilize a set of both well-validated and novel performance-based paradigms to evaluate repertoire and mental flexibility, as well as clinical interviews and self-report questionnaires to evaluate daily functioning and clinical symptoms. In the proposed talk, I will present pilot results from this study, suggesting that improvement in repertoire and cognitive flexibility may be used to buffer the deleterious consequences of repeated traumatic exposure.

A symptoms-network approach for comparing physical and social traumatic events

Roy Azoulay, Pinus*, Keshet, & Gilboa-Schechtman Bar-Ilan, Ramat Gan, Israel

A growing body of research indicates that social stressors may induce post-traumatic symptoms (PTS). Furthermore, PTS following social stressors were found to be equivalent in its magnitude and prevalence to PTS following physical stressors. However, it is not clear to what degree the structures of PTS following those types of stressors are similar. In the current study we used a symptoms-network approach to examine the differences between PTS structures following physical (n= 341) and social (n=502) traumas. We analyzed the PTS structures of individuals with elevated PTS levels (PDS>27) following physical and social traumas. Results did not reveal significant difference between

the symptoms-networks following the types of events, even when gender, social anxiety and depression severity were statistically controlled. These results will be discussed from the perspective of evolutionary theories and in light of the criterion A debate.

Symposium 45

Recent advances in international research in hoarding disorder

Chair: Volen Ivanov, Karolinska Institutet, Stockholm, Sweden

Recent advances in international research in hoarding disorder

Pino Alonso, Mar Puigalto, María Suñol, Carles Soriano-Mas, OCD Clinical and Research Unit. Department of Psychiatry, Hospital de Bellvitge, Barcelona (Spain)

Although some specific cognitive behavioral programs have shown to be effective in treating Hoarding Disorder (HD), the long-term response to such approaches is poorly understood and little is known about what factors might predict it. Pretreatment severity of hoarding, male gender, perfectionism, and comorbid social anxiety have been reported to be associated with worse long-term outcome in some but not all studies (1). Certain forms of coping, the degree of compliance with recommended homework, or readiness for change appear to influence the short-term response to CBT but their actual long-term influence is unknown (2). We aim to review current knowledge on predictors of short- and long-term response to CBT in HD and describe the long-term response to CBT in a sample of 23 patients with a DSM-5 diagnoses of Hoarding Disorder, assessed one year after completing a program of 20 weekly group CBT sessions at Bellvitge Hospital (Barcelona), and explore predictors of short and long-term outcome. In addition to sociodemographic and clinical predictors, we will explore possible biomarkers at the level of functional neuroimaging analyzing the correlations between patterns of brain activation in tasks of response inhibition, response switching and error processing and the response to behavior therapy in a subsample of 17 patients (3). Results will be compared with that from a sample of OCD patients treated by CBT to determine whether possible brain patterns associated with CBT response might constitute transdiagnostic biomarkers.

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Anosognosia for hoarding: clinical and neurocognitive correlates

Peter J. van Roessel,^{1,2} Cassandra Marzke,^{1,3} Andrea D. Varias,^{1,4} Pavithra Mukunda,¹ Sepehr Asgari,¹ Catherine Sanchez,¹ Hanyang Shen,³ Booil Jo,¹ Lisa A. Gunaydin,^{3,6} Leanne M. Williams^{1,2} and Carolyn I. Rodriguez^{1,7}

¹ Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA 94305, ² Sierra Pacific Mental Illness Research, Education, and Clinical Center (MIRECC), Veterans Affairs Palo Alto Health Care System, Palo Alto, CA 94304, ³ Department of Psychiatry and Behavioral Sciences, University of California San Francisco, San Francisco, CA 94143, ⁴ Touro University California College of Osteopathic Medicine, Vallejo, CA 94592, ⁵ Department of Epidemiology and Population Health, Stanford University School of Medicine, Stanford, CA 94305, ⁶ Kavli Institute for Fundamental Neuroscience, University of California San Francisco, San Francisco, CA 94143, ⁷ Veterans Affairs Palo Alto Health Care System, Palo Alto, CA 94304

In hoarding disorder, insight impairment is believed to contribute significantly to morbidity, yet assessment is confounded by the complexity of insight as a clinical construct and by the absence of objective behavioral measures. In this study, we explored anosognosia—or unawareness—as an aspect of insight impairment in hoarding disorder. We assessed whether individuals with hoarding disorder underreport their clutter, and whether the degree of underreporting correlates with clinical or neurocognitive behavioral measures. As a behavioral measure of clutter awareness, $n=71$ individuals with hoarding disorder rated their home clutter levels using a standardized assessment, the Clutter Image Rating (CIR). Home clutter levels were subsequently rated by trained independent evaluators (IEs), and a measure of the discrepancy between self and IE ratings (CIR-error) was explored as a proxy for anosognosia. The neurocognitive basis of anosognosia was evaluated in a substantial subset ($n=53$) of participants using a validated computer-based neurocognitive test battery. The relationships between CIR-error scores, clinical variables, and neurocognitive measures were examined using regression analysis.

Individuals with hoarding disorder underrated clutter severity relative to IEs. Anosognosia (CIR-error) was predicted by IE-assessed clutter severity, though not by self-reported clutter severity. Lower self-reported 'difficulty discarding' predicted greater CIR-error at a trend level, but no other demographic or clinical variable predicted CIR-error score. CIR-error was predicted by performance on neurocognitive tests of cognitive control and inhibition, specifically Go/No-Go and Stroop tests.

Clutter underreporting increases with objective severity of clutter, the cardinal symptom of hoarding disorder, suggesting that anosognosia may reflect core pathophysiology of the disorder. The neurocognitive predictors of clutter underreporting implicate frontoparietal circuits underlying response inhibition and attentional control, suggesting that anosognosia in hoarding disorder may share a neural basis with insight impairment in other neuropsychiatric disorders.

Correspondence to: Peter J. van Roessel M.D., Ph.D., Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, 401 Quarry Road, Stanford, CA 94305, USA, pvanroessel@stanford.edu

The impact of the coronavirus pandemic on people with problematic hoarding behaviors: results from an online survey in Sweden

Sofia Jägholm, Karolinska Institutet, Stockholm, Sweden

Co-authors: David Mataix-Cols, Lorena Fernández de la Cruz, Christian Rück, Erik Andersson, Susanne Guidetti, Volen Ivanov, Karolinska Institutet, Sweden

The impact of the coronavirus pandemic on people with problematic hoarding behaviors: results from an online survey in Sweden

Background: During the last years, the coronavirus pandemic has put pressure on individuals and societies around the world with early reports showing alarming effects on individuals with mental health disorders, including hoarding disorder (HD). This disorder is characterized by strong urges to save and difficulties discarding objects, resulting in cluttered homes of sufferers.

Aim: We wanted to assess self-reported effects of the pandemic on people with hoarding difficulties, via an online survey carried out in Sweden. We also aimed to increase knowledge about treatment preferences, acceptability of various treatments and the effect of the pandemic on treatment seeking attitudes.

Results: In the survey, 280 individuals with hoarding difficulties reported how the pandemic had impacted their general health and hoarding symptoms. Firstly, almost half of the participants reported increased suffering or impairment due to their hoarding symptoms throughout the pandemic. Half of the participants also reported that they had been sad, depressed, or unhappy during the pandemic. Additionally, a third reported that they had been very, or extremely worried sometime during the pandemic. Secondly, a vast majority of the participants reported not having received treatment for HD previously, and the most commonly reported prior treatment was outreach housing support provided by social services. Finally, around 15 % of the participants reported that the pandemic had affected their attitudes towards seeking treatment, mentioning increased insight as a common cause of increased motivation.

Conclusion: Many people with self-reported hoarding difficulties have experienced increased suffering during the pandemic, yet most still do not seek treatment despite increased motivation. Individuals who did seek treatment often received an intervention that so far lacks empirical support.

Symposium 46

Modifying interpretation biases for depression and anxiety – effects on stress reactivity and the role of expectancy effects

Chair: Belinda Platt, LMU University Hospital, Munich, Germany

Developing a cognitive bias modification training task for alleviating loneliness in young people

Laura Riddleston^a, Elizabeth Bangura^a, Olivia Gibson^a, Pamela Qualter^b, Jennifer Y. F. Lau^c

^aKing's College London, ^bThe University of Manchester, ^cQueen Mary University of London

Introduction: Loneliness is associated with long-term health problems and has become a major public health concern. Although it is particularly common in young people, few interventions tackling loneliness are available to this group. Theoretical models suggest that a cognitive bias towards threatening interpretations in social situations can lead to social avoidance and subsequently, persistent loneliness. Cognitive bias modification (CBM) training may therefore be a useful tool for alleviating youth loneliness, but this is yet to be explored. We aimed to (i) use a co-creation approach with young people to develop age-appropriate, ecologically valid materials to be used in a mental imagery enhanced CBM (CBM-I) training task targeting youth loneliness, and to deliver a single session of digital CBM-I training to discover its potential for (ii) reducing loneliness scores, and (iii) altering the hypothesised mechanisms of change (interpretation bias).

Methods: Discussions from individual interviews with fifteen 18-24-year-olds with experience of loneliness were used to develop 92 potential loneliness-inducing scenarios to use in the CBM-I training. These scenarios were then rated by a different sample of 18-24-year-olds (n=51) for relevance. A final sample of 18-24-year olds with high loneliness then received either online CBM-I (n=29) or control (n=27) training. Loneliness and interpretation bias were measured pre and post training.

Results: Although the study was not designed to statistically assess pre to post training changes in interpretation bias/loneliness, we noted a large reduction in social threat interpretations ($r = .62$) and increase in benign/positive interpretations ($r = .65$) in the CBM-I group. We observed a small increase in threat interpretations ($r = .21$), and no effect on benign/positive interpretations ($r = .05$), in the control group. Furthermore, there was a large decrease in loneliness in the CBM-I group ($r = .49$), whereas loneliness in the control group slightly increased ($r = .39$).

Discussion: These findings suggest that interpretation biases relevant to youth loneliness may be modifiable, and CBM-I training could reduce feelings of loneliness. This informs psychological models of loneliness, as well as the development of CBM-I interventions for targeting loneliness in young people.

Positive interpretation bias modification improved physiological (heart rate) recovery from stress

Elske Salemink, Department of Clinical Psychology, Utrecht University, the Netherlands, Bram Van Bockstaele, Research Institute of Child Development and Education, University of Amsterdam, Amsterdam, The Netherlands, Patrick Clarke, School of Psychology, Curtin University, Kent St, WA 6102, Bentley, Australia, Lies Notebaert, School of Psychological Science, University of Western Australia, 35 Stirling Highway, WA 6009 Crawley, Australia, Colin MacLeod, School of Psychological Science, University of Western Australia, 35 Stirling Highway, WA 6009 Crawley, Australia

Cognitive Bias Modification of Interpretation bias (CBM-I) training can affect stress reactivity, yet results have not been consistent. This inconsistency may be partly due to the reliance on self-reported subjective feelings to index stress reactivity. Most emotion theories postulate that subjective feelings are only one component of the emotional response, next to cognitions, physiological changes, and behaviours. These different emotion indices are typically only loosely related, and correlations between different measures are often small and inconsistent. Furthermore, self-report measures are also susceptible to demand effects. To obtain a better and more comprehensive picture of the effects of IBM on emotional reactivity (both the initial stress response as well as the recovery from stress), we also measured heart rate (HR) and heart rate variability (HRV) during and after a stress task. The inconsistency of CBM-I effects on stress reactivity might also be related to variability in the degree to which training procedures alter interpretation at a more automatic level, and a mismatch in available resources between the training and the stress situation. We tested this possibility by investigating whether imposing a cognitive load during CBM-I training would strengthen effects on both interpretation bias and emotional reactivity.

We trained 71 participants in a single session to interpret ambiguity either positively or negatively. Half of our participants did so while performing a cognitively demanding secondary task. We assessed the effects of these different training regimes on interpretation bias and both self-reported and physiological indices of stress reactivity.

Results indicated that positive and negative interpretation bias modification resulted in training-congruent changes in interpretation bias. There were no group differences in self-reported stress reactivity, but positive interpretation training did improve recovery from stress as indexed by the heart rate measurement. That is, while participants in the negative training group showed no decreasing HR during the recovery phase, participants in the positive training group had a significantly lower HR in the recovery phase than in the stress phase, suggesting faster recovery from stress. The addition of cognitive load during the training increased neither the induced interpretive change nor its emotional impact.

To conclude, adding cognitive load to CBM-I training did not strengthen training effects on interpretation bias or emotional reactivity. While we found no effects of CBM-I training on self-reported stress reactivity, but we did find evidence for improved physiological recovery from stress after positive IBM.

Efficacy of a smartphone-based Cognitive Bias Modification program for emotion regulation

Fanny Alexandra Dietel¹, Raphael Rupprecht², Alexander Mohammed Seriy², Malte Post², Matthias Berking³, & Ulrike Buhlmann²

¹ Ruhr-University Bochum and University of Muenster, Germany, ² University of Muenster, Germany, ³ Friedrich-Alexander Universität Erlangen, Germany

Objective: Previous research has identified maladaptive emotion regulation as a key factor in psychopathology. Thus, addressing emotion regulation via low-threshold digital interventions holds important therapeutic potential. Using a randomized crossover trial, we tested the efficacy of a novel smartphone application aiming to improve emotion regulation through psychoeducation and elements of interpretation bias modification and approach avoidance training.

Methods: Students reporting elevated stress were randomized to a one-week active intervention (including multi-session Cognitive Bias Modification program; n = 40), sham training (including multi-session swiping task; n = 36) or a waitlist (n = 25). Before and after the intervention, we assessed emotion regulation, interpretation bias, stress, depression, and anxiety. We further tested stress reactivity using an anagram task post-training.

Results: Results indicated that the active intervention, vs. the waitlist condition, improved maladaptive interpretation biases and psychopathological symptoms. However, sham training, vs. active intervention, showed substantial placebo effects.

Conclusion: These findings highlight the utility of the active intervention in reducing interpretation biases and psychopathological symptoms, including stress. However, future studies should disentangle specific mechanisms underlying the intervention's effects.

The influence of outcome expectancy effects on interpretation bias training in social anxiety: an experimental pilot study

Frommelt, Tonya¹, Platt, Belinda^{*1}, Wittekind, Charlotte.^{*2}

** Joint second authors: ¹ Department of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, LMU University Hospital Munich, Germany, ² Department of Clinical Psychology and Psychotherapy, LMU, Munich, Germany*

Background: Cognitive Bias Modification of Interpretations studies have shown positive effects on interpretation bias in both active interpretation bias training conditions and structurally similar control conditions. Outcome expectations have been suggested to contribute to these placebo effects. The goal of this experimental pilot study was to test the viability of an expectancy induction method and to determine whether this would exert effects on the efficacy of the Cognitive Bias Modification of Interpretations training.

Methods: Socially anxious individuals aged 18 years and older, received a single session (approx. 45 minutes) of either Cognitive Bias Modification of interpretation (CBM-I) or placebo training preceded by either a positive expectancy induction or no expectancy induction. While participants were kept blind to their group allocation, the experimenter and outcome assessor was not. The main outcome measures were the success of the expectancy induction and the effects of the expectancy induction and the training on interpretation bias. Social anxiety and emotional reactivity scores were also collected before and after the training but were not analysed.

Results: Twenty-two female and 12 male participants were randomly assigned to one of four conditions (interpretation bias training + high expectancy = 10, interpretation bias training + no expectancy = 8, placebo training + high expectancy = 11, placebo training + no expectancy = 5). Participants in the high expectancy condition gave higher ratings in their outcome expectations of the CBM-I training than participants in the no expectancy condition. Participants in the active training condition and participants in the high expectancy condition showed increases in positive interpretation bias and decreases in negative interpretation bias from pre to post training on the majority of measures, while participants in the placebo and no expectancy conditions showed no change.

Conclusions: These preliminary findings provide evidence that a positive effect of CBM-I trainings might at least partially be explained by higher outcome expectancies.

Symposium 47

Transdiagnostic to specific interventions: optimising and tailoring Acceptance and Commitment Therapy for specific disorders and clinical challenges

Chair: Trudie Chalder, Department of Psychological Medicine, King's College, London

Developing and optimising ACT-based interventions to support medication adherence

Sophie Green, Leeds Institute of Health Sciences, UK

We will discuss the development stages of two co-developed behavioural interventions designed to support medication adherence in the context of early stage breast cancer. The talk will outline the mixed methods approaches taken to involve key stakeholders in the development process, including patients, clinical psychologists, breast care nurses and oncologists. We will update on the progress of pilot trials evaluating both interventions, including a brief synopsis of the novel experimental approach taken to optimise one of the interventions.

Development of a novel, person-centred psychological intervention (ACT+) based on acceptance and commitment therapy to improve quality of life in patients living with and beyond cancer (Pre-recorded)

Shiela Donovan, Queen Mary University of London, UK

Shiela Donovan will present on the SURECAN (SURvivors' Rehabilitation Evaluation after CANcer) research programme, which aims to develop, pilot and evaluate a novel, person-centred psychological intervention based on Acceptance and Commitment Therapy (ACT) for people who have completed hospital-based treatment for cancer with curative intent but have low quality of life. The intervention is called "ACT Plus (+)" and it is designed to be integrated with support for exercise and work/meaningful occupation, in ways that are tailored to

each participant's personal values and goals. ACT+ is currently being evaluated in the UK in a full scale randomised controlled trial (n = 344). Quantitative and qualitative findings from the intervention development process will be presented.

Acceptance and Commitment Therapy (ACT) as an adjunct to usual care improved QoL for such patients as compared to usual care alone: results of a randomised controlled trial

Trudie Chalder, Department of Psychological Medicine, King's College, London.

Chronic muscle diseases (MD) are progressive and cause wasting and weakness in muscles and are associated with reduced quality of life (QoL). The ACTMuS trial examined whether Acceptance and Commitment Therapy (ACT) as an adjunct to usual care improved QoL for such patients as compared to usual care alone.

This two-arm, randomised, controlled trial recruited 155 patients with MD (Hospital and Depression Scale ≥ 8 for depression or ≥ 8 for anxiety). Participants were randomised to standard medical care (SMC) (n = 78) or to ACT in addition to SMC (n = 77), and were followed up to 9 weeks. The primary outcome was QoL, assessed by the Individualised Neuromuscular Quality of Life Questionnaire (INQoL), the average of five subscales, at 9-weeks.

138 people (89.0%) were followed up at 9-weeks. At all three time points, the adjusted group difference favoured the intervention group and was significant with moderate to large effect sizes. Secondary outcomes (mood, functional impairment, aspects of psychological flexibility) also showed significant differences between groups at week 9.

Conclusions: ACT in addition to usual care was effective in improving QoL and other psychological and social outcomes in patients

Mechanisms of change in the context of a trial: Acceptance and Commitment Therapy (ACT) as an adjunct to usual care compared to usual care alone:

Christopher Graham, Queen's University Belfast, Northern Ireland, UK

ACT treatment methods are specifically designed to engender a quality within behaviour known as 'psychological flexibility' - an open, aware and engaged approach to one's life. The ACTMUS randomised controlled trial of a guided self-help ACT for improving quality of life and mood in people with muscle diseases was designed to enable assessment of this proposed treatment 'mechanism of action'.

We randomised 155 people with muscle diseases to the ACT-guided self-help intervention or to usual care control group. We included three separate measures of psychological flexibility, each aligned to the aforementioned sub-processes comprising the psychological flexibility 'tri-flex': openness, captured with the Acceptance and Action Questionnaire II; awareness, captured with the Mindful Attention Awareness Scale and engagement, measured with the Committed Action Questionnaire. And these measures were administered with outcome measures at 3, 6, 9 weeks and 6 months, to enable evaluation of mediation.

Mixed effect models were used to examine change over time in the mediators and mediation effects.

We found that Acceptance and Action as well as awareness, captured with the Mindful Attention Awareness Scale mediated change in quality of life. Treatments will be further developed with a specific focus on these processes.

Symposium 48

Implementation and evaluation of evidence-based psychological treatment on psychiatric inpatient wards

Chair: Tobias Lundgren, Karolinska Institutet, Stockholm, Sweden

Transdiagnostic ultra-brief behavior therapy for psychiatric inpatients: A multiple-baseline single-case design

Mårten J Tyrberg and Lars Klintwall, Region Vastmanland - Uppsala University, Västerås, Sweden

There is a need to develop quick and transdiagnostic models for psychological treatment in psychiatric inpatient care. Transdiagnostic Ultra-Brief Behavior Therapy (TUBB) is an attempt to achieve this using three behavior analytic components (flexible clinical functional analysis, a simplified version of the lifeline exercise, and a maintenance formulation). This was tested using a single-case experimental design with three patients on a psychiatric ward, using an individual outcome measure called the Personal Questionnaire (PQ). During their stay on the ward, patients received between two and three 45-minute sessions, and results showed that all patients improved as measured with the PQ. Combined, the data indicated a significant effect of the intervention (Tau = 0.52; $p < .01$) with a medium effect size. The PQ proved to be easy to use by ward staff, and yielded data that were both stable and sensitive to change. Whether results generalize and are maintained into outpatient care remains to be investigated.

Acceptance and Commitment Therapy for inpatients with psychosis –an acceptability and feasibility single case AB designed study

Thomas Parling, Karolinska Institutet, Stockholm, Sweden

More research on psychological treatments for psychosis in the inpatient setting is needed. Acceptance and Commitment Therapy for psychosis (ACTp) is a diagnose specific adaptation of the transdiagnostic ACT treatment model which has shown promising results in patients with psychosis. The aim was to explore treatment effects of ACTp on inpatients with psychosis on symptoms, level of functioning, level of activity, psychological flexibility, health-related quality of life, valued living, and to explore the acceptability and feasibility of ACTp. Twelve inpatients with psychosis were treated with 3–10 daily sessions of ACTp in a non-concurrent single case AB design with additional pre-post and mid-measures. We calculated non-overlap of all pairs (NAP) in daily measures, and reliable change index (RCI), and clinical significance in pre-post measures. Half of the participants improved significantly on health-related quality of life and depression in *daily* measures and on depression and anxiety in *pre-post* measures. ACTp was quite acceptable and recruitment and the deliverance of therapy in the inpatient setting was feasible. In the present study, participants found the ACTp treatment to be comprehensive and helpful. Recruitment and treatment of inpatients were feasible, however, since most participants were discharged before ACTp protocol was completed, fewer sessions or having sessions more frequently needs further investigation. Daily measurement showed a significant improvement in health-related quality of life and depression for a majority of the participants.

Value-based behavioural activation in inpatient psychiatric care, an evaluation of a controlled before-after study

Johan Holmberg, Karolinska Institutet, Stockholm, Sweden

Research on psychological treatment delivered within the context of inpatient psychiatric care show behavioural activation to have a small but significant effect on levels of depression compared to usual care or structured pharmacological treatment. Although, evidence from systematic reviews is inconclusive, and more research is needed. In addition to possible effects of interventions in inpatient psychiatric care, studies of patients' experiences from care show a need to improve the treatment context. Patients report that a major part of their time are spent alone without any planned activities, and ratings of perceived distress and reward related to specific activities shows that time spent alone are reported as more distressing and with less reward compared to time spent in activities and with staff.

The present study evaluated the effect of a novel intervention based on Cognitive Behavioural Therapy (CBT) and Acceptance and Commitment Therapy (ACT), in a Controlled Before-After design (CBA). It focused on value-based behavioural activation in a manualized, short series of structured sessions, which were delivered by nurses and assistant nurses who received education on the content of the manual and subsequent supervision on their work with patients for four months. Effects of the intervention were evaluated with self-report questionnaires measuring levels of activity (Behavioural Activation for Depression Scale), depression (Patient Health Questionnaire-9), anxiety (Generalized Anxiety Disorder-7), and health-related quality of life (EQ-5D).

Preliminary results from these initial evaluations of effects of the intervention and conclusions from the study will be presented at the EABCT congress (European Association for Behavioural and Cognitive Therapies) held in 2022 in Barcelona, Spain.

Symposium 49

Current contributions and future prospects of personalization for CBT research and clinical practice

Chair: *Claudi Bockting, Amsterdam UMC, University of Amsterdam, the Netherlands*

The prospects of using individual participant data to personalise psychological relapse prevention interventions in recurrent depression

Josefien J. F. Breedvelt, National Centre for Social Research, London, UK and on behalf of the International Taskforce for Relapse Prevention in Depression (itfra.org)

One of the potential advances that can be made in relapse prevention research for depression is the personalisation of psychological interventions. CBT based psychological interventions (for example, Mindfulness-Based Cognitive Therapy (MBCT), Preventative Cognitive Therapy (PCT)) can be effective in reducing the risk of relapse among people with recurrent depression. They can be delivered on their own, alongside antidepressants or while tapering antidepressants. Potential advances in personalisation can be made by identifying which psychological intervention works best for whom and whether or not this should be in combination with antidepressants. Individual Participant Data Meta-Analysis (IPDMA) is an analytical technique that can help to study these questions.

Results from our efforts on collecting and analysing IPDMA from all available RCTs worldwide comparing psychological interventions to control in relapse prevention for depression will be presented. This includes a recently published IPDMA that showed that psychological interventions (MBCT and PCT) delivered while tapering can be an equally effective alternative to continuing antidepressants, regardless of clinical risk factors. Further results from a large IPDMA assessing predictors and moderators for those receiving a psychological intervention (PCT, MBCT, CBT, Continuation Cognitive Therapy) with treatment as usual versus control will be presented. In addition, we present preliminary results from computational methods to more accurately predict relapse risk. Implications for future research and clinical practice will be provided.

For whom does it work? Trait-like moderators of between- and within-patient effects of positive and negative affect in an Internet-based treatment for emotional disorders

Javier Fernández-Álvarez^{1,2}, Amanda Díaz-García³, Juan Martín Gómez Penedo⁴, Alberto González Robles³, Cristina Botella¹

¹University Jaume I, Dpto. Psicología Básica, Clínica y Psicobiología, Castellón, Spain, ²Department of Psychology, University of Bern, Bern, Switzerland, ³University of Zaragoza, Department of Psychology and Sociology, Zaragoza, Spain, ⁴CONICET Universidad de Buenos Aires, Facultad de Psicología, Buenos Aires, Argentina

Objective: Mounting research demonstrates the efficacy for emotional disorders (ED). Nevertheless, few studies have examined how they work and for whom. Disentangling between and within patients' effects of positive and negative affect (PA; NA) on outcome may shed light on the black box of psychological treatments.

Methods: 144 diagnosed depressed or anxious patients underwent 12 or 16 modules of a transdiagnostic Internet-based protocol for ED. After completing each module, all the patients filled out the Positive and Negative Affect Schedule (PANAS), the Overall Anxiety Severity and Impairment Scale (OASIS), and the Overall Depression Severity and Impairment Scale (ODSIS). Two-level hierarchical lineal models were implemented in order to account for the nested nature of the data (i.e., repeated measures nested within patients).

Results: Both high PA and low NA were associated with less severe depressive and anxious symptomatology during the treatment.

Multilevel analysis showed significant between-patient effects and within-patients of both PA and NA on anxiety and depression symptoms. Based on these significant effects, results of analyses testing moderators will be presented, including personality, quality of life, expectation of treatment and symptom severity.

Discussion: Evidence regarding either main effects of the proposed moderators and/or their interactions with the between- and within-patient effects components of PA and NA will represent important findings in order to personalize future treatments of ED. The results will be discussed in terms of implications for clinical decision-making.

Effects of diverse relapse prevention strategies on temporal affect and emotional dynamics and its impact on depressive relapse using network analysis: a randomized controlled trial

Junus M van der Wal^{1,2,3}, JMB Haslbeck⁴, C. Slofstra⁵, N.S. Klein⁶, T.F. Blanken⁴, M.K. Deserno⁴, A. Lok^{1,2}, L. F. Bringmann⁷, MH Nauta⁶, CL Bockting^{1,2}

¹: Amsterdam UMC, location AMC, Department of Psychiatry, Amsterdam, the Netherlands, ²: Centre for Urban Mental Health, University of Amsterdam, Amsterdam, the Netherlands, ³: Amsterdam UMC, location AMC, Department of Public Health, Amsterdam, the Netherlands, ⁴: University of Amsterdam, Department of Psychological Methods, Amsterdam, the Netherlands, ⁵: Lentis Research, Lentis, Groningen, Netherlands, ⁶: Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, the Netherlands, ⁷: Department of Psychometrics and Statistic, University of Groningen

Relapse rates in major depressive disorder (MDD) are unacceptably high, despite evidence-based pharmacological (continuation of antidepressants; ADM) and psychological (Preventive Cognitive Therapy [PCT] and Mindfulness-Based Cognitive Therapy [MBCT]) relapse prevention strategies. Suboptimal affect regulation is often suggested to predict relapse, and thus a potential target for relapse prevention. Nonetheless, contradicting hypotheses have been described, postulating both increased affect fluctuation and decreased fluctuation (i.e., inertia) as predictors of MDD relapse, possibly representing individual differences. Moreover, little is known on how different relapse prevention strategies impact affect fluctuation and (changes in) affect and emotional dynamics over time in relation to relapse. In this talk, I will present results of an experience sampling methodology (ESM) study (n = 42 remitted recurrently depressed individuals), conducted alongside a randomized controlled trial (RCT), in which we explored whether different measures of affect fluctuation (i.e. within-person variance [WPV], autocorrelation [AC], and root mean squared successive difference [RMSSD]) or changes in affect interactions over time as approximated by temporal network analysis were: (I) prospectively predictive of MDD relapse and (II) were differentially impacted by different relapse prevention strategies in a randomized setting (including a treatment-as-usual control group). The ESM data in this study was collected alongside an RCT that compared the efficacy of: (I) tapering ADM while receiving PCT, (II) combining continuation of ADM with PCT, or (III) continuing ADM without PCT (treatment-as-usual control group) for the prevention of MDD relapse during 2-year follow-up. For all participants, we calculated fluctuations in fourteen individual affect scores and aggregated positive- and negative affect. Also, we applied temporal network analyses (specifically time-varying vector-autoregressive models, TV-VAR) to estimate change over time in the interactions between seven positive and negative affect states, and calculated the average change in network architecture over time per individual and at the group level (i.e., according to treatment condition and relapse status at follow-up). The resulting temporal affect networks show large individual differences in architecture across participants, irrespective of treatment condition or relapse status at follow-up. We detected no group-level differences in the rate of change in affect network architecture over time, nor was this predictive of (time to) relapse. None of the affect fluctuation measures were predictive of (time to) relapse, nor was there an interaction effect with treatment condition. Implications of these findings in the context of personalization in CBT research and in clinical practice will be discussed.

Development and pilot implementation of personalized, transdiagnostic, modular digital CBT

Zachary Cohen, University of California, Los Angeles, USA

The UCLA Screening and Treatment of Anxiety and Depression (STAND) Program uses precision and personalized approaches to provide individuals with the appropriate level of care (stratification) and the right treatment (treatment selection), tailored to their individual needs (treatment personalization), and at the right time (just-in-time adaptive interventions [JITAI]). Decisions for triaging and adapting level of care are based on presenting symptom severity and ongoing assessment (respectively). The system includes STAND Digital Therapy, a coach-supported program comprising a suite of evidence-based online therapy modules and smartphone tools to help prevent the onset of mental health problems, and to help individuals struggling with depression, worry, panic, social anxiety, trauma, and sleep dysregulation. Treatment is selected and tailored based on individuals presenting profiles (e.g., symptoms, comorbidity, chronotype), and assessment and feedback are personalized to help users draw insights into the dynamic relationship between technique/tool use and symptom change. In this talk, findings from a community college pilot and ongoing implementation (N>200) will be presented, focusing on opportunities and challenges for personalization related to digital mental health. The role of measurement-based care and feedback systems in developing precision approaches will be discussed, along with complexities related to generating data-driven systems for transdiagnostic and modular psychological therapies. The presentation will highlight the evolution of precision and personalized treatment from theory-based to data-informed and data-driven personalization.

Can the effect of alliance on outcome be increased by providing more contact? The case of alliance in cognitive behavioral therapy for irritable bowel syndrome

Sigal Zilcha-Mano, The Department of Psychology, University of Haifa, Gregory D. Gudleski, PhD

Division of Behavioral Medicine, Department of Medicine, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, USA, Jacques P. Barber, PhD, The Gordon F. Derner School of Psychology, Adelphi University, Jeffrey M. Lackner, PhD, Division of Behavioral Medicine, Department of Medicine, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo

All authors report no conflict of interest.

Trial Registration: ClinicalTrials.gov Identifier: NCT00738920

The alliance is one of the most consistent predictors of outcome across psychotherapies. Yet, most of the findings are correlational in nature. This study is the first to manipulate the contact with the therapist to investigate its effect on the ability of alliance to predict clients' subsequent self-efficacy. Analyses were conducted on the data of 436 clients with Rome III-diagnosis of irritable bowel syndrome (IBS), randomized to receive either cognitive behavioral therapy (CBT) in two contact intensity levels or educational control. One condition was standard CBT (S-CBT) including 10 sessions, the other was a largely home-based version with minimal therapist contact (MC-CBT) including 4 sessions. Findings show that in the S-CBT condition the alliance had a greater effect on clients' subsequent self-efficacy than in the MC-CBT. The findings suggest that in the context of alliance in CBT for IBS, the effect of alliance on subsequent client self-efficacy may be increased by providing more contact with the therapist.

Corresponding Author's Contact Information: Sigal Zilcha-Mano, Ph., Department of Psychology, University of Haifa, Mount Carmel, Haifa, 31905, Israel, E-mail: sigalzil@gmail.com

Symposium 50

New developments in depression and stress prevention across diverse at-risk child and Adolescent populations

Chair: *Sanne Rasing, Mental Health Institute GGZ Oost Brabant | Radboud University, the Netherlands*

A randomized controlled trial of a preventive intervention for the children of parents with depression: mid-term effects, mediators and moderators

**Johanna Löchner^{1,2}, *Belinda Platt¹, Kornelija Starman-Wöhrle¹, Keisuke Takano², Lina Engelmann, Alessandra Voggt¹, Fabian Loy¹, Mirjam Bley¹, Dana Winogradow¹, Stephanie Hämmerle¹, Esther Dammer, Inga Wermuth¹, Katharina Schmitt¹, Frans Oort³, Gerd Schulte-Körne⁴*

** Joint first-authors.*

¹Department of Child and Adolescent Psychiatry, University Hospital, Ludwig Maximilians-University, Munich, Germany, ²Department of Child and Adolescent Psychiatry, University Hospital, Eberhard-Karls-University, Tübingen, Germany, ³Department of Clinical Psychology and Psychotherapy, Ludwig Maximilians-University, Munich, Germany, ⁴Human Informatics and Interaction Research Institute (HIIRI), National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ⁵Institut für Therapieforschung, Munich, Germany, ⁶Universiteit van Amsterdam, Faculty of Social and Behavioral Sciences, Amsterdam, Netherlands

Objective: Parental depression is one of the biggest risk factors for youth depression. This parallel randomised controlled trial evaluates the effectiveness of the German version of the family-group cognitive-behavioral preventive intervention (GuG Auf!) for children of depressed parents. Registration: The trial was registered on ClinicalTrials.gov ([NCT02115880](https://clinicaltrials.gov/ct2/show/study/NCT02115880)) and study protocol published elsewhere (Platt et al., 2015).

Method: The study took place at a German University Hospital (2018). Families were included if a parent had experienced depression and children (aged 8-17 years) had no mental health disorder. 100 families (135 children) were randomly allocated (50:50 blockwise allocation; stratified by child age and parental depression) to the 12-session family- and group-based intervention (EG) or no intervention (CG). Outcomes were assessed 0-(T1), 6-(T2), 12-(T3) and 15-months(T4) after baseline. All analyses were conducted on an intention-to-treat basis. Primary outcome (onset of depression at T4) was assessed with standardized (blinded) clinical interviews. Secondary (unblinded) outcome was risk of depression (at T2-T4) indicated by symptoms of depression and internalising and externalising disorders. Potential mediators were emotion regulation, attributional style, knowledge of depression and parenting style. Potential moderators were parental depression severity and negative life events.

Results: The frequencies of mental disorder were too low (EG = 2/32, CG = 5/31) for analysis of the primary outcome. The intervention significantly reduced self-reported internalising symptoms at T3 ($p = .027$, $d = -0.45$) and T4 ($p = .035$, $d = -0.44$), while both groups showed significant reduced depressive symptoms ($p = .029$, $d = -0.44$). Cognitive problem-solving and negative parenting emerged as mediators. No adverse events were observed.

Conclusions: GuG-Auf is effective in reducing children's risk of depression in the mid-term. Despite some limitations in the generalizability, this evidence-based intervention makes an important contribution to reducing the burden of youth depression.

I-PREGNO: An mHealth-enhanced intervention for the prevention of psychosocial problems and unhealthy weight gain in vulnerable families during pregnancy and the postpartum period

Lea Vogel¹, Tanja Färber², Caroline Seiferth², Jörg Wolstein², Ansgar Opitz¹, Christoph Liel¹, Ingrid Hölzl³, Tom Deliens⁴, Vicka Versele⁴, Johanna Löchner⁵, Mireille van Poppel³

¹National Centre for Early Prevention, German Youth Institute, Department of Family and Family Policies, Munich, Germany, ²Department of Psychology, University of Bamberg, Bamberg, Germany, ³Institute of Human Movement Science, Sport and Health, University of Graz, Graz, Austria, ⁴Department of Movement and Sport Sciences, Faculty of Physical Education and Physiotherapy, Vrije Universiteit Brussel, Brussels, Belgium, ⁵Department of Child and Adolescent Psychiatry, University Hospital, Eberhard-Karls-University, Tübingen, Germany

Objective: The transition to parenthood represents a critical period of time with physical, psychosocial, and behavioural changes and challenges for parents that often increase stress in families. Furthermore, the transition to parenthood is a crucial phase for the development of unhealthy weight gain that increases the risk of obesity in parents. In recent years, in the hope of reaching more people, especially those who cannot be reached through traditional counselling approaches, an increasing number of eHealth interventions have emerged. The research project I-PREGNO aims to develop and evaluate a mobile app-based intervention for the prevention of unhealthy weight gain and psychosocial problems tailored to the needs of vulnerable families during pregnancy and the postpartum period.

Method. The I-PREGNO app was developed within a participatory research approach, integrating feedback from two rounds of focus groups with professionals and families. The app will be evaluated in a three-arm cluster randomised controlled trial in Germany and Austria. $N = 500$ families will be recruited and randomised to the i) treatment as usual (TAU), ii) TAU and self-help app, or iii) TAU and blended counselling condition receiving the app content and additional support by midwives, family midwives or family nurses. The primary outcome variable is the Body Mass Index (BMI) of parents. Secondary outcome variables are parental stress and depressive symptoms. Potential mediators are difficulties in emotion regulation, self-efficacy, eating behaviour and physical activity. Outcomes will be assessed at baseline (t_0) and 3-months (post intervention, t_1), 6-months (t_2), and 12 months (t_3) after baseline.

Results. We expect higher acceptance and better outcomes on BMI and parental psychosocial stress in the blended counselling condition than in the TAU and self-help app and TAU conditions.

Discussion. The I-PREGNO app is an mhealth intervention for the prevention of psychosocial stress and unhealthy weight gain in vulnerable families during the transition to parenthood. It was developed by an interdisciplinary research team using a participatory research approach. If shown to be successful in reaching its stated goals, this low-threshold intervention offers the opportunity to expand the range of care for vulnerable families in transition to parenthood and to improve long-term family health.

Strong Teens and Resilient Minds (STORM): evaluation of a depression prevention approach in school communities
Sanne Rasing^{1,2}, Karlijn de Jonge-Heesen³, Kim van Ettehoven^{1,4}, Ad Vermulst¹, Ron Scholte², Rutger Engels⁴ & Daan Creemers^{1,2}

¹ Child & Adolescent Psychiatry, GGZ Oost Brabant, The Netherlands, ² Behavioural Science Institute, Radboud University, The Netherlands, ³ 113 Suicideprevention, The Netherlands, ⁴ Erasmus School of Social and Behavioural Sciences, Erasmus University Rotterdam, The Netherlands

Adolescent depression is a global mental health concern because of the association with recurrent episodes in adulthood, the negative impact on several personal domains, and the association with other psychopathology. Although depression is the most prevalent mental disorder among adolescents, symptoms are difficult to observe and therefore a depression often remain unidentified. Identification of high-risk adolescents, and effective prevention in an early stage is necessary in order to prevent the development of a depression. Indicated prevention programs based at Cognitive Behavior Therapy (CBT) have shown to be successful in reducing depressive symptoms in adolescents. For adolescents, school-based prevention has shown to be feasible. Yet, there is limited evidence for the real life effectiveness of depression prevention, as implementation seems to suffer from the large gap that exists between research and practice. Therefore, we examined the effectiveness of depression prevention for high risk adolescents when fully implemented in school communities. Over 5000 adolescents were screened for elevated depressive symptoms in second grade of secondary schools; 130 adolescents aged between 12 and 16 years old were randomly assigned to the experimental- (CBT prevention program Op Volle Kracht) or control condition (psycho education). Adolescents and their parents were monitored on several outcomes up to 24 months after the intervention. The results showed that depressive symptoms decreased over time and this decrease was larger for the intervention condition. This indicates that CBT based prevention might ensure sustainable outcomes when implemented in school communities. However, not all adolescents and parents feel the need to participate in prevention. Despite inviting all adolescents with elevated depressive symptoms to take part in the program, one third actually did. With continued and still ongoing research focused on closing the gap between early detection and participation rate in the preventive intervention, we aim to increase benefit from prevention. Summarizing, our findings demonstrate the potential of implementing school-based depression prevention, but also show that further research is needed.

Preventing youth depression through an internet-based primary care intervention: review of outcomes and next steps in intervention refinement and implementation

Tracy R. G. Gladstone, PhD & Benjamin Van Voorhees MD, MPH, Wellesley College, USA

We developed a primary care intervention, CATCH-IT, to evaluate a self-guided, online approach to depression prevention and conducted a randomized clinical trial comparing CATCH-IT to a general health education Internet intervention. CATCH-IT includes an Internet-based parent program incorporating psycho-educational material about youth depression. The Health Education (HE) model was developed based on the current well-child curriculum used for primary care visits.

Method: Participants were 13-18 (Mean age=15.4, SD=1.5) with histories of depression, current subsyndromal depressive symptoms or both, recruited from N=8 health systems in Chicago and Boston. We randomized N=369 adolescents into CATCH-IT or HE. Seventy-seven adolescents identified as Hispanic, and N=94 identified as non-Hispanic African American. Sixty percent of mothers and 53% of fathers had earned a college degree, and 61% of the parents were married. Assessments were conducted at baseline and 2, 6, 12, 18 and 24 months. Adolescents completed the Centers for Epidemiological Studies Depression scale (CESD) and the Screen for Child Anxiety Related Emotional Disorders (SCARED) at each time point; adolescents and parents participated in a diagnostic interview, the Schedule for Affective Disorders and Schizophrenia for SchoolAge Children Epidemiological Version (K-SADS-PL), at baseline and a follow-up diagnostic interview, the Longitudinal Interval Follow-up Evaluation (LIFE), at each assessment, in order to generate depression incidence data.

Results: Results revealed (1) few episodes of depression and decreased symptoms of depression in *both* intervention groups, and no significant group effects in the *full* sample at 6-, 12- or 24-months; (2) a moderated effect of baseline CES-D scores on episodes of depression at 6 months, and a marginally significant moderated effect of baseline CES-D scores (for adolescents who entered the study with elevated levels of depressive symptoms) on episodes of depression at 12 months; and (3) decreased symptoms of depression for adolescents in both intervention groups over 24-month follow-up, and decreased symptoms of anxiety for adolescents in the CATCH-IT group only, suggesting crossover effects of CATCH-IT.

Discussion: Results suggest at-risk teens who engage in technology-based interventions through primary care may experience decreased depressive symptoms over time, and participation in CATCH-IT may be associated with fewer episodes of depression among adolescents who report elevated levels of depressive symptoms at enrollment. We are currently engaged in a comparative effectiveness trial of CATCH-IT relative to a group, cognitive-behavioral intervention, and are conducting a components analysis of CATCH-IT using a MOST design, to determine which modules are responsible for the intervention effects observed.

Comprehensive prevention: an evaluation of peripheral outcomes of a school-based prevention program

Patrick Pössel, Hayley D. Seely, Jeremy Gaskins - University of Louisville, USA, Martin Hautzinger - University of Tuebingen, Germany

By age 18, 22-27% of adolescents have experienced depressive symptoms increasing their risk of peripheral mental health and social issues. Despite the development of effective depression prevention programs, issues related to dissemination persist. This study aims to identify ways of increasing the likelihood of dissemination by a) investigating how prevention effects differ based on the professional background of the prevention program group leader and b) evaluating adolescent depression prevention in terms of comprehensive prevention – prevention with the breadth to reduce peripheral mental health and social issues. This cluster-randomized trial included 646 eighth-grade students recruited from German secondary schools. Adolescents were randomized into three treatment conditions: teacher-led prevention, psychologist-led prevention, or school-as-usual. Results from hierarchical linear models reveal differences in effects based on implementation type and adolescent gender and provide preliminary evidence for a wider reach of depression prevention such that, regardless of implementation type or gender, the tested program was effective in reducing total problems and hyperactivity over time. Taken together, our findings warrant further research and suggest that depression prevention programs may have an effect on some peripheral outcomes, but not others, and that these effects may differ based on the profession of the group leader and adolescent gender. With continued empirical research investigating the efficaciousness of comprehensive prevention, this type of prevention has the potential to impact a larger proportion of the population and improve the cost-benefit ratio of prevention, thus increasing the likelihood of dissemination.

Symposium 51

COVID 19, mental health and psychosocial factors: lessons from a pandemic

Chair: Anton Martinez, University of Sheffield, UK

Refuting the myth of a 'tsunami' of mental ill-health in populations affected by COVID-19: evidence that response to the pandemic is heterogeneous, not homogeneous

Mark Shevlin¹, Sarah Butter², Orla McBride¹, Jamie Murphy¹, Jilly Gibson-Miller², Todd K. Hartman³, Liat Levita², Liam Mason⁴, Anton P. Martinez², Ryan McKay⁵, Thomas V. A. Stocks², Kate Bennett⁶, Philip Hyland⁷ and Richard P. Bentall²

¹Ulster University, ²University of Sheffield, ³Sheffield Methods Institute, ⁴University College London, ⁵Royal Holloway University, ⁶University of Liverpool, ⁷Maynooth University.

The COVID-19 pandemic constituted an unprecedented global threat to the health, economic wellbeing and social life of the human population. Many commentators predicted a 'tsunami' of mental ill-health caused by the unprecedented restrictions associated with the threat of illness and with the lockdown measures designed to prevent it. The COVID-19 Psychological Research Consortium brought together researchers from the Universities of Sheffield, Ulster, UCL, Liverpool and Royal Holloway and Bedford to monitor and understand these effects. Our first survey wave was conducted in the week of March 23rd 2020 (lockdown week) and we have so far completed eight waves, the last in July 2022, replacing participants who dropped out to maintain quotas corresponding to the composition of the UK adult population. Our sample of N > 2000 (rising to N > 3500 in waves 4 and 5) is highly representative of the population in terms of age, sex, household income, voting history and many other variables and we have measured not only mental health outcomes but health-related behaviours, political attitudes, COVID-19 conspiracy theories and attitudes towards vaccination. Longitudinal analyses did not support the 'tsunami of mental ill-health' narrative but, instead, revealed a more nuanced picture of a population that has adapted to extraordinary circumstances, with some groups badly affected by the restrictions introduced in the pandemic but others thriving. The most common outcome was resilience. Factors that predicted a decline in mental health included living alone, having small children at home and suffering economic adversity. More than ten percent of the sample showed an improvement in mental health. The research project also investigated other aspects of the pandemic, for example factors related to panic buying, determinants of COVID-19 conspiracy theories and vaccine hesitancy. Lessons for future panics will be drawn.

What can qualitative studies tell us about the experiences of people living through the COVID-19 pandemic?

Kate M Bennett and Elfriede Derrler-Merk, University of Liverpool

The C19PRC qualitative studies aimed to examine the experiences of people living through the COVID-19 pandemic in the UK. In particular, we were interested in the experiences of older people aged ≤ 65, people aged between 18 and 64 years old, and pregnant women and parents of children under the age of one. We recruited participants from Wave 1 of C19PRC UK online study. We sampled men and women, living alone and not alone, and for the general adult sample, with and without children. We conducted 2 waves of interviews (April-July 2020; January to April 2021). We interviewed: 33 older people at Wave 1, and 29 of them at Wave 2; 26 adults in the adult sample at Wave 1, and 17 of them at Wave 2; and 7 pregnant women and parents of children under one, and at Wave 2 we interviewed 5 of them. Our questions addressed how people felt and behaved before and during the pandemic, and at Wave 2 what had changed for participants. We also asked about participants' views about the handling of the pandemic, and about ageism and stereotyping in the older sample. Constructivist grounded theory was used for analysis. Across all samples, we found that there were changes in social support, both instrumental and emotional, and in the ways in which support was exchanged. Amongst the older sample we found that families experienced disequilibrium, challenges to belongingness, and many older people experienced ageism, especially in the way the Government handled the pandemic. Across all the samples, there was evidence of resilience, and our findings demonstrated the importance of the ecological model of resilience in understanding the factors which promoted or hindered resilience. Older people demonstrated the ability to adapt. Amongst the general sample, we found that participants experienced benefits (as well as the negatives) during the first lockdown. However, by the second lockdown, participants saw fewer benefits, and were more tired of the restrictions. In addition, participants expressed concerns about the impact the pandemic was having on children. At the point of writing, analysis of the pregnant sample is underway. Our findings point to the resilience of people in the face of the pandemic, whilst acknowledging that for some people the pandemic caused distress. Our findings also demonstrate the need for improved risk communication, and recognition of the heterogeneity of people, especially amongst older people.

The psycho-social impact of COVID-19 in Italy: adversities, challenges, and the ecological resilience model

Anna Panzeri¹, Marco Bertamini¹, Kate Bennett², Andrea Spoto¹, Giulio Vidotto¹.

¹ Department of General Psychology, University of Padova, Padova, Italy, ² Department of Psychological Science, University of Liverpool, Liverpool, UK

Introduction: The Italian C19PRC study aimed at describing the psycho-social impact of the pandemic in Italy, giving insight into various aspects, including the psychological (e.g., depression, anxiety) and social (e.g., vaccine hesitancy, authoritarianism) perspectives, with a special focus on the psychosocial factors promoting or hindering resilience.

Method: Through a longitudinal study design, a nationally representative Italian sample provided socio-demographics, psycho-social, and mental health information at two time points during the outbreak: July 2020 (N=1038, agemean 49.94±16.14; 51.15% females), and April 2021 (n=544; agemean 52.76±15.11; 46.69% females).

Results: C19 represented a challenge for psycho-social functioning. Higher psychological issues were associated with female gender, younger age, minors in the household, traumatic stressors, pre-existing health-issues, somatic symptoms, and living in regions where the virus started spreading (Bruno et al., 2020). About the socio-political dynamics, it emerged that an impersonal existential threat, exerted by C19 rather than by an outgroup, strengthened rightwing attitudes, nationalism, and anti-immigrant sentiments. These results disclose useful implications for preventive psychological interventions and social policy-makers (Panzeri et al., 2022). To understand vaccine hesitancy, a two-wave structural equation model revealed that the negative relationship between C19-conspiracy-beliefs and vaccine-confidence was fully mediated by scientific and medical satisfaction, providing useful suggestions to promote vaccine adoption by increasing confidence in science and medicine (Mignemi et al., 2022). Despite these adversities, in line with the Ecological Resilience Model

(ERM), in July 2020 the majority of the sample (70%) developed resilient outcomes, and 30% reported moderate-severe anxiety and depression. Factors promoting resilience were mainly psychological (e.g., trait resilience, conscientiousness), contrariwise, factors hindering resilience comprised intolerance of uncertainty, loneliness, living with children, higher education, C19-anxiety, and C19-related PTSD symptoms (Panzeri et al., 2021).

Discussion: Despite several adversities (e.g., psychological issues, vaccine-hesitancy, negative psycho-social dynamics), resilience still represents the most common psychological outcome.

Nonetheless, the subclinical psychological difficulties and socio-political consequences of the pandemic require research and clinical attention, to contain negative dynamics and promote better outcomes. In conclusion, Italian findings are in line with others from the C19PRC Study (e.g., UK; Bennett et al., 2022) and international literature. The psycho-social response to health-challenges (e.g. C19-pandemic) is heterogeneous and complex, and the way from the multiple psycho-social adversities to resilience is a dynamic process. The ERM represents a useful tool for successfully conceptualizing this path, it identified factors promoting/hindering resilient responses and informed psychological interventions targeting resilience predictors to support psychological-health and well-being.

Prevalence of Covid-19 paranoia: an international analysis.

Lyn Ellett, University of Southampton, UK
Lyn Ellett

Other Authors: Jessica Kingston, Tania Lincoln, Eric Morris, Suzanne So, Bjoern Schiler, Chen Zhu, Brandon Gaudiano.

Objective: Globally, the COVID-19 pandemic has created an interpersonally threatening context within which other people have become a possible source of threat. The term 'pandemic paranoia' has been coined to refer to paranoid cognitions that focus specifically on the threat posed by others to oneself because of the pandemic. In this paper, we report on the development and psychometric evaluation of a new scale to measure pandemic paranoia, and report on the international prevalence and sociodemographic profile of pandemic paranoia in five international sites.

Methods: A cross-sectional online survey design was employed. The sample consisted of 2,510 participants from five countries: United Kingdom (n=512), United States (n=535), Germany (n=516), Hong Kong (n=445) and Australia (n=502). Stratified quota sampling was employed, ensuring a representative sample was recruited in each region on the basis of sex, age and educational attainment. Participants provided demographic information, and completed a range of measures online, including general paranoid thinking (Revised Green Paranoid Thoughts Scale), depression and anxiety (DASS-21), and the Pandemic Paranoia Scale (PPS), a questionnaire designed to measure pandemic-specific paranoid thinking. Data were collected between February and March 2021.

Results: Preliminary examination of the psychometric properties of the PPS, across five international sites and three languages, supports the factorial stability, construct validity, and internal reliability of the scale. We will also report data on the prevalence of pandemic paranoia, examine differences in prevalence between countries, and present data from regression analyses examining sociodemographic predictors of pandemic paranoia.

Conclusions: The PPS is a reliable and valid measure of pandemic-specific paranoia. Pandemic paranoia was relatively common across the five international sites. Implications of the findings and future directions will be discussed.

The dark and the bright side of the COVID-19 pandemic: a 2-year trajectory of distress and well-being among the Spanish population.

Carmen Valiente ^a, Carmelo Vázquez, Alba Contreras ^c, Almudena Trucharte ^a, Vanesa Peinado ^a

^a Department of Clinical Psychology, School of Psychology, Complutense University. Madrid, Spain. ^c Psychological Sciences Research Institute, Université Catholique de Louvain, Belgium

Introduction: Despite the pessimistic forecasts on psychological responses to the pandemic generated by the COVID-19, resilience, defined as healthy and stable functioning in the face of a potentially traumatic event, is one of the most common responses for the majority of people. However, most research on the impact of adversity has focused on negative response patterns in cross-sectional designs, measured with self-reported questionnaires. This talk aims to provide insight on the psychological trajectories that the Spanish population has shown during the pandemic. In particular, we describe not only the negative responses (e.g., presence of depression or anxiety symptoms), but also the positive ones (e.g., resilience, post-traumatic growth, optimism...). We will provide a big picture on the evolution of these psychosocial patterns of responses during the 2 years of the pandemic. Additionally, we explore the potential role that relevant socio-economic (e.g., gender, education, income) and psychological (e.g., loneliness, intolerance of uncertainty, death anxiety and flexibility mindset) variables may play in the maintenance of these trajectories.

Method: A nationally representative sample of Spain (N = 1550) responded to an online survey designed with qualtrics at five different time points, distributed during these two years since the COVID-19 outbreak. The first assessment took place in April 2020 and the last in May 2022. Participants provided information about sociodemographic data, psychological responses and the aforementioned mental health correlates.

Results: Descriptive statistics of the trajectories (both negative and positive psychological responses) over the 2-year period will be provided. Our analyses supports that resilience is the most prevalent psychological response. Predictive analysis would reveal which socio-economic, psychological and mental health variables would be the key elements predicting each trajectory.

Discussion: The design used in the present work overcome limitations of previous crosssectional data and provided evidence in favour of previous literature conceptualizing resilience as a dynamic process. The clinical implications of identifying significant predictors of resilience and psychological trajectories will be discussed.

Symposium 52

Family-focused practice in the care of parents with psychosis

Convenor and Chair: Lynsey Gregg, University of Manchester, UK

A qualitative exploration of the parenting experiences of parents who experience psychosis

Claire Harries, Debbie Smith, Lynsey Gregg and Anja Wittkowski, University of Manchester, UK

Background: Psychosis can present parents with complex parenting challenges. Although significant adverse psychosocial outcomes for parents with psychosis have been reported, remarkably little is known about how parents experience parenting. Without understanding their parental experiences and needs, evidence-based service provision remains limited. Thus, we sought to understand the lived experiences of parents with a diagnosis of psychosis and their parenting support experiences.

Method: Eight biological parents (five mothers and three fathers) with psychosis, recruited from Early Intervention in Psychosis services in the Northwest of England. Interview data were analysed using Interpretative Phenomenological Analysis (IPA).

Results: Three superordinate themes and seven subordinate themes were identified. Theme 1 '*Living with the Struggle: Painfully Disconnected*' highlighted a persistent parenting struggle that distanced these parents from their children and their experiences of psychosis, fear, and risk-focused service support. Theme 2 '*Desired and Vulnerable Position: Comfortably Connected*' captured parental symptom relief through connection with their children, alongside their need to be integrated with the systems around them. Theme 3 '*Exposed: Parenting Under a Spotlight*' represented parental experiences of inescapable observation and judgment from systems.

Conclusions: These findings underscore novel insights into the role of misaligned parent and service priorities in parental perceptions of powerlessness, shame and disconnection from their children, valued parenting identities and system supports. Systemic interventions that target stigma and promote person-centred, compassionate and meaningful connections between parents and the systems they live within may be needed to support these families better.

Adult mental health service engagement with patients who are parents: evidence from 15 English Mental Health Trusts

Abigail Dunn, Helen Startup and Sam Cartwright-Hatton, University of Sussex, UK

Background: Parents who experience mental health difficulties are forced to manage both their symptoms and the challenges of parenting. Typically, these parents report higher levels of stress and lower levels of confidence and satisfaction than parents who are not experiencing poor mental health. Furthermore, their children are at risk of impaired psychosocial outcomes including the intergenerational transmission of psychopathology. Adult mental health services are often the primary source of support for adults experiencing mental health difficulties. As such it offers an opportunity to engage with the support needs of parents. Ascertaining whether mental health service users have children is a clinical requirement in UK health services and acknowledgement of a patient's parenting role is necessary to enable engagement with their parenting experience and to facilitate support both of which are associated with improved outcomes for the parent-child dyad. A national survey was carried out to investigate the practice of mental health practitioners working in UK adult mental health services with regard to the following: identification of parenthood status; ascertaining whether patients have children; engagement with the parenting role and support needs of patients; engagement with the construct of 'think patient as parent'.

Methods: Self-report online/paper survey of multi-disciplinary adult mental health practitioners working in 15 mental health trusts in England.

Results : A quarter of adult mental health practitioners (n = 1105) did not routinely ask if patients had dependent children. Fewer than half of practitioners routinely explored the parenting experience of patients or the potential impact of parental mental health on children. In contrast, most practitioners did recognise the reciprocity of parent and child mental health and agreed that it was important to support parenting

Conclusions: The parenting role of patients is not routinely captured by large numbers of practitioners working in adult mental health settings. This is despite it being a mandatory requirement and an integral component of the systematic care of the adult, and preventative care for the offspring. Failure to engage with patients who are parents is a missed opportunity with profound downstream public health implications.

Barriers to family-focused practice when working with parents with psychosis in UK adult mental health teams

Jessica Radley, Jane Barlow and Louise Johns, University of Oxford, UK

Background: Patients with psychosis make up over half of the service users in a community mental health team and over a third of individuals with psychosis are a parent. Mental health professionals can experience uncertainty about how to work with and ask about the children of these parents, and often report difficulties when collaborating with other agencies. This study focused on professionals' experiences of working with parents with psychosis and their families to gain an understanding of these parents' needs from a service-level perspective, and to identify barriers that professionals may experience in meeting the needs of parents with psychosis and their families.

Methods: Participants were recruited from Early Intervention in Psychosis teams and Adult Mental Health Teams. Qualitative focus groups were conducted with four to eight mental health professionals per group. Data were analysed using reflexive thematic analysis.

Results: Two overarching themes were developed: 1) Diversity of need in parents with psychosis and 2) Role boundaries. The first explored how mental health professionals felt psychosis could impact on parents and children, and how this could differ between families. The second theme described how some mental health professionals emphasised the importance of holistically supporting service users and their families, whilst others felt it was more critical to treat service users as a 'patient first and parent second'. This theme also covered communication issues both with their service users who were parents and with other agencies.

Conclusions: Mental health professionals identified that the needs of parents with psychosis were diverse and reflected significant variation in the experiences of service users. Mental health professionals across different types of team (early intervention and community mental health) expressed contrasting viewpoints about how achievable it was to respond to a service user's parenting status in an adult mental health setting. Future research should aim to determine where training is needed to enhance mental health professionals' ability to work holistically with families in an adult mental health setting, and how to enhance collaboration with other agencies.

Facilitators of family-focused practice in adult mental health services

Molly Tuck, Anja Wittkowski and Lynsey Gregg, University of Manchester, UK

Family-focused practice (FFP), an approach that emphasises a 'whole-family' approach to care, provides an opportunity to mitigate the significant risks associated with parental mental health difficulties. There are many positive benefits associated with FFP but it is not yet routine in adult mental health services. Research has identified the central role of practitioners in facilitating FFP. We conducted a systematic review to synthesise and appraise the global qualitative literature examining adult mental health practitioners' experiences of implementation of FFP and a separate qualitative exploration of practitioner experiences of FFP in UK adult mental health services. Two studies which focus on the facilitators of family focused practice will be presented. The first is a qualitative metasynthesis of literature examining adult mental health practitioners' experiences of implementing FFP within adult mental health services (AMHS) across the globe. Nineteen papers, spanning 17 years of research with 469 practitioners from seven countries were included. A thematic synthesis derived three main themes and 14 sub-themes. The review identified that practitioners' approach to FFP was variable. Practitioners were engaged in a constant 'balancing act' between FFP stakeholders (service-users, families, professionals and organisational contexts) to achieve meaningful outcomes. Whilst 'working together' unified teams, a greater need for external interagency collaboration was identified. The use of strength-based approaches with clients and dedicated staff resources, within clear guidelines and frameworks, facilitated the delivery of FFP. Service recommendations are provided to maximise the delivery of FFP and therefore improve outcomes for 'whole-families'.

The second study explores adult mental health practitioners' experiences and views of FFP within Early Intervention Psychosis Services in the UK. Semi-structured interviews with 16 adult mental health practitioners were thematically analysed. Practitioners' understanding and implementation of FFP was variable and typically excluded dependent children. Practitioners' characteristics, professional experience and preconceptions of families influenced delivery of FFP, and the engagement approach they adopted impacted families' responsiveness. The diversity and dynamics of service-users and their families had further implications for the delivery of FFP. An operational context characterised by insufficient resources compromised FFP; however, organisational structures were also identified to facilitate FFP. Service recommendations are provided.

Symposium 53

Nonverbal synchrony in social anxiety and social anxiety disorder

Chair: Idan Aderka, University of Haifa, Israel

Out of Synchrony: nonverbal synchrony in Social Anxiety Disorder

Idan Aderka, University of Haifa, Israel

The present study examined nonverbal synchrony during opposite-sex interactions of individuals with social anxiety disorder (SAD). Participants were 156 individuals: 38 diagnosed with SAD, and 118 non-socially-anxious (NSA) individuals. Participants formed 78 dyads of either two NSA individuals (control dyads; $n = 40$) or one individual with SAD and one 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 to small talk conversations, but this was not found 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, 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.

Catching that playful beat: Social anxiety and synchronous group functioning

Ilanit Gordon^{1,2}, Eva Gilboa-Schechtman^{1,2}, Avi Gilboa, Shai Cohen & Yogev Kivity¹

¹ Department of Psychology, Bar-Ilan University, Ramat-Gan, Israel, ² The Gonda Multidisciplinary Brain Research Center, Bar Ilan University, Ramat-Gan, Israel, ³ The Department of Music, Bar-Ilan University, Ramat-Gan, Israel

Social anxiety is characterized by significant impairments in social functioning, yet the processes maintaining such impairments are understudied. Reduced social synchrony has been highlighted as a possible mechanism underlying these impairments. To understand the nature of synchrony in SA, individuals ($n = 150$) were invited to participate in an unstructured playful group social interaction –drumming together. We examined physiological synchrony during this activity using cardiac inter-beat intervals (IBI) and skin conductance levels (SCL). Behavioral coordination was operationalized as the number of times group members drummed simultaneously. Additionally, affect and task difficulty were assessed following the interaction. Mean group-level (but not individual-level) SA-severity negatively predicted IBI synchrony and positively predicted SCL synchrony. As expected, individual-level SA-severity negatively predicted mood and perceived task

difficulty. As playful, unstructured, and non-goal-directed interactions constitute a central social context for the formation and maintenance of group bonds, SA may contribute to social impairments via intrapersonal and interpersonal mechanisms

Nonverbal synchrony in Social Anxiety Disorder during a diagnostic interview

Hallel Shatz, University of Haifa, Israel

A recent study utilized a machine-based analysis of nonverbal behavior and dyadic synchrony in social anxiety disorder (SAD; Asher, Kauffmann, & Aderka, 2020) and found that in intimate contexts social anxiety is negatively associated with synchrony. In the present study, we examined the association between a diagnosis of SAD (as well as continuous levels of social anxiety) and nonverbal synchrony during a different intimate context – a diagnostic interview. We examined 84 individuals: 42 individuals diagnosed with SAD and 42 individuals without SAD during a diagnostic interview (ADIS). Interviews were videotaped and analyzed using motion energy analysis (MEA). We found that when examining complete synchrony (synchrony in body movements that include the head and torso), individuals with SAD synchronized with their interviewers to a lesser extent compared to individuals without SAD. No differences were found for synchrony in head-only movements or body-only movements. Congruently, we found that continuous levels of social anxiety were significantly and negatively associated with complete synchrony (but not head-only or body-only synchrony). Finally, we found that women had greater head-only synchrony compared to men. The effect sizes for all findings were small, and smaller than found in previous studies of nonverbal synchrony. We believe this may be a result of trained interviewers who controlled their body movements to a greater extent compared to participants. Implications for research on nonverbal behavior in SAD are discussed.

Symposium 54

Digital mental health interventions in primary care - new findings from meta-analyses and randomized clinical trials

Chair: Elin Lindsäter, Karolinska Institutet, Sweden

Therapist-guided Internet-based CBT vs. Face-to-face CBT: a further updated systematic review and meta-analysis

Per Carlbring, Stockholm University, Sweden

Background: Mental ill-health and functional somatic disorders are ubiquitous and associated with substantial suffering and impairment. Cognitive behavior therapy (CBT) has generally been shown to be effective, but there is still a clear limitation of the treatment's accessibility. One potential remedy for this is to provide internet-based CBT (ICBT), which drastically increases the number of patients a therapist can have in ongoing treatment. Although several hundred randomized controlled trials have tested ICBT, fewer studies have compared its effect directly to face-to-face CBT, i.e., the gold-standard comparator. In a previously conducted meta-analysis, we found that the two treatment formats produced equivalent effects. As the most recent update of that study was made almost five years ago, and this is a research field that moves rapidly, we viewed an update timely.

Aim: This study aimed to update a systematic review and meta-analysis of published randomized controlled trials comparing therapist-guided ICBT to face-to-face CBT for psychiatric and somatic disorders in adult patient populations.

Methods: We searched PubMed for articles relevant to the topic from 2016 to 2022. After removing duplicates, we screened 5012 papers and included eight new randomized controlled trials. These were added to the 20 found in the previously conducted meta-analysis. Thus, the total number of randomized controlled trials was 28. A random-effects model analysis was used to assess the pooled effect size.

Results: Preliminary analyses showed that the total N of the 28 included trials was 3725. The main analysis outcome indicated that ICBT is equally effective as compared to face-to-face CBT ($g = 0.03$ [95% CI: -0.09, 0.15]). More comprehensive data analyses will be conducted in the summer of 2022, and the results will be presented at the conference.

Significance: Given the potential role of ICBT in increasing accessibility to effective psychological treatment, we view the results as important as they suggest that ICBT can be delivered with effect sizes similar to face-to-face CBT. Although 28 randomized controlled trials is a substantial contribution to the evidence base, a clear limitation is that for most specific disorders, there are still few randomized controlled trials comparing the two treatment formats.

Internet-delivered cognitive behavioral interventions to reduce elevated stress: A systematic review and meta-analysis

Frank Svärdman, Douglas Sjöwall, Elin Lindsäter, Karolinska Institutet, Stockholm, Sweden

Background: Elevated stress over prolonged periods is associated with a range of adverse health outcomes, and stress-related disorders such as burnout and adjustment disorder are highly prevalent. Face-to-face cognitive behavioral therapy (CBT) is the most promising treatment to reduce stress, and internet-delivered CBT (ICBT) enables large-scale dissemination at low costs. Evidence suggests that ICBT can reduce stress in subclinical and mixed diagnostic samples, but less is known about the effect of ICBT in targeted samples suffering from elevated perceived stress or stress-related disorders.

Aim: The objective of this systematic review and meta-analysis was to investigate the efficacy of ICBT specifically aimed at reducing stress in adults with elevated perceived stress or stress-related disorders.

Methods: We searched for randomized controlled trials comparing ICBT with a control group in PubMed, Web of Science, and PsycInfo between 2010 and 2021. A meta-analysis of 14 comparisons (total $N = 1831$) was performed, and Cohen's d was calculated to assess the difference between intervention and control groups at posttest for the primary outcome self-rated stress. Effects on secondary outcomes of anxiety, depression, exhaustion, and insomnia were also meta-analytically investigated.

Results: The pooled mean effect size for self-rated stress at posttest was $d = 0.78$ [CI 95% 0.66 - 0.90]. For anxiety and depression, the effects were $d = 0.69$ [95% CI 0.52-0.86] and $d = 0.65$ [95% CI 0.56 - 0.75] respectively. Effects on exhaustion and insomnia were $d = 0.66$ [95% CI 0.56-0.76] and $d = 0.49$ [95% CI 0.29-0.70], respectively. The heterogeneity of results between studies was low to moderate.

Conclusions: Results provide evidence of the efficacy of ICBT to reduce stress and secondary psychiatric symptoms in adults suffering from elevated stress or stress-related disorders. Findings have important implications for the development of evidence-based treatment guidelines in the face of rapid digital expansion. Future studies should compare ICBT to active treatments and further investigate moderators and mediators of change in treatment.

Internet-delivered treatment for stress-related disorders: preliminary data from a randomized controlled trial

Victoria Sennerstam, Karolinska Institutet, Sweden

Background: Prolonged exposure to stress, without adequate recovery, can increase the risk for physical and psychiatric ill-health. Stress-related disorders, such as adjustment disorder (AD) and exhaustion disorder (ED; similar to clinical burnout), are common and associated with suffering, functional impairment, and high costs. However, the evidence for psychological treatments for these disorders is limited and treatment guidelines are lacking. Cognitive behavior therapy (CBT) has the strongest empirical support to reduce symptoms in individuals with perceived stress and delivering treatment via the internet is one way to increase treatment accessibility at low costs. Our research group recently conducted a randomized controlled trial (RCT) where the efficacy of ICBT for stress-related disorders was compared to a wait list control with promising results. We now present preliminary data from new large-scale RCT of ICBT vs. an active internet-delivered intervention for patients with stress-related disorders. The study has the potential to give important information about treatment specificity and long-term treatment effects.

Aim: To investigate whether ICBT for individuals with stress-related disorders is more efficacious than structured internet-delivered treatment-as-usual (ITAU).

Methods: The study is a randomized controlled trial ($N = 300$) comparing two 12-week therapist-guided internet-delivered treatments, ICBT ($n = 150$) vs. ITAU ($n = 150$), for patients with stress-related disorders (AD and ED). The main outcome is level of perceived stress, with secondary outcomes assessing several other self-reported mental health outcomes as well as functional impairment and workability. Measurements are conducted at baseline and at 3, 12 and 24 months follow up after baseline.

Results: Data from pre- and post-assessments will be analyzed in August 2022. Preliminary results will be presented for the first time at the EABCT conference.

Significance: Given the high prevalence of stress-related disorders, not least in primary healthcare settings, there is an urgent need for efficacious and highly accessible interventions for this patient population. This study is built on previous studies by the research group that indicate that CBT can be efficacious in reducing symptoms of stress and secondary symptoms of exhaustion, depression, insomnia, and anxiety. By further investigating the treatment's specificity we hope to contribute to future guidelines for treatment of stress-related disorders.

A randomized clinical noninferiority trial of group-delivered vs internet-delivered parent training for children with disruptive behavior problems

Johanna Engelbrektsson, Sigrid Salomonsson, Jens Högström, Kimmo Sorjonen, Knut Sundell, Martin Forster, Karolinska Institutet, Stockholm, Sweden

Background: Disruptive behavior problems (DBPs) in children are patterns of defiant, disruptive or aggressive behaviors, such as argumentativeness, fighting and bullying. DBPs are prevalent in children and adolescents and are associated with an increased risk of poor academic and vocational performance, substance use, criminality as well as anxiety and depression in adulthood. Well-established and guideline-recommended treatments are group parent training programs. Access to these treatments is limited and to reach more families there needs to be alternatives to group parent training.

Aim: The current study aimed to evaluate whether an internet-delivered parent training program (iComet), is as effective as its face-to-face counterpart, group-delivered Comet (gComet).

Method: This was a multi-center randomized clinical noninferiority trial where parents to 161 children aged 3-11 years with DBPs were randomized to gComet or iComet. The main outcome measure was disruptive behavior as measured by the Eyberg Child Behavior Inventory (ECBI) and measurements were made at baseline and 3-, 6- and 12-month follow-up. Secondary outcomes included parental behavior as well as child- and parent wellbeing. The noninferiority analysis was based on the ECBI score at 3-month follow-up and determined by a one-sided 95% CI of the mean difference between gComet and iComet using multilevel modeling. The predefined noninferiority margin was set to $d=0.43$.

Results: For children with disruptive behavior, an internet-delivered parent training program resulted in noninferior treatment effects compared to group-delivered parent training. The results were maintained at the 12-month follow-up. There were a few significant differences in secondary outcomes at 3-month follow-up. At 12-month follow-up there were no significant differences between the groups.

Conclusion: Internet-delivered parent training is an effective treatment format and can increase the availability of evidence-based treatments for children with DBPs. Further research is needed to understand which treatment format would benefit the individual family most.

Symposium 55

A new paradigm to diagnose and treat mental disorders: the network approach

Chair: Anita Jansen, Maastricht University, the Netherlands

A new paradigm to diagnose and treat mental disorders: The Network Approach

Anita Jansen, Maastricht University, the Netherlands

Although the current disorder-based approach to the treatment of mental disorders works well for about half of the patients, the other 50% do not profit from this 'one-model-fits-all' method. In this symposium, we will present a new theoretical and methodological framework to explain the existence, development, and maintenance of mental disorders: the network approach. With the network approach, we move away from traditional disorder-based models by conceptualizing mental disorders as complex idiosyncratic systems of dynamically interacting symptoms. The network approach of mental disorders offers new ways to diagnose and treat mental disorders, its promises are: 1) empirical, data-driven diagnoses and case formulations, which sharply contrast current clinical practice, and 2) opportunities for individually tailored network-informed treatments. As such, the network approach has the potential for evolving into a paradigm shift in clinical psychology.

I will outline the core ideas of a consortium of clinical psychologists, psychometricians, and data scientists, working together at the Dutch national level within an ambitious and challenging 10-year project offering training in the network approach of mental disorders to ± 40 PhD students at Dutch Universities and testing the promises of the model for clinical psychology and mental health care (www.nsmdu.nl).

Transdiagnostic individual networks of psychopathology

Alberto Jover Martínez¹, Lotte Lemmens¹, Eiko Fried², & Anne Roefs¹

¹Maastricht University, ²Leiden University.

The network approach to psychopathology moves away from the disorder-based 'one-model-fits-all' approach to understanding and treating mental disorders. Its core assumption is that dynamically interacting symptoms constitute the disorder. The current study takes a next step in testing this network approach by studying individual dynamic transdiagnostic networks of symptoms and other relevant variables (e.g., mood, behavior, and context) in a student sample (n≈200). We assessed baseline psychopathology, and transdiagnostic factors using standard questionnaires before the students participated in an Ecological Momentary Assessment (EMA) protocol for 28 days, during which they answered questionnaires 9 times per day. The selection of transdiagnostic EMA items was mainly based on the opinion of clinicians, who indicated in focus groups and in a survey study what items in their opinion were most important to measure throughout the day. Participants completed a morning questionnaire (40 items), an evening questionnaire (26 items), a momentary questionnaire throughout the day (35 items), and a weekly questionnaire (4 items). The EMA items were triggered at different semi-random times throughout the day. In addition, digital phenotyping data such as geolocation and time spent online were collected. Both contemporaneous and temporal networks will be estimated on these data for each participant. It will be examined if and how these individual networks cluster and how they relate to baseline psychopathology. Preliminary results of the network analyses will be presented. Based on the current results, a next EMA-study will be designed in which patients with a diverse range of mental disorders will be included.

A study of family affect systems in daily life

Myrthe Veenman, Loes H.C. Janssen, Lianne A. E. M. van Houtum, Mirjam C. M. Wever, Bart Verkuil, Eiko I. Fried, and Berniet M. Elzinga, Leiden University, the Netherlands

Adolescence is a time period characterized by sudden affect changes and increasing prevalence of mental health problems. Although social connections with peers become more important, the family remains an important support factor. Prior studies have shown that affect states, such as happiness or irritation of parents are related to these same affect states of adolescents in a bidirectional way. Specifically, relations between negative affect states of adolescents and parents have been linked to psychopathology. However, it remains unclear how momentary affect states of adolescents and parents influence each other over time.

To provide insight into the daily affect dynamics within and across adolescents and their parents, we estimated network models using Ecological Momentary Assessment data from the RE-PAIR study (<https://www.re-pair.org>). The data features four affect states (i.e., sad, irritated, happy, and relaxed) of 34 families with a depressed adolescent (92 individual family members) and 80 families with a non-depressed adolescent (231 individual family members), collected 4 times a day over 14 days. The data also contains information on the interaction between adolescents and their parents, specifically, the perception of the contact, and the affect states during the contact. We modeled relations between affect states of adolescents and their parents and investigated potential differences between families of depressed adolescents and non-depressed adolescents. We will present results of affect network models of all families, individual families, and individual family members, with a focus on highlighting intra-individual versus interindividual effects.

Jumping back onto the giants' shoulders: Why emotional memory should be considered in a network perspective of psychopathology

Inga Marie Freund, Arnoud Arntz, Renée M. Visser, and Merel Kindt, University of Amsterdam

Clinical psychology finds itself with a paradox: On the one hand, there is abundant empirical evidence showing that aversive experiences, including emotional abuse and emotional neglect, are strongly related to an increased vulnerability for developing psychopathology. In fact, a learning and memory framework forms the foundation of numerous psychological theories and treatments. For example, various CBT interventions aim to target maladaptive emotional memories (e.g., schemas or cognitions) that are deemed to lie at the root of mental health conditions. On the other hand, a new approach – the network theory – is gaining ground, which ignores underlying causes for mental disorders and instead dictates a focus on symptoms and their causal interactions. While radical shifts are sometimes necessary in science, we argue why completely neglecting common causes, such as mental representations, is not justified. We critically discuss the strengths and limitations of the network perspective. As this new approach was launched in response to the claimed stagnation in clinical psychology and poor treatment outcomes, the litmus test will be its clinical utility: whether a network approach will indeed lead to better treatment outcomes and lower relapse rates in mental health care. We believe that the clinical research agenda should focus on integrating common causes, such as emotional memory, into the network approach, to extend our mechanistic insight, improve diagnostics and treatment tailoring.

Symposium 56

Virtual reality exposure therapy: we know that it works, but not how!

Chair: Katharina Meyerbröker, Utrecht University, the Netherlands

Virtual reality exposure therapy and the current findings in anxiety disorders

Katharina Meyerbröker^{1,2}

¹ Utrecht University, ² Academic Anxiety Center Altrecht

Virtual reality exposure therapy involves exposing the patient to virtual feared stimuli. It is the artificial counterpart to exposure in vivo, which is the treatment of choice in the majority of anxiety and related disorders (National Institute for Health and Clinical Excellence, 2013). Given its unlimited technological possibilities, VRET offers the therapist and researcher a pallet of options to provide individual tailored exposure treatment. The use of VRET in anxiety and related disorders has been one of first technological agents introduced in the therapist's office and its efficacy has been studied in various ways (Carl et al., 2019; Wechsler et al., 2019). It has been found that effects generalize to the real world (Morina et al., 2015), while there is still no conclusive evidence how the effects of VRET are produced (Meyerbröker, 2021). In this presentation the recent findings concerning assessment and treatment with VRET in anxiety and related disorders will be presented and discussed. Although VRET provides the therapist with a number of tools to assist patients doing VR exposure in their own office, the implementation in clinical practice of VRET is going slow. Different aspects on how this could be improved will be discussed.

VRET provides not only the therapist with various possibilities but also researchers with endless possibilities to investigate therapy and disorder relevant aspects.

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Taking the leap: what do we know about the transition from virtual reality to real-world exposure? (Pre-recorded)

Philip Lindner, Karolinska Institute, Stockholm, Sweden

VR is a convenient and powerful approach to conducting exposure therapy, yet any fear reduction after exposure to virtual stimuli needs to translate into reduced fear of the real-world equivalents, in order for treatment to be of any real-world clinical value. As evident by past research using in-vivo behavioral approach tests after VR exposure, the fear reduction does indeed appear to generalize across modalities, and many studies report continued fear reduction after seizing VR exposure. But what do we really know about how this transitioning occurs and what influences it? This talk will cover a critical presentation and review of the literature on modality transitioning in VR exposure therapy, highlighting important research gaps for future research to address, as well presenting some preliminary research explicitly designed to evaluate the causality of modality transitioning.

Presence and emotional processes in VR: the impact of automation

Diemer, Julia^{1,2}

¹kbo-Inn-Salzach-Klinikum, Clinical Center for Psychiatry, Psychotherapy, Psychosomatic Medicine, Geriatrics and Neurology, Anxiety Research Group, Health Services Research, Gabersee 7, 83512 Wasserburg/Inn, Germany.

²Department of Psychology, LMU Munich, Leopoldstr. 13, 80802 Munich, Germany

Presence, i.e. the illusion of actually being inside the simulated world, is a key process variable of virtual reality (VR) and especially VR exposure therapy. Presence is linked to emotional experience in VR, with previous research suggesting that the correlation is bidirectional (Diemer et al. 2015; Peperkorn et al., 2015). In a recent project we investigated the effects of increased automation on presence and emotional arousal in a neutral VR scenario, and in potentially fear-inducing VR scenes.

The talk will focus on the relationship between presence and emotion. After a brief outline of previous research into presence in different populations and different emotional states, the talk reports on three recent experiments on the impact of increased automation on presence and emotion in VR. We investigated whether delivering instructions during VR simulation either (a) by the investigator (live) or (b) by previously recorded audio files (automated) influenced the experience of presence and the mastery of navigation in VR. In the first experiment, N=66 healthy participants learned to interact with VR with the help of a VR tutorial. The participants were randomly assigned to either a live or an automated tutorial. We assessed presence, subjective mastery, and the time needed to complete a subsequent navigation task (sec.). In the second experiment, N=66 healthy participants were exposed to potentially fear-inducing VR scenarios (improvised speech and/or spiders), with instructions delivered either live or automated (allocation again randomized). Finally, in the third experiment, we repeated the setup of experiment 1 with N=58 inpatients with an anxiety disorder.

We found a number of effects of automation, with automation in some subgroups reducing presence and emotional experience. Possible reasons for this effect are discussed, as are the implications for VR design. We conclude that design features of VR systems should be investigated in more detail to check possible desired as well as undesired effects on emotional experience.

Part of the results presented are the topic of the doctoral theses of Ms. M. Sich and Ms. I. Sam.

Diemer, J., Alpers, G. W., Peperkorn, H. M., Shiban, Y. & Mühlberger, A. (2015). The impact of perception and presence on emotional reactions: A review of research in virtual reality. *Frontiers in Psychology*, 6:26. doi: 10.3389/fpsyg.2015.00026

Virtually (un)expected? The role of expectancy violation in virtual reality exposure therapy for anxiety disorders

Sara Scheveneels, assistant professor at Open University of the Netherlands (Heerlen, The Netherlands), postdoctoral researcher at KU Leuven, Leuven, Belgium

Research on the efficacy of virtual reality exposure therapy (VRET) for anxiety disorders shows promising results, with meta-analyses indicating that it is as effective as in vivo exposure. At the same time, the underlying working mechanisms that drive these effects remain largely unexplored. It is often (implicitly) assumed that these working mechanisms are equivalent to those that drive the effects of in vivo exposure. In this regard, the violation of feared expectancies has been suggested as a key mechanism. It 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. Notably, 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). It can therefore be questioned whether feared expectancies about these outcomes can adequately be violated during VRET and whether expectancy violation is a key underlying mechanism driving its effects. I will present the results of two studies that examined the role of expectancy violation in VRET. In a first study, it was manipulated which outcomes could occur in VRET delivered to a sample of individuals with public speaking anxiety. The effect of this manipulation on treatment outcome was investigated. A second (correlational) study examined whether self-reported expectancy violation predicted VRET outcome in a group of spider anxious participants.

Adolescents’ stutter-related social anxiety in virtual reality

H. Deman, D. Hermans, B. Boets, S. Scheveneels, & Ellen. Rombouts, KU Leuven, Belgium

An estimated 1.5% of adolescents are diagnosed with stuttering, a speech disorder characterized by involuntary sound prolongations, blocks, and repetitions. As these adolescents experience negative reactions from interlocutors to their stuttering, they may develop a significant fear that in future interactions too interlocutors will judge them negatively. Given that there is a rapidly growing interest in designing Virtual Reality interventions to treat stutter-related social anxiety, there is a substantial need to first understand how stutter-related social anxiety operates in Virtual Reality. To this end, we examine anxiety responses of adolescents who stutter during three speaking tasks that represent the three exposure tools presently used to treat stutter-related social anxiety: role-play, Virtual Reality, and in vivo. Based on the prevailing theoretical models on the working mechanisms of exposure, we examine to what extent speech situations in Virtual Reality meet the basic conditions for successful exposure interventions by comparing participants’ fearful expectancies and high (peak) levels of anxiety responses (i.e., cognitive/verbal anxiety, physiological arousal, and gaze aversion) between the three speaking tasks. In this symposium, preliminary findings from this project are presented.

Symposium 57

Innovative technology-based interventions for coping with adversities and emotional distress

Chair: Jeannette Brodbeck, University of Bern, Switzerland

Barriers to and initial experiences with GuG-Auf-online – a family-based online prevention approach for children of depressed parents

Svenja Geissler¹ (presenting author), Angela Joder¹, Christina Blomenhofer¹, Petra Dengl¹, Patricia Graf¹, Silke-Wiegand-Grefe², Gerd Schulte-Körne¹, Belinda Platt¹

¹LMU University Hospital Munich, ²University Medical Center Hamburg-Eppendorf

While children whose parents are suffering from depression are at an elevated risk for developing a psychological disorder themselves, family-based interventions were found to be effective in preventing this transmission. So far, studies have only evaluated preventative interventions that were delivered in person, making them less accessible for families with little time or in remote areas. In order to increase accessibility across a wide range of families and meet the need for online interventions during the COVID-19 pandemic, the previously evaluated family-based preventative intervention GuG-Auf (“Gesund und Glücklich Aufwachsen”, engl. “Growing up healthily and happily”) was adapted to GuG-Auf-Online. Just like the intervention’s original format, the online sessions actively involve participating parents, their children and two therapists. However, GuG-Auf-Online is delivered using video conferencing, allowing families to participate remotely. The eight video-conferencing sessions are complemented by an app through which participants can access group content and complete homework. The intervention is aimed at families with a parent affected by Major Depression and children between the ages of 8 and 17 years.

This presentation spans across two studies. The first study is an online survey of parents who are suitable for the intervention yet decided not to participate. This study aims at uncovering barriers to participation to ensure the intervention’s accessibility for affected families. The presented results will focus on the most relevant barriers to participation and explore their link with the parents’ depressive symptomology.

The second study evaluates the GuG-Auf-Online as a form of multi-family therapy (MFT) within the Children of Mentally Ill Parents – Network “CHIMPS-Net” Randomized-Controlled Trial (RCT). A sample of around 15 families will be described in depth based on clinical interviews conducted at baseline as well as questionnaire-based assessments. Furthermore, clinical experiences from the first three intervention groups will be shared and discussed. Finally, preliminary Ecological Momentary Assessment (EMA) data on stressful experiences and emotional states collected via the app will be reported.

Digital guided trauma-focused intervention for youth with posttraumatic stress disorder: results of a proof-of-concept feasibility study

Christina Schulte¹, Anna-Carlotta Zarski^{1,2}, Cedric Sachser³, Rita Rosner⁴ & David D. Ebert¹

¹ Technical University of Munich, ² Friedrich-Alexander-University Erlangen-Nürnberg,, ³ University Ulm, ⁴ Catholic University Eichstaett-Ingolstadt

Context: Posttraumatic Stress Disorder (PTSD) can be treated effectively with trauma-focused cognitive behavioral therapy (tf-CBT). However, especially youth have concerns about on-site therapy including fear of stigmatization or feelings of shame and may prefer self-help provided more anonymously over the Internet. But so far, digital self-help interventions for youth with PTSD are scarce and have not yet been comprehensively evaluated. The goal of the study is to evaluate the feasibility of a digital guided trauma-focused intervention for youth with PTSD in a one-arm, non-randomized, prospective proof-of-concept feasibility study. Requirements for a large-scale randomized controlled efficacy trial (RCT) should be investigated.

Methods: Participants aged between 15 and 21 years (n=32) diagnosed with PTSD receive access to the digital intervention. Following a formal feasibility framework, different dimensions of feasibility are assessed: (1) recruitment capability and resulting sample characteristics, (2) data collection procedures and outcome measures, (3) acceptability of the intervention and study procedures, (4) resources and ability to manage and implement the study and intervention and (5) participants' preliminary responses to the intervention in terms of symptom severity and satisfaction. Additionally potential negative effects related to the intervention are assessed. Assessments take place pre-, mid-, post-intervention and at 3-month follow-up. Qualitative interviews are conducted to investigate the participants' perspectives on the intervention.

Intervention: The intervention is based on tf-CBT and includes eight online sessions and a booster session together with a complementary smartphone app for symptom monitoring, journaling, and exercise tracking. The intervention starts with three sessions on psychoeducation, emotion regulation, and coping skills, followed by three sessions of in sensu exposure of the traumatic event in form of a written trauma-narrative with subsequent two sessions of cognitive restructuring, and relapse prevention. Participants are guided by an eCoach, who provides weekly semi-standardized written feedback on completed sessions and adherence reminders.

Results: The study started in July 2021 and *n* = 28 youth are enrolled in the study so far. We will present the concept of the intervention and the results of the feasibility study concerning acceptance, symptom reduction, and the occurrence and handling of negative effects during the intervention.

Conclusion: There seems to be a high need for a low-threshold approach in PTSD treatment for youth. The data presented will give insights on the feasibility, potential efficacy, and safety of such a digital approach.

FACE – Development of a self-help app for young adults with adverse childhood experiences using an iterative co-design

Salome I. R. Bötschi^{1,2}, Jeannette Brodbeck^{1,2}, Simon Marmet², Elena Colitti¹, Leonie Füeg¹, & Thomas Berger¹

¹ University of Bern, Department of Clinical Psychology and Psychotherapy, Switzerland, ² University of Applied Sciences and Arts Northwestern Switzerland, School of Social Work

Adverse childhood experiences (ACEs) including different forms of abuse and neglect represent a risk factor for lower psychosocial adaptation and psychopathology in adulthood. Emotion regulation (ER) and social information processing (SIP) are two transdiagnostic factors relating ACEs to later psychopathology. The FACE self-help app aims to improve ER and SIP among young adults with a history of ACEs. It follows cognitive-behavioural therapy principles and includes an ecological momentary assessment (EMA) and ecological momentary interventions (EMI). The EMI allows participants to practice strategies in everyday life. It is the first self-help app specifically developed for young adults with a history of ACEs.

Participants will be recruited from the FACE epidemiological study, a longitudinal cohort study with 1880 participants aged 18 to 22 from a random Swiss population sample. In the first wave in 2021, ACEs, ER, SIP, and psychosocial functioning were assessed.

In an iterative co-design, the FACE self-help app is being developed based on previous evidence, theory, interviews with young adults with ACEs, and several focus groups. The talk presents the results of four focus groups with five young adults with ACEs each, as part of the iterative co-design. Topics included how young adults with ACEs experienced the consequences of ACEs for ER and SIP in daily life and how this can inform the content of the intervention. A content structuring qualitative analysis revealed 3 categories: the content of the self-help app, motivational elements for taking up the intervention and fostering adherence, and the design of the app. Participants expressed the following expectations for the content of the self-help app: specific information on ACEs (definitions, examples, and consequences), training in different ER strategies, and help to identify and change unfavourable thinking patterns in the process of SIP. For enhancing the motivation to use the self-help app, participants recommended using easy-to-understand language as well as emphasizing the anonymity and trustworthiness of the content. Concerning the design of the self-help app, participants expect easy interactions with the app, and individualised elements (such as an avatar, that can be chosen). A prototype of the intervention will be presented.

At the beginning of November 2022, the prototype will be evaluated in a randomised controlled trial. The differential efficacy of the two components ER and SIP will be compared in a cross-over design against a waiting list control group. The first results are expected in 2024.

Modifying dysfunctional beliefs with emotion-enhanced smartphone interventions: pilot study of an emotion-based approach-avoidance modification training for individuals with elevated stress

Marie Keinert¹, Stephanie Böhme¹, Lena Schindler-Gmelch¹, Hannah Streit¹, Lydia Helene Rupp¹, Bjoern Eskofier², Matthias Berking¹

¹Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany; ²Machine Learning and Data Analytics Lab, Department Artificial Intelligence in Biomedical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany

Dysfunctional beliefs play a crucial role in psychological distress and the development and maintenance of mental disorders (Beck & Haigh, 2014; Kuroda, 2016). Potentially, approach-avoidance modification trainings (AAMTs) can modify the evaluation of dysfunctional beliefs. However, studies employing AAMTs in the mental health context found mixed effects of such trainings on symptom severity and approach-avoidance biases (Loijen et al., 2020). Arguably, integrating emotional reactions into the standard AAMT procedure might enhance training effects by increasing the valence of the performed approach/avoidance response. Therefore, we developed a smartphone-based AAMT-intervention in which participants displayed unpleasant emotions (i.e., anger, anxiety, disgust, and sadness) to move dysfunctional, stress-inducing beliefs away from themselves and a set of pleasant emotions (e.g., joy, content) to draw functional, stress-reducing beliefs

towards themselves. In a randomized controlled pilot study, $N = 82$ participants with elevated stress levels (Perceived Stress Scale [PSS]-10 ≥ 19 ; Klein et al., 2016) were randomly allocated to eight conditions: an anger-based AAMT, an anxiety-based AAMT, a disgust-based AAMT, a sadness-based AAMT, an emotion-based AAMT where all four unpleasant emotions were displayed (eAAMT 1:1), an emotion-based AAMT where all four unpleasant emotions were displayed, but with a 4:1 ratio of pleasant:unpleasant emotions (eAAMT 4:1), a swipe-based AAMT where stimuli were moved via swipe-motions, and an inactive control condition. Participants in the active intervention conditions each participated in four 30-minute AAMT sessions on four consecutive days. Effects of the intervention on perceived stress (PSS-10) were assessed directly and one week after intervention completion, with changes of stress levels between pre-assessment and one-week-follow-up being the primary outcome. Analyses showed large pre-to-follow-up effect sizes of the anger-based, sadness-based, and disgust-based AAMT, and eAAMT 4:1 on perceived stress, whereas the effect of the eAAMT 1:1 was moderate, of the swipe-based AAMT small, and of the anxiety-based AAMT negligible. Although preliminary and based on a small pilot sample, these findings suggest the inclusion of emotion display as approach/avoidance reactions into AAMTs to increase their efficacy. Further, an outlook on a subsequent project in the context of depression will be given, where, building on the findings of the pilot study, the assessment of holistic emotional expressions is continuously further automatized utilising sensor data on, among others, facial expression and muscle activity, heart rate, and speech characteristics. Both studies share the goal to change dysfunctional beliefs and to realise ambulatory biofeedback methods which function entirely on the basis of smartphone data.

SOLENA – An online self-help intervention for coping with the loss of a partner

Jeannette Brodbeck^{1,2}, Lena Brandl^{3,4}, Sofia Jacinto^{1,2}, Bettina Mooser², Sarah Madörin¹ & Lex VanVelsen³

¹ School of Social Work, University of Applied Sciences and Arts Northwestern Switzerland · ² Department for Clinical Psychology and Psychotherapy, University of Bern, Switzerland · ³ eHealth group, Roessingh Research and Development, Netherlands · ⁴ Department of Human Media Interaction, University of Twente, Netherlands

Cognitive-behavioural online self-help interventions for coping with prolonged grief have established their efficacy for decreasing symptoms of grief, depression, and loneliness. However, few studies have addressed recent partner loss and none has tested the role of self-tailoring in these interventions.

To meet these gaps in the literature, SOLENA, a guided cognitive behavioural web-based intervention developed within the LEAVES project, has been specifically developed for older adults who lost their partner. The content consists of readings, exercises and activities that are presented via an Embodied Conversational Agent (ECA). The ECA interacts with the user via predefined answers which they can choose from. ECAs have been found to improve therapeutic alliance and increase compliance with interventions.

Furthermore, SOLENA includes an initial risk assessment and a monitoring tool. In the introduction of the program, the user fills in a risk assessment questionnaire. Based on the user's responses, the service displays recommendations for using the program and/or seeking additional help. The bi-weekly monitoring assesses the mood and progress within the program. In settings where no regular contact with a professional is scheduled, the program refers the user to professional human care if the condition of the user deteriorates. The recommendations to seek further professional help are formulated with different urgency levels depending on the results of the monitoring. In guided settings, the monitoring informs weekly guidance by the e-coach.

SOLENA will be evaluated in three randomised controlled trials in Switzerland, the Netherlands and Portugal, with a total of 240 participants, approximately. The aim of the trials is to evaluate the clinical efficacy for reducing grief, depression and loneliness and to examine technology acceptance of the online self-help intervention. To add to the knowledge of grief models and to the area of client-centered interventions, the ongoing trial in Switzerland compares a standardised to a self-tailored delivery format and examines whether the efficacy of online grief interventions can be increased by providing a self-tailored version, in which the users can choose the most relevant and best-fitting content for their current needs. The two delivery formats will be compared for outcomes, client satisfaction, adherence, and working alliance. Furthermore, the trial investigates the effects of age, time since loss and severity of grief at baseline and explores mediators of outcomes. The talk will present the SOLENA program and report preliminary results of the Swiss trial.

The effects of imagery rescripting vs. extinction on the generalization of extinction

Mandy Woelk^{1,2}, Muriel A. Hagenaars^{2,3}, Filip Raes¹, Bram Vervliet⁴, & Julie Krans^{5,6}

¹ Research Unit Behaviour, Health, and Psychopathology, KU Leuven, Belgium, ² Department of Clinical Psychology, Utrecht University, the Netherlands, ³ GGZ Central, Center voor Psychotherapie, Ermelo, the Netherlands, ⁴ Research Unit Brain and Cognition, KU Leuven, Belgium, ⁵ Pro Persona Overwaal Centre for Anxiety, OCD, and PTSD, Nijmegen, the Netherlands, ⁶ Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands

Many people experience at least one potentially traumatic event over the course of their lives. Trauma exposure is associated with increased risk of psychopathology, such as posttraumatic stress disorder, anxiety disorders, and depression. Exposure-based treatments for these disorders are effective for a substantial number of patients, but relapse is not uncommon. Generally, traumatic memories are triggered by several different stimuli or situations, which cannot all be targeted during therapy. Therefore, the efficacy of exposure-based therapy largely depends on the generalization of extinction. Fear conditioning studies have shown poor generalization of extinction, and other strategies are needed to improve generalization of therapy gains to other stimuli and situations. Imagery rescripting (ImRs) is a therapeutic technique that may improve the generalization of extinction because – in contrast to exposure-based therapies – it does not rely on expectancy learning. It has been suggested that ImRs changes the meaning of an aversive memory, for example by becoming less negative or by a change in related cognitions. In theory, this should increase the generalization of extinction. The aim of the current study was to assess the effects of ImRs-only, extinction-only (EXT-only) and a combination of ImRs and extinction (ImRs + EXT) on 1) the generalization of extinction and 2) return of fear (spontaneous recovery and reinstatement) in a 1-day fear conditioning paradigm using an aversive film clip as the US. ImRs participants imagined a standardized script with a positive ending related to the film clip, either after every CS+ presentation (ImRs + EXT) or when given the instruction to do so (ImRs-only). EXT-only participants went through a regular extinction procedure. Data collection is still ongoing and preliminary results will be shown during the presentation. The study is expected to yield more insight into the effects of ImRs and extinction on the generalization of extinction, thereby informing clinical practice on how to possibly improve trauma-related treatment and reduce relapse rates.

What can we learn from experimental analogue studies about how Imagery Rescripting works?

Thomas Ehring, Anna Kunze, Marena Siegesleitner, Miriam Strohm, Charlotte Wittekind, Ludwig-Maximilians-Universität München, Germany

The presentation gives an overview of three recent experimental analogue studies investigating mechanisms of change in ImRs using experimental analogue studies. Study 1 used an aversive film as an analogue stressor in N = 100 healthy participants, and compared two variants of ImRs (active vs. passive rescripting) to Imagery Rehearsal, and a no intervention control group. Results showed similar effects for both rescripting interventions, but revealed differences in emotions experienced during the rescripting. Study 2 investigated the effects of ImRs compared to an active control condition (positive imagery), and a no-intervention control condition in N = 79 non-clinical participants reporting aversive memories of distressing real-life events. Results showed that ImRs led to stronger reductions in memory distress and helplessness than both control conditions. Finally, Study 3 used a modified fear-conditioning procedure to test the hypothesis that ImRs works via the mechanism of stimulus devaluation. In contrast to the hypotheses, no difference between ImRs, imagery rehearsal, and a no-intervention control condition on return of fear as the key dependent variable could be found. Implications of these findings for future research into mechanisms of change of ImRs will be discussed, with a focus on the promise and pitfalls of experimental analogue research studying clinical interventions in the laboratory.

Imagery rescripting for individuals at risk for eating disorders

Julie Krans, Radboud University Nijmegen & Pro Persona Research & KU Leuven, Fortesa Kadriu, KU Leuven, Radboud University Nijmegen, Laurence Claes, KU Leuven, Cilia Witteman, Radboud University Nijmegen, & Julie Krans, Radboud University Nijmegen & Pro Persona Research & KU Leuven

Eating disorders are notoriously difficult to treat, with (CBT) treatment effects being only small to moderate and showing high relapse rates. The transdiagnostic model of eating disorders includes negative core beliefs as a major component in the maintenance of disordered eating behaviors. Thus, targeting core beliefs successfully should accordingly result in lower eating disordered behaviour. Although CBT addresses core beliefs, imagery rescripting (ImRs) may be more effective as it directly targets toxic experiences from childhood that are thought to lie at the foundation of these core beliefs using mental imagery. In two experiments, we tested the effects of imagery rescripting on core beliefs and eating disorder symptoms in individuals at risk of developing an eating disorder. Both experiments included a single session in which the ImRs intervention was given, and a one-week follow-up session to (re-)assess the outcome variables. In the first experiment (N = 66), we compared ImRs of an early autobiographical memory to ImRs of an intrusive image. Both ImRs conditions, compared to a no-task control condition, resulted in a reduction of the believability of negative core beliefs and eating disorder symptoms one week later. In the second experiment (N = 69), we compared ImRs focusing on mastery to ImRs focusing on self-compassion and a positive memory recall control condition. Although the ImRs instructions resulted in increased mastery and self-compassion, respectively, no effects on core beliefs or eating disorder symptoms were found in any of the three conditions. In both experiments, all ImRs interventions were audio-guided following a script although participants were free, within the limitations of the instructions of their assigned condition, to rescript their memory or image as they felt was needed. However, our observations showed that it may have been difficult for our participants to know what their needs are and how to rescript their memory or image in a healthy way. Furthermore, the script required the participant to intervene in the image themselves, whereas clinical guidelines advise to have the therapist rescript in the first sessions. Although experimental control was required and prioritized in choosing the design in these first experiments, future research may want to include therapist guided ImRs for more optimal effects.

Future-oriented imagery rescripting facilitates conducting behavioral experiments in social anxiety

Elze Landkroon, Katharina Meyerbröker, Elske Salemink, & Iris M. Engelhard, Department of Clinical Psychology, Utrecht University, The Netherlands

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 imagery rescripting focused on feared social events increases the willingness to conduct a behavioral experiment. Sixty healthy individuals were asked to formulate a behavioral experiment to test their negative beliefs about a social situation they feared. Participants were randomly assigned to a control condition or to 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 positive scenario. All participants were then asked to complete ratings scales and to conduct the behavioral experiment. 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. Imagery-based interventions focused on feared outcomes seem promising to prepare anxious individuals to engage in treatment.

Symposium 59

Uncertainty processing in diverse groups and contexts: from intolerance of uncertainty to uncertainty distress

Convenor and Chair: Pablo Romero Sanchiz, University of Roehampton, UK

The longitudinal association between intolerance of uncertainty and emotional processing in Italian nonclinical girls and boys: Preventive and clinical implications

Gioia Bottesi¹, Sara Iannattone¹, Eleonora Carraro¹, & Marco Lauriola²

¹ Department of General Psychology, University of Padova, Padova, Italy, ² Department of Psychology of Developmental and Socialization Processes, Sapienza University of Rome, Rome, Italy

Introduction. Adolescence is a critical period for individual development since it is marked by numerous cognitive, physical, psychological, and interpersonal changes that make this life stage particularly stressful, thus also increasing vulnerability to psychopathology. Intolerance of uncertainty (IU) and Emotional Processing (EP) are well-known transdiagnostic factors for psychopathology, but no study has clarified their reciprocal influences nor surveyed adolescent populations to address this issue so far. This pre-pandemic three-wave longitudinal study explored how self-reported IU and EP influence each other over 6 months in a nonclinical group of Italian teenagers.

Method. Four-hundred and fifty-seven adolescents (53% female; age range = 11-18) participated in up to three assessment waves, during which they completed an online survey containing self-report measures including the Intolerance of Uncertainty Scale-Revised and the Emotional Processing Scale. Students filled in the survey in their school's computer room. A Random Intercept Cross-Lagged Panel Model (RI-CLPM) approach was employed to separate within-person from between-person variance in modeling how IU and EP unfolded over time.

Results. A positive association between IU and EP at the between-person level emerged, suggesting that adolescents high on IU across measurement waves chronically experienced more difficulties in EP. At the within-person level, positive cross-lagged coefficients connected IU to EP, indicating that teenagers' changes in their habitual EP score were predicted by corresponding shifts in IU at the previous time point. Conversely, the cross-lagged coefficients from EP to IU were weaker and marginally or not significant, pinpointing that adolescents' deviations from their habitual IU level were less strongly predicted by corresponding shifts in EP at the previous wave.

Discussion. Overall, current results tentatively suggest that changes in IU may promote a better EP, but not vice versa. Findings will be discussed by reflecting on the relevance of deepening the knowledge of IU and its relations with psychopathological constructs in a period of life fraught with uncertainty and characterized by a high vulnerability to psychopathology. Taking a preventive approach, it will also be discussed how a thorough study of IU in teenagers would enable the design and development of early interventions to prevent maladaptive outcomes in such a vulnerable population.

Differences in the experience of gender-specific uncertainty distress: a mixed methods study

Raquel Nogueira-Arjona¹, Emilie H. Dommersnes², Aisha J. Anderson-Sifflet², Georgia A. Mills², Philippa J. Emerton² & Pablo Romero-Sanchiz²

¹ School of Psychology, University of Sussex, Brighton, UK, ² School of Psychology, University of Roehampton, London, UK

Introduction. Diverse studies report inequalities in the experience of distress based on gender. Women, compared to men, suffer more psychological distress causally related to greater exposure to –gender-specific stressors such as those linked to work-to-family conflict, having less decision authority, or being a single parent (Bilodeau et al, 2020). The model of uncertainty distress (Freeston et al., 2020) is a theoretical framework used to understand and manage psychological distress. The model has been tested across different contexts, such as long COVID, professionals working in clinical health settings and climate change. However, there are still unknowns related to a) what are the specific threat and uncertainty-related situations linked to gender leading to distress and b) the applicability of the model to these gender-specific threatening and uncertain situations.

Method. This study used a mixed-methods cross-sectional approach with two parts: a) online interviews (N=10, 50% female; age range = 18-23) and b) an online survey (N = 105; 64.5% female; age range = 18-24). The interviews were focused on identifying a) threat and uncertainty-related situations in the context of gender-related themes and b) coping behaviours aimed at reducing uncertainty in these situations. The survey assessed the main variables included in the model of uncertainty distress (actual and perceived threat, actual and perceived uncertainty, uncertainty behaviours and uncertainty distress).

Results. Analysis of qualitative data suggested that females and males experience distinct gender-specific threats and uncertainties. Analysis of quantitative data showed that females, compared to males, experienced significantly more gender-specific uncertainty and gender-specific threat, leading to higher distress and significantly disrupting their lives. Mediation models showed that perceived threat

positively mediated the relationship between gender-specific threat and distress in females but not in males. However, the mediation of perceived uncertainty in the relationship between gender-specific uncertainty and distress was non-significant both for males and females. **Discussion.** These results provide preliminary evidence of the importance of exploring gender-specific threats and uncertainties in our work with clients, particularly females. Our results will be discussed by reflecting on potential therapeutic targets among females and males experiencing frequent gender-specific threats and uncertainties, particularly the perception of gender-specific threats. Clinical implications in the context of the uncertainty distress model will be discussed.

Quality and quantity of COVID-19-related information and uncertainty distress (US) in a Greek sample

Meropi Simou, Aristotle University of Thessaloniki, Greece

Abstract not available

Influence of ethnicity in the experience of uncertainty and threat in ethnic minorities: a mixed-methods pilot study

Pablo Romero Sanchiz², Roxana Francisca Andrade¹, Adriana Lisbeth Jimenez Ayala¹, Rhoda Ama Koramah Obempong¹, & Raquel Nogueira Arjona²

¹ School of Psychology, University of Roehampton, London, UK, ² School of Psychology, University of Sussex, UK

Background. Uncertainty and threat are commonly studied causes of distress and psychological disorders. However, uncertain and threatening situations or events specifically experienced by people from ethnic minorities and how they affect them remain understudied. Our pilot study aims to fill that gap using a mixed-methods approach to explore the specificities of uncertain and threatening experiences associated with being part of an ethnic minority using the Uncertainty Distress model (Freeston et al., 2020) as a theoretical framework.

Methods. We used a mixed-methods cross-sectional approach using: a) individual online interviews (N = 8, 62.5% female, diverse ethnic backgrounds; age range = 19-24) and b) an online survey (N = 140; 80.3% female; age range = 18-52). For the interviews, we used a thematic analysis approach to explore the themes associated with uncertainty and threat in people from ethnic minorities. The online survey covered the components of the Uncertainty Distress model (actual and perceived threat, actual and perceived uncertainty, uncertainty behaviours and uncertainty distress; Freeston et al., 2020)

Results. In the interviews, several threat- and uncertainty-related themes associated with being part of a minority emerged: 1) negative media portrayals, stereotyping and being racially profiled; 2) difficulties associated with bilingualism; 3) mental health and stigma; and 4) problems associated with adapting to a new culture and assimilation. Regarding the survey, our results showed that people from ethnic minorities experienced higher uncertainty distress in situations related to their ethnic background than white British and other white ethnic backgrounds. In addition, when the remaining variables were included in the analyses, uncertainty distress was not predicted by intolerance of uncertainty or worry but by perceived and experienced uncertainty and threat. This study shows how people from ethnic minorities experience specific personally and socially relevant uncertain and threatening situations associated with their ethnic background.

Discussion. Our results illustrate how people from ethnic minorities experience and are affected by specific threatening and uncertain situations, apart from those experienced by everyone else. Specifically, in these types of situations and events, perceived threat and uncertainty emerged as critical variables that should be carefully assessed and targeted by interventions. How that might affect current cognitive-behavioural models focused on threat and uncertainty, including assessment and treatment, will be further discussed.

Symposium 60

Digital beyond the disorder-specific: different applications of transdiagnostic internet-based interventions

Convenor: Laura Luisa Bielinski, University of Bern, Switzerland

Chair: Gerhard Andersson, Linköping University, Karolinska Institute, Sweden

One size fits all? Applying the Unified Protocol as an internet-based intervention for emotional disorders

Carmen Schaeuffele¹, Christine Knaevelsrud¹, Babette Renneberg¹, Johanna Boettcher²

¹ Freie Universität Berlin, Berlin, Germany

² Hochschule Berlin, Berlin, Germany

Background: Internet-based interventions can facilitate access to treatments, bridge barriers like time and place constraints and facilitate transfer into everyday life. Applying transdiagnostic Internet-based interventions is especially promising, as transdiagnostic approaches are suitable for a wide range of patients. The Unified Protocol (UP) is a mechanistic transdiagnostic treatment protocol: By changing dysfunctional reactions towards emotions, the treatment should be suitable for all emotional disorders.

Method: We applied the UP as a 10-week guided Internet-based intervention for patients for mixed emotional disorders. In an RCT, we compared the intervention to waitlist for participants with a primary anxiety, depressive, or somatic symptom disorder. Outcomes included symptom distress, anxiety and depression, positive and negative affect, negative effects as well as satisfaction with treatment.

Results: We will present quantitative and qualitative findings, discussing the potentials and limitations of applying the UP online. Overall, participants who received the Internet-based UP showed larger changes in symptom distress, anxiety and depression, as well as negative and positive affect. Adherence to treatment was moderate and the majority of participants reported experiencing at least one negative effect.

Discussion: Results will shed light on the important question of whether this transdiagnostic approach delivered over the internet is actually applicable to the most common emotional disorders and if treatment gains can be maintained. If results prove favorable, this Internet-based intervention based on the Unified Protocol would provide a low-threshold intervention for a large range of patients with emotional disorders.

A transdiagnostic internet-based intervention with an emotion regulation focus (REMOTION): Preliminary findings from two ongoing pilot randomized controlled trials in two different settings

Laura Luisa Bielinski^a, Gwendolyn Wälchli^a, Tobias Krieger^a, Franz Mogg^b, Thomas Berger^{aa}

^a Department of Clinical Psychology and Psychotherapy, University of Bern, Bern, Switzerland, ^b University Hospital of Psychiatry and Psychotherapy, University of Bern, Bern, Switzerland

Emotion regulation is a transdiagnostic construct relevant to the treatment of mental health disorders. While several internet-based interventions (IBIs) for mental health disorders include emotion regulation as one of many treatment components, only rarely does an IBI place an explicit focus on the construct. REMOTION is an IBI that uses the extended process model of emotion regulation (Gross, 2015) as a framework, with the aim of reducing patient symptom severity and improving patient emotion regulation. REMOTION includes six different modules and is currently being examined in different trials as a blended treatment, e.g. in combination with face to face treatment. The aim of this presentation is to give an overview of preliminary findings from two ongoing pilot randomized controlled trials that examine REMOTION. One trial examines REMOTION as an add-on to outpatient psychotherapy, the other examines the intervention as an add-on to inpatient psychiatric treatment. The focus of the presentation will be on aspects of feasibility. Qualitative data on experiences of different stakeholders will be presented along with quantitative data pertaining to elements such as uptake, satisfaction with the intervention and system usability. Information from baseline and post-assessment timepoints only will be presented. Finally, potential implications of these preliminary findings for future research in the realm of transdiagnostic blended treatment and also for clinical practice will be discussed.

Internet-based interventions for loneliness – The specific efficacy of a CBT approach in reducing loneliness?

Anton Käll^(1 & 2), Malin Bäck⁽¹⁾, Camilla Welin⁽¹⁾, Hanna Åman⁽¹⁾, Rasmus Bjerkander⁽¹⁾, Matilda Wänman⁽¹⁾, Tomas Lindegaard⁽¹⁾, Matilda Berg⁽¹⁾, Hajdi Moche⁽¹⁾, Roz Shafran⁽²⁾, Gerhard Andersson^(1, 3 & 4)

¹ Department of Behavioural Sciences and Learning, Linköping University, SE-581 83, Linköping, Sweden, ² UCL Great Ormond Street Institute of Child Health, London, UK, ³ Department of Biomedical and Clinical Sciences, Linköping University, SE-581 83, Linköping, Sweden, ⁴ Department of Clinical Neuroscience, Karolinska Institute, SE-171 77, Stockholm, Sweden

While there is currently no gold-standard option among interventions to reduce loneliness, CBT has been named a promising candidate with both face-to-face and internet-based versions of this approach showing successful outcomes in trials up to this point. This efficacy is thought to be attributable to the ability to address maladaptive cognitive and behavioural tendencies that can maintain feelings of loneliness over time. However, up to this point the specific impact of CBT is yet to be compared to other psychotherapeutic ways of conceptualizing and addressing loneliness. We report on the results of a three-arm trial comparing an ICBT intervention for loneliness to one based in interpersonal psychotherapy (IPT). A total of 170 participants were recruited and randomly assigned to one of the two active conditions or a waitlist control group. The primary outcome measure was the UCLA Loneliness Scale. Participants also provided ratings of quality of life and answered questionnaires regarding symptoms of common psychiatric disorders. The primary outcome measure was analyzed using a latent growth curve model, and the secondary outcomes using robust linear regression models. The results indicate significantly lower ratings of loneliness for the ICBT condition at the posttreatment timepoint compared both to the waitlist (Cohen's $d = 0.71$) and to the active IPT treatment (Cohen's $d = 0.52$). The latter did not outperform the waitlist in terms of loneliness ratings, though a significant effect was found for quality of life. An investigation of the long-term effects one year after the treatment began suggested the two active treatment groups exhibited very similar ratings, both in terms of loneliness and for the secondary outcome measures. The results from the trial will be discussed with a focus on how they relate to our understanding of how to successfully create and disseminate loneliness interventions.

Evaluating the efficacy of a guided and an unguided internet-based self-help intervention for chronic loneliness: First results of a three-arm RCT trial

Noëmi Seewer^a, M Sc; Andrej Skoko^a, M Sc; Anton Käll^{b, c}, PhD; Gerhard Andersson^{c, d}, PhD; Maike Luhmann^e, PhD; Thomas Berger^a, PhD; Tobias Krieger^a, PhD

^a Department of Clinical Psychology and Psychotherapy, University of Bern, Bern, Switzerland, ^b Department of Behavioural Sciences and Learning, Linköping University, Linköping, Sweden, ^c Center for Social and Affective Neuroscience, Linköping University, Linköping, Sweden, ^d Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden, ^e Faculty of Psychology, Ruhr University Bochum, Germany

Background: Loneliness is a phenomenon prevalent both in the general population and in clinical practice transdiagnostically. When experienced transiently, loneliness is considered adaptive. However, several studies show that chronic loneliness is associated with and predictive of various mental and physical health outcomes. At present, evidence-based interventions for effectively alleviating chronic loneliness are still scarce. Furthermore, loneliness is highly stigmatized. Thus, low-threshold interventions for addressing loneliness effectively are needed.

Aims: This study aims to evaluate the efficacy of a guided and an unguided internet-based self-help intervention for loneliness.

Methods: In this 3-arm randomized controlled trial, 250 adults with increased levels of loneliness are randomized to either a 10-week internet-based self-help intervention with or without guidance or a waitlist control group (2:2:1 allocation ratio). The self-help program consists of nine modules based on cognitive-behavioral principles. The primary outcome is loneliness, assessed with a 9-item version of the UCLA Loneliness Scale. The efficacy of the interventions will be examined by assessing data at baseline, 5 weeks (intermediate), and 10 weeks (post). Secondary outcomes include depressive symptoms, social anxiety, size of the social network, and satisfaction with life, among others.

Results: Recruitment has started in May 2021 and is ongoing as of the submission of this abstract. We will present first results on uptake, client satisfaction, and the efficacy of the internet-based interventions for loneliness.

Conclusion: Results of the present study will expand knowledge on the effectiveness of interventions for loneliness. Additionally, it will shed light on the role of guidance in internet-based self-help interventions for reducing loneliness.

Symposium 61

Novel approaches to understanding cognitive factors in depression-related pathology

Chair: Mary E. McNamara, University of Texas at Austin, USA

Multifactorial prediction of depression symptom dimensions

McNamara, M.E.,^a Shumake, J.,^a Stewart, R.A.,^a Labrada, J.,^a Alario, A.,^a Allen, J.J.B.,^b Palmer, R.,^c Schnyer, D.,^a M., McGeary, J.,^d Beevers, C.G.^a

^a Department of Psychology and Institute for Mental Health Research, University of Texas at Austin, Austin, Texas, USA , ^b Department of Psychology, University of Arizona, Tucson, Arizona, USA , ^c Department of Psychology, Emory University, Atlanta, Georgia, USA , ^d Veterans Affairs, Providence RI and Department of Psychiatry and Human Behavior, Brown University School of Medicine, Providence, Rhode Island, USA

Depression is a leading cause of disability and has been widely researched; however, most work has studied correlates of depression in isolation. In this study, we present a secondary analysis of a large ($n = 217$), multifactorial dataset that included data from sociodemographic and self-report questionnaires, polygenic risk scores, resting-state electroencephalography, pupillometry, actigraphy, and cognitive-affective behavioral tasks. We used elastic net regularized regression with 10-fold cross-validation to classify individuals into currently depressed (MDE), psychiatric control (PC), and no current psychopathology (NP) groups. We also built models to predict symptom severity and lifetime occurrence of a major depressive episode. The most important variables for prediction in the models were also identified. Cross-validated models explained 20.6% of the out-of-fold deviance for the classification of the MDE versus PC group, 33.2% of the deviance for the MDE versus NP group, but -0.6% of the deviance between PC and NP. Additionally, predictors accounted for 25.7% of the out-of-fold variance in anhedonia severity, 65.7% of the variance in depression severity, and 12.9% of the deviance in lifetime occurrence of a depressive episode. Self-referent processing, anhedonia, and psychosocial functioning emerged as important differentiators of the MDE and PC groups, and were also strong predictors of anhedonia and general distress (e.g. depression symptom dimensions). Findings highlight the advantages of using psychiatric control groups to isolate factors specific to depression.

Neurocognitive predictors of self-reported reward responsivity and approach motivation in depression: a data-driven approach

Kean J. Hsu^{1,2*}, Mary E. McNamara³, Jason Shumake³, Rochelle A. Stewart⁴, Jocelyn Labrada³, Alexandra Alario⁵, Guadalupe D.S. Gonzalez⁶, David M. Schnyer³, Christopher G. Beevers³

¹Department of Psychology, National University of Singapore, ²Department of Psychiatry, Georgetown University Medical Center, ³Institute for Mental Health Research and Department of Psychology, University of Texas at Austin, Austin, TX, ⁴Department of Psychology, Florida State University, Tallahassee, FL, ⁵Interdisciplinary Graduate Program in Neuroscience, University of Iowa, Iowa City, IA , ⁶Department of Psychology, State University of New York Purchase, Purchase, NY

Background: Individual differences in reward-related processes, such as reward responsivity and approach motivation, appear to play a role in the nature and course of depression. Prior work suggests that cognitive biases for valenced information may contribute to these reward processes. Yet there is little work examining how biased attention, processing, and memory for positively- and negatively-valenced information may be associated with reward-related processes in samples with depression symptoms.

Methods: We used a data-driven, machine-learning (elastic net) approach to identify the best predictors of self-reported reward-related processes using multiple tasks of attention, processing, and memory for valenced information measured across behavioral, eye tracking, psychophysiological, and computational modeling approaches ($N = 202$). Participants were adults (ages 18 - 35) who ranged in depression symptom severity from mild to severe.

Results: Models predicted between 5.0-12.2% and 9.7-28.0% of held-out test sample variance in approach motivation and reward responsivity, respectively. Low self-referential processing of positively-valenced information was the most robust, albeit modest, predictor of low approach motivation and reward responsivity.

Conclusions: Self-referential processing of positive information is the strongest predictor of reward responsivity and approach motivation in a sample ranging from mild to severe depression symptom severity. Experiments are now needed to clarify the causal relationship between self-referential processing of positively-valenced information and reward processes in depression.

Cognitive control and emotion regulation in the context of unemployment

Ernst Koster, Ghent University, Belgium

Important individual differences exist in how people respond to major stressors. Despite the key roles attributed to emotion regulation and cognitive control in resilience and vulnerability to stress, relatively few studies have directly investigated these relationships upon confrontation with major stressors, such as unemployment. The current pre-registered study thus set out to prospectively test mediational hypotheses, in which baseline cognitive control (indexed by performance on a cognitive task) and self-reported effortful control predict emotion regulation (follow-up 1), in turn predicting internalizing symptomatology or resilience (follow-up 2). Data of 84 people confronted with unemployment were analyzed using path models: one based on primary outcome measures (repetitive negative thinking and symptoms of depression, anxiety and stress) and one based on secondary outcome measures (positive thinking style and resilience). The results show that effortful control and cognitive control are relevant distal factors to consider when investigating emotional symptoms and resilience in unemployed individuals.

Reinforcement learning correlates of symptom improvement after CBT in depression

Vanessa M. Brown, University of Pittsburgh, USA

Lusha Zhu, Alec Solway, John M. Wang, Katherine L. McCurry, Brooks King-Casas, Pearl H. Chiu

Introduction: Anhedonia and negative affect are primary symptoms of depression. These symptoms describe alterations in learning from and processing positive and negative events in the environment and are primary targets of evidence-based treatments like cognitive-behavioral therapy (CBT). How symptoms of depression relate to impairments in reward and loss processing and how these impairments are remediated with symptom reduction after CBT is unclear. Reinforcement learning (RL) provides precise, quantitative specification of

learning processes behaviorally and neurally. Using RL to characterize learning dysfunctions in depression, the relationship between learning dysfunctions and symptoms, and effects of CBT may provide insights into the pathology and treatment of depression.

Methods: Sixty-nine participants with DSM-IV depressive disorders (Major Depressive Disorder and/or Dysthymia) and thirty-two participants with no current or past depression completed a reinforcement learning task with reward and loss learning blocks while undergoing functional magnetic resonance imaging (fMRI) scanning. Task behavior was fit to a reinforcement learning model and model-calculated prediction error and expected value were regressed against fMRI BOLD signal. Negative affect and anhedonia symptoms were regressed against behavioral and neural measures to assess differences in RL with depression symptoms. After completing 12 weeks of manualized CBT, 32 participants with depression were re-assessed and changes in behavioral RL parameters were related to symptom change after CBT. For all analyses, significance was assessed as $p < 0.05$ (for frequentist analyses) or 95% credible interval not encompassing 0 (for Bayesian analyses).

Results: During reward learning, greater anhedonia in depressed participants was related to lower reward learning rate, higher reward outcome sensitivity, and disrupted striatal relationships between expected value and prediction errors signals. During loss learning, greater negative affect was related to more negative outcome shift and more negative prediction error signals in vmPFC. After CBT, greater symptom improvement was associated with greater reward learning rate and more positive loss outcome shift.

Discussion: We found evidence for valence- and symptom-specific learning alterations at behavioral and neural levels. These learning alterations were responsive to treatment with CBT, suggesting that RL can be used for treatment development and targeting in depression.

Symposium 62

Advances in compassion-based interventions research

Chair: *Ausiàs Cebolla I Martí, Universitat de València, Spain*

Compassionate approach to psychosis: development and preliminary results of the COMPASS intervention

Maria João Martins, University of Coimbra Medical Services, Portugal

Compassion-focused Therapy (CFT) has been used to promote recovery in people with psychosis with promising results. The development process of the Compassionate Approach to Schizophrenia and Schizoaffective Disorder (COMPASS) builds upon the available research on contextual behavioural approaches for psychosis. Its main framework is the affect regulation system's model and the compassion-focused therapy rationale as it was adapted for psychosis. The COMPASS is a manualized intervention, comprises 12 group sessions (and a booster session at 3-months) and evolves through three phases: Building trust and group as a safe space (sessions 1-4); Compassionate Mind Training (5-10); and Revisiting Recovery and Compassionately Planning Ahead (11-12). Preliminary results showed improvement in social functioning difficulties, positive and negative symptoms. Improvement was also found in the hypothesized processes of change in COMPASS: self-criticism, external shame, fears of compassion, self-compassion and self-reassuring abilities.

Nurturing compassion in schools: Feasibility and effectiveness of a Compassionate Mind Training program for teachers on promoting psychological and physiological wellbeing

Marcela Matos, University of Coimbra, Faculty of Psychology and Educational Sciences, Center for Research in Neuropsychology and Cognitive and Behavioural Intervention (CINEICC), Portugal

Addressing mental and physical health problems and promoting wellbeing in educational settings is a global priority. Teachers present a high risk of stress and burnout, which negatively impacts their mental health and professional performance. Compassion-based interventions have been found effective in promoting emotion regulation, prosocial qualities and wellbeing. This paper examines the feasibility and effectiveness of a 6-module Compassionate Mind Training program for Teachers (CMT-T) on indicators of psychological and physiological wellbeing. A pilot non-controlled study ($n=31$) and a pragmatic randomized controlled trial (RCT) with a stepped-wedge design ($n=155$) were conducted in samples of public-school teachers. Participants completed self-report measures of psychological distress, burnout, overall and professional wellbeing, compassion and self-criticism at baseline, post-intervention, and 3-months follow-up. Resting heart-rate variability (HRV) was measured at baseline and post-intervention in a sub-sample. The CMT-T was feasible and effective. Participants in the CMT-T groups showed improvements in self-compassion, compassion to others, positive affect, and HRV as well as reductions in fears of compassion, anxiety and depression. WLC participants who received CMT-T revealed additional improvements in compassion for others and from others, and satisfaction with professional life, along with decreases in burnout and stress. Teachers scoring higher in self-criticism at baseline revealed greater improvements post CMT-T. Improvements were retained at 3-month follow-up. CMT-T shows promise as a compassion-focused intervention for fostering compassion, wellbeing and reducing psychophysiological distress in teachers, and may contribute to nurturing compassionate, prosocial and resilient educational environments. Given its favourable and sustainable effects on wellbeing and psychophysiological distress, and low cost to deliver, a broader implementation and dissemination of CMT-T is encouraged.

Feasibility of a skills-based intervention to increase well-being for long-standing symptoms in BPD.

Joaquim Soler, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain

Despite its severity, remission rates of Borderline Personality Disorder (BPD) are estimated to be around 85% within ten years, leading to a decrease in the use of mental health services in relation to self-harm or suicide attempts. However, no longer meeting diagnostic criteria for the disorder should not be interpreted as an absence of suffering. Studies indicate that beyond the disappearance of parasuicidal behaviors, areas such as emotional instability, affective symptoms, anger or loneliness persist over time. It is therefore relevant to consider recovery over and above the mere remission of the diagnostic criteria of the disorder. To date, research on the effects of interventions from positive psychology on BPD patients is scarce. In this study we examined the acceptability of an 8-week intervention developed from positive psychology and contemplative practice in BPD patients who had already received treatment with Dialectical Behavioral Therapy group therapy and had ceased parasuicidal behaviors. The group intervention was weekly and lasted 2 hours. The contents trained included: The best possible self; Gratitude; Strengths; Savoring; Mindfulness with difficult emotions; Loving Kindness and Compassion; Random acts of kindness; Contribution and Altruism; Multiple selves. The sample consisted of 30 outpatients recruited consecutively at the BPD Unit of the Hospital de la Santa Creu i Sant Pau in Barcelona. Participants of both sexes, aged between 18 and 65 years, were admitted to the study. The audio-recorded interviews were transcribed verbatim and the transcripts were organized into codes. The qualitative

analysis resulted in five general themes: 1) useful practices, 2) unhelpful practices, 3) obstacles, 4) facilitators, and 5) overall effects of training. For most participants, practicing gratitude, savoring and working with personal strengths were related to increased positive emotions. On the other hand, for some participants, projecting a future self and increasing awareness of the inner critic triggered higher levels of anxiety and anger.

Short mental imagery training to enhance the quality of compassion practice

Ausiàs Cebolla I Martí, Universitat de València, Spain

Compassion-based interventions (CBI) have been receiving increased interest in the clinical field. However, study of how to enhance positive effects of the still need additional attention. One unexplored but substantially connected with the quality of the compassion practice path to potentially foster compassion practice corresponds to mental imagery skills. In a series of three studies, we validate a short mental imagery skills training (Study 1; n = 63); we evaluate whether this mental imagery skills training improves the quality of compassion practice under neutral circumstances (Study 2; n = 84), and within self-criticism induction context (Study 3; n = 61). The results of the three studies indicate that the training seems effective in increasing the mental imagery skills. However, the training has no effect on the quality of the compassion practice, either under neutral circumstances or within self-criticism induced context. These results question the importance of the mental imagery skills per se in compassion practice. They also open up new interesting research questions.

Symposium 63

Theory of mind and psychopathology

Chair: Andreas Veith, DGVt and Center for Psychotherapy, Dortmund, Germany

The relationship between cognitive developmental level and the psychopathology

Hakan Turkcapar, Professor of Psychiatry, ASBU University Dpt Psychology, MA Clinical Psychology, HK University

Piaget's cognitive developmental theory supposes that normally all of the adults reach formal operational stage of development but in reality, not all adults actually do so: Data from adolescent populations indicates only 30 to 35% of high school seniors attained the cognitive development stage of formal operations. Studies of college students suggest that slightly less than 70% are formal operational and no more than 20% are in the late formal stage. Being at the formal operational stage in academic or intellectual area doesn't necessarily mean that the individual will perform at that level of competence in all areas of his/her life (e.g. Interpersonal, social area). Patients with personality disorder and chronic psychiatric patients always show characteristics of earlier cognitive developmental stages characteristics (McCullough 2003). They function in an immature level at the social-interpersonal arena. In addition, some psychiatric patients may temporarily regress to earlier stages of cognitive development when they show intense emotional reactions.

In a study in which we investigated the relationship between the cognitive development levels of individuals and their psychological symptoms, we found that there was a relationship between psychological symptoms and cognitive development level (Tabur 2020). In this study we investigate the relationship between psychological symptoms and the cognitive level of the individual. We assessed depression anxiety and other psychological symptoms with using Beck Depression Inventory (BDI), Brief Symptom Inventory (BSI), Short Form of Personality Belief Inventory (PBI-SF), and to assess cognitive developmental level we used Luebeck Pre-Operational Thinking Questionnaire (LQPT) in a sample of 388 people (285 female, 92 male) between the ages of 18–24. In this study we found a significant negative correlation between the IPDT-TR's Relationship and BSI's Hostility scores ($r=-0.13$, $p<0.05$). Also, there were significant negative correlations between the IPDT-TR's Conservation, Relationships, and Law sub-dimension and the PBI- F sub-dimensions scores ($p<0.05$). A significant negative correlation was found between the Luebeck Scale and BDI scores ($r=-0.61$; $p<0.01$). Luebeck Scale scores were negatively significantly correlated with all sub-dimensions of the PBI-SF ($p<0.05$).

Our results suggested that a significant negative relationship between cognitive development level and psychological symptoms. A negative significant relationship was found between the pre-operational thinking scores and psychological symptoms. It can be said that as individuals' pre-operational thinking styles increase, they are more prone to display distinct personality traits. For this reason, it is considered important to examine the relationship between cognitive development level and psychological symptoms. Therefore, when using any form of psychotherapy, the patient's level of cognitive development must be taken into account. This insight will help in understanding and psychotherapeutic and clinical management of individuals with personality disorders and depression, and anxiety.

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Theory of mind in Social Anxiety Disorder: Is it a differentiating factor for avoidant personality disorder comorbidity

Turkan Aghakishiyeva, Kadir Ozdel, University of Medical Sciences, Ankara, Turkey

Social Anxiety Disorder (SAD) is characterized by a pronounced and persistent fear of being at the center of attention and/or humiliation, avoiding social and performance situations. Avoidant Personality Disorder (AvPD) has been reported in various publications that is frequently seen with social anxiety disorder. The two concepts are very related to each other. With this regard Theory of Mind (ToM) abilities in these conditions especially in SAD have grasped attention. However, there is a scarcity of research evaluating ToM in both conditions. We conducted a research study to examine groups including patients with Social Anxiety Disorder with and without AvPD in terms of their theory of mind. Our hypothesis was that advanced level ToM abilities can differentiate SAD patients from healthy controls and abilities including more basic ones can differentiate patients with AvPD from SAD (without AvPD). For this end, 55 patients who are diagnosed with SAD without AvPD, 25 patients with SAD and AvPD according to the Structured Clinical Interview for DSM-5, Clinician Version (SCID-5-CV), and 30 healthy controls were included in the study. Autism Spectrum Quotient Test-(AQ), Liebowitz Social Anxiety Scale (LSAS), Dokuz Eylül Theory of Mind Index (DEZİKÖ), Reading the Mind in the Eyes (RME) were applied to the study participants. It was observed that ToM positive scores measured by Eyes test were higher in the control group than in the group of patients diagnosed with SAD and SAD+AvPD. ToM negative scores of the SAD + AvPD diagnosed patient group were lower than the SAD and control groups (SAD and control group's scores were similar). ToM neutral scores were observed to be similar in all three groups. In addition, in the SAD group, the total scores of the scale were also higher than the SAD + AvPD diagnosed patient group. As a result of the study, it was found that the

AvPD + SAD group has less ToM abilities than the SAD group and the SAD group has less ToM abilities than the control group. Emotional social cognition in SAD and AvPD groups was intact for neutral emotions. And for detecting the negative emotions controls and SAD patients were similarly successful. These results suggest that ToM abilities are the weakest for personality disorder group. However, even in this group recognizing neutral emotion is intact. There was no significant difference between the SAD group's subtypes (i.e., performance and generalized subtypes). The new studies on SAD subtypes, AvPD and ToM will enrich the data in the literature in this subject and ensure that the relationship between SAD, AvPD and ToM would be understood clearer.

The Comparison of Theory of Mind functions in patients with social anxiety disorder and generalized anxiety disorder *Ceyda Deniz Vural Semiz, Ali Ercan Altinoz, Ferdi Kosger, Gokay Aksaray, Eskisehir Osmangazi University, Turkey*

The studies conducted on how theory of mind (ToM) functions are affected in Social Anxiety Disorder (SAD) are contradictory. There are no studies comparing the ToM functions of patients with SAD with another anxiety disorder. In this study, it was aimed to compare ToM functions of patients with SAD, Generalized Anxiety Disorder (GAD), and healthy controls, assuming that there was greater impairment in the ToM functions of patients with SAD than patients with GAD and healthy controls. Our study included 43 patients with social anxiety disorder, 43 patients with generalized anxiety disorder according to DSM-V diagnostic criteria, and 43 age- and sex-matched healthy controls. Semi-structured socio-demographic data form, Beck Depression Scale, Beck Anxiety Scale, Liebowitz Social Anxiety Scale were applied to SAD, GAD patients, and healthy control group participating in the study. In our study, unlike our hypothesis about SAD and ToM, no impairment was found in ToM functions of patients with SAD compared to patients with GAD and healthy controls. On the other hand, it was found that patients with GAD had worse ToM functions compared to the healthy control group. No statistically significant correlation was found between ToM functions and anxiety, depression, and social anxiety scores of the SAD and GAD groups. To the best of our knowledge, our study is the first study in the literature comparing patients with SAD and GAD in terms of ToM functions. Our findings reveal that GAD is more associated with impaired ToM functions than SAD. Prospective studies with larger samples are needed to reveal whether this is a cause or a consequence.

Symposium 64

Internet-based treatment for adolescents and young adults with depression or anxiety: development and results of two innovative transdiagnostic add-on interventions

Convenor: Maria Schouten, Arkin Institute for Mental Health / VU University, the Netherlands

Chair: Julie Emmelkamp, Arkin Institute for Mental Health / VU University, the Netherlands

What is the state of the evidence? A meta-analysis on internet and computer-based CBT for adolescents and young adults with anxiety and depression.

Christ, C., Schouten, M.J.E., Blankers, M., van Schaik, D.J.F., Beekman, A.T.F., Wisman, M.A., Stikkelbroek, Y.A.J., and Dekker, J.J.M., Arkin Institute for Mental Health / GGZ ingest, Amsterdam, the Netherlands

Background: Anxiety and depressive disorders are prevalent in adolescents and young adults. However, the majority of young people with mental health problems do not receive treatment. Computerized cognitive behavior therapy (cCBT) may provide an accessible alternative to face-to-face treatment, but the evidence base in young people remains limited compared with adults. Therefore, we conducted a systematic review and meta-analysis of the effectiveness of cCBT in treating anxiety and depression in adolescents and young adults compared with active treatment controls and passive controls. We aimed to examine post-treatment and follow-up effects, and to explore moderators of treatment effects.

Methods: We conducted systematic searches in six electronic databases, and included randomized controlled trials comparing cCBT with any control group in adolescents or young adults (mean age between 12 and 25 years) with anxiety or depressive symptoms. Quality of included studies and the evidence for each outcome were assessed with the Cochrane risk-of-bias tool for randomized trials (version 2.0) and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. Random-effects meta-analyses were conducted using Comprehensive Meta-Analysis software. Subgroup analyses and meta-regression analyses were conducted to explore whether age, level of guidance, and adherence rate were associated with treatment outcome.

Results: The database search resulted in 7670 papers, of which twenty-four studies met inclusion criteria. Most included studies (22/24) had a high risk of bias. Compared to passive controls, cCBT yielded small to medium post-treatment pooled effect sizes on depressive symptoms ($g = 0.51$, 95%CI 0.30-0.72) and anxiety symptoms, ($g = 0.44$, 95%CI 0.23-0.65). cCBT yielded similar effects as active treatment controls on anxiety symptoms ($g = 0.04$, 95% CI -0.23-0.31). For depressive symptoms, the non-significant pooled effect size favored active treatment controls ($g = -0.70$, 95%CI -1.51-0.11), but heterogeneity was very high ($I^2 = 90.63\%$). No moderators of treatment effects were identified. At long-term follow-up, cCBT yielded a small pooled effect size on depressive symptoms compared with passive controls. No other significant follow-up effects were found, but power was limited due to the small number of studies.

Conclusions: cCBT is beneficial for reducing anxiety and depressive symptoms at post-treatment in young people compared with passive controls. Compared to active treatment controls, cCBT yielded similar effects on anxiety symptoms. Regarding depressive symptoms, however, results remain unclear. Importantly, our study shows that more high-quality research in this population is needed, including active controls and long-term follow-up assessments.

Development of an innovative emotion regulation training for adolescents with a depressive and/or anxiety disorder.

Julie Emmelkamp, Marika A. Wisman, Nico J.M. Beuk, Yvonne A.J. Stikkelbroek, Maaike H. Nauta, Jack J.M. Dekker, Carolien Christ, Arkin Institute for Mental Health / VU University, the Netherlands

Background: During adolescence, depressive and anxiety disorders are among the most common mental health disorders. Both disorders tend to persist, are predictive for other mental disorders, and are associated with severe impairment in diverse areas. It is of great importance to improve treatment outcomes for depressed and/or anxious adolescents. Dysfunctional emotion regulation appears to be a transdiagnostic factor in the development and maintenance of aforementioned disorders. Enhancing emotion regulation skills may therefore reduce symptom severity. In light of this, we developed a guided internet-based emotion regulation training (E-TRAIN) that will be added to CBT.

Method: To develop an emotion regulation training for adolescents, we held in-depth interviews and a focus group with adolescents ($N_{\text{group}}=5$; $N_{\text{interview}}=10$), and a focus group with therapists ($N=6$) that participated in the pilot study. We focused on: 1) evaluating the emotion regulation training of the pilot study; 2) identifying key strategies for improvement; and 3) identifying adolescents' preferences and needs regarding online treatment in general. Based on the existing emotion regulation interventions and the conclusions of these focus groups, we developed a first version of the "E-TRAIN" module. Subsequently, this first version was tested and evaluated by a small sample of adolescents with anxiety and/or depression ($N=4$), after which we further adapted and finalized the E-TRAIN module. E-TRAIN consists of 6 guided online sessions and 3 video conference sessions with a trained psychologist. The effectiveness of E-TRAIN is currently being investigated through a multicenter RCT. In this study, we aim to include 138 adolescents (13-19 years) with depression and/or anxiety disorder. Participants are randomly assigned to CBT or CBT + E-TRAIN. The primary outcome measure, depressive symptoms and anxiety symptoms (measured with the RCADS) and other relevant outcome variables are measured at baseline, and 3, 6 and 12 months after baseline.

Results: First, the results of the focus groups and in-depth interviews regarding 1) the development of an innovative online emotion regulation training and 2) the general preferences regarding online treatment of adolescents with depression and/or anxiety disorder will be discussed. These results are currently being analysed by means of qualitative analyses. Secondly, a digital tour of the E-TRAIN module will be given and psycho-education videos developed for this module will be presented.

Discussion: E-TRAIN is an innovative, transdiagnostic online module aimed at improving emotion regulation skills of adolescents and reducing depressive and anxiety symptoms, which was developed in collaboration with the target group.

Internet-based emotion-regulation training in adolescents with depressive and anxiety disorders: A pilot randomized controlled trial to examine feasibility, acceptability, and preliminary effectiveness

Marika A. Wisman, Julie Emmelkamp, Jack J.M. Dekker, Carolien Christ., Arkin Institute for Mental Health / VU University, the Netherlands

Background: Emotion regulation strategies (ER) are associated with symptoms of depression and anxiety in adolescents. Therefore, ER is an important target point for intervention.

Objectives: The primary aim of this pilot study was to examine the acceptability and feasibility of a guided add-on internet-based emotion regulation training (ERT). The secondary aim was to examine the feasibility of the study design. The third aim was to provide a first estimate of the effectiveness of CBT+ERT compared with CBT in adolescents with depressive or anxiety disorders.

Methods: This study was a pilot RCT with a parallel group design. Participants were 39 adolescents with depression or anxiety disorders, randomly assigned to ERT or control condition. ERT was delivered online, guided by a psychologist and composed of 6 sessions. Assessments at baseline, three-months and six-months follow-up included treatment adherence, satisfaction, depressive symptoms, anxiety symptoms, and ER strategies.

Results: Adherence, participation, and satisfaction of ERT were moderate. Preliminary results of ER, anxiety symptoms, depressive symptoms at six months follow-up in the CBT + ERT group compared to controls will be shared in the presentation.

Conclusions: Both the intervention and the study design were found to be feasible. The sample size was small, and results regarding effectiveness remain preliminary. Furthermore, data-collection took place during COVID-19, which may have influenced the results. The next step should be the development of an improved internet-based ERT and its evaluation in a larger RCT. Improvement of recruitment strategy in a larger RCT is necessary.

Trial Registration: Registered on January 14th, 2020 in The Netherlands Trial Register (NL8304).

Effectiveness of a digital alcohol moderation intervention as an add-on to depression treatment for young adults: preliminary findings of a pragmatic randomized controlled trial.

Maria J.E. Schouten, Jack J.M. Dekker, Anna E. Goudriaan, Matthijs Blankers, Arkin Institute for Mental Health / VU University, the Netherlands

Background: As problematic drinking often co-occurs with depression, we developed an add-on digital alcohol moderation intervention (Beating the Booze, BtB) to complement treatment as usual (TAU) for depressive disorders. Our study aimed to evaluate the effectiveness of BtB+TAU compared to TAU among young adults (18-35 years) with co-occurring depressive disorders and problematic alcohol use.

Methods: Participants were randomized to either TAU+BtB ($n = 81$) or TAU ($n = 82$). The primary outcome was treatment response at 6-months follow-up, operationalized as a composite score that combines alcohol use (7-day Timeline Followback (TLFB)) and depression measures (Center for Epidemiological Studies-Depression, (CES-D)). Secondary outcomes included depression and alcohol use measures.

Results: The sample included 163 participants with depressive disorders, with a mean age of 25 years ($SD 4.5$) and 80% was female. At baseline, the total sample had a mean CES-D score of 30.4 ($SD 10.7$), which is above the cut-off for severe depression (i.e. ≥ 21). The mean number of weekly drinks was 16.1 ($SD 13.5$) and mean AUDIT (Alcohol Use Disorder Identification Test) score was 15.2 ($SD 7.0$), corresponding to the lowest cut-off for alcohol dependence (≥ 15). Concerning BtB adherence, mean number of logins was 18.8 ($SD 27.8$) and 25% of the users proceeded until the last module of the programme. Follow-up results regarding effectiveness of the intervention (treatment response, TLFB and CES-D) are currently being analysed and will be presented during the conference.

Conclusion: If proven effective, the digital alcohol moderation intervention could be implemented in practice and might improve depression treatment for young adults.

Funding and trial registration: The study is funded by ZonMw (The Netherlands Organisation for Health Research and Development, grant number 636310009) and is pre-registered at the Netherlands Trial Register under registration number NL8122 (<https://www.trialregister.nl/trial/8122>).

Symposium 65

Improving inpatient treatment of people with dual diagnosis, focusing on cognitive therapy and motivational work in the milieu.

Convenor and Chair: Irene Oestrich, Mental Health Centre Sct. Hans, Denmark

The challenging aspects of treating people with severe mental illness and addiction: a success story of building CBT competences in all professions in a multidisciplinary staff.

Jakob Krarup, Chief psychiatrist. Mental Health Centre Sct. Hans, Denmark

Treating people with co-occurring severe mental illness and addiction posed several challenges from a diagnostic, psychotherapeutic, organizational and pharmacology perspective. The goal is maximization of the treatment effort and improving the level of functioning in the inpatients through new strategies. This presentation will give an overview of these challenges and pinpoint the strengths in using a uniform CBT approach in a staff model to mitigate some of these challenges, and present the first REDD PAC data from a 20+ years CBT based integrated dual diagnosis treatment concept.

Improving competence and therapeutic skills at different levels in the staff and how to measure and implement them

Irene Oestrich: senior psychologist, specialist and supervisor in CBT. Mental Health Centre Sct. Hans, Denmark

Therapeutic education is essential for good clinical results in the inpatient group. In a new cognitive stabilization and inclusion section a higher educational program for treating dual diagnosis patients is developed. Moreover a tailored multiple choice competence test is used to measure the extent to which there is improvement in therapeutic knowledge, skills and competence in the staff before the educational intervention, after the educational intervention and follow up after one year of practical training and supervision in the ward as well as a booster workshop. Different aspects of implementation of therapeutic skills in cognitive milieu therapy are discussed. Such as therapeutic training of the staff, supervision and continuous development of competence.

21 years of experience at the Mental Health Centre Sct. Hans in the Capital Region of Denmark illustrate the importance of CBT-trained interdisciplinary teams in the treatment of patients with dual diagnosis in an inpatient setting.

Janne Theisten, Assistant Ward Nurse, Mental Health Centre Sct. Hans, Denmark

20 years of experience at Psychiatric Center of Sankt Hans illustrates the important professional roles in securing effective, well-structured courses of treatment for patients with severe mental illnesses and substance use disorders. The entire staff is responsible for gathering data through therapeutic tools and manuals in order to continuously adapt cognitive methods in order to improve patient's recovery. The presentation includes examples of how the interdisciplinary team manage to collect data, use exercise learned strategies, secure collaboration and enhance a very fluctuating motivation in the dual diagnosis population. in the interdisciplinary team.

VR assisted CBT in the treatment of social anxiety among people with dual diagnosis: an exploratory study of acceptance, feasibility and preliminary efficacy

Vivian Heinola-Nielsen, clinical psychologist, specialist in psychotherapy, Mental Health Centre Sct. Hans, Denmark

Virtual reality (VR) is being increasingly used for the diagnosis, assessment and treatment of mental disorders. A number of studies has shown promising results when it comes to treatment of psychosis and addiction. However, to our knowledge no studies on the use of VR for dual diagnosis has been published. This presentation will present the protocol and early results from a study on VR-assisted CBT for social phobia among patients with psychosis and addiction.

Symposium 66

Driven by the Unknown - Behaviour Related to Intolerance of Uncertainty

Convenor: Helmut Appel, University of Cologne, Germany

Intolerance of uncertainty, fear of missing out, and problematic internet use.

Mark Freeston, Niamh Chalmers, Newcastle University, Manon Lewis, Newcastle University and CNTW NHS Foundation Trust and Richard Thwaites, CNTW NHS Foundation Trust, UK

Background: Problematic internet use (PIU) has been widely studied among adolescents but to a lesser extent among adults. Questions remain about PIU and whether it is reducible to other known problems (e.g., internet gambling as a form of gambling disorder), or it represents a more general pattern of unhelpful behaviour not limited to specific content. However, there are consistent relationships between PIU and symptoms of psychopathology as well as to neuropsychological correlates. Although intolerance of uncertainty (IU) research originated in the study of anxiety disorders and worry in particular, as a transdiagnostic construct, IU can be considered in relation to other behaviours and concerns, including problematic internet use. Behaviours associated with intolerance of uncertainty have not been widely investigated despite the fact that observation suggests that people have characteristic behavioural repertoires used to manage uncertainty in everyday situations, whether the outcomes are positive, neutral, or negative.

Method: We studied the direct and indirect effects of IU on problematic internet use (PIU) through fear of missing out (FOMO) and uncertainty behaviours in everyday life among 309 adults (mean age 36 yrs.). Exploratory factor analyses identified four types of uncertainty-related behaviours, namely, planning, under-engagement, over-engagement, and impulsive actions.

Results: Results indicated a significant direct effect of IU on PIU and indirect effects through FOMO and through higher under-engagement and higher impulsive action (separately and combined serially) but not through planning and over-engagement. The results show some specificity because when worry (rather than PIU) was the outcome; different behaviours were involved in the indirect effects, namely, higher planning and lower under-engagement.

Discussion. This proof-of-concept study extends knowledge of IU in two ways. First, FOMO and PIU are further established as phenomena of concern that are related to IU. Second, some behaviours related to IU have been further identified, and importantly that different IU-related behaviours mediate different outcomes in the same study. Thus, this study invites researchers and clinicians alike to consider how different uncertainty related or uncertainty driven behaviours may contribute to the maintenance of broadly defined mental health problems.

Can curiosity and Intolerance of Uncertainty (IU) be differentiated at the behavioural and emotional level?

Zoe Ryan, Helen Dodd & Lily Fitzgibbon

University of Reading, University of Exeter & University of Stirling

Curious people have a thirst for knowledge and can feel enjoyment and reward by resolving the information gap brought about by uncertainty. For those who experience intolerance of uncertainty (IU - an aversion to not knowing), uncertainty can lead to discomfort which can be reduced by resolving the information gap. Thus, curiosity and IU are both thought to drive information seeking under uncertainty but have very different affective profiles, with curiosity associated with positive affect and IU associated with negative affect. Our research aims to examine whether IU and curiosity predict behavioral and emotional responses to uncertainty during a computerised task. We developed an online task based on Hsee & Ruan's (2016) task assessing information seeking under uncertainty. In the game, each button in an array plays either a neutral or an aversive sound when pressed. Uncertainty was manipulated by varying button labels. There were four trials, each with different sounds which together give an index of information seeking. Affective responses were measured through self-reported emotional valence and worry during an anticipation period. Additionally, measures of trait curiosity and IU were completed.

Initially we conducted this task with a sample of 133 children aged 8 – 12 years ($M = 9.71$ years, $SD = 1.30$), the results of which were presented at EABCT 2021. We have now conducted the same task with a sample of 132 adults aged 18-48 years ($M = 20.99$, $SD = 4.36$). Pre-registration for the study can be found here.

In the adult sample, IU did not predict information seeking (button presses) as we had expected, but there was a positive relationship between curiosity and information seeking; more curious adults pressed significantly more buttons than less curious adults. IU interacted with trial uncertainty to predict affect and worry; participants were significantly less happy and significantly more worried in high uncertainty trials than low and this affect was exaggerated in participants high in IU.

Comparing across the two samples, we found similarities between the adult and child samples in the associations (or lack thereof) between IU/curiosity and information seeking. However the affective responses diverged between the samples – while IU predicted affect and worry in adults, it was unrelated to affect or worry in children. Furthermore, in children, curiosity was associated with positive affect, which was not found in the adult sample.

The findings indicate that in adults IU is more closely associated with emotional responses to uncertainty than behaviour under uncertain conditions, which contrasts to our results for children where no effects of IU were found. Furthermore the results indicate that curiosity consistently predicts information seeking behaviour in both adults and children but may only be associated with positive affect in children. The results have relevance for developing therapeutic approaches that target IU as a means of reducing anxiety and also for harnessing curiosity to improve educational outcomes.

The role of individual differences in self-reported intolerance of uncertainty and obsessive-compulsive features on subjective, behavioural, and physiological indices during a checking task

Shannon Wake, University of Reading, UK

Checking behaviour has been described as a form of preventative behaviour used by an individual to establish control over the environment and avoid future misfortune. However, when compulsive, checking behaviours can become disabling and distressing and have been linked to the maintenance of anxiety and obsessive-compulsive disorders. Despite this, there is limited literature across the field that has assessed the impact of dimensional measures of anxiety and obsessive-compulsive features (i.e., negative affect, uncertainty, and perfectionism) in driving checking behaviour. As such, the present study examined the impact of individual differences in self-reported intolerance of uncertainty (IU) and obsessive-compulsive features on subjective, behavioural, and physiological indices during a visual discrimination and checking task ($n = 87$). Higher self-reported IU and obsessive-compulsive features were associated with higher subjective ratings of unpleasantness and the urge to check during the task. Moreover, higher self-reported IU and obsessive-compulsive features related to general negative affect, uncertainty, and perfectionism were associated with greater checking frequency during the task. Lastly, stronger obsessional beliefs about perfectionism and the need for certainty were found to predict poorer accuracy, slower reaction times, and higher engagement of the corrugator supercilii during the task. In sum, these findings demonstrate how different IU and obsessive-compulsive features may relate to and maintain checking behaviour in low threat contexts, which likely has implications for models of excessive and persistent checking in anxiety and obsessive-compulsive disorders.

Making it worse by trying to make it better – Intolerance of uncertainty is associated with maladaptive safety behavior in decision making

Helmut Appel, & Alexander L. Gerlach, University of Cologne, Germany

Background: Decision making often requires committing to a choice despite uncertainty. Intolerance of uncertainty (IU) may therefore motivate exaggerated attempts to eliminate decisional uncertainty. Similar to safety behaviors in anxiety disorders, such uncertainty reduction strategies are likely to be time- and energy-consuming or to even maintain IU, thereby interfering with decision making. In line with this reasoning, IU is related to indecisiveness, i.e. the dispositional subjective inability to make satisfactory decisions. The present research therefore tests the assumption that IU is associated with maladaptive decision-related safety behavior, and that this association is mediated by indecisiveness. It also investigates whether the association is stronger for important than for unimportant decisions.

Methods: In Study 1 ($N = 183$), participants read a realistic decision scenario and were asked to imagine that they engaged in an adaptive or maladaptive behavioral response. They rated the behavioral response on items representing features of maladaptive safety behavior. In Study 2 ($N = 258$) and 3 ($N = 246$), participants read scenarios describing either an important or unimportant decision. They then selected one of several uncertainty-reducing behaviors that would be their typical response to this decision. They rated their chosen behavior on the same maladaptive safety behavior items used in Study 1. IU (all studies) and indecisiveness (Studies 2 and 3) were assessed via self-report. Study 1 featured a Covid-related decision scenario, whereas the scenarios in Studies 2 and 3 were unrelated to Covid.

Results: In Study 1, the maladaptive behavior received substantially higher ratings on the maladaptive safety behavior items, indicating content validity. Across all studies, IU showed a strong positive association with decision-related maladaptive safety behavior. Contrary to predictions, this effect was not qualified by decision importance. Indecisiveness partially mediated this relationship in Studies 2 and 3.

Discussion: To our knowledge, these are the first findings specifically demonstrating a relationship between IU and maladaptive safety behavior in the decision making context. They add to emerging evidence on problematic IU-related behaviors even outside psychological disorders. Crucially, they offer preliminary insights on the costs and potential detrimental long-term effects brought about by such behaviors. Limitations include the use of hypothetical scenarios and self-report measures. The results highlight the importance of targeting IU for overcoming decision making problems and may have implications for decision problems in patients suffering from anxiety-related disorders. The effects seem to be applicable to Covid-related decisions that involve a particularly high amount of uncertainty.

Symposium 67

Enhancing emotional competence in the young: A principle, evidence-based, mobile-health approach to prevent mental disorders and promote mental wellbeing

Convenor: Azucena Garcia-Palacios, Universitat Jaume I, Spain

Chairs: Edward Watkins, University of Exeter, UK and Heleen Riper, Vrije Universiteit, Amsterdam, the Netherlands

The ECoWeB project: Background, aims, rationale, and the development of the MyMoodCoach-App

Thomas Ehring, Ludwig-Maximilians Universität München, Germany and Edward Watkins, University of Exeter, UK. and the ECoWeB consortium

Preventing mental disorders and promoting well-being is a major global priority, especially in young people. The ECoWeB project aimed to investigate the efficacy of MyMoodCoach, a novel mobile app focused on fostering emotional competence in adolescents and young adults. The process of developing the app was guided by three key principles. First, all interventions are based on an established theoretical model of normal emotional functioning, the Component Process Model of Emotion. The app therefore included modules each specifically targeting one of the components suggested by the model, namely emotion knowledge and perception, emotion production (specifically: functional appraisals), and emotion regulation (specifically: repetitive negative thinking). Second, the app is based on a tailored and personalized approach where intervention modules offered to an individual participant are matched to their emotion competence profile. Finally, the intervention is delivered as a mobile app to ensure high scalability, high accessibility, and acceptability for the target population of adolescents and young adults. In addition, it carries the advantage of providing assessment and intervention in participants' daily lives, which may enable a faster implementation of newly learned skills in daily life. The MyMoodCoach-App was developed in collaboration between experts on the different components of emotional competence, technical partners, and youth advisory boards in all participating countries. It includes psychoeducation, advice, repeated assessment with tailored feedback, structured exercises, training modules to learn and improve emotional competencies, and tools to implement newly learned skills in daily life. In addition, gamification in the form of badges, rewards, and feedback is implemented to increase motivation. In this first presentation of the symposium, an overview of the rationale and development of the app is provided, along with some specific examples. The following presentations will then present results on the efficacy, acceptability, and usage of the app.

Relationship between EC components and wellbeing cross-sectionally and at baseline

Azucena Garcia-Palacios, Universitat Jaume I, Spain

Authors: Johnny R. J. Fontaine, Ghent University, Belgium, Thomas Ehring, Ludwig-Maximilians Universität München, Germany, Azucena Garcia-Palacios, Universitat Jaume I, Spain, Veerle Huyghe, Ghent University, Belgium, Reinhard Pekrun, University of Essex, UK, Belinda Platt, LMU University Hospital Munich, Germany, Klaus Scherer, University of Geneva, Switzerland, Edward Watkins, University of Exeter, UK, and the ECoWeB consortium

Characteristic for the ECoWeB-project is that emotional competencies have been studied from clinical psychology perspectives (interpersonal appraisal biases and rumination), educational psychology perspectives (achievement appraisals, emotions and motivation), emotion psychology perspectives (appraisal mechanisms) and from the perspective of interindividual difference in emotional abilities. Moreover, very different assessment approaches, going from maximum performance tests, over scenario approaches to trait-like self-report measures, as they are used in each of the respective domains, were included. It was empirically investigated how they are related to one another and whether overarching structuring dimensions could be identified across the different domains and assessment approaches. This was investigated in one exploratory and one extensive confirmatory research before starting the baseline assessment of the RCT study of ECoWeB. In a first exploratory study with 607 participants in Belgium (53% female, average age 17.2), 12 very diverse emotional competence instruments, as well as key indicators of the nomological network of emotional competence were studied. A PCA of the 12 instruments revealed a well-interpretable four-componential structure. On the first dimension all scales that referred to or implied positively valenced experiences were opposed to scales that implied negatively valenced experiences. This dimension was labelled "emotional positivity". The second dimension was strongly characterized by the maximum performance tests and was called "emotional intelligence". Achievement striving was opposed to the experience of boredom in achievement contexts on the third dimension and could thus be interpreted as "general motivation". Finally, on the last dimension expecting negative emotional reactions in situations that typically elicit negative emotions were opposed to actual tendencies to ruminate. Since this dimension differentiates a situation-specific ability to experience negative emotions from a general tendency to not deal well with these emotional experiences, this dimension was interpreted as "emotional resilience". This exploratively identified structure was then investigated and confirmed in four samples from Belgium, UK, Germany and Spain with 1218 participants (51.7% females, mean age 18.6 years). Moreover, the pattern of correlations with intelligence, personality, wellbeing and psychopathology in both studies confirmed the interpretation of the four dimensions. As was to be expected, the four-dimensional structure was also identified in the baseline assessment of the RCT-study (using substantially shortened instruments) with in total 3875 participants from the same four countries (75.7% females, mean age 19.0). Despite very different theoretical backgrounds and very different assessment procedures a coherent overarching structure could be identified in the emotional competence domain.

Overall ECoWEB trial results: PREVENT and PROMOTE

Edward Watkins, University of Exeter [and the ECoWEB consortium](#)

The ECoWEB trial is one of the first large-scale trials of mobile apps for young people with medium-to-long term follow-up. It involved two parallel trials in young people aged 16-22 in UK, Spain, Belgium, and Germany. The PROMOTE trial involved individuals reporting normative emotional competence skills to test the ability of self-help apps to promote wellbeing in relatively healthy young people. The PREVENT TRIAL involved individuals scoring in the worst quartile for at least one emotional competence (e.g., elevated worry; negative appraisals; elevated rejection-sensitivity) to test the ability to prevent depression in an elevated risk group. In both trials, participants were randomised to a self-monitoring control app, a generic cognitive-behavioural app, and an app that features elements designed to target different emotional competence skills (improving emotional regulation by reducing worry and rumination; improving emotional understanding and recognition; increasing positive social appraisals; building adaptive academic appraisals focused on a growth mindset) personalised to the individual based on initial screening. Participants were assessed at baseline, 1 month, 3 month (primary endpoint) and 12-month follow-ups. We recruited 3800 young people in the trials, with retention at 3 months, in line with our power calculations for detecting a minimum clinically important difference on our primary outcomes (Wellbeing, WEMWBS, for PROMOTE; PHQ9 depression for PREVENT). This talk will report the results of the primary analyses and the lessons for our knowledge as to which apps can be beneficial for young people on a public health scale.

Using implementation science to enhance the implementation and sustainability of mental health apps

Holly Bear, Lara Ayala Nunes, Mina Fazel and the ECoWEB research team, Department of Psychiatry, University of Oxford, Oxford, UK

Background: There has been a proliferation in the number of smartphone mental health applications ('apps') being developed, both commercially and in academic research programmes. Apps have the potential to address some of the current accessibility issues facing service provision in youth mental health by improving the scalability of evidence-based mental health and wellbeing interventions and providing wider access to underserved populations. However, few apps have been successfully implemented and consensus on implementation measurement is lacking. This can be attributed, in part, to the complex and lengthy process of implementing evidence-based approaches into practice, as well as the commercial and regulatory complexities of scaling up digital technologies commercially and in services.

Aim: Using implementation science, our research aimed to address these challenges by building core knowledge about what facilitates and inhibits the uptake of mental health apps for young people (aged 16 – 22) in order to inform the wider ECoWEB Study.

Methods: To achieve this aim, we conducted two systematic literature reviews to better understand the barriers and facilitators of successful implementation of smartphone apps, including a systematic review to determine the proportion of evidence-based mental health and wellbeing apps that have been successfully adopted and sustained in 'real-world' settings. Informed by these reviews, we then used semi-structured interviews conducted with 29 young people in the United Kingdom and Spain to explore trial participants' experiences of participating in the ECoWEB trial and their views of the MyMoodCoach app. We also used semi-structured interviews conducted with 20 underserved and vulnerable young men the UK, Spain and Germany to understand the feasibility and acceptability of the app for underserved populations.

Results: There are several important findings from this programme of work which will be discussed during the presentation. These include, but are not limited to, themes about intrinsic and extrinsic motivations to participate in research, intervention engagement, feasibility and acceptability, and perceptions of change in outcomes. In addition, the wide reaching clinical and research implications and key learning will be presented.

Conclusions: Without addressing common implementation drivers there is considerable redundancy in the translation of research findings into practice. Studies should embed implementation strategies from the outset of the planned research, building collaborations with partners already working in the field (academic, commercial) to capitalise on existing interventions and platforms, modifying and evaluating them for local contexts or target problems/populations

Symposium 68

Digital interventions for psychosis: examining subjective users' experiences, implementation challenges and generalisation of responses using qualitative and naturalistic methods.

Chair: Mar Rus-Calafell, Ruhr Universität Bochum, Germany

Participants' experiences of AVATAR therapy for distressing voices: a thematic qualitative evaluation.

Mar Rus-Calafell ^{1,2}, Nils Ehrbar ¹, Thomas Ward ^{3,4}, Clementine Edwards ^{3,4}, Mark Huckvale ⁵, Jennifer Walke ², Philippa Garety ^{3,4}, Tom Craig ^{2,4}

¹ Mental Health Research and Treatment Centre, Faculty of Psychology, Ruhr-Universität Bochum, Bochum, Germany, ² Department of Health Service and Population Research, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK, ³ Department of Psychology, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK, ⁴ South London & Maudsley NHS Foundation Trust, London, UK, ⁵ Speech, Hearing and Phonetic Sciences, Division of Psychology and Language Sciences, University College London, London, UK

AVATAR therapy is an innovative therapy designed to support people with distressing voices. Voice hearers co-create a digital representation of their voice and engage in dialogue with it. Although it has been successfully tested in a powered randomised controlled trial (ISRCTN65314790), the participants' experience of this therapy has not been yet evaluated. We aimed to explore enablers and barriers to engagement with the therapy and potential for real-world impact on distressing voices. Thirty per cent of those who completed AVATAR therapy (15 people in total) and 5 who dropped out from therapy within the main AVATAR RCT were invited to participate in a semi-structured interview, which was audio-recorded and subsequently transcribed. Fourteen therapy completers (28% of the full sample) and one person who dropped out of therapy after 1 active session, were interviewed. Thematic analysis was used to explore the interviews. A total of 1276 references were coded, and five overarching themes identified: AVATAR therapy set-up; voice embodiment and associated emotions; working in a safe space (supported by the therapist); learning new ways of relating to the voices; impact of therapy on everyday life. Overall, the therapy set-up, with its digital components and its distinctive features as compared with common face-to-face talking therapies, was satisfactory. The inclusion of technology was well accepted as both a means to deliver the therapy and a tool to create a

digital representation of the person's distressing voice. The co-creation of the avatar and the enactment of the relationship between the person and the voice were perceived as a very helpful process to promote the therapeutic dialogue. Participants reported engaging well with the therapist and feeling supported and identified specific learnt strategies to deal with the voices and how they have had an impact on everyday life. AVATAR therapy is acceptable and provides benefit for participants with psychosis. Our results highlighted the enablers and challenges of working dialogically with distressing voices using a digital representation and dealing with highly demanding emotional, cognitive, and relational processes linked to the experience. Our analysis also identified the core strategies learnt by participants and how these were generalised to their daily life resulting into a positive change in different domains, and in particular broader social relationships.

The service user experience of SlowMo, a blended digital therapy for reasoning in people with psychosis: a co-produced thematic analysis.

Kathryn Greenwood^{1,2}

Co-authors: Gurnani M¹, Ward T^{3,4}, Vogel E², Vella C², McGourty A², Robertson S², Sacadura C², Hardy A^{3,4}, Rus-Calafell M⁴, Collett N⁵, Emsley R⁶, Freeman D^{5,7}, Fowler D^{1,2}, Kuipers E^{3,4}, Bebbington P⁸, Dunn G⁹, Michelson D¹, Garety P^{3,4} and the SlowMo Patient and Public Involvement (PPI) team.

¹School of Psychology, University of Sussex, Brighton, UK; ² Sussex Partnership NHS Foundation Trust, Worthing, UK; ³ Department of Psychology, King's College London, Institute of Psychiatry, Psychology and Neuroscience, London, UK. ⁴ South London and Maudsley NHS Foundation Trust, London, UK; ⁵ Oxford Health NHS Foundation Trust, Oxford, UK; ⁶ Department of Biostatistics and Health Informatics, King's College London, Institute of Psychiatry, Psychology and Neuroscience, London, UK; ⁷ Department of Psychiatry, Oxford University, Oxford, UK. ⁸ Division of Psychiatry University College London, London UK; ⁹ Centre for Biostatistics, School of Health Sciences, The University of Manchester, Manchester Academic Health Science Centre, Manchester.

Background-SlowMo is the first blended digital therapy for paranoia or fear of harm from others. The therapy is 8-sessions, targeted at reasoning biases, and is delivered face-to-face by a therapist, supported by a web and mobile app. A recent RCT showed significant small-moderate reductions in paranoia.

Aim -This qualitative sub-study, co-produced with our patient and public involvement (PPI) team, explored the subjective experience of receiving the SlowMo therapy in terms of therapy content; experience of the digitally supported blended approach, and the 'triangle of alliance' between therapist, technology and user; and the specific experience of the digital aspects of the intervention

Method- Twenty-two adult service users were interviewed by peer researchers, using a topic-guide co-produced by the PPI team. Inclusion criteria were as for the main trial: psychosis with persistent distressing paranoia, and completion of at least 1 SlowMo therapy session and a 24 week follow-up, at one of the 3 sites in Oxford, London and Sussex, UK. Interviews were transcribed and analysed thematically. Multiple coding, triangulation, PPI validation were used to reach consensus on the final theme structure.

Results-Themes included (i) Starting the SlowMo journey: reasons, feelings and barriers; and (ii) The central role of the supportive therapist, with human interaction being critical, acting as a bridge to both therapy and technology. Key components of the intervention were identified as (iii) Slowing things down; and (iv) Value and learning from social connections. People talked about learning the concept of slow thinking as a new skill set, that was integrated through practice, and of enhanced connection, normalising of experiences and learning gained from the video vignettes. They talked of (v) Approaches and challenges of technology, using technology to support engagement, developing personal relationships with the app, and limitations of the interface and of (vi) Improvements in paranoia and wellbeing.

Conclusions - For these service users, slowing down for a moment was helpful, and integrated into thinking over time. Learning from connections with video vignettes of peers was linked to reduced isolation. The role of the supportive therapist was seen as central and together with the triangle of alliance between service user, therapist and digital platform was effective in promoting positive outcomes for paranoia and wellbeing.

EMPOWER in Daily Life: A qualitative investigation of end user experience of a blended digital intervention for relapse prevention in schizophrenia in a cluster randomised controlled feasibility trial.

Stephanie Allan, Sara Beedie, Hamish McLeod, John Farhall, John Gleeson, Simon Bradstreet, Emma Morton, Imogen Bell, Alison Wilson Kay, Helen Whitehill, Claire Matrunola, David Thomson, Andrea Clark, Andrew Gumley, University of Glasgow, UK

Objectives: To study the end-user experiences of participants randomised to receive a blended digital intervention for relapse prevention in schizophrenia in the context of a cluster randomised controlled feasibility trial.

Design: A qualitative interview design with thematic analysis was used

Method: A subsample of EMPOWER participants comprising 16 patients, 5 mental health staff and one carer were interviewed one-on-one.

Results: Two overarching themes were constructed that were relevant for understanding end-user experiences within the EMPOWER trial: Affordances and Change Processes. Affordances described the processes underpinning how and why participants interacted with or avoided the various components of the intervention. Affordances spanned all EMPOWER components, including self-monitoring, peer support workers, clinical triaging, wellbeing messages and diary function. The affordances were Access to Social Connection, Access to Digital, Access to Mental Health Support, the Ability to Gauge Mental Health and Access to Mental Health Information. The affordances framework helped explain the multitude of engagement trajectories featured within the qualitative interviews. If participants sustained usage, affordances acted as a springboard for change processes, including increased self-confidence that patients could self-manage, noticing patterns and changes, and using EMPOWER as a conversation starter.

Conclusions: The implementation process of EMPOWER was emergent and was best described by the intervention offering a range of affordances which could act as implementation barriers or facilitators depending on individual needs and wants. [JG5] Affordances may present a sound theoretical framework for explaining end-user experiences.

Effectiveness of stand-alone Temstem, an app for voice-hearing individuals

Alyssa Jongeneel, Department of Clinical, Neuro and Developmental Psychology, Amsterdam Public Health Research Institute, Vrije Universiteit Amsterdam, Netherlands, Research Centre, Parnassia Psychiatric Institute, Zoutkeetsingel 40, 2512 HN, Den Haag, Netherlands

Background – Temstem is a mobile application developed in co-creation with voice-hearing persons to help them cope with distressing voices. Temstem contains two language games that can be used two ways: Silencing and Challenging. Silencing is based on the finding that voices (temporarily) go to the background when a language task is performed. Challenging is based on the ‘dual tasking’ principle: thinking about a negative image (a voice-hearing statement) while being occupied by another task (a language game) might decrease emotionality and vividness of the statement. We investigated whether Temstem was effective in reducing voice-hearing distress and improving social functioning in two studies: the Temstem Randomized Controlled Trial (RCT) and a naturalistic study.

Methods – In the RCT, we randomized participants 1:1 in the Temstem or active control arm. All participants, who suffered severely from voices, filled in multiple questionnaires a day during three study periods (baseline, post-intervention and follow-up) with questions about their voices, mood, social activities and more by using an Experience Sampling Method (ESM) app. In addition, all participants received a short reflective questionnaire in the evening during the ten-week study period. They also filled in validated questionnaires at baseline, post-intervention and follow-up. Participants in the Temstem arm received instructions on how to use Temstem and could use Temstem for five weeks stand-alone.

In the naturalistic study, we collected data of persons in the Netherlands who downloaded Temstem for coping with their voices and who used Temstem at least several times. We analyzed the pre- and post session scores on voice-hearing distress and emotionality and vividness of voices.

Results – 89 participants participated in the Temstem RCT. We found that participants did not improve on (voice-hearing) distress and social functioning in the Temstem arm compared to the active control arm. In the naturalistic study, data 1,101 users was included; we found that on average, they improved on voice-hearing distress and emotionality and vividness of voice statements (all medium to large effects).

Discussion – Temstem is not effective as a stand-alone tool in reducing voice-hearing distress in a sample of severe voice-hearing individuals. In a sample of persons with less chronic voices, Temstem seems promising as a coping tool to cope with the voices in daily life. We will discuss limitations and implications for research and clinical practise.

Symposium 69

Mental health problems and psychological scalable interventions to reduce distress and promote resilience during the COVID-19 pandemic

Chair: Naser Morina, University Hospital Zurich, University of Zurich, Switzerland

Impact of COVID-19 on common mental health outcomes in the early phase of the pandemic: an umbrella review of the evidence

Anke B. Witteveen^{1*}, Susanne Young¹, Pim Cuijpers¹, José Luis Ayuso-Mateos², Corrado Barbui³, Federico Bertolini³, Maria Cabello², Camilla Cadorin³, Naomi Downes⁴, Brandon Gray⁵, Danielle Franzoi¹, Michael Gasior¹, Maria Melchior⁴, Mark van Ommeren⁵, Christina Palantza¹, Marianna Purgato³, Judith van der Waerden⁴, Siyuan Wang¹ and Marit Sijbrandij¹

¹ Department of Clinical, Neuro- and Developmental Psychology, Amsterdam Public Health, Institute and World Health Organization Collaborating Center for Research and Dissemination of Psychological Interventions, Vrije Universiteit, Amsterdam, Netherlands, ² Department of Psychiatry, Universidad Autonoma de Madrid, WHO Collaborating Center for Research and Training in Mental Health Services at the Universidad Autónoma de Madrid, Spain, and Centro de Investigación Biomédica en Red de Salud Mental, CIBERSAM, Instituto de Salud Carlos III, Madrid, Spain, ³ University of Verona and WHO Collaborating Centre for Research and Training in Mental Health and Service Evaluation, Verona, Italy, ⁴ Pierre Louis Institute of Epidemiology and Public Health, INSERM and Sorbonne Université, France, ⁵ World Health Organization, Department of Mental Health and Substance Use, Geneva, Switzerland

The impact of the COVID-19 pandemic on mental health remains uncertain although numerous systematic reviews have pooled data from individual studies. With this umbrella review, evidence on prevalence of common mental health outcomes and populations in pre- and during pandemic periods and lockdowns was collected. A systematic search in five databases for peer-reviewed systematic reviews and meta-analyses published between December 31, 2019 until October 6, 2021 investigating the impact of COVID-19 on mental health, provided prevalence of depression, anxiety and PTSD symptomatology among general- and specific population and healthcare workers. Data and methodological quality from reviews were assessed independently. Of the included reviews (n = 58), three involved pooled longitudinal or pre-pandemic matched comparison data while 55 reviews involved pooled data from cross-sectional studies. Quality of included systematic reviews was highly diverse and only one review that pooled longitudinal pre- and during pandemic study-data scored positive on all critical AMSTAR 2 items. Difference in mental health outcomes from pre- to during pandemic were small but significant for depression in the general population across the entire first half year of the pandemic, while for anxiety an increase was found only in early months of 2020. During lockdowns compared to periods of no public health and social measures, significant increases were found as well. In healthcare workers, no differences in anxiety and depression symptoms during- compared to matched pre-pandemic rates were found. Significant and non-significant increases mental health symptoms in people with pre-existing physical (but not mental) health conditions, patients, students, adolescents and children were found. Meta-analyses of cross-sectional data with validated screening tools, presented prevalence rates based on a range of cut-off scores and lacked pre-pandemic comparison. Screening tools with different cut-offs were accounting for the high heterogeneity in outcomes. Prevalence rates were consistently higher in females while country-level COVID-19 factors were less consistent moderators although mortality rate moderated PTSD prevalence in health care workers. There is a need for pooling data from longitudinal population-based or cross-country cohort studies to better understand the impact of COVID-19 on mental health, particularly from low- and middle income countries and in those having post COVID-19 condition. Evidence suggests an increase of depression and shorter-term increase of anxiety over the first half year of the pandemic and during lockdowns, particularly in vulnerable subgroups. Quality and interpretability of most of the evidence collected in the first year of the pandemic is however moderate

Sustained negative mental health outcomes among healthcare workers over the first year of the COVID-19 pandemic: a prospective cohort study

Roberto Mediavilla^{1,2,3}, Eduardo Fernández-Jiménez^{3,4}, Irene Martínez-Morata^{5,6}, Fabiola Jaramillo^{7,8}, Jorge Andreo-Jover^{1,3}, Inés Morán-Sánchez⁶, Franco Mascayano^{5,9}, Berta Moreno-Küstner^{10,11}, Sergio Minué⁷, José Luis Ayuso-Mateos^{1,2,12}, Richard A. Bryant¹³, María-Fe Bravo-Ortiz^{1,2,3,4} and Gonzalo Martínez-Alés^{3,5}

¹Department of Psychiatry, Universidad Autónoma de Madrid (UAM), Madrid, Spain, ²Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Madrid, Spain, ³University Hospital La Paz Research Institute (IdiPAZ), Madrid, Spain, ⁴University Hospital La Paz, La Paz, Spain, ⁵Mailman School of Public Health, Columbia University, New York City, NY, United States, ⁶Murcia BioHealth Research Institute, University of Murcia, Murcia, Spain, ⁷Andalusian School of Public Health, Granada, Spain, ⁸University of Chile, Santiago, Chile, ⁹New York State Psychiatric Institute (NYSPI), New York City, NY, United States, ¹⁰Department of Personality, Assessment, and Psychological Treatment, University of Málaga, Málaga, Spain, ¹¹Instituto de Investigaciones Biomédicas de Málaga, Universidad de Málaga, Málaga, Spain, ¹²Fundación Biomédica, Hospital de La Princesa, Madrid, Spain, ¹³School of Psychology, University of New South Wales, Kensington, NSW, Australia

Objective To characterize the evolution of healthcare workers' mental health status over the 1-year period following the initial COVID-19 pandemic outbreak and to examine baseline characteristics associated with resolution or persistence of mental health problems over time.

Methods We conducted an 8-month follow-up cohort study. Eligible participants were healthcare workers working in Spain. Baseline data were collected during the initial pandemic outbreak. Survey-based self-reported measures included COVID-19-related exposures, sociodemographic characteristics, and three mental health outcomes (psychological distress, depression symptoms, and posttraumatic stress disorder symptoms, as measured by the GHQ-12, the PHQ-9, and the PC-PTSD-5, respectively). We examined three longitudinal trajectories in mental health outcomes between baseline and follow-up assessments (namely *asymptomatic/stable*, *recovering*, and *persistently symptomatic/worsening*). We used multivariate linear and logistic regression models adjusted for potential confounding based on prior causal knowledge to explore the prospective association between baseline characteristics and follow-up outcomes.

Results We recruited 1,807 participants. Between baseline and follow-up assessments, the proportion of respondents screening positive for psychological distress and probable depression decreased, respectively, from 74% to 56% and from 28% to 21%. Two-thirds remained asymptomatic/stable in terms of depression symptoms and 56% remained symptomatic or worsened over time in terms of psychological distress.

Conclusions Poor mental health outcomes among healthcare workers persisted over time. This has implications at the individual and organisational levels, and occupational programs and mental health strategies should be put in place.

Effectiveness of a videoconferencing-delivered psychological intervention for mental health problems during COVID-19: A proof-of-concept randomized clinical trial

Richard A. Bryant, PhD^{1,2,3}, Katie S. Dawson¹, Dharani Keyan¹, Suzanna Azevedo¹, Srishti Yadav¹, Jenny Tran¹, Natasha Rawson¹, and Samuel Harvey^{1,3}

¹University of New South Wales, Sydney, ²Westmead Institute for Medical Research, Sydney, ³Black Dog Institute, University of New South Wales, Sydney

Anxiety and depression have increased markedly during the COVID-19 pandemic. There is a lack of evidence-based strategies to address these mental health needs during the pandemic. We aimed to conduct a proof-of-concept trial of the efficacy of a brief group-based psychological intervention delivered via videoconferencing for adults in Australia distressed by the pandemic. In this single-blind, parallel, randomised controlled trial, adults who screened positive for COVID-related psychological distress across Australia were randomly allocated to either a 6-session group-based program based on behavioural principles ($n = 120$) or enhanced usual care (EUC, $n = 120$). Primary outcome was total score on the Hospital Anxiety and Depression (HADS) anxiety and depression subscales assessed at baseline, 1-week posttreatment, 2-months (primary outcome time point), and 6-months after treatment, as well as secondary outcome measures of worry, sleep impairment, anhedonia, mood, and COVID-19-related stress. Between May 20, 2020 and October 20, 2020, 240 were enrolled into the trial. Relative to EUC, at 2-months participants receiving intervention showed greater reduction on anxiety (mean difference, 1.4 [95% CI, 0.3 to 2.6], $p=0.01$; effect size, 0.4 [95% CI, 0.1 to 0.7]) and depression (mean difference, 1.6 [95% CI, 0.4 to 2.8], $p=0.009$; effect size, 0.4 [95% CI, 0.2 to 0.7]) scales. These effects were maintained at 6 months. There were also greater reductions of worry, anhedonia, COVID-19-related fears, and contamination fears. **Conclusions:** This trial provides initial evidence that brief group-based behavioural intervention delivered via videoconferencing results in moderate reductions in common psychological problems arising during the COVID-19 pandemic. This program may offer a viable and scalable means to mitigate the rising mental health problems during the pandemic.

Efficacy of a brief psychological intervention to reduce distress in healthcare workers during the COVID-19 Pandemic: A Randomized controlled trial

Naser Morina¹, Sonja Weilenmann¹, Katie S. Dawson², Ursina Möckli¹, Jutta Ernst³, Zelim Zanitti¹, Roland von Känel¹, Matthias Schick¹, Tobias R. Spiller^{1,4}, and Richard A. Bryant^{2,5}

¹Department of Consultation-Liaison Psychiatry and Psychosomatic Medicine, University Hospital Zurich, University of Zurich, Zurich, Switzerland, ²School of Psychology, University of New South Wales, Sydney, Australia, ³Centre of Clinical Nursing Science, University Hospital Zurich, University of Zurich, Zurich, Switzerland, ⁴Department of Psychiatry, Yale University School of Medicine, New Haven, Connecticut, USA, ⁵Brain Dynamic Centre, Westmead Institute for Medical Research, Westmead, Australia

Background: The COVID-19 pandemic has placed extreme demands on healthcare workers (HCWs), which has led to a sharp increase in mental health problems in frontline HCWs. There is a need for brief and accessible interventions that can be implemented during the pandemic for HCWs to mitigate psychological problems. This study aimed to evaluate the efficacy of a brief psychological intervention (RECHARGE) delivered by videoconferencing specifically developed for HCWs to reduce psychological distress during the pandemic.

Methods: This single-blind, parallel, randomised controlled trial, enrolled HCWs in Switzerland who screened positive for psychological distress based on a score ≥ 16 on the Kessler Psychological Distress Scale (K10). Participants were randomly allocated on a 1:1 basis to RECHARGE, a peer-delivered intervention, or active treatment as usual (ATAU), which comprised directing participants to internet stress management programs. RECHARGE included four individual sessions delivered by doctors, nurses, or psychologists, via videoconferencing that taught skills in managing stress, managing worries, behavioural activation, and maintaining social supports. The primary outcome was psychological distress as measured by the K10, which was assessed at baseline, 5 weeks (post-intervention), 13 weeks (2-months after intervention; primary outcome time point), and 31 weeks (6-month follow-up; secondary outcome time point). In addition, secondary

outcome measures included assessment of worry, anxiety symptoms, depressive symptoms, burnout, traumatic stress, moral injury distress (due to perceived ethical dilemmas) and work performance. All assessments were completed online, and the assessment process was administered in a way that all research personnel were blind to assessment administration. Intention-to-treat analyses were conducted using linear mixed models. The trial was prospectively registered on ClinicalTrials.gov (NCT04531774).

Findings: 160 HCWs were enrolled in the study, with 82 assigned to RECHARGE and 78 to ATAU. The sample was predominantly female (131, 81.9%) and comprised 66 (41.3%) physicians, 61 (38.1%) nurses, and 33 (20.6%) allied health personnel. There were 136 (85.0%) participants retained at the posttreatment assessment, 125 (78.1%) at the 2-month assessment, and 111 (69.4%) at the 6-month assessment. Relative to ATAU, at 2 months HCWs who had received RECHARGE showed greater reduction in psychological distress (mean difference between treatment arms of 1.86 points on the K10 [95% CI, 0.28 to 0.34]), $P = .02$; effect size, 0.37). In terms of secondary outcomes, RECHARGE also led to greater reductions in worry (mean difference 1.2 [95% CI, 0.1 to 2.3], $P = .03$; effect size, 0.36), burnout (mean difference 0.2 [95% CI, 0.0 to 0.4], $P = .04$; effect size, 0.30), and distress due to perceived ethical dilemmas (mean difference 0.2 [95% CI, 0.0 to 0.4], $P = .03$; effect size, 0.40). None of these effects was significantly maintained at six months.

Discussion: This trial provides initial evidence that a brief psychological intervention delivered via videoconferencing results in significant reductions in mental health problems arising during the COVID-19 pandemic. Booster sessions may be needed to maintain these benefits.

Symposium 70

Mindfulness-based cognitive therapy: from targeted populations to wider implementation in routine clinical care

Chair: Marloes Huijbers, Radboud University Medical Centre, the Netherlands

Supporting antidepressant discontinuation using mindfulness plus monitoring versus monitoring alone: a cluster randomized trial in general practice

Marloes J Huijbers¹, Carolien Wentink¹, Peter Lucassen², Cornelis Kramers³, Reinier Akkermans², Jan Spijker⁴, Anne EM Speckens¹

¹Department of Psychiatry, Radboud university medical center, Nijmegen, the Netherlands., ²Department of Primary and Community Care, Radboud Institute of Health Sciences, Radboud university medical center, Nijmegen, the Netherlands, ³Department of Pharmacology and Toxicology and Department of Internal Medicine, Radboud university medical center, Nijmegen, the Netherlands, ⁴Pro Persona Nijmegen, Expertise Centre Depression, The Netherlands

Background: Discontinuing antidepressant medication (ADM) can be challenging for patients and clinicians. In the current study we investigated if Mindfulness-Based Cognitive Therapy (MBCT) added to supported protocolized discontinuation (SPD) is more effective than SPD alone to help patients discontinue ADM.

Methods: A prospective, cluster-randomized controlled trial. From 151 invited primary care practices in the Netherlands, 36 (24%) were willing to participate and randomly allocated to SPD+MBCT ($n=20$) or SPD ($n=16$). Adults using ADM > 9 months were invited by GPs to discuss tapering, followed by either MBCT+SPD, or SPD alone. Exclusion criteria included current psychiatric treatment; substance use disorder; non-psychiatric indication for ADM; attended MBCT within past 5 years; cognitive barriers. From the approximately 3000 invited patients, 276 responded, 119 participated in the interventions and 92 completed all assessments. All patients were offered a decision aid and a personalized tapering schedule (with GP). MBCT consisted of eight group sessions of 2.5 hours and one full day of practice. SPD was optional and consisted of consultations with a mental health assistant. Patients were assessed at baseline and 6, 9 and 12 months follow-up, non-blinded. In line with our protocol, primary outcome was full discontinuation of ADM within 6 months. Secondary outcomes were depression, anxiety, withdrawal symptoms, rumination, well-being, mindfulness skills, and self-compassion.

Results: Patients allocated to SPD + MBCT ($n=73$) were not significantly more successful in discontinuing (44%) than those allocated to SPD ($n= 46$; 33%), OR 1.60, 95% CI 0.73-3.49, $p=.24$, number needed to treat=9. Only 20/73 allocated to MBCT (27%) completed MBCT. No serious adverse events were reported.

Conclusion: We were unable to demonstrate a significant benefit of adding MBCT to SPD to support discontinuation in general practice. Actual participation in patient-tailored interventions was low, both for practices and for patients.

In search of balance: Mindfulness-Based Cognitive Therapy for bipolar disorder

Imke Hanssen^{1*}, Marloes Huijbers², Eline Regeer³, Marc Lochmann van Bennekom⁴, Anja Stevens⁵, Petra van Dijk⁶, Elvira Boere^{7,11}, Rob Havermans⁸, Rogier Hoenders⁹, Ralph Kupka^{3,10}, Anne E. Speckens¹

* Corresponding author. Email: imke.hanssen@radboudumc.nl | Phone: 0031-243615445

¹ Radboud University Medical Center, Donders Institute for Brain, Cognition, and Behaviour, Department of Psychiatry, Center for Mindfulness, Reinier Postlaan 4, 6525 GC, Nijmegen, the Netherlands, ² Radboud University Medical Center, Department of Psychiatry, Center for Mindfulness, Reinier Postlaan 4, 6526 GC, Nijmegen, the Netherlands, ³ Altrecht Institute for Mental Health Care, Outpatient clinic for Bipolar Disorders, Lange Nieuwstraat 119, 3512 PG Utrecht, the Netherlands, ⁴ Pro Persona Mental Health Care, Outpatient clinic for Bipolar Disorders, Nijmeegsebaan 61, 6525 DX, Nijmegen, the Netherlands, ⁵ Dimence Mental Health, Center for Bipolar Disorders, Pikeursbaan 3, 7411 GT, Deventer, the Netherlands, ⁶ PsyQ Department of Mood Disorders, Lijnbaan 4, 2512 VA, The Hague, the Netherlands, ⁷ PsyQ Department of Mood Disorders, Max Euwelaan 70, 3062 MA, Rotterdam, the Netherlands, ⁸ Mondriaan, PsyQ Department of Bipolar Disorders, Oranjeplein 10, 6224 KD, Maastricht, the Netherlands, ⁹ Lentis, Center for Integral Psychiatry, Hereweg 76, 9700 AB, Groningen, the Netherlands, ¹⁰ Amsterdam University Medical Center, Vrije Universiteit, Department of Psychiatry, Oldenaller 1, 1081 HJ, Amsterdam, the Netherlands, ¹¹ Leiden University Medical Center, Department of Psychiatry, Albinusdreef 2, 2333 ZA Leiden, the Netherlands

Background: Mindfulness-Based Cognitive Therapy (MBCT) seems a promising intervention for bipolar disorder (BD), but there is a lack of randomised controlled trials (RCT) investigating this. The purpose of this multicenter, evaluator blinded RCT was to investigate the added value of MBCT to Treatment as Usual (TAU) in BD up to 15 months follow-up (NCT03507647).

Method: A total of 144 patients with BD type I and II were randomised to MBCT+TAU ($n = 72$) and TAU ($n = 72$). Primary outcome was current depressive symptoms. Secondary outcomes were current (hypo)manic and anxiety symptoms, recurrence rates, rumination, dampening of positive affect, functional impairment, mindfulness skills, self-compassion, and positive mental health. Potential moderators of treatment outcome were examined.

Results: MBCT+TAU was not more efficacious than TAU in reducing current depressive symptoms in the whole sample (95% CI [-7.0 – 1.8],

$p = 0.303$, $d = 0.24$). However, exploratory analysis revealed that patients with higher depressive symptoms and functional impairment at baseline benefitted more from MBCT+TAU than TAU (95% CI [0.19 – 0.77, $p = 0.001$, $d = 0.56$ and 95% CI [0.01 – 0.65], $p = 0.043$, $d = 0.34$, respectively). At follow-up, there were group differences on anxiety, mindfulness skills, and positive mental health.

Conclusions: In these patients with highly recurrent BD, MBCT may be a treatment option in addition to TAU for those who suffer from moderate to severe levels of depression and functional impairment.

Trial registration: ClinicalTrials.gov, NCT03507647. Registered the 25th of April 2018, <https://clinicaltrials.gov/ct2/show/NCT03507647>

MindChamp: a randomized controlled trial of a mindfulness-based intervention for children with ADHD and their parents

Anne E.M. Speckens¹, Nienke M. Siebelink^{2,3}, Susan M. Bögels^{4,5}, Janneke T. Dammers^{2,3}, Thomas Wolfers^{2,6}, Jan K. Buitelaar^{2,3}, Corina U. Greven^{2,3,7}.

¹Radboudumc Centre for Mindfulness, Department of Psychiatry, Radboud University Medical Centre, Nijmegen, The Netherlands.

²Donders Institute for Brain, Cognition and Behaviour, Department of Cognitive Neuroscience, Radboud University Medical Centre, Nijmegen, The Netherlands, ³Karakter Child and Adolescent Psychiatry University Center, Nijmegen, The Netherlands., ⁴Department of Developmental Psychology, University of Amsterdam, Amsterdam, The Netherlands., ⁵Research Institute of Child Development and Education, University of Amsterdam, Amsterdam, The Netherlands., ⁶Norwegian Centre for Mental Disorders Research, University of Oslo, Oslo, Norway., ⁷Social, Genetic and Developmental Psychiatry, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK.

Background: Family mindfulness-based intervention (MBI) for child attention-deficit/hyperactivity disorder (ADHD) targets child self-control, parenting and parental mental health, but its effectiveness is still unclear.

Methods: MindChamp is a pre-registered randomised controlled trial comparing an 8-week family MBI (called 'MYmind') in addition to care-as-usual (CAU) ($n = 55$) with CAU-only ($n = 48$). Children aged 8-16 years with remaining ADHD symptoms after CAU were enrolled together with a parent. Primary outcome was post-treatment parent-rated child self-control deficits (BRIEF); post hoc, Reliable Change Indexes were explored. Secondary child outcomes included ADHD symptoms (parent/teacher-rated Conners' and SWAN; teacher-rated BRIEF), other psychological symptoms (parent/teacher-rated), well-being (parent-rated) and mindfulness (self-rated). Secondary parent outcomes included self-ratings of ADHD symptoms, other psychological symptoms, well-being, self-compassion and mindful parenting. Assessments were conducted at post-treatment, 2- and 6-month follow-up.

Results: Relative to CAU-only, MBI+CAU resulted in a small, statistically non-significant post-treatment improvement on the BRIEF (intention-to-treat: $d = 0.27$, $p = .18$; per protocol: $d = 0.33$, $p = .11$). Significantly more children showed reliable post-treatment improvement following MBI+CAU versus CAU-only (32% versus 11%, $p < .05$, Number-Needed-to-Treat = 4.7). ADHD symptoms significantly reduced post-treatment according to parent (Conners' and SWAN) and teacher ratings (BRIEF) per protocol. Only parent-rated hyperactivity impulsivity (SWAN) remained significantly reduced at 6-month follow-up. Post-treatment group differences on other secondary child outcomes were consistently in favour of MBI+CAU, but mostly non-significant; no significant differences were found at follow-ups. Regarding parent outcomes, significant post-treatment improvements were found for their own ADHD symptoms, well-being and mindful parenting. At follow-ups, some significant effects remained (ADHD symptoms, mindful parenting), some additional significant effects appeared (other psychological symptoms, self-compassion) and others disappeared/remained non-significant.

Conclusions: Family MBI+CAU did not outperform CAU-only in reducing child self-control deficits on a group level but more children reliably improved. Effects on parents were larger and more durable. When CAU for ADHD is insufficient, family MBI could be a valuable addition.

Putting mindfulness-based cognitive therapy to the test in routine clinical practice

D.E.M. Geurts^{1,2*}, N.M. Haegens^{1,3##}, M.H.C.T. Van Beek^{1,2}, M.J. Schroevers³, F.R. Compen^{1,2}, A.E.M. Speckens^{1,2}

¹ Department of Psychiatry, Radboud University, Nijmegen, The Netherlands, ² Donders Institute for Brain, Cognition and Behavior, Radboud University, Nijmegen, The Netherlands, ³ Department of Health Psychology, University of Groningen, Groningen, The Netherlands

Background: Over the past two decades there has been a growing number of randomized clinical trials supporting the efficacy of mindfulness-based cognitive therapy (MBCT) in the treatment of several psychiatric disorders. Since evidence for its effectiveness in routine clinical practice is lagging behind, we aimed to examine adherence, outcome and predictors of MBCT in a well-characterized, heterogeneous outpatient population in routine clinical practice.

Methods: Data were collected from a naturalistic uncontrolled cohort of 998 patients formally diagnosed with mainly major depressive disorder (MDD), anxiety disorders, personality disorders, somatoform disorders and/or ADHD. Patients received MBCT and completed self-report questionnaires pre- and post-treatment on overall functioning, depressive symptoms, worry, mindfulness skills and self-compassion. Pre- to post-treatment changes were analysed for the overall sample and each diagnostic category separately with paired sample t-tests, reliable change indices and repeated measures ANOVA for groups with and without comorbidity. Multiple linear regression was carried out to assess possible predictors of adherence and change in overall functioning.

Results: Adherence was high (94%) but negatively affected by lower levels of education, more comorbidity and presence of ADHD. Outcome in terms of improvement in overall functioning was good in the overall sample (Cohen's $d=0.50$, 30% showed reliable improvement vs. 3.5% reliable deterioration) and within each diagnostic category (Cohen's d range=0.37-0.61). Of note is that improvement of depressive symptoms for patients with an MDD was independent from MDD recurrence and remission status. Worse overall functioning at baseline was the only predictor for a larger treatment effect.

Discussion: After MBCT, overall functioning improved in a large heterogeneous psychiatric outpatient population independent of diagnosis or comorbidity. Previous efficacy results in controlled research settings are maintained in clinical practice across different diagnostic categories. However, people who did not adhere to treatment tended to be lower educated and suffer more often from psychiatric and somatic comorbidity, which urges active attention from clinical and research groups to improve adherence for these patients.

Symposium 71

New strategies for improving youth mental health and facilitating delivery of a CBT preventive intervention

Chair: Kristin Martinsen, The Regional Center for Child and Adolescent Mental Health, University of Oslo, Norway

Factorial design in the ECHO Study, Initial Data & the Use of Technology in CBT for children

Carina Lisøy, Jo Magne Ingul, Kristin Martinsen, Frode Adolfsen, Solveig Holen, Lene-Mari Rasmussen & Simon-Peter Neumer, The Regional Center for Child and Adolescent Mental Health, RBUP East and South, Oslo, Norway and Jo Magne Ingul, Regional Center for Child and Youth Mental Health and Child Welfare, RKBU Central Norway, NTNU, Trondheim, Norway

Introduction: The ECHO-study aims to optimize a school-based group CBT intervention. We investigate three components that may either improve intervention effects, reduce resource demand or increase implementation feasibility. Technological advancements offer new ways to deliver CBT for children and have presented encouraging results. In ECHO, we have used automated web-based sessions and a measurement feedback app developed for the research project. In addition, the groups have used Virtual Reality (VR). Skills training, exposure, and behavioral experiments are among the best documented techniques for helping young people with anxiety and depression. Therapists, however, often report problems with planning, adapting and completing these tasks. In the ECHO study VR with 360° movies was used to provide an experience similar to everyday challenging situations. The aim was to make it easier to practice difficult tasks, and to provide a safe environment.

Method: The study employs a 2x2x2 cluster randomized factorial design. We will present how the full factorial design allows an examination of the performance of each factor (main effects) and how these factors affect each other's performance (interaction effects).

Results: 58 schools were randomized into 8 experimental conditions. During the course of four recruitment waves (school semesters), more than 1300 children with parental consent completed electronic screening surveys at school. We will report on initial data concerning the screening, gender differences in symptoms of anxiety and depression, suicidal ideation and the co-variance of symptoms of anxiety and depression. In addition, we will present experiences using the VR 360° movies in the intervention based on feedback from group-leaders and participants, and discuss whether VR is a feasible component in this intervention.

Conclusion: Factorial design is an effective way to optimize interventions, and new ways to deliver CBT for children are offered by newer technology.

Use of a new measurement feedback system (MFS) for children with emotional problems – How can the “myecho” app improve outcomes in a preventive intervention?

Simon-Peter Neumer, The Regional Center for Child and Adolescent Mental Health, RBUP East and South, Oslo, Norway
Ida Mari Haug, Joshua Patras, Kristin Martinsen, Carina Lisøy, Frode Adolfsen, Lene-Mari Potulski Rasmussen, Jo Magne Ingul, Elisabeth Valmyr Bania, Kristin Ytreland, Anne Mari Sund, Solveig Holen

Introduction: One way to optimize effects of psychosocial interventions is to combine it with a Measurement Feedback System (MFS). Preliminary results in a Cochrane report currently undertaken in Norway (Bergman, et al., 2018) on the effect of client feedback, identified several MFS instruments that can be used with children and adolescents. The existing MFS systems suffer, however, from use of measures that are not well-validated, a rigid structure that is not adaptable, or a monetized approach that is not compatible with large-scale implementation.

To develop a new MFS for the Echo study, our research group conducted a pilot study funded by the Norwegian Research Council. The new MFS used in the current study, which will later be made available for municipal health services, is called “myEcho.” It is delivered via an app developed in close collaboration with the University of Oslo.

Method: The “myEcho” app includes an idiographic measure of three personal goals and six items measuring symptom levels of depression and anxiety, which are displayed on a visual data dashboard to guide the group leaders in tailoring the intervention to children's needs. The app sends a weekly reminder for the children to register goal progress and symptom levels.

The Echo study has a cluster randomized factorial design, where MFS is one of the experimental factors, which means that half of the group leaders in the intervention receives feedback via the “myEcho” app.

Results: We will address the limitations of established MFS systems and give a presentation of the “myEcho” app. Initial experiences and results based on user data will be presented.

Discussion: After a presentation of the background and rationale, the new MFS app will be presented.

Conclusion: MFS systems can give feedback about children's progress to therapists enabling them to tailor the intervention to the specific child, while new technology will make the system safe to use and easily accessible in first line services.

A transfer from a traditional CBT group intervention to DIGGI, a partially web-based intervention - does digitalization have the potential to enhance access and facilitate delivery of evidence-based interventions?

Kristin Martinsen, The Regional Center for Child and Adolescent Mental Health, RBUP East and South, University of Oslo, Norway

INTRODUCTION: Anxiety and depression are common and disabling disorders in childhood, and subthreshold symptoms may also considerably reduce functioning and increase the risk of developing disorders. Effective preventive interventions are available; however, service utilization is low. Increasing the use of evidence-based interventions also faces the challenges of capacity in the services. One way to both increase access and reduce the burden on service providers is to provide interventions online, either as fully digital interventions or as blended approaches. Making such interventions available for youth with anxious and depressive symptoms may be important, as there is promising evidence of the effectiveness of online interventions, and evidence of blended approaches having the same effects as face-to-face treatment

The transdiagnostic cognitive behavioral EMOTION intervention, which targets symptoms of anxiety and depression in school-aged children, was evaluated with positive results when provided as a group-based intervention where participants met face-to-face. In the current ECHO study, a partially web-based EMOTION intervention (DIGGI) was developed where children completed every other session as

automated online-sessions and every other session in group (blended approach). We compared the blended approach with the full face-to-face group version.

METHOD: One of the factors in the current study's factorial design was DIGGI, a partially web-based delivery of the intervention. Half of the children participating in the study (N = 330) received DIGGI, where 8 sessions were delivered in group-setting and 8 sessions were completed by the children at home as automated web-based sessions. The other half received the full Emotion intervention in a group format, meeting face-to-face during school- **METHOD:** One of the factors in the current study's factorial design was DIGGI, a partially web-based delivery of the intervention. Half of the children participating in the study (N = 330) received DIGGI, where 8 sessions were delivered in group-setting and 8 sessions were completed by the children at home as automated web-based sessions. The other half received the full Emotion intervention in a group format, meeting face-to-face during school- time, with a maximum of seven children in the group.

RESULTS: The digital intervention and initial results indicating feasibility and acceptability of DIGGI will be presented.

DISCUSSION: After a presentation of the new partially digitalized version of the EMOTION preventive intervention (DIGGI), opportunities and challenges will be discussed.

CONCLUSION: A partial digital intervention has several potential benefits; it preserves the intensity of the intervention, may improve acceptability of the intervention, may achieve comparable effectiveness as interventions delivered in a group face-to-face format only, and may also improve cost-effectiveness. A blended approach such as DIGGI may therefore be a promising innovation to enhance access and facilitate delivery of evidence-based interventions in community settings.

Do parents matter? - high and low parental involvement in a preventive intervention for anxious and sad children

Kristin Ytreland, Regional Center for Child and Youth Mental Health and Child Welfare, RKBU Central Norway, NTNU, Trondheim, Norway

Jo Magne Ingul, Elisabeth Valmyr Bania, Kristin Martinsen, Frode Adolfsen, Simon-Peter Neumer & Anne Mari Sund

Introduction: Research indicates that parental factors may contribute to the development and maintenance of youth anxiety and depression. Thus, parents are often involved in the treatment of childhood internalizing problems. However, studies investigating the effect of parental involvement in treatment show mixed results. Some studies indicate that parental involvement improves outcome, while others indicate no effect. This may partly stem from different ages being studied, methodological issues and whether the components included in parental involvement targets parental factors shown to contribute to child emotional problems.

In the ECHO-study parental involvement was one of three factors in a factorial design, and the aim of this factor was to investigate whether high parental involvement improves child outcome, compared to low parental involvement. Secondary aims were to examine whether high parental involvement alters relevant hypothesized mechanisms, such as family functioning, parenting and parents' own symptomatology.

Method: In this indicated controlled study parents (n=1300) were randomized either to high parental involvement; 5 group sessions, focusing on how to help their sad and/or anxious child, with child attendance in three of the sessions, or to low parental involvement, where parents received a brochure with psychoeducational content based on the same cognitive behavioral approach as the high parental involvement group.

Results: The content of the parental involvement factor will be presented, together with preliminary results related to the parental involvement factor of the ECHO-study.

Discussion Resources are scarce in first line services, also parents may find it difficult to attend meetings. Optimizing interventions, implementing only components that work is important. Knowledge regarding the effect of high and low parental involvement may guide the priorities in the services. The lack of concordance between content of parental involvement and risk factors associated with development of anxiety and depression may partly explain the lack of additional effects in outcome when including a parental component to youth anxiety and depression treatment and prevention interventions.

Conclusion: Optimizing interventions, reducing strain on youth, and improving cost-effectiveness in services is important. Initial results of parental involvement in the ECHO study may be an important step in this direction to illuminate the contribution of parental involvement and family and parent specific content in an indicated prevention program.

Implementation factors in a transdiagnostic program for sad and anxious children.

Frode Adolfsen, Regional Center for Child and Youth Mental Health and Child Welfare, RKBU North Norway, UiT, Tromsø, Norway

Authors: Lene-Mari P. Rasmussen, Kristin Martinsen, Jo Magne Ingul, Kristin Ytreland, Carina Lisøy, Simon-Peter Neumer.

Introduction: Implementation of preventive programs in general has the purpose of identifying factors relevant for improvement of the success in evidence-based practice (EBP)

Identifying and focusing on factors relevant for implementation is important to assess program outcomes. Transdiagnostic approaches are becoming more relevant for children with fluctuating symptoms and are being more used within the prevention field. However, many of these are resource-demanding and time consuming. Investigating implementation factors are therefore necessary to find, which is more suitable within municipal services.

In the ECHO study, implementation factors including fidelity to the different experimental conditions were explored. For that purpose, we will present preliminary results measured from the group leaders relevant to implementation of the EMOTION program for sad and anxious children.

Methods: Implementation factors such as attitudes to EBP, climate for implementation and leadership were measured after introducing the EMOTION program to the group leaders. After completion of each group, the group leaders filled out a separate questionnaire regarding experiences running groups. In addition, each session the group leaders answered the degree of fidelity of the program, by reporting how much of the sessions content they had done.

Results: A total of N = 215 group leaders reported their attitudes towards implementing evidence-based programs. Half of the group leaders had some earlier experience working with manuals and about 30 % of them had experience working with groups of children with emotional symptoms. According to the self-reported fidelity measure, group leaders mainly followed the program manual. However, the group leaders also reported struggling with accomplishing all planned tasks for each session.

Discussion: Although positive attitudes to EBP and having relevant experience, implementing manualized prevention programs in first line services presents challenges. Group leaders reported different issues within the different experimental conditions, but also general factors related to implementation of EMOTION, such as group size and time constraints within the services.

Conclusion: The different experimental conditions present different implementation issues, and increased knowledge/focus of implementation factors and how to use manualized programs in the first line service is still needed.

Symposium 72

Digital mental health: recent innovations and potential interferences

Chair: Oana David, Babes-Bolyai University Cluj-Napoca, Rumania

The RETHink online therapeutic game for the prevention of emotional disorders in youths

Oana David, Cristina Lorint and Ioana Iuga - DATA Lab, Babes-Bolyai University Cluj-Napoca, Romania

The RETHink online game is a standalone prevention tool based on validated cognitive-behavioral protocols, that capitalizes on the attraction that youths have on gaming to engage them. We aim to present its components and recent data that support the efficacy of the game in training emotion-regulation skills and preventing of emotional disorders in youths. The RETHinkEMOTIONS online platform will also be presented, which integrates game based and mobile tools that can connect youths and their parents with clinicians and researchers in order to offer timely and personalized prevention for the youths in need.

Acceptability of The "Symptoms" app for supporting treatment of Gambling Disorders

Díaz-Sanahuja, L.¹, Miralles, I.¹, Mira, A.², González-Pérez, A.¹, Casteleyn, S.¹, García-Palacios, A.^{1,3}, Bretón-López, J.^{1,3}

¹ Universitat Jaume I ² Universidad de Valencia ³ CIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN)

Cognitive Behavioral Therapy is the treatment of choice for Gambling Disorder (GD), with stimulus control (SC) and exposure with response prevention (ERP) being its two core components. SC is introduced initially to avoid gambling cues and establish an abstinence period. Afterwards, ERP is incorporated to achieve the habituation process of the urge to gamble considering the presence of a particular emotional reaction or gambling related stimulus. Despite their efficacy, SC and ERP are not easy to deliver, so it is important to explore new ways to enhance patient compliance regarding SC and ERP. We conducted a consensual qualitative research study with two patients with problem and pathological gambling, using Symptoms app, a location-based ICT system that during SC and ERP. It consists of a technological platform that allows therapists indicate the relevant places for treatment and corresponding contents (e.g., personalized messages) to be delivered when the patient is in a particular place. In order to analyze clients' experiences with the use of the aforementioned LBT-based ICT system during SC and ERP therapeutic components, we used the Expectation and Satisfaction Scale and System Usability Scale as well as a semi-structured interview, developed ad-hoc based on those instruments. Qualitative results showed that the patients considered the app to be useful during the SC and ERP components and emphasized that feeling observed and supported at any given time helped them avoid lapses. They reported high expectations before starting the treatment and high satisfaction after finishing it. One of the important aspects to highlight is that confidence when using the system improved. Moreover, even though it was not a goal of the present study, preliminary results regarding the overwhelming urge in the target behavior showed an important score reduction in the scheduled situations, supported by the LBT-based ICT system during the treatment and were maintained at the 1, 3, 6 and 12-month follow-up periods. Other complementary clinical outcomes were explored and we obtained data from pre-intervention to 1- and 6-months follow-ups. There were also improvements in gambling severity and gambling-related cognitions, and although the perceived gambling self-efficacy was high at pre-intervention, it improved at 6-months follow-up, achieving the maximum score. This work can offer a starting point that opens-up new research paths regarding psychological interventions for gambling disorder, such as assessing whether location-based ICT tools enhance commitment rates and to explore the efficacy of these interventions with more rigorous research designs.

Funding sources: This work was supported by the Health Ministry of the Spanish government (program: Research projects on addictions 2020I015).

Technoference, attachment and socio-emotional behaviors in toddlers

Marie Danet ¹; Sophie Arnaudeau ¹; Nadège Lefèvre ¹; Jenny S. Radesky ²; Oana David ³; Claire Hofer ¹

¹ Laboratoire Psittec, Université de Lille - Nord de France ² University of Michigan ³ Babes-Bolyai University Cluj-Napoca

Parental mobile devices' use while caring for toddlers is related to lower quality parent-child interaction and decreased interactions. This may limit parents' ability to perceive and respond to children's emotional signals and needs, causing a technoference, and impacting the attachment relationship and other emotional competencies. The study DATE, conducted among 64 families with toddlers (18 month to 36 month), aims to explore associations between children's attachment representations, mobile device use, and children's emotional competence, taking into account the socio-economic environment of the families. Preliminary results have shown that technoference was linked with more children's problematic socioemotional behaviors, children's attachment insecurity and parent's media use. Parent's media use was also linked with more children's attachment insecurity. Implications and directions for future research are discussed.

Digital mental health for emotion regulation

Corina Sas, Lancaster University, UK

This talk provides an overview of technologies for awareness and regulation of emotions developed with my research group and collaborators. It covers theoretical and empirical findings concerning the design and evaluation of several research prototypes integrating biosensing and wearable technologies. The talk articulates the value of this body of work for novel design implications for technologies aimed to support awareness and regulation of emotions in everyday life.

Internet-delivered cognitive-behaviour therapy for adolescents with body dysmorphic disorder: a feasibility trial

Daniel Rautio^{1,2}, Maral Jolstedt^{1,2}, Martina Gumpert^{1,2}, Georgina Krebs^{3,4}, Amita Jassi³, Tobias Lundgren^{1,2}, Markus-Jansson Fröjmark^{1,2}, Eva Serlachius^{1,5}, David Mataix-Cols^{1,2}, Lorena Fernández de la Cruz^{1,2}

¹Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden, ²Stockholm Health Care Services, Region Stockholm, Stockholm, Sweden, ³National and Specialist OCD, BDD, and Related Disorders Clinic for Young People, South London and Maudsley NHS Foundation Trust, London, UK, ⁴Research Department of Clinical, Educational and Health Psychology, University College London, London, UK, ⁵Lund University, Skåne, Sweden

Body dysmorphic disorder (BDD) is a prevalent and impairing condition that can be effectively treated with cognitive-behaviour therapy (CBT). However, CBT for BDD is a highly specialised treatment and most adolescents do not have access to it. Internet-delivered CBT (ICBT) can be a way to increase the availability of effective psychological treatments. No study to date has evaluated the feasibility of ICBT for adolescent BDD, but the experience in adults with BDD treated with ICBT is encouraging. The primary aim of this open trial is to measure the feasibility and safety of an ICBT intervention. The secondary aim is to measure its preliminary efficacy. A total of 20 participants aged 12-17 years and meeting DSM-5 criteria for a diagnosis of BDD were recruited. Treatment was delivered from the OCD and Related Disorders Clinic for Children and Adolescents in the region of Stockholm, Sweden. Participants were offered 12 modules of the therapist guided ICBT for BDD over a period of 14 weeks. This treatment is based on a previously evaluated face-to-face CBT protocol which mainly includes psychoeducation, exposure with response prevention, and relapse prevention strategies. Feasibility measures were based on rates of participant retention, treatment completion and adherence to treatment content, treatment acceptability, treatment credibility, and treatment satisfaction at post-treatment, as well as adverse events during the treatment. Preliminary efficacy was measured by using the Yale-Brown Obsessive Compulsive Scale, modified for BDD, adolescent version (BDD-YBOCS-A) and the rate of treatment responders at post-treatment and at the 3-month follow-up. Secondary outcome measures included self-reported BDD symptoms, depressive symptoms, and functional impairment. In this talk, the feasibility and preliminary efficacy results of the pilot study will be presented up to the 3-month follow-up. Future plans to perform a fully powered randomized controlled trial of the ICBT intervention for adolescent BDD will be described.

Clinical characteristics and treatment outcomes in young people with comorbid body dysmorphic disorder and autism spectrum disorder

Amita Jassi¹, Daniel Rautio^{2,3}, Benedetta Monzani^{1,4}, Lorena Fernández de la Cruz^{2,3}, David Mataix-Cols^{2,3}, Georgina Krebs^{1,5}

¹National and Specialist OCD, BDD, and Related Disorders Clinic for Young People, South London and Maudsley NHS Foundation Trust, London, UK, ²Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden, ³Stockholm Health Care Services, Region Stockholm, Stockholm, Sweden, ⁴Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK, ⁵Research Department of Clinical, Educational and Health Psychology, University College London, London, UK

Treatment for paediatric Body dysmorphic disorder (BDD) is starting to gain focus in research. Outcomes for cognitive behaviour therapy (CBT) have previously been found to be modest (Mataix-Cols et al., 2015) and are improving as CBT packages develop (Rautio et al., 2022). As with OCD, enhanced packages of treatment may be warranted for those with comorbid autism spectrum disorder (ASD), given the high rates of comorbidity and potential compromised outcomes to standard packages of CBT. In order to understand the need for augmented packages of CBT, comparing the phenomenology and treatment outcomes between those with and without ASD is a helpful endeavour. Young people consecutively referred to one of two national specialist services for BDD in London and Stockholm with a primary diagnosis of BDD were included in the study. A total of 132 young people without ASD and 27 with ASD aged 10-19 years old were compared on clinician measures of BDD symptom severity, insight, and functional impairment and self-reported measures of BDD and depression at baseline. Mixed-effect regression models for repeated measures were used to examine differences in treatment outcomes between the groups at end of treatment and three-month follow-up points on primary measures of BDD severity and secondary measures (e.g., depression). The clinical implications of the findings are discussed considering the strengths and limitations of this study.

Supervised digital training of clinicians to assess and deliver cognitive behaviour therapy for young people with body dysmorphic disorder: A feasibility study

Martina Gumpert^{1,2}, Daniel Rautio^{1,2}, Maral Jolstedt^{1,2}, Tobias Lundgren^{1,2}, Eva Serlachius^{1,3}, Lorena Fernández de la Cruz^{1,2}, David Mataix-Cols^{1,2}, Markus-Jansson Fröjmark^{1,2}

¹Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden, ²Stockholm Health Care Services, Region Stockholm, Stockholm, Sweden, ³Lund University, Skåne, Sweden

Body dysmorphic disorder (BDD) is a prevalent and impairing condition that typically starts in adolescence and can be effectively treated with cognitive behaviour therapy (CBT). However, many individuals with BDD go undiagnosed and few receive CBT due to a lack of awareness of BDD and a shortage of trained clinicians with the necessary skills to treat this complex disorder. Additionally, a shortage of effective therapist training in psychological treatments creates major barriers to the implementation and delivery of evidence-based interventions in routine clinical practice. There is therefore a pressing need to increase awareness about BDD among clinicians and develop methods to help disseminate evidence-based treatments for BDD across the public health system. The overall aim of this study is to develop a supervised digital educational tool to train clinicians (i.e., doctors, psychologists, nurses, and counselors) who work within child and adolescent mental health services (CAMHS) in Sweden in the assessment and treatment of children and adolescents with body dysmorphic disorder (BDD). The online training program has been developed to increase the therapists' BDD knowledge as well as their skills and use of paediatric CBT for BDD by including both didactic and applied training and access to ongoing consultation. All assessments and delivery of training will be administered from a single site in Stockholm, Sweden, the Child and Adolescent Psychiatry (CAP) Research Center. The primary objective is to investigate whether the educational tool is a feasible way to train clinicians. Feasibility is defined as whether the online education is acceptable and credible, and whether participants are satisfied and make use of the online training in their clinical practice. The secondary objectives are to provide preliminary efficacy data and to gather qualitative information on the experience

of undergoing the online education from the perspective of the clinicians for improvement of future online education interventions. In this talk, the study design and educational content, as well as the evaluation of educational interventions and dissemination of evidence-based treatments, will be discussed.

Symposium 74

New clinical models and optimizing treatment strategies for OCD and its subtypes

Chair: Andrea Pozza, University of Siena, Italy

Can musical obsessions be predicted by the interaction between frequency and dysfunctional interpretations of common earworms?

Karina Wahl¹, Andrea H. Meyer¹, Carlotta V. Heinzl¹, & Roselind Lieb¹

¹Department of Psychology, Division of Clinical Psychology and Epidemiology, University of Basel, Basel, Switzerland

Musical obsessions can be conceptualized as a severe form of repetitive intrusive musical imagery (IMI), commonly known as earworms. The aim of this study was to evaluate the predictions of the two-factor model of musical obsessions. It proposes that musical obsessions result from the interaction of the frequency of IMI and dysfunctional interpretations of IMI. Eighty-one individuals with a lifetime diagnosis of obsessive-compulsive disorder (OCD) and 291 without a known diagnosis of OCD completed online questionnaires about the frequency of IMI, their dysfunctional interpretations, and their severity. We specified a model with severity of IMI as outcome and interpretations and frequency as predictors and controlled for the type of sample (OCD or non OCD). The interaction between frequency and dysfunctional interpretations predicted severity of IMI, however in another direction than suggested by the two factor model. In particular, the positive association between CEAR Interpretations and the SIMS was stronger for low frequencies than for moderate or high frequencies. Future studies should include experimental and longitudinal designs and pay particular attention to low-frequency IMI and their role in musical obsessions.

Videoconference based treatment in the home environment for obsessive compulsive disorder: overview and results of an open study.

Eva Zisler, Simone Pfeuffer, Mathias Favreau, Ulrich Voderholzer, Schoen Clinic Roseneck, Prien am Chiemsee, Germany

Due to the fact that obsessive-compulsive disorder (OCD) is a debilitating mental disorder for many patients, the need for psychotherapy is elevated. The gold standard for treating patients with OCD is the use of cognitive-behavioral therapy with elements such as therapist-supervised exposure and response prevention (ERP). Nevertheless, these therapeutic techniques in particular are rarely used in routine care which is in turn often associated with poorer treatment outcomes as well as issues such as low rates of generalization into the everyday life of patients after discharge from inpatient treatment. Therefore, it is necessary to explore innovative therapeutic options which includes videoconference-based psychotherapy. Consequently, based on existing literature, a brief overview of current research findings on the topic of videoconference-based psychotherapy, specifically for OCD, will be presented. Furthermore, the aim of this study was to investigate the feasibility of ERP as well as its impact on treatment outcome via videoconference-based psychotherapy. Thus, 88 inpatients with OCD participated in the present study and completed videoconference-based exposures adjunctive to multimodal inpatient treatment between 2015-2021. Participant's ratings indicated good to excellent system-usability and naturalness of videoconference-based ERP. For individual sessions, sufficient depth and positivity was achieved by videoconference ERP. A strong working alliance between patients and therapists was established regarding tasks, goals and emotional bonding. Compared to matched controls, patients participating in videoconference-based ERP in conjunction to inpatient treatment showed stronger reductions in Y-BOCS from admission to discharge ($p < .001$). Hence, the results highlight the great importance of systematically administering exposures also in the patient's natural environment to enhance treatment response in OCD. Videoconference-based ERP as add-on to TAU is an appropriate option to facilitate the application of ERP in the patients' natural environment and foster the generalization of successful ERP conducted in clinical settings. These findings are particularly relevant whenever therapist-supervised ERP outside the clinical setting is not feasible.

The role of attachment styles and disgust in OCD

Andrea Pozza, University of Siena, Italy

Introduction. The aim of the present study was to explore the attachment style that characterizes Obsessive-Compulsive Disorder (OCD) patients, with and without contamination symptoms, and compare it with that of a group of patients with Anxiety or Depressive disorders. We then went to investigate if disgust propensity/sensitivity moderated the relationship between attachment styles and diagnosis.

Methods. The OCD group comprised 90 patients and the Anxiety or Depressive disorders group comprised 36 patients. Both groups were simultaneously administered 4 self-report measures:

Results. Regarding our first objective, we found that the OCD group reported a greater mean score ($M = 17.59$, $SD = 5.64$) compared to the anxious/depressive group ($M = 15.00$, $SD = 4.82$) on the scale "Relationships as Secondary", and this difference was statistically significant ($t = 2.42$, $p < 0.05$). Further, a moderator effect emerged for the DPSS-r total score on the relationship between scores on the ASQ and the OCD subtype.

Conclusions. The results obtained demonstrate that the OCD group presents an attachment style dimension that is characterized by two factors: high avoidance and low anxiety. Further, the results highlight the moderator effect of disgust propensity/sensitivity on the relationship between attachment style, and more specifically Relationships as Secondary, and OCD with fears of contamination.

EMMERGED: a model for emotion regulations skills and emotion regulation strategies in youth

Leentje Vervoort, Behavioral Science Institute/Social Development, Radboud University, The Netherlands - Clinical Developmental Psychology, Ghent University, Belgium

Objective. Dealing with emotions is a challenging task that everybody needs to learn to master from an early age on. If one succeeds in managing her of his emotions successfully, this opens up a pathway to well-being and mental health. However, if one struggles to hold control over emotions, one runs the risk of developing emotional problems and psychopathological symptoms. Emotion regulation is traditionally studied from one of two approaches. The strategies approach describes ER as range of processes that influences the type of emotion an individual has, its intensity, its timing, and how it is experienced and expressed, and focusses on the strategies that one uses to influence the process of emotion generation and its manifestation in behavior. The skills approach describes ER as typical, dispositional ways in which one deals with one's emotions, and focusses on the skills that one needs to understand, accept and tolerate one's emotions. Integrating both perspectives, I will present the EMMERGED (EMotional Reactivity and emotion ReGulation thourought Development) model, describing how ER is linked with temperament and how both strategies and skills are linked to behavior and mental health, discussing empirical evidence for (a parts of) the model.

Method. 238 participants between 9 and 18 years (60% girls) completed questionnaires assessing the use of ER skills and ER strategies (*Emotion Regulation Skills Questionnaire-Junior and Der Fragebogen zur Erhebung der Emotions-regulation bei Kindern und Jugendlichen*), the *Positive and Negative Affect Schedule (PA and NA)* and the *Child Depression Inventory*.

Results. PA was associated with increased use of ER skills and adaptive ER strategies and with decreased use of maladaptive strategies. NA was associated with increased use of maladaptive strategies, there were no indications that it's associated with skills or adaptive ER. The use of less ER skills or less adaptive ER strategies and the use of more maladaptive ER strategies were associated with higher depression scores.

Discussion. Data support core parts of the EMMERGED model, evidencing that, concurrently, temperament is linked to ER and that the use of ER skills and ER strategies is implicated in youth mental health. Future research investigating causal/mediational relations could strengthen the evidence for the EMMERGED model. ER interventions should not only aim at replacing maladaptive ER strategies with more adaptive ER strategies, but also at boosting ER skills.

The relationship between perceived stress and depressive symptoms in adolescents during high stress: The moderating role of emotion regulation

Jolien Braet, Clinical Developmental Psychology, Ghent University, Belgium

Introduction: This study examined the moderating role of adaptive and maladaptive emotion regulation in the relationship between general perceived stress and depressive symptoms during the first COVID-19 lockdown in March-April 2020 in Belgium, while controlling for past depressive symptoms in 2016.

Method: Participants were 110 adolescents (55% female; $M_{age} = 16$, $SD_{age} = 1.80$) who filled out different questionnaires assessing maladaptive and adaptive emotion regulation strategies (ERS), perceived stress, and depressive symptoms.

Results: Results revealed that only maladaptive ERS statistically significantly moderated the relationship between perceived stress and depressive symptoms. More specifically, the amount of perceived stress is positively associated with the level of depressive symptoms, especially in adolescents who use more maladaptive ERS.

Conclusion: The repertoire of adaptive ERS might not be sufficient for adolescents to flexibly cope with a highly stressful situation such as the COVID-19 pandemic and lockdown. Study findings highlight the need to support youth, particularly those who use more maladaptive ERS, in adaptively coping with intense stressful life events.

Effects of emotion regulation training on psychophysiological stress responses in children and adolescents with obesity

Van Royen Annelies¹, Verbiest Ine¹, Taaik Debeuf¹, Nathalie Michels², Goemaere Heleen¹, Sandra Verbeken¹, & Caroline Braet¹

¹Clinical Developmental Psychology, Ghent University, Belgium, ²Faculty of Medicine, Ghent University, Belgium

Objective: Children and adolescents with obesity display elevated stress levels, which may be targeted by training adaptive emotion regulation (ER) strategies. A crucial question is whether such training is effective and can be qualified by objective parameters. However, to our knowledge, no studies yet examined the effect of ER training on objective parameters, more specifically, physiological measures of stress such as heart rate and heart rate variability (HRV) in children and adolescents with obesity on top of weight loss. Therefore, the present study had a dual aim: 1) to examine the impact of the Multidisciplinary Obesity Treatment (MOT) on physiological stress parameters in children and adolescents with obesity; 2) to assess whether adding ER training has an added value with regard to the physiological stress parameters. The present study is part of a larger randomized control trial (SRCTN 83822934).

Method: From an inpatient treatment center for obesity in Belgium, 92 children and adolescents ($M_{age} = 12.5$, $SD_{age} = 1.7$, 43.5% boys) were randomly assigned to a control group (MOT) or training group (MOT + ER training). High frequency (HF) HRV and heart rate at rest and during a stress paradigm were measured before the start of the training (T1) and after 12 weeks of training (T2).

Results: When exposed to stress, the MOT group showed a significantly reduced relative decrease in HF-HRV at T2 compared with T1. Regarding heart rate, significant results vanished after adding age as a covariate. Although no significant group differences between the MOT and training group were found, post-hoc within-subject analyses revealed additional improvements in the training group (e.g., decreased stress levels at rest, increased weight loss) that were not discovered in the MOT group.

Discussion: The present study is the first to investigate the effect of MOT and training adaptive ER strategies on physiological stress parameters in children and adolescents with obesity. The results form preliminary evidence that MOT effectively decreases stress responses in children and adolescents. Although the main analysis showed no significant differences between the training and MOT group, the results of post-hoc analyses point towards a potential additional effect of ER training on top of MOT, which is promising for youth with obesity. Further research in a larger sample with extended follow-up measurements is needed to corroborate these initial findings.

Reducing the risk of relapse, what works in young individuals in remission of depression and/or anxiety

Suzanne J. Robberegt, MSc.,^{1,2} Bas E.A.M. Kooiman, MSc.,^{2,3} Marlies E. Brouwer, PhD,¹ Yvonne A.J. Stikkelbroek, PhD,^{2,4} prof. Maaike H. Nauta, PhD,^{3,5} prof. Claudi L.H. Bockting, PhD,^{1,6} Prof. Dr. Jennifer L. Hudson⁷, Lizél-Antoinette Bertie, MSc.⁷; MacQuarie co-authors.

¹. Department of Psychiatry, Amsterdam University Medical Centres, location AMC, University of Amsterdam, the Netherlands ². Depression Expertise Centre-Youth, GGZ Oost Brabant, The Netherlands, ³. Department of Clinical Psychology and Experimental Psychopathology, Faculty of Behavioural and Social Sciences, University of Groningen, the Netherlands ⁴. Department of Clinical Child and Family Studies, Faculty of Social and Behavioural Sciences, Utrecht University, the Netherlands ⁵. Accare Child Study Centre, The Netherlands ⁶. Centre for Urban Mental Health, University of Amsterdam, the Netherlands. ⁷. Black Dog Institute, Australia

The majority of children and youth with anxiety and depression disorders initially respond to CBT (60%). Many of them, however, relapse after remission. Relapse rates are highly varied and often either incongruently operationalised or unmentioned in research regarding youth. Furthermore, little is known on the characteristics of those who relapse. Therefore, this symposium will discuss a meta-analysis (9 studies, $N=582$) on all conducted relapse intervention studies in adolescents and young adults, a study with individual patient data (11 global sites; $N=568$) on predictors of anxiety disorder relapse after successful CBT in children and young people, and the theorization, trials and tribulations of conducting StayFine: a personalised app-based relapse prevention study for adolescents and young adults on anxiety and depressive disorders with 3-year follow-up (RCT).

Symposium 76

Pitfalls in intervention development in e-mental health: How can we develop, design, and advance digital interventions?

Convenor and chair: Carmen Schüffele, Freie Universität Berlin, Germany

From practice for practice – participatory intervention development of an integrative transdiagnostic online intervention for blended psychotherapy

Solveig Behr¹, Friederike Fenski², Carmen Schaeuffele¹, Johanna Boettcher², Christine Knaevelsrud¹

¹ Clinical-Psychological Intervention, Freie Universität Berlin, Habelschwerdter Allee 45, 14195 Berlin, Germany < ² Clinical Psychology and Psychotherapy, Psychologische Hochschule Berlin, Berlin, Germany

Background: Internet-based interventions offer a way to meet the high demand for psychological support. However, this setting also has disadvantages, such as the lack of personal relationship and the limited ability to respond to crises. Blended psychotherapy combines Internet-based interventions with face-to-face psychotherapy and brings the benefits of both settings together. To ensure the uptake of blended psychotherapy in real-life settings, online interventions need to be suitable for different therapeutic approaches and mental disorders. To achieve this, we aimed to develop an online intervention with a common therapeutic language and with content on various transdiagnostic topics to be integrated into routine outpatient psychotherapy.

Methods: To develop this intervention in a participatory manner, we followed the Integrate, Design, Assess, and Share (IDEAS) framework. In a multilevel development process, we used a combination of interviews and focus groups to optimally tailor online modules to routine outpatient psychotherapy. This included expert interviews with psychodynamic ($n = 20$) and systemic psychotherapists ($n = 9$) as well as focus groups with psychotherapists of different approaches ($n=10$) and patients with various mental disorders ($n=10$). This integrative and transdiagnostic intervention is currently studied in an RCT in routine care (projected $n = 231$ psychotherapists with $n = 1152$ patients).

Results: We will describe the development process of this intervention step-by-step, outlining the specific requirements that therapists from different therapeutic backgrounds as well as patients have and how we implemented them in our intervention. This includes the content and specific exercises in the online modules, aspects of data protection, language, graphic design, and usability. We will also provide an overview of the study design, initial experiences with recruitment and the use of the intervention in practice.

Conclusion: Involving psychotherapists and patients in intervention development may positively impact acceptance and usage in practice. Interventions that use a common therapeutic language and offer flexibility via modularization, have the potential to reach a large proportion of psychotherapists and patients and facilitate the use of blended settings in routine outpatient psychotherapy.

Participatory and user driven app development: Digital mental health and psychosocial support for Arabic-speaking refugees in Switzerland

Rilana Stöckli¹, Thomas Berger¹, Viktoria Zöllner², Monia Aebbersold², Michel Hosmann², Rebecca Brunner², Sebastian Burchert³, Jessica Wabiszcewicz³, Christine Knaevelsrud³, Eva Heim⁴

¹Departement of Clinical Psychology and Psychotherapy, University of Bern, Bern, Switzerland, ²Departement of Health and Relief, Swiss Red Cross, Bern, Switzerland, ³ Clinical-Psychological Intervention, Freie Universität Berlin, Berlin, Germany, ⁴ Institute of Psychology, University of Lausanne, Lausanne, Switzerland

In the first years after their arrival in the host countries, refugees suffer from numerous stressors. Various factors can consequently lead to psychological problems and disorders for many refugees. To feel independent and comfortable living in the Swiss system, a refugee usually needs several years of adjustment and sometimes painful learning. Along the way, they must re-establish essential social and psychological pillars that are often disrupted in conflict-affected people in order to stabilise their well-being.

Digital approaches to mental health support for refugees have shown promising results. Yet, social and structural needs have rarely been addressed in these evaluated interventions.

In the study, we report on the culturally sensitive, bottom-up, participatory development and adaptation of the mobile app Sui. Sui is designed to support disrupted psychosocial pillars whereby it focuses on asylum-specific social, structural, and psychological support. The goal is to provide refugees with tools to more easily understand complicated bureaucratic Swiss systems, manage psychological symptoms to thereby improve their quality of life early after arrival in Switzerland.

The intervention was developed in a culturally sensitive way from scratch using a mixed-methods approach. This included literature review, online surveys, focus groups, and interviews with experts and representatives of the target group. Process documentation was facilitated by Heim et al.'s (2021) guidelines for Reporting Cultural Adaptation in Psychological Trials (RECAPT) and the accompanying

adaptation monitoring form. The content, storyline, illustrations, and language were developed and adapted through careful decision-making and elaborated review processes.

By using the RECAPT criteria, the process of cultural adaptation can be simplified and replicated for further research. A randomised controlled trial is planned to test the effectiveness and acceptance of the app on a large scale.

Lessons learned from 'TRAbec' – a large full-factorial designed study (n=2400) targeting depression and/or anxiety *Per Carlbring¹, George Vlaescu², Jakob Mechler¹, Karin Lindqvist¹, Björn Philips¹, & Gerhard Andersson²*

¹ Department of Psychology, Stockholm University, Stockholm, Sweden, ² Department of Behavioural Sciences and Learning, Linköping, Sweden

Background: Typically, internet-based treatment programs are effective for various psychological problems. However, diagnosing, and matching treatments to an individual's need, is a challenge and potentially resource-intensive. In addition, it is unknown what the optimal treatment length is and whether access to an online forum is beneficial for treatment adherence and subsequent outcome. In this study, the Iterapi platform fully automated all decisions and communication with the participants, maximizing scalability.

Methods: A total of 2400 participants presenting with anxiety and/or depression were randomized into 12 subgroups (n=200 each) based on treatment modality, duration, and moderated discussion forum (Yes vs. No). Weekly measurements using PHQ9 and GAD7 were the primary outcome measures.

The treatments were based on Cognitive Behavior Therapy (Unified Protocol) or Psychodynamic models and treatment principles (Affect Phobia). Both Unified Protocol and the Affect Phobia treatment program are transdiagnostic methods targeting symptoms of anxiety and depression. The participants were also randomly assigned to either having (50%) or not having (50%) access to a discussion forum that a clinician moderated. Finally, all participants of the two treatment groups and the waitlist-control group were randomly assigned to either an 8- or 16-week intervention duration.

Results: All 2400 participants have been recruited. However, all post-assessment data is not yet collected at the time of writing (but will be by the time of the conference). This talk will focus on design considerations and lessons learned from the 'TRAbec' study.

Discussion: Since the weekly assessment of outcome has been collected, the statistical power is strong, especially since the total number of participants is 2400. The outcome will answer several dissemination questions, including treatment length, discussion boards' added value, and treatment type (CBT vs. PDT).

Predicting response to transdiagnostic iCBT for emotional disorders from patient and therapist involvement: implications for treatment advancement and personalization

Alberto González-Robles¹, Javier Fernández-Álvarez², Carlos Suso-Ribera², Amanda Díaz-García¹, Azucena García-Palacios^{2,3}, Diana Castilla⁴, Cristina Botella^{2,3}

¹Department of Psychology and Sociology, Universidad de Zaragoza, Teruel, Spain, ²Department of Basic and Clinical Psychology, and Psychobiology, Universitat Jaume I, Castellon, Spain, ³CIBER Fisiopatología Obesidad y Nutrición (CIBEROBN), Instituto Salud Carlos III, Madrid, Spain, ⁴Department of Personality, Evaluation and Psychological Treatments, Universidad de Valencia, Valencia, Spain

Introduction: Transdiagnostic Internet-delivered Cognitive Behavioral Therapy (iCBT) for emotional disorders has shown to be effective. However, little is known about the optimal level of therapist and patient involvement in these interventions. Specific characteristics of Internet-delivered interventions include treatment adherence (e.g., amount of review of the materials) and guidance (e.g., amount of therapist support). Exploring the importance of these elements in treatment outcome may help to maximize the efficiency and to increase personalization of Internet-delivered psychological interventions. The aim of this study was to analyze the relationship between patient and therapist involvement (i.e., platform usage and amount of therapist guidance) in a sample of patients with emotional disorders who received transdiagnostic iCBT in Spanish public specialized mental healthcare services.

Method: This is a secondary analysis of a randomized controlled trial. The sample included 63 patients who completed transdiagnostic iCBT for emotional disorders. Platform usage metrics included number of logins into the platform and number of times the participants reviewed the modules. Therapist guidance was measured as the number of support phone calls with a therapist and their total duration (minutes). Logistic regressions and ROC analyses were performed to explore the predictive value of platform usage and therapist guidance in symptom reduction. Clinical outcomes included depressive and anxiety symptoms assessed at baseline and post-intervention. The bivariate relationship between the platform usage and therapist guidance variables was also explored.

Results: Overall, platform usage and therapist guidance were not associated with symptom improvement. However, the patient and therapist involvement parameters were intercorrelated. Specifically, the number of calls and their duration were associated with a greater number of logins ($r = 0.61$; $p < .001$) and more frequent reviews of the modules ($0.46 \leq r \leq 0.60$; $p < .001$). Higher baseline depression and anxiety were, respectively, associated with greater improvements in depression ($r = -0.37$, $p = .003$) and anxiety after treatment completion ($r = -0.48$, $p < .001$).

Discussion: The results suggest that there is no reliable cut-off point for platform usage and therapist guidance in predicting optimal symptom reduction. However, significant associations were found between platform usage and guidance variables that warrant additional research. More research on this topic is necessary to further clarify the role of these and other platform usage and guidance variables in Internet-delivered iCBT outcomes. The implications of this work for the advancement and personalization of iCBT will be discussed.

Symposium 77

Mechanisms in psychotherapy: A complex system approach

Chair: Sverre Urnes Johnson, University of Oslo, Norway

A Network approach to Mental Problems and Their Mechanisms of Change

Johnson, S. U.^{1,2}, Hoffart, A.²

¹University of Oslo, Faculty of Social Sciences, Department of Psychology, Oslo, Norway

²Modum Bad Psychiatric Center, Vikersund, Norway

In this theoretical study (Hoffart & Johnson, 2020), it is examined whether and how a latent trait, a latent trait-state and network conceptualization of mental problems account for their descriptive features and their causal mechanisms. The latent-trait approach

explains symptoms as underlying trait-like disorders. The latent trait approach is restricted to between-person relations and thus provides no direct tests of mechanisms, which involve within-person relations. The latent trait-state approach is able to address within-person relations, but the assumption of independence between latent constructs is often violated. Moreover, the focus on latent states results in only global clinical recommendations.

In the network approach, clinical disorders are viewed as causal networks of observable mental problems/symptoms. The observable symptoms that have traditionally been considered indicators of latent traits (disorders) and states are taken to be directly related causal entities

The practice of psychotherapy is a dynamic process in which within-person deviations from the usual on certain key mechanistic variables are promoted to produce change in the usual level of desired outcome variables. The network approach reflects this practice well by accounting for the relationship between the strength of the connections of a network - which in effect is the size of the relationships between the within-person deviations from the usual on the variables - and the overall level of the aggregate of variables included in the network.

Clinical observation suggests that a mental problem is not a single and isolated reaction but rather a part or feature of a typical cluster of reactions, a so-called *episodic cluster*. A determination of psychological mechanisms should include an account of the lower-level processes involved in its operation (Kazdin, 2009). Accordingly, the mechanisms of a mental problem relate to its associated episodic cluster. More specifically, they are the causal relations between the triggering events, internal reactions, and behaviors constituting the cluster. The network approach has so far not addressed the episodic cluster of reactions surrounding each symptom. We propose an extended network approach, which identifies mechanistic relationships with the causal interactions among the reactions of these clusters. This approach is associated with differentiated clinical models and leads to specific clinical recommendations. Implications for treatment and psychological theories are discussed.

Reference:

Hoffart, A., & Johnson, S. U. (2020). Latent Trait, Latent-Trait State, and a Network Approach to Mental Problems and Their Mechanisms of Change. *Clinical Psychological Science*, 8(4), 595-613. doi:10.1177/2167702620901744

Kazdin, A. E. (2009). Understanding how and why psychotherapy leads to change. *Psychotherapy Research*, 19, 418-428. <http://dx.doi:10.1080/10503300802448899>

Is it too early for early warning signals? A study of rising autocorrelation and variance as personalized predictors of transitions towards depressive symptom improvement in individual patients

Marieke A. Helmich^{1,2}, A. C. Smit², M. J. Schreuder², L.F. Bringmann^{2,3}, A.J. Oldehinkel², M. Wichers², & E. Snippe²

¹University of Oslo, Faculty of Social Sciences, Department of Psychology, Oslo, Norway

²University of Groningen, University Medical Center Groningen, Interdisciplinary Center Psychopathology and Emotion regulation, Groningen, The Netherlands ³ University of Groningen, Faculty of Behavioural and Social Sciences, Department of Psychometrics and Statistics, Groningen, The Netherlands

The path to depressive symptom improvement during therapy is very personal and often complex. This complicates evaluating the effectiveness of treatment based on depressive symptoms alone, as many individuals experience periods of instability and discontinuous symptom change. To gain a better understanding of the dynamics that precede clinically relevant symptom shifts in depression, researchers have begun collecting ecological momentary assessments of affect (e.g., "I feel down") during sensitive periods, such as during treatment. In such data, Early Warning Signals (EWS) are hypothesized to be detectable as increasing lag-1 autocorrelation and variance, which could serve as personalized indicators of imminent symptom shifts

If EWS can be found consistently, they could be developed into a clinical tool. The timely detection of destabilization would provide patients and therapists with feedback about the effectiveness of the current treatment, even when depressive symptoms have not yet improved in mean-levels or are strongly fluctuating.

In this symposium, I will present results from a study specifically designed to detect EWS before symptom improvements during psychological treatment, the Transitions in Depression (TRANS-ID) Recovery project. Participants were 41 individuals undergoing psychotherapy, who rated their momentary positive and negative affect (high and low arousal) five times a day over four months (M=521 observations per individual), and weekly depressive symptom assessments over six months. This is a first in-depth empirical investigation of within-person detected EWS using a repeated single-subject design with a total of 26,408 observations of symptoms and momentary affect.

Reliable symptom transitions – large reductions in SCL-90 depression scores that occurred over 1-4 weeks and remained low thereafter – were identified for 9 individuals, while the remaining 32 individuals did not show such marked decreases. EWS in autocorrelation and variance were investigated with a moving window method, and extensive sensitivity analyses were conducted to examine the influence of our analysis choices (e.g., window size, transition definition, minimally relevant effect size, etc.).

In brief, we found that 89% of individuals with a transition showed at least one EWS in autocorrelation (true positives), versus 63% of the non-transition group (false positives). For the variance, 44% true positives (EWS in the transition group) were found and 25% false positives (EWS in individuals without transitions). I will discuss these results in detail during the presentation and reflect on the theoretical implications of this study. The presentation will end with a discussion of whether EWS live up to their promise for use in the clinical context.

Depressive symptomatology during the COVID-19 pandemic and the psychopathological processes intertwined with these symptoms

Omid V. Ebrahimi, Julian Burger, Asle Hoffart, Sverre Urnes Johnson

Background: The coronavirus pandemic has been accompanied by elevations in depressive symptoms in the general adult population. The key feature of a depressive condition involves the prolonged constellation and experience of its symptoms. Monitoring the temporal evolution of symptoms is thus central in detecting deteriorations in population-wide mental health.

Methods: This presentation builds on two longitudinal studies, with the first monitoring the evolution of depressive symptomatology in representative sample of 4361 adults across all modifications of viral mitigation protocols (VMPs) from their onset to termination using a latent change score model. Second, a dynamic multi-level network study investigated the psychopathological processes intertwined with depressive symptoms on a within- and across-day basis in 1706 individuals over a 40-day period.

Results: Symptom levels increased with the strictness of VMPs and were unrelated to COVID-19 incidence rates. While population-level symptoms began declining ensuing the termination of VMPs, detrimental long-term adversities were revealed by 10% of adults, shifting from predominantly asymptomatic to clinically relevant levels of depression. The strongest change in depressive symptom levels occurred during the first three months of the pandemic. Dynamic network models revealed that helplessness had the strongest across-day influence on depressive symptoms, while emotion regulation difficulties displayed more proximal interactions with symptomatology. Rumination was to a greater extent susceptible to being influenced rather than temporally influencing other components of depression.

Conclusion: Adaptation to the pandemic, whether favorable or maladaptive, occurred within its first three months, after which individuals' symptomatology consolidated in a stable pattern that was predominantly maintained for the remainder of the pandemic. The main mechanism tied to elevations in symptoms was helplessness. Lethargy and worthlessness revealed greater within-person temporal carry-over effects, preliminary indicating that these symptoms were more strongly associated with pushing individuals toward prolonged depressive states.

The attention training technique delivered in a group format for anxiety and depression in coronary heart disease outpatients. A pilot feasibility study

Dammen T., Medical faculty (UiO), Drammen, Norway, Tunheim K., Munkhaugen J., & Papageorgiou C.

Background: Significant symptoms of anxiety and depression are common (30-40%) in coronary heart disease (CHD) patients and are associated with an increased risk of recurrent cardiovascular events and mortality, poorer quality of life, and higher health care cost compared to those without such symptoms. To date, most psychological treatments have limited effects on symptoms of anxiety and depression in CHD patients. Therefore, it is essential to develop and evaluate more effective treatments for depression and anxiety in these patients. The attention training technique (ATT) is a component of metacognitive therapy based on a transdiagnostic model of emotional disorders. The self-regulatory executive function (S-REF) model provides the theoretical basis for the metacognitive model and therapy more broadly. There is evidence that ATT can be as effective as full MCT in alleviating anxiety and depressive symptoms. However, ATT has not yet been used as a stand-alone intervention in treating symptoms of anxiety and depression in CHD patients.

Purpose: To evaluate the feasibility of ATT in CHD patients with significant symptoms of anxiety and depression and describe changes in these symptoms.

Methods: Five consecutive CHD patients with significant anxiety and depressive symptoms, with Hospital Anxiety and Depression Scale (HADS)-Anxiety or Depression subscale score ≥ 8 , received six weekly group sessions of ATT in an open trial. Outcomes included feasibility, symptoms measured by HADS at baseline, post-treatment and at six months follow-up. Psychiatric diagnoses, type D personality, insomnia, worry and rumination were also assessed.

Results: The sample comprised five men with a mean age of 59.9 (SD 4.4) years. Four of the patients attended all six sessions, and one patient attended all but one session. Mean HADS-A scores at baseline, post-treatment, and follow up were 9.4 (SD 3.0), 4.2 (SD 3.0) and 4.0 (SD 2.5), and for HADS-D 8.6 (SD 3.3), 3.0 (SD 3.7) and 1.6 (SD 1.5), respectively. The results showed clinically significant changes in anxiety, depression, psychiatric disorders, insomnia, worry, and rumination. Statistically significant changes were found for pre- to post-treatment for HADS-A and worry, which was maintained at 6-months follow-up, and HADS-D significantly decreased from pre-treatment to 6-months follow up.

Conclusions: ATT in a group format appears to be a feasible stand-alone metacognitive treatment for CHD patients. An adequately powered randomised controlled trial is warranted.

Presentation and preliminary findings of a two-week MCT treatment of anxiety disorder in a group setting

Therese Ruud Snuggerud¹, Henrik Nordahl², KariAnne Vrabel^{1,3}, Asle Hoffart^{1,3} & Sverre Urnes Johnson^{1,3}

¹ Modum Bad Psychiatric Hospital, ²Norwegian University of Science and Technology, ³University of Oslo

Long treatment durations may not always be feasible for patients due to pressure to get better quickly, long travel distance to treatment clinics, inflexible working hours, or childcare. To overcome these challenges intensive treatments have emerged and several research studies have shown significant and lasting results of diagnosis-specific intensive treatments. A transdiagnostic approach is an alternative to the acknowledged diagnosis-specific manuals. In contrast to the diagnosis-specific treatment manuals, a transdiagnostic manual have the possibility to be administered in group therapy with heterogenous anxiety disorders. The main aim of the study is to investigate the feasibility and efficacy of a two-week intensive group Metacognitive Therapy mainly using Attention Training Technique.

Patients are included in an in-patient program at Modum Bad Psychiatric hospital with group sessions two times a day. Attention Training Technique is delivered in group sessions and practiced for homework every day. Approximately 60 young adults between 18-30 years of age, meeting diagnostic criteria for generalised anxiety disorder, social phobia, or panic disorder with or without agoraphobia are randomly assigned to active treatment or waitlist for three weeks. Patients are assessed at pre-treatment, post-treatment, and 3- and 6 month follow up. Primary outcome measure is Generalized Anxiety Disorder-7 and secondary outcome measures are Patient Health Questionnaire-9, Social Phobia Inventory, Credibility/expectancy questionnaire, The Short Warwick-Edinburgh Mental Well-being Scale, Metacognition questionnaire, The single-item Work Ability Score, Inventory of Interpersonal Problems and CAS-1. Mini-International Neuropsychiatric Interview is used for diagnostic evaluation of the participants pre- treatment, post-treatment and six month follow up. Structured Clinical Interview for DSM-5 Personality Disorders is used for diagnostic evaluation of personality disorders. An ecological momentary assessment (EMA) capturing anxiety and depression symptoms, and mechanisms of change is answered four times per day, before, during and after treatment. The use of EMA gives the possibility to study how Attention Training Technique impacts specific symptoms or mechanisms. Multiple measurements per day can give more accurate information about mechanisms of change in treatment. Information concerning mechanisms of change enables improvement for future treatment of patients.

The research is ongoing and preliminary results of the study will be presented. Implications for treatment of anxiety disorders will be discussed.

Pandemic-related changes in social interaction predict automatic approach-avoidance behaviour*Amanda Henwood, London School of Economics, UK*

People's natural tendencies to either approach or avoid different stimuli in their environment are considered fundamental motivators of human behaviour. There is a wealth of research exploring how changes in approach and avoidance motivational orientations impact behaviours with consequences for wellbeing. However, research has seldom explored this relationship in reverse. The COVID-19 pandemic offered a unique opportunity to explore how widespread changes individual social behaviour impact automatic approach-avoidance tendencies over time. We collected information on people's adherence to the restrictions on social behaviour prescribed by the government, and measured people's approach and avoidance tendencies in response to different stimuli (negative, positive, and social) at three time points during the COVID-19 pandemic. Reductions in overall social interaction were found to predict faster avoidance relative to approach of negative stimuli. In line with these results, we discuss a possible role for approach-avoidance tendencies in building psychological resilience during times of crisis, and beyond.

Approach-avoidance in the mood and anxiety disorders spectrum – associations with the outcome of cognitive behavior therapy*Dirk Adolph¹, Mike Rinck^{1,2}, Jürgen Margraf¹*¹ Ruhr-University, Mental Health Research and Treatment Center, Bochum, Germany, ² Radboud University, Nijmegen, Netherlands

There is still debate on how affective and anxiety disorders are separable in terms of their underlying pathogenic processes. Indeed, both disorders are highly comorbid and share substantial symptomatology as well as a liability towards enhanced negative affect. However, both disorders are also distinguishable on basis of their affective reactivity: While depression is related to broad blunted affect, many anxiety-disorders are related to elevated threat-responses and hyperarousal. Within this framework, research into approach and avoidance-tendencies seems promising to differentiate between depression and anxiety. For example, paralleling theoretical assumptions, research has shown that anxiety is associated with automatic avoidance of fear-related, negative stimuli and even positive stimuli while weakened approach-avoidance tendencies and a lack of the otherwise functional "approach-positive, avoid-negative" pattern has been observed in depression.

However, research so far involved highly selective samples with patients widely lacking comorbidity, and without patient comparison groups. Moreover, no study to date implemented a transdiagnostic, dimensional approach cutting across traditional nosology, an approach probably beneficial to disentangle the intertwined mechanisms underlying the internalizing spectrum. Finally, almost no research yet addressed the predictive value of approach- / avoidance for the outcome of psychotherapeutic treatments.

Within the current study we aimed at closing these gaps and recruited a non-selected sample of patients with depression (n=103), anxiety disorders (n=93) and a sample of healthy controls (n=60). Importantly, the current patient sample is representative for the patient-population typically attending for treatment within our outpatient center. After completing an approach/ avoidance task assessing automatic approach/ avoidance tendencies towards social, non-social and abstract positive and negative stimuli, all patients received approximately 25 sessions of treatment-as-usual disorder specific cognitive behavior therapy (CBT) as provided routinely within our outpatient center. To assess individual differences in basic approach-/ avoidance tendencies we conducted a group-based analytic approach, and analyzed the data dimensionally across diagnostic groups.

Results so far indicate subtle interindividual differences in basic approach and avoidance tendencies between and across diagnostic categories. These effects were more pronounced in the transdiagnostic approach. In addition, the current data showed that enhanced approach tendencies towards social stimuli is predictive of superior outcome of CBT for depression, but not anxiety.

In sum, the current data suggest the usability of approach-/ avoidance tendencies to differentiate between depression and anxiety within naturalistic, patient samples and provides first evidence for the specific predictive validity of approach-tendencies for the outcome of disorder specific CBT for depression.

Implicit avoidance tendencies during treatment for patients with chronic anxiety and comorbid personality disorder: a multiple baseline study.*Nancy Peeters^{1,2}, Boris van Passel^{1,2}, Mike Rinck², Gert-Jan Hendriks^{1,2}, Eni Becker², Julie Krans^{1,2}*¹ Pro Persona Overwaal Expertisecentrum voor Angst, Dwang en PTSS, Nijmegen, the Netherlands, ² Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands

Anxiety disorders and obsessive-compulsive disorder (OCD) are among the most prevalent psychiatric disorders (Kessler et al., 2005). Current first-line treatments are effective for many patients. However, a significant minority of these patients are partial or non-responders (Loerinc et al., 2015). For those patients, an alternative psychological treatment called 'SCHerp' has been developed. SCHerp is an intensive outpatient group treatment that aims to treat anxiety disorders and OCD by integrating schema therapy (SCH) with exposure and response prevention (erp).

This study investigated the effects of SCHerp using a non-concurrent multiple baseline design. Six female participants diagnosed with chronic anxiety and/or OCD and comorbid personality disorder were randomly assigned to a baseline period of three to six weeks.

Participants then received group treatment with a period of 26 weeks. Each week, participants completed measures on psychological malfunction, schema modes, disorder-specific symptoms, and implicit avoidance tendencies. This presentation will focus on the results regarding the implicit avoidance tendencies.

Implicit avoidance tendencies were measured by a personalized approach-avoidance

task (AAT). Participants were instructed to react to single pictures by either pulling or pushing a joystick. Pulling the joystick made the picture bigger (reflecting approach behaviour) while pushing made the picture smaller (reflecting avoidance behaviour). An implicit avoidance tendency is reflected in the AAT by shorter reaction times in the avoidance condition compared to the approach condition.

The AAT comprised picture stimuli from three categories: disorder-related pictures (e.g., dirty toilet for OCD patients), self-portraits of the patient, and neutral control pictures (puzzle pictures). The disorder-related pictures were included to assess implicit avoidance tendencies

for disorder-specific situations. To ensure that the pictures matched the patients' feared situation, these were selected for each patient individually and with input from the patient. The self-portraits of the patient were included to exploratively assess implicit avoidance tendencies towards themselves. These tendencies towards themselves were assumed to reflect, on a conceptual level, schema modes (a crucial concept within schema therapy).

Within this study, we evaluated how implicit avoidance tendencies change during treatment for patients with chronic anxiety and comorbid personality disorder. This is of importance because biased approach-avoidance tendencies are assumed to contribute to the maintenance of psychopathology (Loijen et al, 2020). In this study, we hypothesized that dysfunctional avoidance tendencies would decrease during the treatment.

At the time of writing, the data collection has been finished and the data is being processed. Complete results will be shown during the presentation.

Nicotine avoidance training in alcohol-dependent patients: first results

Charlotte Wittekind¹, Edwin J Schenke^{2,3,4}, Mike Rinck⁴, Reinout W Wiers⁵, Robert Schöneck³, Johannes Lindenmeyer^{2,3}

¹ Ludwig-Maximilians-Universität München, Germany, ² Medizinische Hochschule Brandenburg Theodor Fontane Neuruppin, Neuruppin, Germany, ³ salus clinic Lindow, Lindow, Germany, ⁴ Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands

⁵ Addiction Development and Psychopathology (ADAPT) Lab, Department of Psychology, ABC and Yield Research Priority Areas, University of Amsterdam, Amsterdam, The Netherlands

Almost 80% of alcohol-dependent patients in treatment are smokers (PAD). This comorbidity causes severe health consequences, high mortality rates along with extremely high costs to society. Further, if PAD achieve abstinence from alcohol, abstinence from tobacco is a rare exception, even after receiving smoking cessation treatment. Simultaneously, PAD have an increased risk of relapse into drinking despite of having successfully completed treatment for alcohol use disorder (AUD).

Central to addictive behaviors is that they are strongly governed by automatic processes which play a major role in maintenance of both AUD and nicotine dependence. Targeting and modifying automatic behaviors, by means of computerized cognitive trainings, collectively called Cognitive Bias Modification (CBM) has shown to effectively reduce automatic approach of alcohol stimuli as well as relapse rates one year after treatment.

However, to date, the presence of approach bias toward tobacco stimuli has not been considered in PAD, even when they are engaged in evidence-based smoking cessation. Given the high comorbidity of alcohol and nicotine dependence in AUD, it is therefore essential to also modify the approach bias toward nicotine stimuli to solidify the effectiveness of smoking cessation and abstinence from tobacco in the long term.

This randomized-controlled, double-blind (feasibility) study examines the effectiveness of nicotine CBM training (CBM-TAT) for modifying automatic approach tendencies in nicotine dependence as a specific add-on intervention to an established cessation program (Rauch Frei®) in PAD undergoing inpatient alcohol cessation treatment. This presentation will provide initial results of the CBM-TAT as well as an insight into the process within the clinical setting.

A mobile approach-avoidance training for depression

Maximilian Blomberg¹, Hilmar Zech², Maximilian Johannes Kluge¹, Nico Böhmert¹, Helmut Platte³, & Timo Brockmeyer¹

¹ Department of Clinical Psychology and Psychotherapy, University of Goettingen, ² Section of Systems Neuroscience, Technische Universität Dresden, ³ Paracelsus Roswitha-Klinik Bad Gandersheim

Objective: While a tendency to approach positive socio-emotional stimuli appears to be a protective factor for mental health, this bias seems to be lacking in people with depression. Cognitive bias modification training designed to restore this healthy approach bias has shown promising results in alleviating depression symptoms. However, the feasibility of this training was limited by its implementation as joystick-task and results have been ambiguous due to the lack of follow-up data and the limited reliability of bias measures. In this study, we test the short-term and longer-term efficacy of a mobile approach-avoidance training for depression and implement a reliable bias assessment.

Method: Seventy-five inpatients with depression were randomly allocated to receive 6 sessions of either mobile approach-avoidance training or sham training. Depression symptoms and approach-avoidance bias were assessed at baseline, post-training, and 2-week follow-up, depression symptoms are further assessed at 6-month follow-up. Anhedonia and positivity as potential mediators were assessed at baseline and post-training.

Results: None of the outcomes measured changed significantly from pre- to post-training or 2-week follow-up due to training condition. Split-half reliabilities for approach-avoidance biases were high at every assessment (>.80). Six-month follow-up data collection will be finished in July 2022. We will present results on the short-term and longer-term effects of training and possible mediating mechanisms.

Conclusion: This randomized-controlled trial aims to add to the evidence regarding the efficacy of approach-avoidance trainings for depression. While there do not appear to be short-term training effects for any of the outcomes, the long-term effects are still being examined.

Symposium 79

Cognitive-Behavioral blended interventions for the treatment of common mental health disorders

Chair: Jorge J. Osma, Unniversidad de Zaragoza, Spain

Unified Protocol for transdiagnostic treatment of emotional disorders applied in blended format: study protocol at the Spanish National Health System

Jorge J. Osma, Unniversidad de Zaragoza, Spain, Martínez-García, L., González-Pérez, A., Peris-Baquero, Ó., Prado-Abril, J., & Ferreres-Galán, V.

Emotional disorders (EDs) have become the most prevalent psychological disorders in the general population, which has boosted the economic and care burden associated with their management. Finding solutions to deliver cost-effective treatments for EDs has become a key goal of today's clinical psychology. As it is known that the preferred intervention format by patients with EDs attending the Spanish National Health System is individual, face-to-face treatment, blended treatments have emerged as a potential solution to the previous. The

Unified Protocol for the Transdiagnostic Treatment of EDs (UP) might serve this purpose, as it can be applied to a variety of disorders simultaneously and its manualized format makes it suitable for blended interventions. Therefore, to date, the efficacy of the UP has been supported by numerous studies, including three systematic reviews and meta-analyses. The present study is a multicenter, randomized, superiority, clinical trial that will compare the efficacy and cost-efficiency of the UP in a blended format (face to face individual UP + UP-Smartphone app) against treatment as usual (individual cognitive behavioral therapy) in a sample of 310 patients with a diagnosis of an ED in public settings in Spain. Assessment points will include baseline and 3, 6 and 12 months after treatment onset. To date, we have conducted two focus groups, one with patients and the other with clinicians, both familiar with the UP, to identify the needs, opinions, expectations and design aspects of the future UP smartphone app. The following topics emerged in the focus groups as shared by both patients and clinicians: Immediacy, dropout prevention, privacy and data protection, complementary use, flexibility, gamification and motivation, interaction and examples. In turn, clinicians pointed to four specific topics: Lack of resources and technological organizational culture, lack of experience, personalization and supervision. Considering this information gathered in the focus groups, we have developed the app together with a group of engineers with experience in the development of health Smartphone apps. Through this speech we will present the study protocol, the outcomes obtained through the focus groups, and also a demo with the UP-Smartphone app.

Blended treatment for adjustment disorder: study protocol and preliminary opinion data

Sara Fernández-Buendía¹, Jorge Grimaldos¹, Cintia Tur¹, María Palau-Batet¹, Amanda Díaz-García² & Soledad Quero^{1,3},

¹ Universitat Jaume I, ² Universidad de Zaragoza, ³ CIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN)

Despite its increasing prevalence and clinical relevance Adjustment Disorder (AjD) has been commonly excluded from multiple research studies. Although there is no treatment of choice yet, several systematic reviews conducted so far propose that CBT is showing promising results. Internet-based treatments emerge as a suitable alternative. However, low adherence of participants is a common barrier in these formats. A blended treatment format could be a viable solution. The aim of this study is to describe the protocol of a feasibility study testing a blended treatment format, i.e. combining a self-administered online treatment program with videoconference sessions with a therapist. In addition, preliminary opinion data of the participants are presented. The study consists of an open feasibility trial with a single treatment group and no control group. A minimum of 41 participants with AjD as defined by the International Classification of Diseases (ICD-11) will be included. All of them will receive a CBT intervention in blended format, combining a self-administered internet-based treatment programme (TAO) with videoconferencing sessions with a therapist every 10-12 days. The assessment will include three measurement points (pre-, post-treatment and follow-ups at 3 and 12 months) and will collect both quantitative and qualitative measures. The preliminary opinion data presented are based on the experience of 6 participants, all female (mean age = 24.33, SD = 5.24). They were assessed at pre-post treatment with the Expectations and Satisfaction with Treatment Questionnaire adapted from Borkovec and Nau (1972), with scores ranging from 0 to 60, and with an Opinion Questionnaire of the Videoconference Sessions, with scores ranging from 0 to 10. Higher scores indicate greater satisfaction. Results on the Expectations and Satisfaction with Treatment Questionnaire showed that most participants had good expectations of the treatment (mean = 43.5, SD = 10.43). Moreover, in most cases satisfaction scores improved after the intervention (mean = 49, SD= 16.74). As for the opinion about the videoconference sessions, they were well rated by all patients (mean = 8.86, SD = 0.38). Overall, it seems that the participants are satisfied with the intervention and value positively the presence of the videoconference sessions with a therapist. This is in line with previous studies that have tested internet-based treatments with patients with AjD and report good results in terms of satisfaction with the intervention. However, these data are still preliminary and more research with more participants is needed to determine the patients' opinion of a blended treatment.

Be a Mom Coping with Depression, a blended cognitive-behavioral intervention for postpartum depression: a feasibility study

Mariana Branquinho¹, Maria Cristina Canavaro¹, Ana Fonseca¹

¹ University of Coimbra, Center for Research in Neuropsychology and Cognitive Behavioral Intervention, Faculty of Psychology and Educational Sciences, Coimbra, Portugal

Postpartum depression (PPD) can have negative effects for the mother, the baby as well as for the family system, if left untreated. Given that few women seek professional help for PPD, mainly due to practical and societal factors, it is important to develop new formats of interventions that can overcome these barriers while addressing postpartum women needs. A blended cognitive-behavioral intervention for postpartum depression (*Be a Mom Coping with Depression*) was developed in Portugal, consisting of the combination of seven face-to-face sessions (delivered through videocall) with six online sessions in a web-based program. This study aimed to assess the feasibility, acceptability and preliminary effects on outcomes of this blended intervention for postpartum depression.

A single-arm pre- and posttest study was conducted between March 2021 and January 2022. Adult Portuguese women in the postpartum period (up to 12 months) with a clinical diagnosis of a major depressive episode were eligible to participate ($n = 9$). Participants completed self-report measures pre- and postintervention and were interviewed after completing the intervention. Eight participants completed the blended intervention. Although the recruitment rate was low (6.1%), the adherence rate to treatment was high (88.9%). The intervention was generally perceived as well-structured, useful, important, and beneficial, and the frequency and number of sessions were considered adequate by the sample. The web-based program was described as appealing, attractive, interactive, accessible, funny and professional. Participants reported several advantages of this blended intervention for PPD, which were related to the inclusion of the web-based program, the sessions with the psychologist and the delivery format of the sessions through videocalls, and also reported high levels of satisfaction. Generally, the levels of depressive and anxiety symptoms decreased among the participants. The *Be a Mom Coping with Depression* intervention was found to be feasible, acceptable and potentially beneficial for the reduction of depressive symptoms in our sample. These findings provide important information to proceed with the conduction of a randomized controlled trial to assess the efficacy of this blended intervention for PPD.

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Blended CBT treatment (online + group therapy) for problem gambling and gambling disorder

Bretón-López, J.^{1,2}, Muñoz-Ranchel, A.¹, Díaz-Sanahuja, L.¹, García-Palacios, A.^{1,2} y Mira, A.³

¹ Universitat Jaume I · ² CIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN) · ³ Universidad de Valencia

Gambling disorder (GD) is an important mental disorder which get worse due to the comorbid with another mental health problems as anxiety, depression, or substance addictions. Cognitive behavioral therapy (CBT) is the most effective treatment for GD (Molander et al., 2020). However, it is difficult to reach all people in need due to different barriers as economic and time costs or the stigma regarding psychological interventions. We present the combination of Internet-based interventions and group format as an alternative to overcome these barriers.

Internet-based psychological interventions have shown to be effective for the treatment of GD with important benefits in terms of accessibility, immediacy, and availability. Blended interventions appear as a novel alternative of combining face-to-face with Internet-based sessions. Blended interventions have important advantages like the reduction of waiting lists, the care burden of public health services and also reduction of therapists' time. Although research is recent and limited, there are already results of its effectiveness for the treatment of mental disorders (Erbe et al., 2017).

The provision of treatment in a group format in the field of addictions has shown multiple benefits (Costa et al., 2018). Working in a group provides an alternative for the intervention that facilitates a sense of normalization and establish a purpose of group cohesion (Epstein et al., 2018) and can be a cost-effective treatment.

The objective of this work is to present the main characteristics of a blended CBT treatment (online + group therapy) for problem gambling and GD. The study design will consist of a pilot randomized controlled trial study with two groups: blended intervention group versus waiting list control group. The blended intervention group will receive CBT: motivation for change, psychoeducation, stimulus control, cognitive restructuring, emotion regulation, planning of significant activities, coping skills, exposure with prevention, and relapse prevention. The patients will have therapeutic help (weekly 10-minute call to encourage the adherence). This is a work in progress. To our knowledge there is no research conducted with this approach for the treatment of GD. Thus, it would be a novel study which would represent an ideal combination to explore cost-effectiveness and efficiency. The expected efficacy in the application of this psychological treatment may open future lines of research for the treatment of GD and other mental health disorders.

Feasibility of a blended transdiagnostic group CBT for emotional disorders: preliminary data

García-Palacios, A.^{1,2}, Jiménez, N.¹, Vidal, J.¹, Díaz-García, A.³, Paredes, M.¹, González-Robles, A.³, & Bretón-López, J.^{1,2}

¹ Department of Basic and Clinical Psychology, and Psychobiology, Universitat Jaume I, Castellon, Spain · ² CIBER de Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Instituto Salud Carlos III, Madrid, Spain · ³ Department of Psychology and Sociology, Universidad de Zaragoza

The high prevalence, disability, comorbidity rates, and costs associated with emotional disorders (ED) (i.e., anxiety and depressive disorders) have become an important public mental health problem, with less than 25% of people suffering from ED receiving adequate treatment and long waiting lists before starting psychotherapy. Therefore, research priorities have been to design and test cost-effective interventions to reach everyone in need. Different approaches have emerged to close these treatment gaps. In this regard, one important approach is the use of transdiagnostic treatments, which are more widely effective addressing different disorders with a single protocol. Another approach that considerably reduce the costs is the use of Internet to deliver treatments. In this context, blended treatments are a new form of intervention that combines the strengths of face-to-face and Internet approaches. Blended treatments are gaining prominence and have advantages over traditional intervention and totally self-applied treatments. In addition, the group format also makes it possible to provide evidence-based treatments at a lower cost and improve the cost-effectiveness ratio. Thus, the aim of this study is to describe the feasibility and preliminary efficacy data of a blended transdiagnostic group treatment that adds a specific component for the regulation of positive affectivity for ED. Participants are adults from a community sample suffering from DSM-5 anxiety and/or depressive disorders. The treatment consists of a blended transdiagnostic group intervention delivered during a period of 24 weeks. Groups of 6 to 10 patients attend a total of eight 2-hour, face-to-face sessions, alternated with the use of an online platform where they find the contents of the treatment protocol. The intervention has these core components: present-focused awareness, cognitive flexibility, identification, and modification of behavioral and cognitive patterns of emotional avoidance, interoceptive and situational exposure, and positive affect component. These components are delivered in 16 modules. Assessments are performed at baseline, during the treatment, at post-treatment, and at 3-month follow-up. Quantitative and qualitative results (participants' views about blended group psychotherapy) are presented. Clinical and treatment acceptability outcomes are also included. To our knowledge, this is the first study that integrates the blended format with the group format to apply a transdiagnostic protocol for ED. This study seeks to deepen the understanding of how this intervention works and facilitate ongoing adaptation of blended transdiagnostic group treatment for ED.

OPEN PAPER SYMPOSIA

Open Paper Symposium 1

Pain, interoception, and physical exercise

Pain control after surgery: can virtual reality make a difference? Results of a randomized controlled clinical study, p ii
Raluca Georgescu, The International Institute for The Advanced Studies of Psychotherapy and Applied Mental Health, Babeş-Bolyai University, Cluj-Napoca, Romania; Anca Dobrea, The International Institute for The Advanced Studies of Psychotherapy and Applied Mental Health, Department of Clinical Psychology and Psychotherapy, Babeş-Bolyai University, Cluj-Napoca, Romania; Alina Silaghi, Department of Endocrinology, "Iuliu Hațieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania; Horatiu Silaghi, Department of Surgery, V-th Surgical Clinic, "Iuliu Hațieganu" University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania

A certain amount of pain after surgery is normal as could signal a potential surgical complication, however, the intensity of pain should decrease in accordance with the healing process. In those cases when pain persist longer than expected time to recover, both pharmacological and psychological strategies are fundamental for a proper postoperative care. Currently, cognitive-behavioral strategies, as psychological option are among the most efficient strategies to alleviate pain after surgery. These strategies could be delivered in a classical format (eg: face to face) or in a technological context such as through Virtual Reality (VR). Interventions delivered through VR aiming to decrease pain in other contexts (ex: burn pain, physical therapy pain) showed promising results, however, for pain after surgery there is still a lack of evidence. Therefore, through a randomized controlled clinical trial (RCT) we have tested if VR interventions along standard treatment could have a greater reduction of pain than standard treatment alone. To determine this, 547 surgical patients from the Community Clinical Hospital from Cluj-Napoca, were evaluated to be included in the study. Of these, 63 meet the inclusion criteria and were assigned in one of the two groups of the study: (1) the experimental group (VR + standard care) or (2) control group (standard care). The intervention for the experimental group involved exposing patients to the "Nature TreksVR®" application for 15 minutes. During this time, patients had the opportunity to choose between 12 independent virtual reality environments representing different natural scenarios and having the possibility to modify them (ex: create new elements such as flowers or change the weather) to increase the degree of immersion. To determine if the pain level changes, before and after, whether or not they have been exposed to the VR environment, all patients in the study reported pain levels on a Numerical Rating scale (NRS). Following analysis of variance with repeated measurements for pain intensity scores a significant effect of group $F(1, 60) = 92.54, p = 0.000, d = 1.93$ was observed (i.e., patients from the experimental group reported a significant reduction in pain compared to patients treated with standard treatment. In terms of clinical significance, 22 out of 31 patients from the experimental group reported a reduction in pain intensity of more than 30% and the χ^2 test ($\chi^2(1) = 4.23, p = 0.039$) indicated a significant association between the group and the chances of having such a reduction. Patients also reported elevated immersion levels ($M = 42.48, SD = 3.98$) and satisfaction with intervention ($M = 18.53, SD = 2.48$), and 83.9% reported that they would be willing to use VR interventions for postoperative care in the future. Thus, even if the treatment of pain after surgery is a complex process due to the individual's response to painful stimuli, Nature's intervention TreksVR® has proven to be an effective and enjoyable alternative.

Interoception in pathological illness anxiety – evidence from three different paradigms

Carolyn Wolters, University of Cologne, Cologne, Germany; Timo Slotta, University of Cologne, Cologne, Germany; Zeynep Dursun, University of Cologne, Cologne, Germany; Judith Ratajczak, Charité University Hospital of Berlin, Berlin, Germany; Michael Witthöft, Johannes Gutenberg University Mainz, Mainz, Germany; Alexander L. Gerlach, University of Cologne, Cologne, Germany; Anna Pohl, University of Cologne, Cologne, Germany

Introduction: Body perception in pathological illness anxiety (PIA) might be inaccurate or biased in the way that somatic symptoms are overreported. Predictive coding theory assumes that interoception depends on both somatosensory signals and their prediction. Biased predictions are particularly powerful when somatosensory signals are weak. To date, findings regarding interoceptive processes in PIA are inconclusive. This study employed three measures of interoception in different body domains in a sample with PIA.

Method: $N = 60$ participants with PIA and $N = 54$ control participants conducted 1) a breathing resistance task, 2) a tactile signal detection task, and 3) a heartbeat mental tracking task. In 1), participants' breathing was restraining by a lung trainer. Eight increasingly strong resistances were labeled "A" (lower resistances) or "B" (higher resistances). Participants were asked to label resistances after a memorization phase. In 2), participants were asked to classify weak vibrational stimuli at their fingertip as "present" or "absent". Vibrational stimuli were accompanied by additional visual stimuli in half of the trials (LED or illness-related word stimuli). In 3), participants were asked to count their heartbeats in three time intervals.

Results: 1) Regression analysis showed that while sensitivity of breathing sensations was similar between categories, participants with PIA used a more liberal response criterion at category borders ($\beta = .05, p < .01; \eta^2 = .02$). They erroneously assigned weaker breathing resistances to the higher category. 2) An ANOVA revealed contrary patterns regarding tactile sensitivity in the two groups: Participants with PIA showed a more pronounced increase of sensitivity from no LED to LED trials, and a decrease of sensitivity from neutral to illness word trials, $F(1,76) = 5.34, p = .024, h^2 = .066$. Group differences did not hold up in post-hoc analyses, and there were no differences regarding response bias. 3) Mean heartbeat perception scores did not differ between groups, $t = 0.66, p = .51$

Discussion: 1) Findings from the breathing resistance task are in line with the predictive coding theory, showing bias in basic perceptual processes. Difficulties in adapting predictions to context could play a role in the maintaining of PIA. 2) Findings from the tactile task indicate that participants with PIA were more prone to multisensory integration when LED stimuli were presented, and that they were more distracted by word presentations. Word stimuli exhausted attentional resources in all participants, so that effects on interoception might have been compromised. 3) Similar heartbeat perception in the two groups is in line with previous findings. The mental tracking task does not distinguish between accuracy and response bias and might thus confound these two facets of interoception.

Conclusion: In line with predictive coding theory, the present study shows biased categorization of breathing resistances in PIA. The two other tasks do not show inaccurate or biased perception, which might be due to task characteristics. Future research should further test the assumption of biased perception in PIA. A promising approach is to manipulate predictions regarding somatic signals, for example by using a threat-related framing.

The benefits of physical exercise on state anxiety: exploring possible mechanisms

Eva Herzog, LMU Munich, Munich, Germany; Maria Voß, LMU Munich, Munich, Germany; Viktoria Keller, LMU Munich, Munich, Germany; Sophia Koch, LMU Munich, Munich, Germany; Keisuke Takano, LMU Munich, Munich, Germany; Barbara Cludius, LMU Munich, Munich, Germany

Introduction: Anxiety disorders are among the most common mental disorders around the world and lead to great individual, social and economic burden. There are well-established treatment options, namely cognitive behavioral therapy and anxiolytic medication. However, there is a large treatment gap with only a minority of affected individuals receiving appropriate treatment due to drop outs and multiple treatment barriers. Promising alternative low threshold and cost-effective treatment approaches are physical activity interventions. Several studies have investigated and shown that already one acute bout of physical exercise can reduce state anxiety in healthy samples. However, studies that have examined this effect in subclinical and clinical samples are still rare and they have found mixed results. The main aim of the present study was to close this research gap and investigate if a single session of acute exercise reduces state anxiety in a subclinical sample with high anxiety sensitivity. Another intent of this study was to explore possible mediators, suggested as such in former research, that could help explain the beneficial effect of exercise on anxiety. Variables that were investigated are positive and negative affect, mindfulness, self-efficacy, self-esteem, subjective vitality, rumination, emotion regulation, emotional understanding and emotion recognition.

Method: Participants (N = 88) with moderate to high anxiety sensitivity were assigned randomly to either an active group (n = 44) or a control group (n = 44). Participants in the active group completed 30 minutes of acute aerobic exercise on an ergometer, whereas participants in the control group watched nature documentary film clips for 30 minutes. State anxiety and the mediator variables were assessed before and after the intervention.

Results: State anxiety was reduced from baseline to post-intervention in both groups, but no difference was found between groups. In the active intervention condition, a reduction in state anxiety was partly mediated by an increase in positive affect and fully mediated by an increase in subjective vitality.

Discussion: One acute bout of exercise might not be enough to significantly decrease state anxiety in subclinical individuals with high anxiety sensitivity compared to other possibly calming activities. This is in contrast to the results of previous studies that examined healthy samples. However, exploratory analyses suggested, that there may be a difference between the effect in the two groups when considering positive affect and subjective vitality as mediating variables. Exercising seems to increase positive affect and subjective vitality more than watching nature documentaries and experiencing positive affect and subjective vitality seems to reduce state anxiety.

Conclusion: Our results demonstrate the need for further studies focusing on subclinical and clinical samples in this field. Furthermore, future studies should further investigate the underlying mechanisms, especially those found in our study, to be able to determine the ideal composition of an exercise intervention with the aim of reducing anxiety symptoms.

The influence of sexual arousal and disgust on pain

Lara Lakhsassi, University of Groningen, Groningen, Netherlands; Charmaine Borg, University of Groningen, Groningen, Netherlands; Peter J. De Jong, University of Groningen, Groningen, Netherlands

Introduction: Genito-pelvic pain/penetration disorder, affecting 14-34% of women, can not only undermine sexual functioning, but also influence relationship satisfaction and general quality of life. An important factor contributing to the maintenance of such symptoms is weakened sexual arousal. Accordingly, pain has been found to be significantly lessened by sex and orgasm, likely due to the release of endorphins during sex, which are potent analgesics. There is evidence suggesting that endorphins are also present during sexual arousal (SA) (i.e., prior to sex/orgasm). It follows then that pain can theoretically be modulated during SA, independent of sex/orgasm, too. Studies have thus far successfully demonstrated this effect in men, but have failed to replicate this in women. One explanation could be that for women, the erotic slides used to induce SA were not potent enough to elicit a lasting primed state of SA by the time pain was induced. Thus, Study 1 aimed to optimize the means of inducing a potent state of SA (using an erotic film) and subsequently examined the potentially analgesic influence of SA on pain in women. Furthermore, the study assessed whether the anticipated analgesic effect of SA would be stronger than that of distraction or generalized (non-sexual) arousal. Another explanation could be that disgust was inadvertently induced in women who viewed the erotic film; research has shown that this is a common occurrence in female participants. In Study 2, we therefore additionally examined the impact of disgust on pain and explored the potential counter-forcing effect of disgust on the analgesic effects of sexual arousal.

Method: Female participants were randomly distributed across conditions and asked to view their respective film while concurrently using a cold pressor test (CPT) to induce pain. Visual analogue scales were used to measure perceived pain intensity, and the time participants kept their hand in the cold water was used to measure pain tolerance. Study 1 (N = 151): Conditions: SA (pornographic film), generalized arousal (parkour film), mere distraction (neutral –train ride- film with counting task), neutral baseline (neutral film without counting). Study 2 (N = 174): Conditions: SA (pornographic film), disgust (vomiting/gagging film), and neutral baseline (neutral film). In Study 2 we also assessed subjective disgust to examine whether indeed the pornographic film elicited disgust and whether disgust moderated the influence of viewing the pornographic film on participants' pain during the CPT.

Results: Study 1: SA did not reduce subjective pain. Generalized arousal and distraction did not result in stronger analgesic effects than the neutral (baseline) condition. Study 2: Data acquisition will be finalized April 25th; data analyses will be performed in May.

Discussion: Despite successful manipulations in Study 1, no pain modulatory effects of SA were found. This might potentially be due to the possibility that feelings of disgust may inadvertently have been induced by the pornographic stimulus and interfered with SA in influencing pain intensity. Study 2 aims to shed light on this question.

Conclusion: The findings in Study 1 do not support the hypothesis that SA modulates subjective pain in women.

Applying Imagery Rescripting in the treatment of worry: a preliminary experimental investigation

Lauren Stavropoulos, UNSW, Sydney, Australia; Nancy Briggs, UNSW, Sydney, Australia; Jessica Grisham, UNSW, Sydney, Australia

Introduction: Negative mental images of feared events are shown to be overactive and intrusive in generalised anxiety disorder (GAD). Imaginal exposure for GAD involves systematic exposure to mental images to induce habituation. By contrast, imagery rescripting involves integration of positive or neutral imagery and corrective information into mental imagery to facilitate emotional processing, reduce imagery intrusions, and re-structure underlying schema. Yet only one known study has applied the technique to treatment of worry. The present study aimed first to characterise relationship between trait worry and key features of mental imagery, and secondly to investigate the effects of manipulating a negative mental image on anxiety, worry, cognitive biases, and flexibility regarding the related feared event.

Method: A total of 365 unselected participants were recruited through MTurk, 28% scoring above the clinical cutoff for GAD. Participants completed self-report questionnaires of trait worry and GAD symptom severity, identified their current major worry, wrote the script of a worst-case scenario mental image, and rated features of these images. Participants were randomised to two online tasks of re-writing the same script (exposure), or writing the script of either one or three positive alternative images (rescripting conditions), and provided ratings related to worry about their original concern.

Results: Participants' level of trait worry negatively predicted their ratings of worry images, including valence and ability to cope, and positively predicted distress, anticipated cost, and belief in their negative meaning. In experimental analyses, linear mixed-effects models revealed that at post-intervention, ratings of participants' anxious response and cognitive appraisal of threat related to the original concern were significantly lower among participants allocated to rescripting relative to exposure conditions. There was no significant difference between rescripting types, and effects were not maintained at follow-up.

Discussion: These results are consistent with findings that GAD is characterised by dysfunctional negative and intact positive imagining (Morina et al., 2011; Pile & Lau, 2020; Tallon et al., 2020). Trait worry was associated with difficulty manipulating the images, which is consistent with findings that high worriers are particularly anchored to their initial construction of negative images (Wu et al., 2015). The results of the experimental manipulation demonstrate the impact of a strategy of rescripting personally-relevant negative mental images of future concerns. By activating emotions associated with the chosen image and current distress, the technique may have facilitated emotional processing and restructured or produced an emotionally-salient positive image that outcompeted the original. There was no enhanced benefit of developing multiple outcome images, possibly because doing so within the same time limit as generating one rendered the images less convincing. Lastly, the dose of the tasks might have been insufficient to sustain effects at follow up. Conclusion: The study supports the appropriateness of imagery rescripting for GAD, and provides a novel preliminary investigation of the capacity of a future-oriented imagery rescripting task to induce reductions in worry, anxiety, and cognitive biases associated with real worries in an unselected sample. Results may contribute to the development of imagery rescripting interventions for GAD.

Attention control moderates the relationship between attention bias and worry.

Ya-Chun Feng, National Sun Yat-sen University, Kaohsiung, Taiwan; Colette R. Hirsch, King's College London, London, United Kingdom

Introduction: Constant and chronic worrying is a distressing state and is a core symptom of generalised anxiety disorder (GAD). According to the cognitive model of worry (Hirsch & Mathews, 2012), worry is closely associated with impaired voluntary attention control (i.e., cognitive resources to ignore distractors while focusing on the current task), and negative information processing biases, which include the tendency to attend to negative information (i.e., negative attention bias). Sufficient attention control can help shift attention from negative information (e.g., worry thoughts), thereby buffering against worry. Evidence has supported that worriers have poorer attention control (e.g., Hayes et al., 2008) and negative attention bias (e.g., Williams et al., 2014), but some of the findings were mixed (e.g., Engels et al., 2007; Goodwin et al., 2017). In addition, it is still unclear whether attention control influences attention bias. Some previous studies used self-reported questionnaires to assess attention control rather than an objective performance measure that is less prone to demand or response bias (e.g., Derryberry & Reed, 2002; Goodwin, Eagleson et al., 2017; Lonigan & Vasey, 2009). As studies have shown that individuals with poor self-reported attention control and high levels of anxiety (Derryberry & Reed, 2002) or negative affectivity (Lonigan & Vasey, 2009) had greater negative attention bias, it is likely that the interaction of attention bias and attention control influences levels of worry. Therefore, the present study aimed to examine whether attention control moderates the relationship between automatic attention bias and worry.

Method: Sixty-four participants completed assessments of worry and anxiety via self-reported questionnaires (Penn State Worry Questionnaire and Generalized Anxiety Disorder 7-item scale). Attention bias and attention control when processing emotional information were assessed via two independent tasks, the dot-probe task and the emotional n-back task, with worry induction phases before the tasks.

Results: Correlations showed that benign attention bias was correlated with lower levels of anxiety but not worry; attention control was not associated with worry or anxiety. Regression models showed that the attention bias \times attention control interaction was a significant predictor for worry, but not attention bias and attention control per se. The follow-up slope tests showed that those with high benign attention bias had significantly lower levels of worry than those with low benign attention bias only in those with poor attention control, but not with high attention control.

Discussion: The findings showed that attention bias and attention control were not associated with worry directly. Only individuals with negative attention bias and poor attention control to shift their attention from emotional distractors showed higher levels of worry.

Conclusion: The study helps to understand the underlying cognitive mechanisms of worry and implies that interventions for worry can focus on enhancing attention control in worriers with poor attention control and negative attention bias.

How well do psychological treatments for generalized anxiety disorder impact intolerance of uncertainty? A systematic review and meta-analysis

Emily Wilson, University of Technology Sydney, Sydney, Australia; Alice Norton, University of Technology Sydney, Sydney, Australia; Maree Abbott, University of Sydney, Sydney, Australia

Introduction: The ability to tolerate uncertainty in a constantly changing world is crucial to well-being. Research has found a strong link between difficulty tolerating uncertainty and excessive worry. This led to the development of the intolerance of uncertainty model of generalized anxiety disorder (GAD). The model posits that individuals with GAD experience high intolerance of uncertainty; specifically, they have a dispositional tendency to react negatively to uncertain situations that in turn maintains excessive worry and anxiety (Dugas & Robichaud, 2007; Hebert & Dugas, 2019). Research has found that psychological interventions that directly or indirectly target intolerance of uncertainty lead to reductions in both intolerance of uncertainty and worry for individuals with GAD. There is yet to be a systematic examination of the effectiveness of these interventions.

Method: The current review aimed to evaluate how effective psychological interventions for GAD are at reducing intolerance of uncertainty and worry, as indexed by the Intolerance of Uncertainty Scale (IUS) and Penn State Worry Questionnaire (PSWQ), respectively. The study also sought to investigate the effectiveness of psychological interventions that directly or indirectly target intolerance of uncertainty through sub-groups analysis. The sub-groups included cognitive behavioural therapy that directly targeted intolerance of uncertainty (CBT-IU), cognitive behavioural therapy that indirectly targeted intolerance of uncertainty (CBT), and acceptance-based therapy (ABT). The study also investigated potential moderators of treatment efficacy through meta-regression analyses.

Results: A systematic literature search identified 23 studies to be included in the review. Within-group effects for the overall treatment group indicated that psychological treatment led to a large significant reduction from pre-to-post treatment as well as pre-treatment to follow-up on the IUS ($g = 0.92$; $g = 1.32$) and PSWQ ($g = 1.25$; $g = 1.48$). Sub-groups analysis found that CBT-IU was significantly more effective at reducing intolerance of uncertainty and worry than general CBT (IUS = $p < 0.001$; PSWQ = $p < 0.001$) and ABT (IUS = $p < 0.001$; PSWQ = $p < 0.001$) from pre- to post-treatment. Sub-groups analysis found CBT-IU was significantly more effective than general CBT at reducing worry from pre-treatment to follow-up ($p < 0.001$). Meta-regression analyses for the overall treatment group indicated that increases in the proportion of time spent directly targeting intolerance of uncertainty during treatment, as well as increases in the number of overall sessions significantly increased the effect size on both the IUS ($z = 3.04$, $p < 0.001$; $z = 3.42$, $p < 0.001$) and PSWQ ($z = 3.92$, $p < 0.001$; $z = 3.38$, $p < 0.001$), respectively. Age, sex, total treatment time, treatment format, pre-treatment IUS, and pre-treatment PSWQ did not significantly moderate treatment effects.

Discussion: Large within-group treatment effects were maintained at both post-treatment and follow-up for intolerance of uncertainty and worry. CBT-IU was found to be more effective at reducing IUS and PSWQ scores, than CBT and ABT. Conclusion: Psychological treatment is effective at reducing intolerance of uncertainty for individuals with GAD. Furthermore, findings highlight the importance of directly targeting intolerance of uncertainty during the treatment of GAD to optimise outcomes.

Ideal, ought, and feared self-identities in Generalized Anxiety Disorder (GAD)

Sally Zheng, Ryerson University, Toronto, Canada; Justice Cupid, Ryerson University, Toronto, Canada; Jason C Deska, Ryerson University, Toronto, Canada; Naomi Koerner, Ryerson University, Toronto, Canada

Introduction: Generalized anxiety disorder (GAD) is a chronic, difficult-to-treat disorder characterized by excessive and uncontrollable worry and anxiety. Gold-standard treatments for GAD, such as cognitive-behavioural therapy (CBT), aim to alleviate worry and its associated symptoms through targeting dysfunctional beliefs about uncertainty, problems, the usefulness and/or harmfulness of worry, as well as emotions and one's ability to regulate them (Behar et al., 2009; Koerner et al., 2020). However, only half of individuals achieve clinically significant change posttreatment. One potential explanation is that current CBT protocols do not adequately address the fundamental core beliefs (e.g., "I am incompetent") that underlie automatic, anxious beliefs about uncertainty, problems, worry, and emotions (e.g., "Worry helps me cope;" "Uncertainty is unacceptable;" "I cannot let my emotions overtake me"; Hazlett-Stevens, 2008). Without an explicit focus on restructuring underpinning beliefs, an individual may remain vulnerable to chronic worry and anxiety after a seemingly successful intervention (Hazlett-Stevens, 2008). To date, little is known regarding the core beliefs of individuals high in worry. Previous research has indicated that individuals' current beliefs about themselves are informed by their possible selves: internal representations of their hopes and fantasies (ideal self), responsibilities and moral obligations (ought self), and attributes they do not want to possess and fear becoming (feared self; Markus & Nurius, 1986). That is, one's perception of their actual self (and whether it is negative or positive) is determined by how one views themselves in relation to achieving desired (ideal and ought) and avoiding undesired (feared) selves (Higgins, 1987). Therefore, the goal of the current study was to provide an examination into the themes present within the ideal, ought, and feared selves of individuals with probable GAD.

Method: Participants ($N = 144$) were recruited through Prolific, a recruitment database and online survey platform. They completed the Integrated Self-Discrepancy Index (ISDI), a gold-standard measure of the content of possible selves. Individuals were asked to generate five attributes to describe their ideal, ought, and feared selves.

Results: A thematic analysis was conducted to elucidate the predominant themes within each of the possible selves. Findings suggested that individuals with probable GAD reported attributes reflecting achievement-oriented perfectionism (e.g., successful, hard-working) and an inflated sense of moral responsibility (e.g., virtuous, ethical) for their ideal and ought selves respectively. Individuals in the sample tended to report a "flawed" self as their feared self, capturing generally undesirable but not inherently dangerous attributes (e.g., selfish, lazy).

Discussion: Our findings coincide with previous literature suggesting that individuals high in worry and anxiety tend to hold high, rigid standards in achievement-related areas (e.g., Thompson et al., 2020) and morality (e.g., Avard & Garratt-Reed, 2021). Given the dearth of literature in this area, results from the current study provide preliminary insight into the content of core beliefs of individuals with GAD.

Conclusion: Findings from this novel and seminal investigation provide an integral foundation for future research on core beliefs in GAD, which will hopefully enhance current interventions for worry and anxiety.

Introduction to the Lived Experience Symptom Survey.

Monica Huerga, Central and Northwest London NHS Foundation Trust, UK

Background: The Lived Experience Symptom Survey (LESS) is a registered *Quality Improvement* project that uses routinely collected cognitive-phenomenological information to inform the development of the early intervention in psychosis service. The first LESS study (Isaacson, Hazell, Cape...& Raune, 2022) led to staff training to improve psychosis assessment. The present study aims to see what routine multidisciplinary case notes can identify about:-

- i) the prevalence of physical harm domains in patients who have delusions/hallucinations
- ii) the prevalence of evidence-based delusion/hallucination cognitive-phenomenological predictors of physical harm
- iii) the association between the two.

Such information may help identify which delusion/hallucination patients need CBT to reduce physical harm and which cognitive features might need CBT-targeting to reduce physical harm.

Method: Retrospective case note survey (N=273) scrutinising each patient's case notes and other documents since the onset of first episode psychosis (M=26 months). Noted was the presence/absence of delusions/hallucinations and any of their previously known evidence-based cognitive-phenomenology features which have predicted physical harm in past studies. Also noted was the presence/absence of potential/actual physical harm in the domains of accidents, neglect, deliberate harm to self, harm from others and harm to others. Only included were physical harm incidents that occurred after the delusion/hallucinations emerged and where there was a case-note narrative link made by patient/staff between the delusion/hallucination and the physical harm. Patients were binary classified into yes/no in each physical harm domain and yes/no as to the presence of a delusion/hallucination or specific cognitive-phenomenological feature. Chi square or logistic regressions then identified sole/independent predictors of physical harm in each harm domain.

Results: The prevalence was found of all domains of physical harm and previously known evidence-based cognitive-phenomenological predictors. Multiple simultaneous statistical testing between these delusion/hallucination features and physical harm domains revealed a range of statistically and clinically significant associations, including independent predictors.

Discussion: The associations found here between delusions/hallucinations and physical harm should be borne in mind when screening/assessing early course psychosis patients. When delusion/hallucination-physical harm links/cognitive-phenomenological predictive features exist in a case, they are usually clearly evident from the patient's lived experience account. However, a limitation of our study is that where they are not found to be present in a case, we do not know if this is because staff did not provide additional probes, as staff do not usually document the definite *absence* of delusion/hallucination-physical harm links/cognitive-phenomenological features. Therefore, a future study could attempt a more comprehensive approach, including directly interviewing the patients. The associations found in this present QI study could also be considered at the individual case level, as possible factors to include in CBT formulations explaining physical harm in the early course of psychosis. Their possible causal status needs further testing; but illustrative CBT intervention suggestions are made for any individual cases where the clinician believes the cognitive-phenomenological factors act causally on physical harm. Staff training about prevalence and predictors of physical harm in delusions/hallucinations has already commenced.

Cognitive features of verbal auditory hallucinations: their role in physical harm in the early course of psychosis and implications for early intervention CBT

Sophia Hasapopoulos, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Roman Hamza, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Zareena Ahmed, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Jennifer McGowan, University College London (UCL), London, United Kingdom; Jonathan Souray, Central and Northwest London NHS Foundation Trust, London, United Kingdom; David Raune, Central and Northwest London NHS Foundation Trust, London, United Kingdom

Introduction: High prevalence rates of both potential and actual physical harm have been identified during the early course of psychosis (e.g., suicide). One of the most common psychotic experiences during early-course psychosis are verbal auditory hallucinations ('voices'). Some specific cognitive risk features of voice-hearing experiences, both content and beliefs about voices, increase the risk of certain physical harm outcomes. However, the previous literature has neglected to study the full range of physical harm domains; cognitive risk features have typically been studied in isolation or only in very small clusters; precise risk estimates of any danger remain unquantified; samples have lacked ethnic diversity; and crucially for CBT in this early critical period, early-course sample data is limited. Aims: The present study aimed, in an ethnically diverse early-course sample, to: (1) determine the prevalence of evidence-based cognitive risk features of voices, (2) quantify the prevalence of all five physical harm domains related to hearing voices ('harm to self', 'harm to others', 'harm from others', 'accidents', and 'neglect'), (3) identify which cognitive voice features would be predictive of particular physical harm domains whilst statistically controlling for all the other voice features, (4) provide an interpretable numerical danger estimate to alert clinicians.

Methods: This study is a registered Quality Improvement project to improve risk management in the multidisciplinary team of the Harrow and Hillingdon Early Intervention in Psychosis service. A search of the empirical literature identified twelve cognitive features of voices conferring an elevated risk of physical harm in early-course/chronic psychosis samples. Next, secondary data analysis of routinely collected patient health records enabled the identification of the twelve risk features and any narrative link in the health notes to any associated physical harm outcomes. The sample was N = 208 (mean age = 25.2 years, mean psychosis length = 28.8 months, 36.1% Asian, 24% black, 19.7% white). The data was analysed using binary logistic regressions.

Results: High rates of actual and potential physical harm were found, particularly in 'neglect' (actual = 22.6%), 'harm to self' (actual = 14.4%), and 'harm to others' (potential = 10.1%). The only significant independent predictor of potential harm to self was derogatory voice comments (odds ratio = 10). For actual physical harm, independent predictors were found for harm to self: self-harm command content (odds ratio = 20) and omnipotence beliefs (odds ratio = 7); and harm to others: violent command hallucination content (odds ratio = 6). These rendered all other cognitive evidence-based risk factors non-significant.

Discussion/Conclusion: In the early course of psychosis, cognitive risk features of verbal auditory hallucinations are shown to be highly prevalent, four of which indicate substantial danger. Theoretically, these results inform cognitive theoretical models of auditory hallucinations about what might contribute to the high rate of physical harm associated with this young population. Clinically, these cognitive risk features should be routinely assessed from early-course psychosis onwards, considered in CBT formulations, and targeted for prevention with early intervention CBT.

Hallucinations in visual, olfactory, gustatory and tactile/somatic modalities in early-course psychosis: role in physical harm prevalence, and implications for early-intervention CBT

Zareena Ahmed, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Roman Hamza, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Sophia Hasapopoulos, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Jennifer McGowan, University College London (UCL), London, United Kingdom; Jonathan Souray, Central and Northwest London NHS Foundation Trust, London, United Kingdom; David Raune, Central and Northwest London NHS Foundation Trust, London, United Kingdom

Introduction: Physical harm to oneself and others is most prevalent in the early course of psychosis. The prevalence and role of visual, gustatory, olfactory and tactile/somatic hallucinations - 'rarer' hallucinations - in physical harm remains largely unexplored. Yet the hallucinatory content has often been found to be extreme, highly emotionally distressing and associated with completed suicides. Despite this, rarer hallucinations remain virtually untested in relation to physical harm. Recently, attention has been drawn to the suicide attempts of patients who suffer multimodal (more than one) hallucinations. However, previous literature has not yet studied all four rarer hallucinations and included the full range of physical harm domains in the same study. Previous studies have also not looked for case note evidence that physical harm was directly linked to part of the hallucinatory experience rather than a mere statistical association. There is also very little data on patients from diverse ethnicities. Crucially, most data are based on chronic patients which does not directly inform early intervention CBT. Aims: This is a registered Quality Improvement project to improve risk management in the multidisciplinary Harrow and Hillingdon Early Intervention in Psychosis service. The specific aims were to (1) establish the prevalence of rarer hallucinations, (2) quantify how often they were narratively linked in the case notes to the full range of physical harm domains: harm to self, harm to others, harm from others, accidental harm, and neglect, (3) whether the risk of harm increased in association with multimodal compared to unimodal hallucinations

Method: The sample consisted exclusively of N = 144 early-course psychosis patients presenting with rarer hallucinations (mean age = 25 years, mean psychosis length = 2.37 years; Asian = 32.7%; black = 21.48%, white = 20.1%). The patients' case notes were screened for the presence and details of the hallucinatory experiences and notes were made of any physical harm that was part of the experience. Chi-square analyses tested unimodal and multimodal hallucinations for their association with physical harm domains.

Results: The most common rarer hallucinations were: visual (87.5%) and tactile/somatic (27.1%). The most common combination were visual and tactile/somatic hallucinations (12.5%). The combined prevalence of potential and actual physical harm associated with rarer hallucinations was established: neglect (15.3%; all cases actual), particularly sleep deprivation (13.2%), deliberate self-harm (11.2%), harm to others (11.1%) were most common. Chi-squared analyses found a positive association between tactile/somatic hallucinations and neglect, and between multimodal hallucinations and neglect ($p < 0.05$).

Discussion/Conclusions: A small but clinically significant proportion of early-course psychosis patients with rarer hallucinations present with physical harm. Particularly, the increased propensity for neglect by sleep deprivation for patients who have tactile/somatic or multimodal hallucinations is easily missed. Therefore, novel CBT for insomnia for this population is recommended, and further clinical and theoretical development is warranted. Although there were no significant associations between visual hallucinations and harm to self, CBT might also prevent/disrupt any growing link between visual/multimodal hallucinations and suicidality after early-course psychosis.

Cognitive features of delusions: their role in physical harm in the early course of psychosis and implications for early intervention CBT

Roman Hamza, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Sophia Hasapopoulos, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Zareena Ahmed, Central and Northwest London NHS Foundation Trust, London, United Kingdom; Jennifer McGowan, University College London (UCL), London, United Kingdom; Jonathan Souray, Central and Northwest London NHS Foundation Trust, London, United Kingdom; David Raune, Central and Northwest London NHS Foundation Trust, London, United Kingdom

Introduction: High prevalence rates of potential and actual physical harm, such as violence, occur during the early course of psychosis. Delusions are extremely prevalent in early-course psychosis and they may contribute to physical harm rates. However, previous research has several limitations. These include testing delusions as the unit of analysis rather than specific cognitive risk features of delusions; not testing known evidence-based cognitive features together in the same sample to identify independent predictors of physical harm; not including the full range of physical harm domains (e.g., 'accidents'); the presentation of statistical associations with no narrative case note link that physical harm was part of the delusional experience; most samples are not ethnically diverse; and there is an under-representation in the literature of early-course psychosis patients during this critical period to inform early intervention CBT. Aims: This is a registered Quality Improvement project to improve risk management in the Harrow and Hillingdon Early Intervention in Psychosis service. The specific aims were to establish the prevalence rates of physical harm related to delusions according to the following five domains: harm to self, harm to others, harm from others, accidental harm, and harm by neglect. Then, to determine which cognitive features of delusions were independently predictive of physical harm for each of these domains after statistically controlling for all the other cognitive features.

Method: A literature search identified 15 evidence-based cognitive risk features of delusions associated with physical harm in early-course/chronic psychosis samples. Our own sample consisted of 264 early-course psychosis patients with delusions (mean age = 25.18 years, mean illness length = 2.27 years; ethnicity Asian = 36%; black = 22%; white = 22%). Patients' notes were scanned for potential and actual physical harm related to delusions and the 15 evidence-based cognitive delusion risk features. Binary logistic regressions tested which cognitive delusion factors would independently predict physical harm, and in which specific domains.

Results: Actual physical harm linked to delusions spanned all five domains of harm, with the highest prevalence rates found in neglect (22%), harm to others (12%), and harm to self (5%). A variety of evidence-based cognitive risk features of delusions were also found to be predictive of physical harm. The strongest independent cognitive delusion predictors of physical harm to others were anger due to delusions (odds ratio = 3, 28% likelihood of harm) and conspiracy delusions (odds ratio = 3, 24% likelihood of harm).

Discussion/conclusion: Physical harm and evidence-based cognitive delusion predictors of physical harm are common in early-course psychosis in an ethnically diverse sample. Our data can help inform the development of a cognitive model of what makes a delusion clinically significant. Therapeutically, early assessment identification of anger and conspiracy beliefs might help prevent physical harm to others. Early intervention CBT might consider targeting anger, including "Poor-Me" paranoia beliefs, and teaching patients how to cope non-violently with conspiracy beliefs, e.g., helping the patient to recognise the power of restraint coping, in order to prevent violence.

Perfectionism as a predictor of treatment outcome in third-wave group therapies for OCD

Nathalie Claus, Ludwig-Maximilians-University Munich, Munich, Germany; Franziska Miegel, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; Lena Jelinek, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; Steffen Moritz, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; Anne Katrin Külz, University Medical Center Freiburg, Freiburg, Germany; Julian Rubel, Justus-Liebig-University Giessen, Giessen, Germany; Barbara Cludius, Ludwig-Maximilians-University Munich, Munich, Germany

Introduction: Less than half of patients seeking treatment for Obsessive Compulsive-Disorder (OCD) profit from evidence-based interventions such as Cognitive Behavioral Therapy (CBT). There is little understanding of what predicts treatment success. One factor which has been suggested to interfere with a patient's ability to engage with therapy is maladaptive perfectionism. Cognitive models of OCD assume that maladaptive perfectionism is one important cognitive distortion in OCD. Some evidence exists that maladaptive perfectionism impedes OCD treatment response in CBT. To increase treatment success of CBT, promising adjunctive treatment options have emerged in recent years, such as Metacognitive Training (MCT) and Mindfulness-Based Cognitive Therapy (MBCT) for OCD. So far, it is still unknown what effect maladaptive perfectionism has on treatment success in those third-wave adjunctive treatments for OCD. It is the aim of the current study to examine maladaptive perfectionism as a predictor of treatment outcome in these treatments.

Method: Combining two existing data sets from separate RCTs, the predictive value of maladaptive perfectionism will be investigated in a sample of N = 61 OCD patients who underwent eight weekly sessions of group therapy (n = 39 in MCT, n = 22 in MBCT). MCT was adapted specifically for OCD patients and aimed to modify dysfunctional metacognitions considered relevant to OCD. MBCT was also adapted specifically for this target group. The group treatment conveyed the core principles of mindfulness (an open, non-judgemental awareness and acceptance of present-moment experience). The original studies both employed an experimental mixed factorial design, with participants being tested pre- and post-treatment as well as at follow-up (3 months for MCT, 6 and 12 months for MBCT) and randomly allocated to either a treatment (MCT or MBCT) or control condition (waitlist-control or psychoeducation). Main analyses for the current study will focus on active treatments only (MCT and MBCT). Maladaptive perfectionism was measured using the Frost Multidimensional Perfectionism Scale and Clinical Perfectionism Questionnaire. The primary outcome will be OCD symptom severity, as measured by the Yale-Brown Obsessive Compulsive Scale. Secondary outcomes are self-reported OCD symptom severity (Obsessive-Compulsive Inventory Revised) and self-reported depressive symptoms (Beck Depression Inventory II). To test the effect of maladaptive perfectionism on symptom severity, a multi-level model will be computed, with repeated measures nested within participants.

Results: Results on the predictive value of maladaptive perfectionism as evidenced by the final model will be presented. The effect of both baseline maladaptive perfectionism and change in maladaptive perfectionism over the course of the treatment will be considered. Model coefficients will be reported.

Discussion: We will critically discuss the value of maladaptive perfectionism as a predictor for treatment outcome in these third-wave adjunctive group treatments for OCD. Results will be compared with existing literature regarding the predictive value of perfectionism in classic CBT treatments (both in individual and group settings). **Conclusion:** Implications for OCD treatment as well as further research will be presented.

Therapist guided, parent-led CBT for preadolescent children with OCD

Chloe Chessell, University of Reading, Berkshire, United Kingdom; Cathy Creswell, University of Oxford, Oxford, United Kingdom; Brynjar Halldorsson, University of Iceland, Reykjavik, Iceland; Kate Harvey, University of Reading, Berkshire, United Kingdom; Alice Farrington, Berkshire Healthcare NHS Foundation Trust, Berkshire, United Kingdom

Introduction. Obsessive Compulsive Disorder (OCD) is a mental health disorder that often onsets during preadolescent years (Geller et al., 1997) and is associated with significantly impaired functioning (Piacentini et al., 2003; Stewart et al., 2017) – highlighting the need for preadolescent children with OCD to access timely evidence-based treatment. Cognitive Behavioural Therapy (CBT) including Exposure and Response Prevention (ERP) is the gold standard, recommended psychological treatment for preadolescent children with OCD (NICE, 2005; Freeman et al., 2014) – however, few mental health professionals are trained to deliver this treatment (AACAP, 1998) and thus, there are often long waitlists for children to access treatment (O'Neill & Feusner, 2015). Delivering treatment through parents may be one way to increase access to evidence-based treatments for preadolescent children with OCD, as this approach has been shown to be effective and cost-effective for children with anxiety disorders (Creswell et al., 2020). This presentation will therefore discuss the development and initial evaluation of a therapist guided, parent-led CBT treatment for parents of preadolescent children (aged 5- to 12-years-old) with OCD.

Method. The treatment was adapted from an existing evidence-based therapist guided, parent-led treatment for children with anxiety disorders (Thirlwall et al., 2013) to ensure suitability for families of preadolescent children with OCD. A non-concurrent, multiple baseline approach was used to conduct a preliminary evaluation of the treatment and consisted of a series of AB replications where 'A' refers to a no-treatment baseline period, and 'B' refers to the intervention period. Ten families of preadolescent children (M= 10.9 years, SD= 1.1 years, 70% girls) were randomly allocated to no-treatment baseline periods of 3-, 4-, or 5- weeks before receiving 6- to 8-individual treatment sessions delivered by a qualified Psychological Wellbeing Practitioner. Parents (and children) took part in semi-structured diagnostic interviews before starting the baseline period, within one-week of completing treatment, and one-month after completing treatment. Parents also completed weekly questionnaires measuring their child's OCD symptoms, family accommodation, and parental knowledge/confidence to help their child throughout the baseline and intervention periods.

Results. In line with recommended guidelines (Kratchowill et al., 2014), visual analyses of the weekly questionnaire measures will be presented, as well as indices of clinically significant and reliable change for diagnostic and questionnaire measures. The percentage of children who met criteria for 'clinical response' and 'clinical remission' will be reported, as well as parents' acceptability of the treatment approach (assessed through weekly questionnaires, an end-of-treatment questionnaire, and a semi-structured qualitative interview).

Discussion and conclusion. This research provides preliminary evidence that therapist guided, parent-led CBT may be an effective treatment to help increase access to psychological treatment for preadolescent children with OCD. The outcomes achieved from this treatment were in line with other treatments that aim to increase access to psychological treatments (Clark, 2018) and was found to be acceptable to families who participated. The need for further evaluation of this treatment, through a randomised controlled trial with a diverse range of families, will be discussed.

Action-sequence learning, habits and automaticity in obsessive-compulsive disorder: implications for treatment

Paula Banca, University of Cambridge, Cambridge, United Kingdom; Miguel Fernando Gonzalez-Zalba, University College London, London, United Kingdom; Maria Herrojo Ruiz, Goldsmiths University of London, London, United Kingdom; Akeem Sule, University of Cambridge, Cambridge, United Kingdom; Naomi Fineberg, University of Hertfordshire, Hertfordshire, United Kingdom; Trevor Robbins, University of Cambridge, Cambridge, United Kingdom

Introduction: An aberrant formation of habits has been considered a strong hypothesis for the development of compulsions in Obsessive-Compulsive Disorder (OCD) (Gillan et al, 2016). However, the main evidence for this hypothesis relies on deficits in goal-directed behaviour and hence a hypothetical bias towards habitual control (Robbins et al, 2019). No direct test of an over-active habit system in OCD has been conducted so far and the mechanism by which habits may become compulsions is yet to be specified. This study aims to address this matter by attempting to induce and measure human habits more effectively, to further uncover the specific role of the habit circuitry in compulsion development.

Method: We developed a smartphone motor sequencing app to induce the acquisition of a putative habit and measure automaticity in 32 patients with OCD and 35 healthy controls. The app enabled subjects to learn and practice 6-element sequences of finger movements (like a piano-based app; the following video describes the task design). We collected 30 days of real-time data and measured procedural learning as well as automaticity development. We also compared patients and healthy volunteers in measures of motivation and app engagement and assessed to what extent performing such repetitive actions during one month impacted the OCD symptomatology. We finally combined this behavioural tool with measures of self-reported habit tendencies.

Results: OCD patients enjoyed performing the sequences and practised them significantly more than healthy volunteers, even though additional training was not requested. Despite performing the action sequences slower and with a more irregular pace at the beginning of training, OCD patients reached the same asymptotic level of automaticity as healthy controls. There was no evidence of procedural learning deficits per se in patients, but they attained automaticity slower when negative feedback was more prominent. We additionally show via a novel self-report measure of habitual tendencies, that OCD patients exhibit in general greater habits than controls, both in terms of routine behaviours and automatic responses. Finally, exploratory analysis unexpectedly revealed that patients with higher habitual tendencies and compulsivity scores found the app somewhat beneficial: 41% improved their symptomatology after the month training (as measured by the Y-BOCS scale difference pre-post training, as well as individual feedback) and 32% of them clearly attributed their improvement to the app training.

Discussion: Patients, contrary to what has been hypothesised, do not become automatic faster than healthy humans. In fact, they achieve automaticity slower when negative feedback is given. This contrasts with patients reporting subjectively more routine and automatic behaviours in general. Such a dissociation between lack of abnormal habit/automaticity formation and enhanced well-established habits may be explained by the years of behavioural repetitions (a question to be addressed in future studies).

Conclusion: Future studies, including a clinical trial, are warranted to further investigate the psychological mechanism underlying the potential efficacy of the app at ameliorating patient's symptoms. Hitherto, the exploratory clinical findings presented here are promising as it advocates the potential of digital technologies focused on habit reversal as a new approach to treat OCD.

Open Paper Symposium 5 Treating Eating Disorders

The efficacy of meaning-centered psychotherapy for eating disorders (MCP-ED) in a high-risk group of undergraduate women: a randomized controlled trial

Sanne Van Doornik, University of Groningen, Groningen, Netherlands; Klaske Glashouwer, University of Groningen, Groningen, Netherlands; Brian Ostafin, University of Groningen, Groningen, Netherlands; Peter De Jong, University of Groningen, Groningen, Netherlands

Introduction: Eating disorders (EDs) are severe mental disorders, marked by emotional distress, psychosocial impairment, and physical morbidity. Despite the great impact of EDs, current treatment options are limited in their effectiveness and recurrence rates are high. Therefore, there is a great need to develop new, evidence-based treatment options that focus on the maintaining factors of EDs. Recently, low meaning in life was proposed to be relevant in the development and refractoriness of EDs. Theory suggests that the overvaluation of weight, shape, and eating behavior 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 identity and structure in their lives. However, in the long run, these dysfunctional goals and values can interfere with 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. The purpose of the present study was to test the efficacy of meaning-centered psychotherapy for EDs (MCP-ED) to increase meaning in life among women at risk of developing an ED.

Method: We conducted a randomized controlled trial with 134 first-year female students, who were at risk of developing an ED. Participants completed baseline measures and then received either six weekly, individual, online sessions of MCP-ED (n = 67), or were assigned to a waiting-list control condition (n = 67). After the final session or after a seven-week waiting period, participants completed the post assessment (N = 125). Four weeks later the follow-up assessment was completed (N = 124).

Results: In line with our hypotheses, the results showed that MCP-ED was effective in increasing meaning in life at post-assessment and follow-up with medium to large effect sizes. Secondary analyses also showed positive effects of MCP-ED on ED symptoms, satisfaction with normative life domains, psychological well-being, and general distress. No effects were found regarding the search for meaning.

Discussion: Strengths of the current study were being one of the first to experimentally manipulate meaning in life, using a randomized controlled trial design, with a large sample of individuals at risk of developing an ED, and a relatively low drop-out rate. Limitations include the relatively short follow-up, the fact that the specificity of the intervention cannot be determined, and the fact that the added value of MCP-ED over standard treatment options is unknown.

Conclusion: Overall findings support the efficacy of MCP-ED as an intervention to increase meaning in life and point to the relevance of examining whether adding MCP-ED to regular treatment might increase treatment effectiveness in individuals with EDs.

Evaluating the effects of a virtual reality-based transdiagnostic prevention protocol for the prevention of eating disorders: a preliminary pilot study

Valentina Gardini, Department of Psychology, University of Bologna, Bologna, Italy; Elena Tomba, Department of Psychology, University of Bologna, Bologna, Italy

Introduction: Virtual reality (VR) emerged in the field of clinical psychology as a promising instrument for the treatment and prevention of many psychiatric disorders, including eating disorders (EDs). However, while VR-based interventions were seen to effectively reduce ED-related symptomatology, no VR-based intervention so far has been developed to also concurrently tackle important cognitive-behavioural transdiagnostic factors, such as psychological inflexibility, emotion dysregulation, and experiential avoidance. In fact, according to the transdiagnostic approach to mental health, many psychological disorders are maintained or caused by similar cognitive and/or behavioral processes defined as transdiagnostic factors. Psychological inflexibility, emotion dysregulation, and experiential avoidance in particular were seen to be related to the onset and maintenance of EDs and, therefore, tackling these factors through a VR-based intervention could help to improve the ED-related symptomatology and to prevent the onset of a full syndrome. This study aims to test the ability of a six-session VR-based prevention intervention carried out through an innovative VR transdiagnostic software (H.O.M.E. - How to Observe and Measure Emotions) designed to concurrently reduce the ED-related symptomatology together with psychological inflexibility, emotion dysregulation, and experiential avoidance in general population (GP) individuals at risk for EDs, in particular when compared to a waiting-list condition.

Method: GP individuals screened as at risk for EDs are randomized either to undergo six-sessions of the VR-based prevention intervention H.O.M.E. for the reduction of ED-related symptomatology, psychological inflexibility, emotion dysregulation, and experiential avoidance or to be assigned to a six-week waiting-list. Both groups will complete the following questionnaires at baseline and at the end of the VR-based intervention/waiting-list: the Eating Disorders Examination-Questionnaire (EDE-Q) to detect ED risk and to measure ED-related symptomatology, the Difficulties in Emotion Regulation Scale-brief version (DERS-16) to measure emotion dysregulation, the Acceptance and Action Questionnaire-II (AAQ-II) to measure psychological inflexibility, and the Multidimensional Psychological Flexibility Inventory (MPFI)-experiential avoidance. Changes in these questionnaires between baseline and end of intervention/waiting-list in the groups and between the intervention and waiting-list group will be tested with mixed-model repeated measure ANOVAs.

Results: The study is currently ongoing. Preliminary results will be presented subsequently.

Discussion: The ability of the H.O.M.E. VR-based intervention to tackle dysfunctional eating behaviors together with transdiagnostic factors linked to the onset of EDs can represent an important tool to help preventing EDs before the onset of a full syndrome.

Conclusion: People at risk for EDs rarely seek traditional psychological treatment, probably due to its associated stigma. Given similarities between VR and everyday-life technologies, this VR-based intervention could also help engaging reluctant individuals in psychological treatment, especially young individuals which are also at higher risk of developing EDs.

Never too old to learn? A pilot study on a short, intensive cognitive-behavioural treatment for young adults with ARFID

Sandra Mulkens^{1,2,3}, Diana Kroes², & Eric Dumont^{1,2,3}

¹ Dept. of Psychiatry and Neuropsychology, Faculty of Health, Medicine, and Life Sciences, School for Mental Health and Neuroscience, Maastricht University, Maastricht, The Netherlands

² Dept. of Research and Development, SeysCentra, Malden, Netherlands

³ Dept. of Clinical Psychological Science, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, The Netherlands

Avoidant/Restrictive Food Intake Disorder (ARFID) is a recently acknowledged DSM-5 feeding/eating disorder. These individuals restrict their food intake and/or eat extremely selectively which is related to serious somatic and/or psychosocial consequences. ARFID has 3 profiles which drive the food restriction and/or selectivity: (1) lack of interest in food or eating; (2) avoidance of food due to the sensory characteristics of the food; (3) avoidance due to the concern about the aversive consequences of food/eating. There is no fear of gaining weight or body image disturbance, such as present in anorexia or bulimia nervosa. Failure to identify and treat ARFID may result in serious malnutrition and negative effects, comparable to anorexia nervosa. Still, ARFID is often misdiagnosed and treatment programs (and their scientific evaluation) are predominantly directed at (young) children, although ARFID is estimated to be present in around 1% of adults. The lack of evidence-based treatment possibilities for (young) adults, plus the increasing demand for treatment in this age group at our specialized treatment centre, led us to develop a short, intensive treatment program for this specific group, based on their needs. This treatment was based on a previously developed 4-week intensive day-treatment for 12-18-year-old adolescents (Dumont et al., 2019), in which exposure and expectancy violation were core elements, and which proved rather successful. The current program, however, was shorter and more focused on the typical age phase (working/studying/independent young people). Its duration was only 2 weeks of day-treatment (including individual and group session with a focus on exposure), with online follow-up sessions over 5 weeks.

We conducted a pilot study with a group of 4 young women (aged 20-22) who were referred from the hospital or mental health institutes in The Netherlands and who were motivated to work on their ARFID as the main complaint. Before treatment, they underwent a series of intake sessions, filled out questionnaires and a 1-week food diary, a food selectivity test, and were interviewed with the PARDI (Bryant-Waugh et al., 2019). Two women were obese, two had healthy weight. Besides a serious form of ARFID (in 1-3 profiles), they all had severe comorbidities such as Autism Spectrum Disorder (N=1), mood disorder (N=2), PTSD (N=1), Personality Disorder (N=2), OCD (N=1), other anxiety disorders such as specific phobia, social anxiety disorder (N=3). Measurements were taken before and after 2 weeks of day treatment, after the end of (7 weeks) treatment, and at 3-months follow-up including the PARDI, several ARFID questionnaires (FNS, NIAS, EDY-Q), the EDE-Q, a disgust questionnaire (DPSS-R), and a general mental health questionnaire (MHC-SF-NL). During treatment, CCM's and anxiety were measured on a regular basis.

All 4 women showed an important decrease in ARFID symptoms already after the first 2 weeks of day-treatment. At 3 months follow-up, these results were more pronounced. In 3 out of 4, ARFID was in remission after 3 months follow-up. The effects of CBT were sustained, in that these 4 women were still trying new foods. They all experienced the treatment as very intensive but were surprised about the obtained results. One had additional EMDR sessions. Long term effects of this pilot study are hopeful. Serious comorbidity appears no exclusion criterium for a short, intensive CBT treatment. Detailed results will be shared at the conference.

Staging models for eating disorders: a systematic scoping review of the literature

Elena Lo Dato, University of Bologna, Bologna, Italy; Elena Tomba, University of Bologna, Bologna, Italy

Introduction: Eating Disorders (ED) represent a complex mental illness, which despite the existence of effective and standardized treatments, is often characterized by low remission rates, frequent drop-out and residual symptoms. To improve outcomes, the staging approach has been proposed in the assessment of ED. This model has its roots in the medical field and it is used to define the phases that characterize a certain disease based on its symptoms severity and clinical manifestations on a continuum. In order to map the existing literature on the staging models for EDs and to offer an overview of it, we conducted a systematic scoping review.

Method: A literature search on Pubmed, PsycINFO and Scopus has been conducted using the following key terms: staging, anorexia nervosa, bulimia nervosa, binge eating disorders, eating disorders. 9 studies met inclusion criteria.

Results: Six different staging models have been identified, almost all for anorexia nervosa only. Referring to the specific stages pointed out, all the models except for one agree on the existence of early/subsyndromal phases and all of them underline the existence of severe and enduring/chronic forms of the illness. Referring to the intermediate stages, these slightly differ among the models and include full/acute, residual, remission and relapse phases. The clinical criteria used for the definition of the stages include the presence of early risk factors, severity of symptoms, BMI levels and duration of the illness. Only in one case the stages have been defined through the use of a standardized measure. Only one study identified specific interventions for the different stages of the illness.

Discussion: Despite the few literature on this topic, applying the staging model to the assessment of this clinical population might be beneficial by helping clinicians in locating patients along a continuum. Thus, it might be helpful in offering treatments tailored for the specific stages and preventing the severe forms of the illness by acting on the early stages. **Conclusion:** Overall, only two of the proposed models have been empirically tested, which highlights the need for further empirical researches on this clinical population. Moreover, further studies are needed in order to better understand and eventually apply staging models to EDs other than AN.

Can you learn to starve yourself? – Developing a laboratory model for anorexia nervosa.

Michelle Spix, Maastricht University, Maastricht, Netherlands; Anita Jansen, Maastricht University, Maastricht, Netherlands

The restriction of energy intake, or in other words food avoidance, is a central and persistent symptom of anorexia nervosa. Recent models of the disorder suggest that food avoidance is a learned behaviour that is acquired and maintained by classical and operant conditioning (Melles et al., 2021). Accordingly, food avoidance initially is the behavioural expression of a classically conditioned relationship between eating and an aversive outcome, such as weight gain (Hildebrandt et al., 2015). In an operant learning process, individuals then acquire knowledge about the consequences of food avoidance, and these determine whether the behaviour occurs again in the future. The removal of expected negative consequences for food intake and a reduction in eating-related fear supposedly play a role here. The rewarding consequences of food avoidance e.g., increased self-esteem or feelings of control (Walsh, 2013), might also be relevant for the maintenance of the behaviour. The present study set out to test this theoretical framework. For this, we investigated whether introducing negative consequences for the intake of tasty high-calorie food and introducing positive consequences for its avoidance can create food avoidance behaviours and decreased eating desires in healthy individuals. 103 healthy women were randomly assigned to an experimental or control condition and completed a conditioning task. During an initial appetitive conditioning phase, participants learned that after seeing a certain geometrical shape (Conditioned Stimulus, CS+) they always received a sip of milkshake, while another shape was never followed by anything (CS-). In the subsequent operant learning phase, participants could decide whether they wanted to receive the milkshake or not by clicking on the respective button. The experimental condition gained money in case they avoided food intake, while they heard an aversive sound in case, they did not avoid food intake. The control group on the other hand never received these consequences. To assess the persistence of the acquired avoidance behaviours, the experimental condition eventually did not receive rewards and punishments for food intake / avoidance anymore. Besides looking at avoidance behaviours we also assessed appetitive and aversive conditioned responses. Participants repeatedly rated their desire to drink the milkshake, their fear levels and how much they liked the CSs and the taste of the milkshake. Participants in both conditions initially showed successful appetitive conditioning. With the introduction of reward and punishment, conditions started to differ. Compared to controls the experimental group 1) was more likely to avoid the milkshake, 2) gave higher fear and lower desire ratings on CS+ trials and 3) reported less liking for the CS+ and the taste of the milkshake. Even though differences between conditions reduced once reward and punishment were set on extinction, they were still present at the end of the conditioning task. Thereby, our results suggest that persistent food avoidance behaviours can be learned based on a combination of reward and punishment. Moreover, reward and punishment also affected appetitive and aversive conditioned responses mirroring a pattern often observed in patients with anorexia. In the discussion we focus on the theoretical and clinical implications of this.

Life meaning as an important factor, in eating disorder and comorbid symptomatology

Franziska Schutzzeichel, Heymans Institute, Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, Netherlands; Marije Aan Het Rot, Heymans Institute, Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, Netherlands; Klaske Glashouwer, Heymans Institute, Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, Netherlands; Peter De Jong, Heymans Institute, Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, Netherlands; Reinout Wiers, University of Amsterdam, Amsterdam, Netherlands

Introduction The current DSM-5 classification of eating disorders (EDs) is facing several challenges, based on symptom overlap between categories, heterogeneity within categories, and a high proportion of not otherwise specified EDs (Vervaeke et al., 2021). In addition, all subcategories of EDs show high comorbidities for example with anxiety and depression. The network model of psychopathology seems helpful to explain the frequently observed connections among the various ED symptoms, but also between specific ED symptoms and symptoms of other disorders. Thus far most network studies have focused on core ED symptoms (e.g., overvaluation of weight and shape) and tested existing theories, such as the transdiagnostic model (Fairburn et al., 2003). Yet, other crucial factors have also emerged. One of these factors is ineffectiveness (Monteleone & Cascino, 2021), showing that feelings of incompetence and worthlessness could play an important role in the maintenance of EDs. Those feelings may reflect low perceived life meaning: When other sources of meaning are lacking, eating- and weight-regulation might offer a sense of purpose in the short-term (Marco et al., 2017). However, in the long-term, this focus on thin ideals and (unobtainable) body shape and weight goals most likely does not yield a positive and satisfying goal engagement, which potentially affects the perceived life meaning negatively again. The relevance of this process is not restricted to EDs, as feelings of

ineffectiveness and a low sense of life meaning are also related to other disorders like depression and anxiety (Marco et al., 2020). Therefore, the current study examined the links between the constructs of ineffectiveness, life meaning, ED symptoms, and comorbid symptomatology.

Method: Online survey data from 501 participants between 16 and 75 years was gathered. Ineffectiveness was assessed with the Eating Disorder Inventory-2 subscale, ED symptoms with the Eating Disorder Examination-Questionnaire, and presence of and search for life meaning with the Meaning in Life Questionnaire. Comorbid symptomatology was measured with the Depression Anxiety Stress Scales-21.

Results: In line with previous research, preliminary analyses showed moderate to large positive correlations between ineffectiveness and core ED symptoms. Consistent with the proposed connection between life meaning and ineffectiveness, the presence of life meaning was strongly and negatively correlated with ineffectiveness. In addition, the presence of life meaning showed small to moderate negative correlations with ED symptoms. Anxiety and depression symptoms were also moderately to strongly associated with life meaning and ineffectiveness. When presenting the open paper, we will also report outcomes from an undirected network model based on partial correlations.

Discussion/Conclusion: Preliminary findings showed a clear link between a low sense of life meaning and symptomatology of EDs, anxiety, and depression. Investigating this link further with a network analysis will help shed light onto potential ED maintenance factors. Considering the high number of ED patients who do not recover after treatment and their high mortality rate (Schmidt et al., 2016), an increased understanding of working mechanisms seems highly desirable to provide clues for optimizing currently available treatment options.

Anxiety and avoidance in eating disorders

Hanna Melles, Maastricht University, Maastricht, Netherlands; Anita Jansen, Maastricht University, Maastricht, Netherlands

Introduction: Anorexia nervosa is a disabling mental disorder and a huge challenge to treat. Despite the severity of the eating disorder, we do not know much about the mechanisms that maintain the disorder and impel patients in their endeavor to persistently lose weight, though anxiety is identified as an important and potentially perpetuating symptom. Studies show that patients with anorexia nervosa experience a large variety of anxieties such as fears of food and eating, fears of weight gain, physical sensations and fears related to personal and social consequences (Levinson & Byrne, 2015; Levinson, Vanzhula & Christian, 2019; Levinson & Williams, 2020; Schaumberg et al., 2020). Fear related learning processes may play a role in the maintenance of anorexia nervosa. The fears may trigger avoidance behaviors such as restrictive eating. Avoidance temporarily reduces unpleasant fearful feelings and is thereby maintained through negative reinforcement. In the long term, however, avoidance perpetuates fears, it may even increase them (e.g. Craske et al., 2008; Hildebrandt et al., 2015; Melles et al., 2021). So far, anxiety has primarily been associated with anorexia nervosa. Research, however, indicates that anxieties and avoidance behaviors may also be important characteristics of the other eating disorders. In the present study, we therefore investigated whether anxiety and avoidance behaviors are transdiagnostic eating disorder characteristics that contribute to the maintenance of not only anorexia nervosa but other eating disorders as well.

Method: Eating disorder patients (n=250), including both subtypes of anorexia nervosa, bulimia nervosa, binge eating disorder and other specified feeding and eating disorders, as well as healthy controls (n=111) completed online questionnaires assessing general anxiety, eating specific anxieties and avoidance behaviors.

Results: All eating disorders showed significantly more specific eating anxieties compared to healthy controls. Likewise, all eating disorders showed more general anxieties than healthy controls on one of two scales. On the other general anxiety scale the binge eating disorder group took a middle position between the other eating disorders and healthy controls. The same was true for avoidance behaviors: on one of two scales, the binge eating disorder group had a middle position and on both scales the binge eating disorder did not differ from healthy controls whereas all other eating disorders scored significantly higher than the healthy controls.

Discussion: Eating disorder specific anxieties, general anxieties, and food avoidance behaviors are transdiagnostic symptoms in anorexia nervosa, bulimia nervosa and other specified feeding and eating disorders. While binge eating disorder patients exhibit as many specific eating fears, general fears and avoidance behaviors are less evident in binge eating disorder patients. Specialized interventions targeting anxieties, such as exposure therapy, may be promising add-on interventions, not only for the treatment of anorexia nervosa but for the treatment of all eating disorders.

Psychological and cognitive characteristics of individuals at high risk of eating disorders: a network perspective

Giuliano Tomei, University of Bologna, Bologna, Italy; Benedetta Beccerica, University of Bologna, Bologna, Italy; Elena Tomba, University of Bologna, Bologna, Italy

Introduction: According to psychological network theory, mental health symptoms are not just the manifest part of a latent disorder, but autonomous entities capable of activating and maintaining other symptoms in and of themselves. Network psychometrics permits to graphically represent relationships between multiple different constructs. This approach has been enthusiastically adopted for the study of eating disorders (EDs), due to their heterogeneous symptom presentations, high rates of comorbidity and frequent diagnostic migration. However, no network study so far explored the psychopathological manifestations that precede onset of an acute ED. The present study aims at filling this gap in the literature by applying network analysis (NA) to investigate which psychological components are most prominent in a population at high risk of ED. In this open talk we will present for the first time the results from the data collected in this ongoing study.

Method: Individuals from the Italian general population are being recruited and screened online to detect individuals at high risk of ED, based on their (EDE-Q) scores, and no lifetime history of an ED. Data collected includes sociodemographic information (sex, age, ethnicity), ED symptomatology (EDE-Q), psychological flexibility (AAQ-II), rational and irrational beliefs (ABS-2 SF) aspects of well-being (MHC-SF), anxiety, affective symptomatology and stress (DASS-21). Data will be analysed using network analysis (NA) methods. Specifically, a regularized network model will be derived using the bootnet package for the R software, to identify which are the key symptoms in an at-high-risk of ED population.

Results: So far 949 individuals have been recruited, of which 78 were identified as at high risk of developing an acute ED according to their EDE-Q scores (>2.3 - Discussion: Preliminary analyses showed non ED-specific factors to be generally more relevant than specific ED symptoms and behaviours in at-high-risk populations. In line with established theoretical models, ED symptomatology seems to be secondary to underlying psychological distress, specifically in the form of negative affective symptomatology and stress. These factors might therefore be the driving factors that might precipitate an at-risk picture into a full-blown ED. Discussions will be reviewed in light of analyses of the full data.

Conclusion: From the results observed so far prevention interventions might benefit by focusing on symptomatology often present in full-blown EDs but not strictly associated with them, such as negative affective symptoms and stress. Consistently with previous studies, well-

being seems to play an important role in the transition from risk to full-blown EDs, and further fostering positive psychological functioning might decrease onset of ED in this population.

Motives for using social networking sites: A uses and gratifications perspective amongst people with eating disorder symptoms

Alexandra Dingemans, GGZ Rivierduinen Eating Disorders Ursula, Leiden, Netherlands; Jolanda Veldhuis, Vrije Universiteit Amsterdam, Department of Communication Science, Amsterdam, Netherlands

Introduction: Studies investigating motives for social networking sites (SNS) use amongst people with eating disorder (ED) symptoms are scarce. Some evidence exists that readiness to change may be a factor related to SNS use patterns in this population. The uses and gratifications theory is uniquely suited to exploring the motives why people with body image or eating concerns may engage in online activities. The general aim of the present study was to investigate the potential relationship between readiness to change ED cognitions/behaviors and SNS use motives in individuals with current or past ED symptoms, employing a uses and gratifications theory perspective. Our first research question was whether SNS use is related to ED severity. Our second question was whether ED severity was related to readiness to change. Our third research question was whether motives to use SNS were related to severity of ED psychopathology and readiness to change.

Method: We collected 103 complete survey responses from visitors of a large e-community for individuals with eating problems or disorders that is dedicated to promoting a healthy body image and approach to eating and exercise, as well as from three patient organizations. 103 individuals (16-55 years old; Mage = 26.1, SDage = 8.1) provided complete data. A cross-sectional research design was applied. Participants were asked to fill out an online survey measuring ED psychopathology, readiness to change, SNS use and motives for SNS use.

Results: SNS use was unrelated to ED symptom severity (i.e. ED symptom severity (EDE-Q global, $r=-0.07$), body satisfaction (BDQ, $r=-0.04$), self-esteem ($r=-0.05$). As hypothesized, ED symptom severity was inversely associated with readiness to change. However, contrary to expectations, time spend on (specific) SNS was not associated with ED symptom severity. The factor analysis in our sample revealed four motive dimensions: Impression Management, Community, Passive Use, and Positive Use. The only motives dimension that was related to readiness to change was 'Impression Management' (i.e. social pressure, self-presentation, and popularity motives).

Discussion: The results suggested that if individuals felt less capable of overcoming their dysfunctional cognitions/behaviors about their body/eating (i.e., were less ready to change), they were more likely to be motivated to use SNSs for the purpose of impressing others and reputation management. **Conclusion:** The clinical implication is that high amounts of SNS use may not necessarily be harmful for people with EDs or recovering from EDs, whereas using SNSs for the purposes of impression management could potentially be related to being less ready to recover.

Open Paper Symposium 7 Obsessive-compulsive disorder

General somatic health and lifestyle habits of individuals with obsessive-compulsive disorder: an international survey

Anna Holmberg, Karolinska Institutet, Stockholm, Sweden; Lina Martinsson, Karolinska Institutet, Stockholm, Sweden; Matthias Lidin, Karolinska Institutet, Stockholm, Sweden; Christian Rück, Karolinska Institutet, Stockholm, Sweden; David Mataix-Cols, Karolinska Institutet, Stockholm, Sweden; Lorena Fernández De La Cruz, Karolinska Institutet, Stockholm, Sweden

Introduction: Obsessive-compulsive disorder (OCD) is a debilitating mental disorder associated with an increased risk of metabolic and cardiovascular disorders and a broad range of other health-related issues. Modifiable lifestyle habits such as physical inactivity, smoking, unhealthy diet, and alcohol consumption are hypothesized to contribute to this association. However, the lifestyle habits of individuals with OCD have been scarcely investigated. Hence, the aim of this study was to explore the physical health and lifestyle habits of adults (≥ 18 years) with a self-reported diagnosis of OCD via an international survey.

Method: An online survey available in seven different languages was disseminated through patient organizations and social media between July 2021 and March 2022. The survey included questions relating to socio-demographic variables and clinical characteristics (including OCD symptom severity, as measured with the 12-item self-report scale Obsessive-Compulsive Inventory [OCI-12], and psychotropic medication), physical health, and lifestyle habits. Frequencies and percentages – for categorical variables – and means and standard deviations – for continuous variables – were calculated. Subgroup analyses were performed by gender, age, country, and OCD symptom severity.

Results: A total of 496 individuals with OCD completed the survey. The mean age of the group was in the late thirties and the majority were women (79%). Most participants were from countries within Europe (46%) and from the United States (36%). Their mean score on the OCI-12 was 21.2 (sd=9.1), corresponding to moderate OCD severity. Psychiatric comorbidities were very common, with more than 80% of the sample reporting other psychiatric disorders, besides OCD. This talk will report on the physical health and lifestyles of this sample. In sum, a majority reported having comorbid somatic health issues (e.g., allergies, gastrointestinal conditions, hypertension, obesity). A significant proportion also reported unhealthy lifestyle habits, such as low physical activity, risk consumption of alcohol, smoking, and having a non-restorative sleep. A large majority reported wanting to change their lifestyle habits. **Discussion:** In line with previous register-based and clinical studies, individuals with OCD in this sample self-reported a range of health-related issues. They also reported a number of unhealthy lifestyle behaviors and a willingness to change these habits. Implications for prevention and intervention strategies in individuals with OCD will be discussed.

Conclusion: For some people with OCD, interventions aimed at modifying unhealthy lifestyles may be useful to prevent or improve health-related problems that go beyond the psychiatric symptoms.

Verbal overshadowing disrupts memory for faces in participants with low, but not high OCD symptoms

Assaf Soreff, Tel Aviv University, Tel Aviv, Israel; Bella Dubinchik, Tel Aviv University, Tel Aviv, Israel; Reuven Dar, Tel Aviv University, Tel Aviv, Israel

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., Soreff 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). **Conclusion:** 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.

An experience sampling study examining the components of obsessive-compulsive disorder

Gülşah Durna, Dokuz Eylül University/ Department of Psychology, Izmir, Turkey; Orçun Yorulmaz, Dokuz Eylül University/ Department of Psychology, Izmir, Turkey

Introduction: The accurate assessment of Obsessive-Compulsive Disorder (OCD) is a cornerstone for treatment. The traditional assessment methods, self-report measures and interviews, could require retrospective recall of symptoms which may lead to bias (Maclaren Kelly & Kertz, 2019) and faulty inferences. Experience sampling method (ESM), defined as the repetitive collection of real-time data consisting of momentary experiences in daily life (Csikszentmihalyi & Larson, 2014), can make great contributions to the assessment of OCD by its ecologically valid nature. Accordingly, in this study we aimed to scrutinize the cognitive, emotional and behavioral components of OCD in a process model with ESM.

Method: The sample consisted of 48 adults (30 females, Mage = 37.73). Firstly, participants completed a socio-demographic form, then utilized a mobile phone application to response a 30-item ESM questionnaire which covers obsessive intrusive thought intensity and relevant emotions, thought control strategies, compulsions, and positive and negative affect (PA & NA). A mixed-sampling design were used; so the participants could complete the questionnaire at random eight points within fixed time intervals for a day between 10:00 am and 11:15 pm. The descriptive statistics, correlations and group differences were investigated.

Results: Participants who experienced two or more number of obsessional themes (46%) had more intense intrusive thoughts and compulsions than those with only one. The results showed that participants were more likely to state PA. As the study was conducted with non-clinical population, the variance of intrusive thought intensity was lesser, expectedly. The discomfort was the most frequently reported emotional reaction towards intrusions, followed by anxiety, sadness, guilt, disgust and shame. Moreover, most commonly preferred strategies were distraction, reappraisal, mental compulsion, worry, social control, self-punishment and overt compulsions, respectively. Correlation analysis pointed out that intrusions were positively related to NA, discomfort, anxiety, sadness, guilt, shame, difficulty in thought control, self-punishment, mental and overt compulsions. Besides, while both NA and PA was correlated with intrusions, sadness, anxiety and guilt, NA was also positively related to difficulty in control, self-punishment and compulsions, and self-punishment was the common method related to all emotions. It seems that the more severe the intrusion-related emotions were, the more difficult the control of intrusions were. Given that two extreme groups were created based on intensity of intrusions, as compared to other group, high-intensity group reported higher on discomfort, anxiety, sadness, difficulty on thought control, self-punishment, mental and overt compulsions. Participants who had high scores on NA were more likely to have intrusive thoughts and feel sadness, in respect to those with low scores.

Discussion: Ultimately, these findings suggest that momentary emotions and emotions related to intrusions in daily life notably contribute to the severity of intrusions and control mechanisms. Furthermore, self-punishment may be a serious indicator of the severity of OCD, as in line with some previous studies and cognitive accounts. This preliminary study also reveals the importance of ESM on the assessment of OCD and may guide the clinical and research fields. **Conclusion:** Consequently, more longitudinal ESM studies are needed for an in-depth analysis of dynamics of OCD.

Open Paper symposium 8 Online and virtual therapy

Success, adherence to treatment and efficiency of videoconferencing and face-to-face therapies: results from the Centre of Applied Psychology of the Autonomous University of Madrid.

Diego Fernández-Regueras, Universidad Autónoma de Madrid, Madrid, Spain; M^a Cristina Guerrero, Universidad Autónoma de Madrid, Madrid, Spain; Alba Luque, Universidad Autónoma de Madrid, Madrid, Spain; Ana Calero, Universidad Autónoma de Madrid, Madrid, Spain

Introduction: The COVID-19 pandemic has boosted both the use and scientific interest in e-Health. Within the former, telepsychology is defined as the provision of psychological services using Information and Communications Technologies (ICTs). Online therapy involves communication between clients and therapists both at the same time and at different times. Videoconferencing psychotherapy (VCP) is a form of online therapy that implies a synchronous communication between clients and therapists. This has been a widely adopted alternative in psychological clinics in Spain following the emergence of the COVID-19 pandemic. There seems to be a growing consensus in the scientific literature about the therapeutic success that this modality of therapy can achieve in different problematics. Adherence to treatment and efficiency have been questioned, with mixed results found in the literature. We hypothesise that there will be no differences in therapeutic success, treatment adherence will be lower in VCP and treatment efficiency will be higher in VCP assessment sessions and in face-to-face therapy (FTF) treatment sessions.

Method: We recruited a sample of 176 participants, all clients at the university psychological clinic of the Centre of Applied Psychology of the Autonomous University of Madrid (CPA-UAM), with a variety of diagnoses. They received Cognitive-Behavioural Therapy (CBT) in FTF or

VCP modalities from 26 therapists with different levels of expertise. Beck Depression Inventory (BDI-II), State-Trait Anxiety Inventory (STAI), Symptom Checklist 90-R (SCL90-R), World Health Organization Quality of Life Questionnaire (WHOQoL-BREF) and the percentage of therapeutic goals achieved were used as measures of therapeutic success. For the measure of adherence to treatment, the percentage of dropouts, compliance with therapy tasks and attendance to therapy sessions were used. For the measure of treatment efficiency, the number of assessment sessions and the number of treatment sessions were used.

Results: No differences were found in therapeutic success between treatment modalities, apart from depression, in which the difference in BDI-II scores before and after treatment was significantly greater in FTF ($F=37.508$, $p<0.0001$, partial $\eta^2=0.393$). No differences were found in any of the indicators of adherence to treatment. The number of assessment sessions was significantly lower in VCP ($t=3.078$, $p=0.002$, $d=0.461$), whilst no significant differences in the number of treatment sessions were found between the two modalities.

Discussion: There appear to be no differences in most clinical indicators of therapeutic success, which supports the findings in scientific literature. Differences in depression scores will be discussed. Whilst the scientific literature finds mixed results regarding adherence to treatment in online therapy, we could not find differences with the FTF format, which may be due to the similarity between the two therapy modalities compared to other online therapy formats and FTF. VCP has been found to be more efficient in the assessment phase, which may be due to a lesser effort of the therapists to establish an adequate therapeutic relationship. Conclusion: The results of this study contribute to the consideration of VCP as a therapeutic alternative with increasingly better clinical indicators. Possible improvements will be discussed in the light of the results.

An online contextual schema therapy workshop for social anxiety symptoms – a randomized control trial

Simona Stefan, Babes-Bolyai University/Department of Clinical Psychology and Psychotherapy, Cluj-Napoca, Romania; Paula Stroian, Babes-Bolyai University, Cluj-Napoca, Romania; Mircea Mustatea, Babes-Bolyai University, Cluj-Napoca, Romania; Daniel Matita, Babes-Bolyai University, Cluj-Napoca, Romania; Iulia Fechete, Babes-Bolyai University, Cluj-Napoca, Romania; Ioana Boldea, Babes-Bolyai University, Cluj-Napoca, Romania

Introduction. Social anxiety is a highly prevalent and debilitating condition, marked by fear of negative evaluation, avoidance of social situations, and high self-criticism. In the context of the COVID-19 pandemic, social occasions may have been fewer, but avoidance tendencies may still be higher than before. Not having to participate in social interactions, individuals with social anxiety may be inclined to self-isolate and to restrict their presence in technology-mediated interactions. Therefore, strong avoidance may lead to increased difficulties, now that social events are to resume. Using the contextual schema model as a framework, avoidance behaviors in socially-anxious individuals may be conceptualized as avoidant coping modes driven by inner critic modes (e.g., self-defeating beliefs about one's ineptness, and the importance of external evaluations). Addressing social anxiety via schema-based interventions thus appears to be a promising approach.

Method. Participants were recruited online via social media ads, and those with scores above the 30 cut-off point on the Liebowitz Social Anxiety Scale were selected to participate in the trial. 41 participants, aged 20 to 36 ($m = 21.2$, $SD = 4.1$), 26 females, 19 in the experimental group and 21 in the control group (waitlist) participated in the trial. Fear of negative evaluation, measured with the Brief Fear of Negative Evaluation II (BFNE; Carleton et al., 2006) was the primary outcome at post-intervention and 2-weeks follow-up, and experiential avoidance, measured with the Acceptance and Action Questionnaire II (AAQ; Hayes et al., 2011) was the proposed change mediator. We delivered a two and a half-hour long session of contextual schema therapy, in the form of an online workshop, and we tested its efficacy via a randomized control trial, with a waitlist control condition. The workshop included 4 modules: safe place imagery, accessing the vulnerable child mode, impeaching the critic mode and prospective imagery for change.

Results. Participants in the experimental group scored lower on the BFNE and AAQ compared to the control group, MANOVA interaction effects $F(1,79; 154) = 11,86$; $p = .000$ - BFNE-II; $F(1,74; 154) = 7,03$; $p = .003$ - AAQ-II. Pairwise comparisons were significant from pre to post-intervention and from pre-intervention to follow-up, $p < 0.001$. Mediation: Total effect, $b = -0.774$, $p = 0.115$, CI $[-9,61; -1,293]$, indirect effect, $b = 0.515$, $p = 0.0009$, CI $[.2253; .805]$, indicating that the effect of group on changes in negative evaluation scores was mediated by changes in experiential avoidance.

Discussion: The online group contextual schema therapy workshop appears to be a feasible and effective intervention for reducing fear of negative evaluation in participants with elevated levels of social anxiety symptoms. Results were also maintained at 2-weeks follow-up. The effect was mediated by changes in experiential avoidance. Future studies should expand these results by using a longer follow-up, employing an active control group, or looking into other mediators (e.g., self-criticism). In conclusion, delivering such short-term, online, interactive and experiential interventions seems to be a promising and acceptable approach. Acknowledgements The current project was supported by Babeş-Bolyai University, grant number GTC 35288/18.11.2020.

Effectiveness and mechanisms of change of two mobile psychological interventions in reducing depressive, anxiety and stress symptoms: PsyPills and online-Contingent attention training (OCAT)

Vasile Sîrbu, Babeş-Bolyai University, Cluj-Napoca, Romania; Oana David, Babeş-Bolyai University, Cluj-Napoca, Romania; Alvaro Sanchez-Lopez, Universidad Complutense de Madrid, Madrid, Spain; Ivan Blanco, Universidad Complutense de Madrid, Madrid, Spain

Introduction: One of the most powerful and successful strategies to regulate distressful mental states is reappraisal. Several conceptualizations and empirical applications have been used in the literature for this strategy. Positive reappraisal is purported to be achieved by recognizing the positive aspects and/or interpreting in a more positive note the meaning of a situation. Here, attention mechanisms are postulated to play a key role by way of disengagement of attentional resources from negative content and engagement with a positive one, stopping negative ruminative processes and allowing thus a focus on positive interpretation to take place. Applying such findings, Online Contingent Attentional Training (OCAT) is an innovative intervention which delivers its content in an accessible app format. Another form of reappraisal is so called functional reappraisal, by which the person is engaging even with a negative emotion, but attempts to gain a more functional perspective of its context (decatastrophization and accepting the situation, allowing for goal directed behaviors). One of the first mental health mobile applications integrating such a strategy in an interactive and personalized format is PsyPills. Following such directions, we aim in our study to investigate the effectiveness of two mobile mental health interventions (mHealth) and the mechanisms of change involved in reducing the symptoms of psychological distress, on an adult population with a mild to moderate level of symptoms (sub-clinical).

Method: The current study is ongoing and is being preregistered with the ClinicalTrials.gov identifier: NCT05294809. The estimated end time is June. The research design will be a 3-arm randomized controlled clinical trial, with 4 waves of data collection. Once selected using a

symptomatic screening questionnaire, eligible participants will be randomly assigned to one of three conditions: 2 experimental conditions (PsyPills and OCAT) and an active control group (shamOCAT). Measurements regarding symptomatic level, affectivity, cognitive processes, emotional regulation, and attentional bias will be collected before allocation (baseline), during the intervention (through an ecological momentary assessment paradigm, EMA), at the end (post) and at an interval of one month after the intervention (follow-up).

Results: We are expecting that intervention conditions will produce a significant decrease in distress symptomatology compared with the control group. The effect of PsyPills intervention in decreasing symptomatology is mediated by irrational beliefs, functional reappraisal, and functional emotions. The effect of OCAT intervention in decreasing DAS symptomatology is mediated by attention regulation, attention bias toward positive emotions, positive reappraisal, positive emotions and rumination. The EMA data will reveal similar relations with those from retrospective questionnaires.

Discussion & Conclusion: This study will contribute to the literature with a more ecological valid evaluation of two mHealth interventions, while maintaining a high standard of validation, comparing it against a placebo control. Moreover, although increasing in popularity among consumers and permeating increasingly the research agenda, studies on mediators in mHealth are scarce. These findings will cast light on the specific processes involved and so contribute to the informed selection of evidence-based interventions components targeted for the relevant problems.

Cultural acceptability of online cognitive behaviour therapy in India during the Pandemic: experiences of therapists & clients

Rati Khurana, Assistant Professor, IILM University, Gurugram, Haryana, India; Nimisha Kumar, Founder President, Indian Association for CBT, New Delhi, India

Introduction: The sudden outbreak of COVID-19 pandemic in March 2020 had forced mental health practitioners to conduct therapy sessions online as the government imposed a country-wide lockdown to manage the pandemic. It was observed that both therapists and clients faced numerous hurdles in adapting to the online mode of psychotherapy ranging from techno-phobia to privacy issues. Further, in the context of huge disparities, the digital divide and lack of infrastructure for online mental health intervention on one hand and acceptability of online intervention on the other came to the fore in a big way.

Method: The current study was a mixed methods study carried out with the objective to understand the factors supporting and limiting the cultural acceptability and adaptability of psychotherapy, particularly CBT delivered in online mode. Another objective was to explore the effectiveness of online CBT in terms of therapist competency (scores on CTRS-R) as well as client outcomes (problem & target ratings). The sample for the study was 15 CBT practitioners and 15 clients who received online sessions of CBT during the COVID-19 outbreak. The qualitative aspect of the study was carried out using semi-structured interviews.

Results: The research highlights important contextual and cultural issues faced by therapists and clients due to online delivery of CBT. Common challenges faced were building rapport and trust over the screen, technological glitches, adapting CBT techniques to online mode of delivery, difficulties in managing emergency cases, and so on. Some positive themes that emerged through a thematic analysis were better accessibility, more flexibility, convenience as well as better control over the session. Interestingly, both therapist competency and client outcomes were not compromised due to the online delivery of CBT.

Discussion and Conclusion: Online therapy seems to have emerged as an effective and convenient option for both therapists and clients during the Covid-19 pandemic in the urban Indian context. Keywords: Online psychotherapy, Cognitive Behaviour Therapy, Experiences, Therapists, Clients, Cultural Acceptability, India

Open Paper Symposium 9

Helping those who help those with dementia

Exploring implicit experiential avoidance in dementia family caregivers

Isabel Cabrera, Universidad Autónoma de Madrid, Madrid, Spain; María Márquez-González, Universidad Autónoma de Madrid, Madrid, Spain; Laura Gallego-Alberto, Universidad Autónoma de Madrid, Madrid, Spain; Laura Mérida-Herrera, Universidad Autónoma de Madrid, Madrid, Spain; Inés García-Batalloso, Universidad Autónoma de Madrid, Madrid, Spain; Andrés Losada-Baltar, Universidad Rey Juan Carlos, Madrid, Spain

Introduction: Dementia caregiving is a chronic stress situation that is associated with a higher probability to suffer from psychological distress (Schulz et al., 2020). Drawing on the stress and coping model, experiential avoidance (EA) has been studied as a modulating variable in the stress process. EA is the unwillingness to engage with unpleasant feelings, thoughts, and physiological sensations, as well as the actions performed to modify these experiences (Hayes et al., 1996), and has been related to anxiety and depression in clinical samples (Chawla & Ostafin, 2007). In dementia family caregivers, EA has been explored with the Experiential Avoidance in Caregiving Questionnaire (EACQ; Losada et al., 2014) and it has been significantly associated with relevant caregivers' psychological variables, such as dysfunctional thoughts about caregiving, alexithymia (Losada et al., 2014) and attentional avoidant biases (Cabrera et al., 2022). However, contrary to what has been found in clinical population, experiential avoidance in caregiving (EAC) does not present a significant association with caregivers' distress (anxiety and depression). Assessment of EA has involved self-report measures, which are susceptible to being influenced by biases and other confounding variables (e.g., limited introspection). However, there may be implicit processes involved in this response style (Chawla & Ostafin, 2007) and the implicit EA has not been analyzed so far. The aims of this communication are to a) present the preliminary data of the validation of the implicit association test (IAT, Greenwald et al., 1998) to measure implicit experiential avoidance and b) explore the relationship between implicit experiential avoidance and clinical relevant variables in the caregiving stress process: anxiety, depression, ambivalence, and explicit EAC.

Method: The IAT used is an adaptation of the IAT that employs behavioral categories of approach and avoidance, instead of an evaluative category (Palfai & Ostafin, 2003). The IAT will explore the relationship between negative and positive emotions and behavioral categories of acceptance and avoidance. The task has a target category that consists of a set of 5 words of negative emotions (e.g., sadness) and 5 words of positive emotions (e.g., happiness). The behavioral category pair comprises 5 acceptance words (e.g., approach) and 5 avoidance words (e.g., reject).

Results: Preliminary results of the implicit experiential avoidance task in 30 family caregivers of individuals with dementia will be presented.

Discussion: Findings will be discussed, comparing the results of the EA measures with the self-report (EACQ) and with the implicit measure (IAT). Conclusion: The implicit assessment of the experiential avoidance with the IAT in dementia family caregivers could provide new perspectives of the clinical implication of this transdiagnostic process.

The moderating role of co-residency with the care-recipient in the longitudinal association between caregivers' leisure and cardiovascular risk.

Carlos Vara-García, Universidad Rey Juan Carlos, Alcorcon, Spain; Rosa Romero-Moreno, Universidad Rey Juan Carlos, Alcorcon, Spain; Samara Barrera-Caballero, Universidad Rey Juan Carlos, Alcorcon, Spain; María Del Sequeros Pedroso-Chaparro, Universidad Autónoma de Madrid, Madrid, Spain; Roland Von Känel, University Hospital Zurich, Zurich, Switzerland; Brent Mausbach, University of California, San Diego, La Jolla, United States; Andrés Losada-Baltar, Universidad Rey Juan Carlos, Alcorcon, Spain

Introduction: Caregiving for a relative with dementia is commonly associated with a higher frailty risk (e.g., higher risk of developing a cardiovascular disease). Objective measures of this worsening of physical health are gradually becoming more common in the literature, such as biomarkers (e.g., C-Reactive Protein, CRP). In addition, researchers and clinicians around the globe focus their interest on protective factors that may be of help for diminishing caregivers' health risk. Such is the case of frequency of leisure activities, which has been associated with lower levels of cardiovascular biomarkers. However, neither of these studies have analyzed if the situation of co-residency with the care-recipient may have an impact on this association. The objective of this study is to analyze the longitudinal association between frequency of leisure activities and plasma levels of CRP in a sample of family caregivers, considering the moderator effect of co-residency with the care-recipient.

Method: 121 caregivers of a relative with dementia were assessed in three time points through a 2-year period (baseline and 1 and 2 year follow-up) about sociodemographic and health-related information (age, gender, kinship with the care-recipient, and body mass index, and longitudinal changes on weekly hours of physical exercise, weekly number of smoked cigarettes, daily hours devoted to care), stressors (longitudinal changes on frequency and stress associated with behavioral and psychological symptoms of the relative with dementia, BPSD) and frequency of leisure activities. In addition, blood extractions were conducted in order to obtain CRP plasma levels. Data analyses were conducted following a mixed-models approach. Frequency of leisure activities, co-residency with the care-recipient and the interaction between these two variables were included as main predictors, with the other assessed variables included as covariates.

Results: Both frequency of leisure activities and the interaction between leisure and co-residency were significant predictors of CRP, suggesting a moderating effect of co-residency in the association between frequency of leisure activities and CRP. When analyzed separately, a higher frequency of leisure activities was significantly associated with lower levels of CRP only in those caregivers not sharing their home with their care-recipient, while this association was not found significant for co-resident caregivers.

Discussion: Our findings suggest that co-residency with the care-recipient moderates the association between frequency of leisure and caregiver's frailty (measured as plasma levels of CRP). These results suggest that a higher frequency of leisure seems to be protective in terms of cardiovascular health when the caregiver does not share its residence with the care-recipient. Conclusion: If confirmed, these results suggest that behavioral activation (i.e., increasing engagement in leisure activities), which is a common therapeutic strategy for dementia caregivers, may be specially recommended for not co-resident caregivers, but additional treatment targets may be necessary for obtaining benefits in the case of co-residing caregivers.

Mechanisms of action of Acceptance and Commitment Therapy for dementia family caregivers: A network analysis

Laura Gallego-Alberto, Universidad Autónoma de Madrid, Madrid, Spain; Inés García-Batallo, Universidad Autónoma de Madrid, Madrid, Spain; María Márquez-González, Universidad Autónoma de Madrid, Madrid, Spain; Isabel Cabrera, Universidad Autónoma de Madrid, Madrid, Spain; Laura Mérida-Herrera, Universidad Autónoma de Madrid, Madrid, Spain; Andrés Losada-Baltar, Universidad Rey Juan Carlos, Madrid, Spain

Introduction: Taking care for a relative with dementia is a stressful situation linked with negative outcomes in caregivers' emotional health. Despite there is evidence of the efficacy of interventions based on Acceptance and Commitment Therapy (ACT) for reducing psychological distress in caregivers (Losada et al., 2015), little is known about the mechanisms of action underlying the efficacy of these interventions. Network analysis (NA) is an analysis tool that represents connections between variables through graphics showing their interconnections in a network structure. For analyzing the effects of psychological interventions, NA has the potential of showing patterns of associations between variables and revealing complex patterns of changes after interventions on that network (Blanco et al., 2020). The objective of the present work was to analyze the topography of changes in psychological variables in family caregivers who participated in an Acceptance and Commitment Therapy.

Method: Ninety-three family caregivers with clinically significant depressive symptomatology participated in the study. Forty-five caregivers were randomly assigned to intervention condition received an eight-week individual ACT intervention, whereas the rest of caregivers were allocated to a control group (CG) and received a psychoeducational talk about dementia of two hours. They were individually assessed at pre-, postintervention, and follow-up in: depressive symptomatology, anxiety, leisure, dysfunctional thoughts, cognitive fusion, and experiential avoidance. A network analysis will be performed for each time of measurement (pre-intervention, post-intervention, and follow-up) and experimental condition (ACT and CG), changes in the network between time assessments will be obtained regarding changes in the network structure, strength of each relationship between variables, and strength of the whole network (global strength or connectivity), using the Network Comparison Test (NCT; van Borkulo et al., 2017). The R studio program will be used for NA analyses.

Results: We expect to find significant changes in the structure of the network for psychological elements associated with participation in the intervention. We expect that experiential avoidance and cognitive fusion will play a substantial role in the expected changes in the network, becoming relevant key variables for explaining ACT effects. In addition, we expect to find differences in the post-intervention networks between experimental conditions, with greater patterns of changes in ACT intervention condition compared to CG condition.

Discussion: Results and clinical implications will be discussed. Conclusion: The findings might be useful to advance our knowledge of potential mechanisms underlying the efficacy of ACT based interventions for dementia family caregivers.

The role of behavioural problems, ambivalence, and positive emotions in quality changes of the relationship between the person with dementia and their caregiver.

Laura Mérida-Herrera, Universidad Autónoma de Madrid, Madrid, Spain; María Márquez-González, Universidad Autónoma de Madrid, Madrid, Spain; Laura Gallego-Alberto, Universidad Autónoma de Madrid, Madrid, Spain; Inés García-Batalloso, Universidad Autónoma de Madrid, Madrid, Spain; María Del Sequeros Pedroso-Chaparro, Universidad Autónoma de Madrid, Madrid, Spain; Isabel Cabrera, Universidad Autónoma de Madrid, Madrid, Spain; Andrés Losada-Baltar, Universidad Rey Juan Carlos, Madrid, Spain

Introduction: Caring for a family member with dementia is a situation of chronic stress that can have an impact on the relationship between the caregiver and the person with dementia. The quality of the relationship may be an important variable in order to understand caregivers' well-being and mental health. Behavioral and psychological symptoms of dementia (BPSD) are related to a lower quality of the dyad relationship. Ambivalent feelings towards the care-recipient and positive emotions have been found to be significant variables in explaining the caregiver's feelings and are also influenced by BPSD. This study aimed to explore caregivers' perceptions of a change in the quality of the relationship with the care-recipient from the time before the diagnosis of dementia to the current moment, and the possible mediating role of ambivalence and positive emotions in the association between caregiver's reactivity to BPSD and the quality of the relationship.

Method: A sample of 315 caregivers was assessed through questionnaires measuring BPSD, ambivalence, positive emotions, and changes in the quality of the relationship. Differences between the three groups of reported caregivers were studied: 1) no change in the relationship, 2) change for the better, 3) change for the worse. Study variables (relationship quality, BPSD, ambivalence, and positive emotions) were analysed using ANOVAs, and a multiple mediation model was tested using the SPSS macro PROCESS.

Results: The results showed significant differences between groups in the variables of reactivity to BPSD and ambivalence depending on the perceived changes in the relationship (higher levels reported by those who perceive a worsening of the quality of their relationship), as well as in positive emotions (higher levels reported by those who report no changes in it). The results also provide support to the mediating role of ambivalence and positive emotions in the relationship between caregivers' reaction to BPSD and the quality of their current relationship. Specifically, caregivers with worse reactions to BPSD also report higher levels of ambivalence ($\beta = .35$), which leads to a lower frequency of positive emotions ($\beta = -.33$). This association is also related to a poorer quality of the relationship between the caregiver and the person with dementia ($\beta = -.50$). The model explained 55% of ambivalence, 52% of positive emotions, and 66% of current relationship quality.

Discussion: Caregiver's reactivity to BPSD seems to be an important variable to understand how the worsening of the perceived quality of the relationship of the caregiver with the care-recipient. In addition, the findings suggest that variables such as ambivalence and positive emotions have a mediating effect on the association between BPSD and the quality of the relationship, and so are relevant to understanding this process.

Conclusion: Management of BPSD should be addressed in interventions with caregivers, as it may help minimize caregivers' emotional ambivalence, increasing their positive emotions. These effects may buffer the impact of the caregiving process on caregivers' perceived quality of relationship with the care-recipient.

Open Paper Symposium 10

Social anxiety in children and adolescents

The Covideo study - a randomized non-inferiority trial of cognitive therapy for youth social anxiety disorder, comparing screen delivery to office delivery in Norway.

Einar Heiervang, Innlandet Hospital Trust, Hamar, Norway; Jo Magne Ingul, Norwegian University of Science and Technology, Trondheim, Norway; Thea Maria Rytterager, Youth Mental Health Norway, Oslo, Norway; Øyvind Sandsether, Innlandet Hospital Trust, Tynset, Norway; Eleanor Leigh, University of Oxford, Oxford, United Kingdom; David Clark, University of Oxford, Oxford, Norway; Gro Janne Wergeland, University of Bergen, Bergen, Norway

Introduction: There is increasing interest into delivering psychotherapy by online video (screen therapy), to make therapy more accessible to youth, to those living in rural areas, and during the recent pandemic. However, there is limited empirical support for screen therapy in youth, and almost none for youth with anxiety disorders. Clinics have seen a steep rise in referrals for social anxiety during and after the pandemic, and are looking for efficient and effective modes of treatment. It is therefore of great importance to investigate if cognitive therapy delivered by screen could meet this need.

Method: An adolescent version of the Clark and Wells manual for social anxiety have recently been developed and showed promising results in case-series and as an online self-help program. The manual specifies 14 sessions of 90 minutes each with attention and security behaviour experiments, videofeedback, attention training, behavioural experiments, and dealing with socially traumatic memories and with worry and post-event processing. Based on power-analysis we plan to include 200 youth age 14-18 years referred to Child and Adolescent Mental Health Services (CAMHS) throughout Norway, allowing for a drop-out of 20%. To achieve this, 20 therapists have been trained and will complete one office and one screen therapy during the pilot phase in 2022. As from January 2023 and for the next two years each therapist will treat 10 cases each. Scores on a social phobia rating scale will be the primary outcome, with diagnostic remission as a secondary outcome. Potential predictors and moderators of outcome will be assessed throughout the duration of the therapies. In separate work-packages user experiences (patient and therapist) and acceptability, as well as health economy aspects, will be examined.

Results: To date two PhD scholarships have been allocated to the study, and a third is being applied for. A study group including a representative from a youth mental health NGO, two international experts from the University of Oxford, and experienced Norwegian anxiety treatment researchers, have met monthly for the past two years. Ethical approval (IRB) has been obtained for the study, and a system for recording of screen therapy sessions with direct safe storage has been tested successfully. All therapy sessions (also office sessions) will be taped; 15% of these will be selected for scoring of therapy competence and manual adherence.

Discussion: This will be the largest and the only sufficiently powered study to date, examining effectiveness, acceptability and health economy for screen therapy in youth. Social anxiety disorder is the most prevalent anxiety disorder in adolescents, and generic cognitive behaviour therapy programs have shown to be ineffective for this condition. Also, with the large increase of referrals to CAMHS following the pandemic, showing the effect of this new manual even for screen delivery is a huge step forward.

Conclusion: The Covideo study represents an excellent international collaboration addressing urgent needs within youth mental health with results expected to have a huge impact on the clinical and scientific field.

Efficacy of diagnosis-specific group CBT treating adolescents with social anxiety: a randomized controlled trial

Thea Agersnap, Department of Psychology and Behavioral Sciences, Aarhus BSS, Aarhus University, Aarhus, Denmark; Johanne Jeppesen Lomholt, Department of Psychology and Behavioral Sciences, Aarhus BSS, Aarhus University, Aarhus, Denmark; Morten Berg Jensen, Department of Economics and Business Economics, Aarhus BSS, Aarhus University, Aarhus, Denmark; Mikael Thastum, Department of Psychology and Behavioral Sciences, Aarhus BSS, Aarhus University, Aarhus, Denmark

Introduction: Social anxiety disorder is one of the most common disorders in adolescence. It is associated with severe distress and negative long-term consequences such as loneliness, school problems, and comorbidity of other anxiety disorders, depression and substance abuse. Along with that, if left untreated social anxiety disorder is associated with chronicity. Generic cognitive behavioral treatment (CBT) are both the best-documented treatment and the recommended treatment for adolescents with anxiety disorder, including social anxiety disorder. However, studies show that adolescents with social anxiety disorder have poorer outcome from generic CBT treatment than adolescents with other anxiety disorders. A few studies points to the suggestion that diagnosis-specific CBT may improve the outcome for adolescents with social anxiety, as it does for adults with social anxiety disorder. Currently a study is comparing diagnosis-specific CBT and generic CBT in an individual format for children and adolescents with social anxiety disorder. Another study revealed that adolescents with social anxiety have comparable results from either individual or group treatment. Therefore, it would be interesting to compare a diagnosis-specific CBT to a generic CBT for adolescents with social anxiety in a group format. To the best of our knowledge no one have made a direct comparison between diagnosis-specific group CBT and generic group CBT in treating adolescents with social anxiety disorder. Therefore, the aim of the study was to compare the effect of a diagnosis-specific group CBT for adolescents with social anxiety disorder with a generic group CBT for adolescents with social anxiety disorder. **Method:** The study was a randomized controlled trial comparing the diagnosis-specific group CBT to a generic group CBT for adolescents with social anxiety disorder. Ninety adolescents aged 12-17 with social anxiety disorder participated in the study. Anxiety Disorder Interview Schedule, a semi structured interview, was conducted with adolescents and their parents at baseline, post treatment and three month after treatment to examine the clinical severity of the adolescent's social anxiety disorder. Along with that, the adolescents and their parents conducted questionnaires at baseline, post treatment, and at three-month follow-up to examine the adolescents' social anxiety symptoms as well as their overall anxiety symptoms, impact on life function and depression symptoms. Multi-Level Modelling will be conducted in the statistical analysis. **Results:** The preliminary findings indicated no significant difference between treatment conditions in clinical severity of social anxiety disorder as well as social anxiety symptoms. However, both the diagnosis-specific group CBT and the generic group CBT reduced severity of social anxiety disorder and social anxiety symptoms significantly post treatment. The results remained and improved further from post treatment to three-month follow-up. The preliminary findings will be presented further. Along with that, the findings will be discussed and compared to other studies.

How does the Norwegian Universal Preventive Program for Social Anxiety (NUPP-SA) work? examining the magnitude of underlying processes.

Tore Aune, The Norwegian Directorate for Children, Youth and Family Affairs, steinkjer, Norway

Introduction: A key objective of intervention studies is to understand the psychological processes through which predictor variables affect the outcome variables. Mediation analysis has been used to examine relations among predictor and outcome variables in studies examining the intermediate effect of for example behavior inhibition, social support, and social self-efficacy (Aune et al., 2021) among individuals suffering from social anxiety disorder (SAD). However, among older children and young adolescents, SAD intervention studies examining intermediate effects have been rarely reported. Applying the Social Phobia and Anxiety Scale for Children (SPAI-C) as the primary outcome measure in a cluster randomized control trial (n = 1,439), Aune and Stiles (2009) demonstrated that the Norwegian Universal Preventive Program for Social Anxiety (NUPP-SA), which is based on a cognitive-behavioral format, showed both a prevention and treatment effect. Assessing the intervention effect both among participants with a pretest score of 18 or higher on the SPAI-C (syndromal) and the total sample revealed an effect size of .21 and .88 for the total sample and the syndromal social anxiety disorder group, respectively. However, no study has been reported examining questions about the mechanism resort to process modeling, empirically estimating and test hypotheses about how the NUPP-SA is working. Previous studies have examined the factor structure of the SPAI-C and suggested three-, four-, and five-factor models. Beidel et al. (1995). A confirmatory factor analysis (CFA), and DSM-5 criteria supported the five-factor structure proposed by Aune et al., (2008) including Assertiveness, Physical/Cognitive Symptoms, Public Performance, Social Encounters, and Avoidance factors or subscales. Although the SPAI-C has been used in many randomized control trials, to our knowledge, no study has reported the specific effects of an intervention on the various characteristics of social anxiety disorder. Furthermore, examining how a prevention intervention program for social anxiety works across those with syndromal and with subsyndromal social anxiety will help dismantle interventions and make them more pinpointed.

Method: All sixth- to ninth-grade older children and young adolescents 11-14 years of age (M = 12.6, SD = 1.1, range 11-15) in two municipalities in the central region of Norway were invited to participate in this study. To assess for mediation, Andrew Hayes' (2018) PROCESS macro for SPSS, version 3.5, was used. Hayes' PROCESS macro employs a regression-based path analysis approach.

Results: For the subsyndromal sample, the NUPP-SA program works significantly through the Assertiveness, Physical-cognitive symptoms, Public performance, and Avoidance factors. In contrast, among the syndromal sample, the NUPP-SA works significantly via assertiveness and avoidance.

Discussion: The data demonstrate that the NUPP-SA program has a significant effect on youth's experience of being assertive. This yield both for the population-based sample and for the SAD syndromal sample. Contrary to our expectations, the NUPP-SA works differently, in some ways, across the two samples. **Conclusion:** While the NUPP-SA seems to work more broadly for the subsyndromal sample, a more specific impact seems to emerge for the syndromal sample. The findings will be discussed further in will be seen in the context of treatment and prevention.

A feasibility and a subsequent evaluation study on the outcomes in children after engagement in an individualized, group-based social skills training

Julia Offermans, UvA minds and the Research Institute of Child Development and Education at the University of Amsterdam, Amsterdam, Netherlands; Rebecca Van Der Hout, UvA minds, Amsterdam, Netherlands; Esther De Bruin, UvA minds and the Research Institute of Child Development and Education at the University of Amsterdam, Amsterdam, Netherlands; Bonny Van Steensel, The Research Institute of Child Development and Education at the University of Amsterdam, Amsterdam, Netherlands

Social skills are learned behaviors that enable one to effectively initiate or respond to social interactions (Merrell & Gimpel, 2014). Children with social skill impairments might experience various difficulties (e.g., rejection by peers) that may lead to internalizing and/or externalizing problems (e.g., Shin et al., 2016). Group-based Social Skills Training (SST) has been developed to prevent and/or decrease such negative outcomes. However, these interventions have generally been moderately effective (e.g., de Mooij et al., 2020). Possible explanations include a lack of generalization (i.e., targeted social skills are not transferred to daily practice), as well as program content not matching individual social skill needs (e.g., Maag, 2006). In study A, we aimed to examine whether an individualized, group-based SST – following a Cognitive Behavioral Therapy-based, semi-structured protocol allowing children to work on personal goals – is a feasible program for children with social skill deficits. Participants were 33 children aged 7 to 11 years, referred to an academic treatment center for various psychological problems, as well as 33 mothers and 31 fathers. We used a mixed-methods design combining a top-down approach (i.e., researcher-chosen measures, including treatment adherence and questionnaires on social skills and problem behavior filled out by children and parents at pre- and post-test) and a bottom-up approach (i.e., participant-driven measures, including ratings of personal goals by children and parents at pre- and post-test, and reports of program evaluation interviews with parents at post-test). Results indicated high treatment adherence for both children and parents. After the SST, personal goals, social skills, and problem behavior improved (large, small, and small effects respectively). Evaluation reports mainly showed improvements in social responsiveness, emotion regulation, and internalizing problems. At the same time, however, most parents also reported limitations (e.g., a lack of generalization). These findings reflect the potential of individualized interventions, as well as individualized intervention research. Nonetheless, more research is needed. Based on the findings of study A, we are currently conducting an evaluation study into the effects of this group-based, individualized SST (study B). Again, we are combining a top-down and bottom-up approach. This time, to the top-down approach, we are adding questionnaires for emotion regulation next to those for social skills and problem behavior, which are completed by children and parents at waitlist, pre-test, post-test, and 3-month follow-up. The bottom-up approach consists of weekly ratings of personal goals by children, parents, and teachers during baseline, an intervention phase, and two different follow-up phases. By using this Multiple Case Experimental Design for the bottom-up approach, participants function as their own controls. Through comparing measurement occasions between and within phases, we aim to get a better insight into the effects of the SST, as well as trajectories of changes in children. Next to the findings of study A, we will present the preliminary results of study B. The latter will include data of five children, aged 8 to 12 years, referred to the same academic treatment center as in study A, as well as their parents and teachers. Clinical implications will be discussed.

Open Paper Symposium 11 Bringing CBT to schools

Improving effectiveness of CBT for adolescent anxiety in community clinical care: an evaluation of RISK, an exposure-focused CBT with parent and school involvement

Thomas Bertelsen, Sørlandet Sykehus, Kristiansand S, Norway; Gro Janne Wergeland, Haukeland University Hospital, Bergen, Norway; Tine Nordgreen, Haukeland University Hospital, Bergen, Norway; Joseph Himle, University of Michigan, Michigan, United States; Åshild Tellefsen Haaland, Sørlandet Sykehus, Kristiansand, Norway

Introduction: Although cognitive-behavioral therapy (CBT) is an effective treatment for adolescents with anxiety disorders, the majority remain impaired following treatment. We developed a group CBT program (RISK) with high degrees of exposure practice and family and school involvement delivered in a community-based setting and investigated its effectiveness.

Method: The treatment involved adolescents (N = 90), with a primary diagnosis of anxiety disorder (82%) or obsessive-compulsive disorder (18%), and their families who received 38 hours of group treatment over 10 weeks. Diagnostic status and symptom severity were assessed at pre- and post-treatment, and a 12-month follow-up and benchmarked against previous effectiveness studies, which involved both children and adolescents.

Results: Our results showed that, at post-treatment, the RISK-treatment was comparably effective as benchmarks on measures of diagnostic status, parent-rated measures, adolescent-rated measures, and clinician-rated measures. At 12-month follow-up all outcomes were superior to benchmarks, including the proportion of participants in remission (79.5%, 95% Highest Posterior Density Interval [74.7, 84.2]), indicating that the RISK-treatment enhanced effectiveness over time.

Discussion: The improved effectiveness at 12-month follow-up was in line with expectations that increasing exposure practice and involving school personnel and parents would enhance treatment outcomes. That the treatment did not outperform benchmarks at post-treatment may be understood in light of a higher age in the current sample than benchmark and a high proportion of social phobia as primary anxiety disorder.

Conclusion: The combination of group format, a high degree of exposure practice, and school and family involvement is a promising format for real-world settings that may help sustain and increase treatment effectiveness.

How to implement school based cognitive behavioral therapy for youth anxiety at all schools in a municipality.

Experiences from the implementation process.

Åshild Håland, Sørlandet hospital, kristiansand, Norway; Thomas Bertelsen, Sørlandet hospital, kristiansand, Norway; Lina Beisland, Sørlandet hospital, kristiansand, Norway; Lene Holmen Berg, Sørlandet hospital, kristiansand, Norway

Introduction: Currently, it is of great concern that most anxious youth worldwide, including Norway, do not often receive evidence-based treatment in the primary health services. Although research shows that different types of school-based CBT programs for anxiety have an effect, dissemination of the programs to ordinary practice has had limited success (Werner-Seidler et al, 2017). Although the school is considered a good arena to implement evidence-based low-threshold interventions, such interventions are generally not implemented or implemented unsuccessfully (Fixen et al, 2005). The authors of a recent systematic review and meta-analysis of school-based depression

and anxiety prevention programs, calls for research studying what facilitates successful and sustained implementation on targeted prevention for mental health problems in schools. Werner-Seidler et al, 2017). To improve reach, coverage and the sustainability of school-based interventions for anxiety, there is a need for more knowledge about factors that facilitate successful implementation of CBT interventions for anxiety in a school setting. The current project is an ongoing implementation project between Department of Children and Adolescent Mental Health (ABUP) at Sørlandet hospital and a municipality in Southern Norway where CBT school-based groups (Mini-RISK) for anxious youth are implemented at all 47 schools in the municipality. Preliminary clinical experiences of the implementation of Mini-RISK groups among intervention providers, among municipal management in schools and health service will be presented in the open paper.

Method/discussion To date, 70 public health nurses and school social workers from the municipality are trained/in training in delivering Mini-RISK for anxious youths. Mini-RISK are now available at 35 out of 47 schools in the municipality. From 2020-2023, approximately 100 group leaders will have completed the training. Mini-RISK is a 15 hours school-based group CBT intervention developed at ABUP for youth anxiety led by two group leaders, primarily a public health nurse and a school social worker. The high degree of exposure practice as well as involvement of parents and teachers is unique in Mini-RISK/RISK. Mini-RISK is a short-version of an intensive multifamily outpatient RISK group at the hospital where most adolescents were free of all anxiety diagnoses one year after treatment (Bertelsen et al, 2022, in review). The open paper presentation are based on experiences from the project period where the first author, as project leader, was close to the Mini-RISK providers, municipal management and principals at schools. Preliminary experiences on the implementation process, will be also be addressed.

Conclusion: The experiences so far has already given us useful knowledge about what promote and inhibits the implementation of Mini-RISK. Gaining more knowledge about the implementation process will increase the likelihood that the intervention will be sustained after the project period ends.

Developmentally oriented brief cognitive therapy for adolescent SAD for use in schools: development and case series

Klaus Ranta, Tampere University, Tampere, Finland; Siiri Lampinen, Tampere University, Tampere, Finland; Jaakko Monthan, Tampere University, Tampere, Finland; Jaana Minkkinen, Tampere University, Tampere, Finland; Mauri Marttunen, University of Helsinki, Helsinki, Finland

Introduction Social anxiety disorder (SAD) typically onsets in adolescence (1) affecting 3-9 % of adolescents (2). It frequently leads to functional impairments in social relationships and in school, and associates with an elevated risks of depression and educational underachievement in adulthood (3). Disorder-specific cognitive therapy (CT) and cognitive-behavioural therapy (CBT) are effective for SAD (4). Research indicates that generic CBT may be less effective for SAD than disorder-specific CBT among adolescents (5). Meta-analyses suggest that further developmental modification and/or treatment delivery in ecological contexts such as school might enhance treatment efficacy (6, 7). As CT/CBT often is 12-16 sessions in length, a question arises of its applicability in public services (8), let alone in primary level services. Method Building on components included in effective SAD treatments in adolescents (9-11) and analysis of Finnish primary service delivery model (12) we constructed a pilot development model of brief CT for use among adolescents with SAD in schools:

Developmentally Oriented Cognitive Therapy for SAD in adolescents (DOCT-SAD). The DOCT-SAD is a 10-session, combined individual-group intervention based on key CT and CBT intervention modules (9-11) for SAD in adolescents. Modules informed by developmental science were added into DOCT-SAD, including salient processes and themes related to adolescents' socio-emotional and cognitive development (13). Specifically, cognitive modules take in account development of self-image in adolescence (14) and its centrality for SAD (15), while partial group delivery format will enhance peer support (16). We describe the development of model and results from pilot case development series of DOCT-SAD among 12-to15-year-old adolescents. DOCT-SAD was delivered by Masters' level clinical psychology students, trained and supervised by a cognitive therapy trainer. We report descriptive characteristics, variables related to identification of SAD in the schools, symptom and clinical characteristics of adolescents at baseline, preliminary feasibility, and pre-post symptom change after intervention using frequencies, mean scores, symptom change scores and recovery/remission rates.

Results Ten adolescents (90 % girls, 10 % boys) with mean (SD) age of 13.8 (0.9) years were treated in two groups. Identification of SAD in the schools by school psychologists using a brief checklist was fairly accurate, lower among other professionals. Two initial and two mid-treatment DOCT-SAD sessions were individual, six sessions were in group. Parents attended two individual sessions. At baseline all adolescents had SAD, with frequent anxiety disorder comorbidity. The mean (SD) baseline SPIN total score was 42.5 (11.0), mean (SD) baseline safety behaviour severity, assessed with SAFE total score was 66.8 (23.3). Initial feasibility reports by adolescents were positive. We will report full feasibility and pre-post symptom change and recovery / remission rates from treatment endpoint in June 2022.

Discussion SAD is undertreated in adolescents. Therefore, brief CT interventions are needed for use in primary services. Our preliminary findings suggest that SAD can be identified in the schools relatively reliably. Developmentally informed DOCT-SAD seems promise as a feasible intervention and merits further clinical examination. Conclusion Brief interventions for SAD delivered in schools may offer promise as early interventions for SAD in adolescents.

Mindfulness to foster healthier ways of responding to negative and positive feelings among adolescents: a cluster-randomised controlled trial in secondary schools.

Liesbeth Bogaert, KU Leuven, Leuven, Belgium; Katleen Van Der Gucht, KU Leuven, Leuven, Belgium; Peter Kuppens, KU Leuven, Leuven, Belgium; Merle Kock, KU Leuven, Leuven, Belgium; Filip Raes, KU Leuven, Leuven, Belgium

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 feelings. 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 stress, anxiety and sadness) 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 and express negative emotions.

Method: By means of a cluster-randomized controlled trial (expected end: May/June 2022), the impact of an 8-week in-class MT, delivered at secondary schools, was examined (intervention vs. control group; expected sample size: ncontrol = 130 and nintervention = 90). Adolescents (15-18 years) of both groups participated in three assessment points (before, immediately after and three months after intervention), consisting of self-report and Experience Sampling assessments. Analyses will be based on general linear modelling and multilevel mixed effects modelling.

Results: Data analyses have not been conducted yet as the final round of data collection is still ongoing. The expected end data of data collection is May 2022/June 2022. All required analyses will be conducted before the conference takes place. A short overview of the expected results is provided instead. First, MT is expected to significantly reduce levels of stress, anxiety, depressive symptoms and anhedonia. Second, lower levels of suppression/non-acceptance of negative emotions, lower levels of dampening of positive emotions, and less perceived social pressure not to experience/express negative emotions are expected to explain the beneficial effects of MT on emotional distress and anhedonia.

Open Paper symposium 12

ADHD

ADHD: Medication or meditation. Results of a randomized controlled trial

Esther I. De Bruin, University of Amsterdam, Amsterdam, Netherlands; Renee Meppelink, University of Amsterdam, Amsterdam, Netherlands; Brett Kosterman Zoller, University of Amsterdam, Amsterdam, Netherlands; Frans Oort, University of Amsterdam, Amsterdam, Netherlands; Susan Bogels, University of Amsterdam, Amsterdam, Netherlands

Introduction: Attention-Deficit-Hyperactivity-Disorder (ADHD) is one of the most common childhood disorders, with a prevalence of 5% in the general population. Medication is often the treatment of choice, as it currently is most effective. However, medication takes only short-term effects, treatment adherence is often low and most importantly; medication has serious side effects. Therefore, there is a need for other psychological interventions for children and adolescents with ADHD. Mindfulness Training is emerging as a potentially effective training for children and adolescents with ADHD. The aim of this study is to compare the effectiveness of mindfulness training to the effectiveness of methylphenidate in an RCT in children with ADHD and their parents, on measures of attention, hyperactivity/impulsivity.

Method: A multicentre and multi-informant RCT with two follow-up measurements was used to measure the effects of mindfulness training versus the effects of methylphenidate. Participants were children and adolescents of both sexes diagnosed with ADHD, referred to urban and rural (academic) treatment centres. Participants were between 9 and 18 years old. In total 94 participants were included. The mindfulness training was conducted in small groups, and consists of eight weekly 1.5-hour sessions. Parents followed a parallel mindful parenting training. Short-acting methylphenidate was administered individually and monitored by a child psychiatrist.

Results: The results for the first follow up have been finalized. Due to restrictions in regards to journal publication, they cannot be provided in the abstract. Findings from the second follow up are currently in process, but will be completed during the time of the congress. The question of short-term and long-term comparison between medication and mindfulness on subjective and objective measures will be answered during the presentation.

Discussion: Results of this study will inform mental health care professionals and health insurance companies about the clinical effectiveness of mindfulness training for children and adolescents with ADHD and their parents compared to the effectiveness of methylphenidate.

Conclusion: Due to restrictions in regards to journal publication, this cannot be provided in the abstract.

Treating parental stress levels of parents of children with ADHD with mindfulness for parent and child versus treatment through child medication

Brett Kosterman, University of Amsterdam, Amsterdam, Netherlands; Susan Bögels, University of Amsterdam, Amsterdam, Netherlands; Esther De Bruin, University of Amsterdam, Amsterdam, Netherlands

Introduction: Parental stress has been described as resulting when the demands of parenting exceed the resources of a parent (Abidin, 1990). While parenting in itself can be challenging, child neurodevelopmental disorders often add to the demands placed on parents. In this study, we look at the effects of an 8 week mindfulness course in reducing parents' stress levels when raising a child with Attention-Deficit-Hyperactivity-Disorder (ADHD), a disorder with a prevalence of 5% in the general population. Specifically, we look at parents and children treated with an 8 week mindfulness course in comparison to families in which the ADHD diagnosed child is treated with methylphenidate.

Method: A multicentre RCT with a post-test and two additional follow-up measurements was used to measure the effects of mindfulness training for both the parent and child versus the effects of methylphenidate usage exclusively by the child. Participants were parents of children and adolescents (ages 9 to 18) of both sexes diagnosed with ADHD, referred to urban and rural (academic) treatment centres. In total 126 parents were included. The mindfulness training was conducted in small groups, and consists of eight weekly 1.5-hour sessions. Children also followed a parallel mindfulness training. Short-acting methylphenidate was administered individually and monitored by a child psychiatrist.

Results: The results for the post test and two follow ups are being finalized, but will be completed before the time of the congress. The question of comparison between the effects of medication and mindfulness in families on parental stress will be answered during the presentation.

Discussion and Conclusion: Results of this study will inform mental health care professionals and health insurance companies about the clinical effectiveness of mindfulness training for parents of children and adolescents with ADHD and their parents compared to the effectiveness of stress levels for parents of children treated with methylphenidate.

Can ADHD criteria be advantageous to the individual depending on environmental factors?

Elizabeth Ekman, Kognitiv Beteende Terapi i VS AB, Stockholm, Sweden; Carolina Lundqvist, Lindköping University, Lindköping, Sweden

Introduction: Hallowell and Ratey's suggested in 1994 that an ADD (today ADHD) personality is characterized by several positive traits like high energy, creativity, intuitiveness, resourcefulness, tenacity, hardworkingness, a never-say-die approach, warm-heartedness, a trusting attitude, a forgiving attitude, sensitivity, ability to take risks, flexibility, and a good sense of humor. The Adult ADHD Self-Report Scales (ASRS), are commonly used to facilitate diagnosis. The ASRS are mainly focused on difficulties and reveal limited information about the individual's subjective experiences of the ADHD criteria. Previous research indicate that athletes can score high on ASRS criteria in school, while at the same time score low in their sport activity. The purpose of our study was to explore if athletes subjectively can experience the ASRS criteria to be advantageous to their sports activity. Question of interest was if it is plausible that some individuals scoring high on ASRS experience some criteria as beneficial in settings like sports and can develop functional abilities (e.g., staying active as well as focused, social abilities like being talkative and loyal, ability to relax and slow down when needed).

Method: Participants were 109 athletes (age range: 16-19 years) enrolled in Swedish national sports talent programs. An experienced psychotherapist performed all interviews with athletes. Data analyzes were performed by use of theory-led thematic analysis and involved four main stages: detailed reading of the data, identification of initial themes, refinements of themes, and clustering of themes also based on the ASRS results, into categories seen as common problems in ADHD. Analyses were performed by two researchers (i.e., the first author and a pediatrician) which both had a specialization in ADHD.

Results: The findings show several ASRS criteria to be experienced as advantageous by athletes. High energy (81.9%) was perceived as beneficial by the highest percentages of athletes, but also hyper focus/focus attention, (68.1%), and patience endurance and meticulous (58.3%). Ability to unwind, calm down (45.8%) and social ability and patience (33.3%) were expressed as highly valued. Discussion: Can future studies investigating if main criteria in ADHD can be perceived as an advantage and if environmental factors can influence development of abilities are encouraged.

Conclusion: In conclusion, the results show that the ADHD criteria, as assessed by the ASRS, to be experienced as more advantageous than disadvantageous for athletes' achievements in sports. Criteria like the ability to hyper focus, high energy, persistence, not giving up, and endurance are of particular interest for this population as these are abilities that are necessary for achieving success in sports. It is possible that the sports environment and coaches provide well-needed structure to athletes. Structure in combination with social competence needed to interact with coaches and teammates could help athletes to develop functional strategies and abilities also transferable to other life-areas like school, work and academic achievement. The criteria for ADHD have varied throughout the centuries and are today mainly focused on disadvantages. The present study reveals that several ADHD criteria can be perceived advantageous in sports

Open Paper symposium 13 Perinatal mental health

Imagining a novel future: how thinking about the future can help reduce women's experience of pregnancy related anxiety and prepare them for parenthood.

Linda Mortimer, Goldsmiths University of London, London, United Kingdom; Lorna Goddard, Goldsmiths University of London, UK

Introduction: Pregnancy is for many women a time of happiness and joy, as they look forward to the birth of their baby. However, for some, it signals a time of adjustment to new demands that can result in increased levels of worry and stress. For example, there is a growing body of evidence that shows an association between high maternal stress during pregnancy and premature birth, lower birth weight, smaller infant head circumference, and subsequent impaired cognitive development (Huiznik et al, 2004). Understanding factors that contribute to and maintain pregnancy related anxiety is therefore vital for developing much needed interventions which could enhance the wellbeing of mother and child, especially for nulliparous women. The current study examines how nulliparous women think about the future and aims to identify qualities of future thinking associated with anxiety before and after birth.

Method: Seventy nulliparous women imagined their impending labour and the birth of their baby and early parenthood, simulating the steps involved in as much detail as possible. They rated their anxiety for these events both before and after simulating. Simulations were also rated for various qualities; these included the degree of vividness, detail and amount of sensory imagery; the extent to which they anticipated positive and negative emotions and had previously simulated events. Generalised anxiety was assessed with a self-report mood questionnaire, (the GAD-7, Spitzer et al., 2007), whilst pregnancy related anxiety was assessed with the PRAQ (Huiznik et al, 2004). The same women were followed up after birth and asked to rate the degree to which their previous simulation matched their actual experience of birth and early motherhood.

Results: Results showed that anxiety ratings for birth and early motherhood significantly reduced after simulating. Moreover, greater simulation detail was related to a greater reduction in childbirth anxiety as measured by the PRAQ, while frequency of previous simulation and positive expectations about early parenthood were related to reduced GAD-7 scores. Results from the follow-up revealed that accuracy of simulation during pregnancy was a significant predictor of adjustment to parenthood.

Discussion: In this study we explored how thinking about the novel and highly personal event of childbirth and early parenthood can reduce both pregnancy specific anxiety and anxiety more generally. We also examined how the qualities of future thinking of a novel event are related to anxiety about childbirth and early parenthood, and general anxiety. The act of simulating the future decreased anxiety across the different events, supporting previous research that suggests simulating the future can help us regulate our emotions and manage any anxiety we may be experiencing about that future (Jing et al., 2016).

Conclusion: Our findings suggest that pregnancy-specific interventions that focus on future thinking may be helpful in facilitating women's adjustment to not only the demands of pregnancy but also early motherhood.

Fear of childbirth, nonurgent obstetric interventions, and new-born outcomes: a randomized controlled trial comparing mindfulness-based childbirth and parenting with enhanced care as usual

Irena Veringa, University of Amsterdam, Amsterdam, Netherlands; Esther De Bruin, University of Amsterdam, Amsterdam, Netherlands; Francisca J.a. Van Steensel, University of Amsterdam, Amsterdam, Netherlands; Susan M. Bögels, University of Amsterdam, Amsterdam, Netherlands

Introduction: The World Health Organization (WHO) has asked for a reduction in the use of nonurgent obstetric interventions during childbirth such as self-requested cesarean birth (sCB). sCB is strongly associated with fear of childbirth (FOC). Although CB can be an obstetric necessity, it is not risk-free. The risk of severe acute maternal morbidity is five times higher with CB than with vaginal births and having had a previous CB increases the risk for morbidity in ongoing pregnancy by three times. Children born by CB have an increased risk of allerge-immunological problems, asthma, and obesity. Additionally, untreated FOC is a risk factor for traumatic childbirth and pregnancy specific anxiety including fear of birth, and it is associated with impaired neuro-emotional development in newborns caused by high levels of maternal cortisol. Reducing FOC may reduce nonurgent obstetric interventions.

Objective: To investigate whether mindfulness-based childbirth and parenting (MBCP) or enhanced care as usual (ECAU) for expectant couples decreases FOC and nonurgent obstetric interventions during labor and improves newborn outcomes. Methods: Pregnant women with high FOC (n = 141, and their partners) were recruited from midwifery settings in the Netherlands during April 2014-July 2017. Researchers conducted a randomized controlled trial where participants were allocated to MBCP or ECAU. Hierarchical multilevel and intention-to-treat (ITT) and per-protocol (PP) analyses were conducted. Main outcome measures are: Primary: pre-/postintervention FOC, labor anxiety disorder, labor pain (catastrophizing and acceptance), and preferences for nonurgent obstetric interventions; and secondary: rates of epidural analgesia (EA), self-requested cesarean birth (sCB), unmedicated childbirth, and 1- and 5-minute newborn's Apgar scores.

Results: MBCP was significantly superior to ECAU in decreasing FOC, catastrophizing of labor pain, preference for nonurgent obstetric interventions, and increasing acceptance of labor pain. MBCP participants were 36% less likely to undergo EA (RR 0.64, 95% CI [0.43-0.96]), 51% less likely to undergo sCB (RR 0.49, 95% CI [0.36-0.67]), and twice as likely to have an unmedicated childbirth relative to ECAU (RR 2.00, 95% CI [1.23-3.20]). Newborn's 1-minute Apgar scores were higher in MBCP (DM -0.39, 95% CI [-0.74 to -0.03]). After correction for multiple testing, results remained significant in ITT and PP analyses, except EA in ITT analyses and 1-minute Apgar.

Discussion: Until now, only cognitive behavioral therapy reduced the use of nonurgent obstetric interventions during childbirth in pregnant women with high FOC. MBCP is the first effective non-psychological intervention in reducing FOC, catastrophizing labor pain, preferences for nonurgent obstetric interventions, and rates of self-requested CB, and in increasing acceptance of labor pain, and unmedicated childbirth. The study's strengths include: the use of a study protocol, corroborative ITT and PP analyses, adjustment of P-values for multiple testing to decrease type 1 errors and blinding of the outcome assessor to group allocations.

Conclusions: Our findings suggest that offering MBCP to pregnant women suffering from high FOC and their partners is effective in decreasing FOC and nonurgent obstetric interventions such as sCB, and substantially increasing unmedicated childbirths. MBCP appears an acceptable and effective intervention for application in non-clinical settings such as midwifery care.

Mindful awareness as a mechanism of change for unmedicated childbirth in pregnant women with high fear of childbirth: a randomised controlled trial

Irena Veringa, University of Amsterdam, Amsterdam, Netherlands; Kelly Ziemer, University of California-Berkeley, Berkeley, United States; Ed De Bruin, University of Amsterdam, Amsterdam, Netherlands; Esther De Bruin, University of Amsterdam, Amsterdam, Netherlands; Susan M Bögels, University of Amsterdam, Amsterdam, Netherlands

Introduction: Mindfulness-Based Childbirth and Parenting (MBCP) is effective in increasing unmedicated childbirth in pregnant women with high fear of childbirth (FOC) as compared to enhanced care as usual (ECAU). We aimed to examine through which pathway of action MBCP reaches this effect, based on a model of approaching or avoiding the challenges related to childbirth.

Method: One hundred eleven pregnant women with high FOC were measured pre- and post intervention on several pathways: FOC (emotion pathway), catastrophic beliefs about labour pain (cognition pathway) and mindful awareness (attention pathway). A multiple mediation model was used to examine through which pathway the mechanism of change operated in relation to approach (i.e., unmedicated childbirth) versus avoidance (i.e., self-requested caesarean section (sCS)). These outcomes were operationalized into a gradient of childbirth mode using an ordinal scale consisting of five categories, with higher numbers indicating childbirth with more advanced obstetric interventions: 0 = unmedicated (natural) childbirth as birth without any obstetric interventions; 1 = spontaneous childbirth with some obstetric intervention (e.g., augmentation with oxytocin or assisted delivery) not including epidural analgesia (EA); 2 = spontaneous childbirth with EA; 3 = childbirth with obstetric indication for CS made during childbirth; and 4 = childbirth by sCS.

Results: It was found that greater mindful awareness (18% R² = 0.18, F[1,107] = 22.77, p < 0.0001) was the only significant mechanism of change operating through the attentional pathway leading to unmedicated childbirth. More specifically, nonreactivity to inner experience (a facet of mindful awareness) showed to be the strongest mechanism of change. More extensive meditation practice was positively associated with unmedicated childbirth; however, the number of completed MBCP sessions was not associated with the outcome.

Discussion: The aim of this study was to clarify how participation in an MBCP program could lead to an unmedicated childbirth in pregnant women with high FOC. For this purpose, we examined three pathways of action that would operate with adaptation to childbirth through unmedicated childbirth: emotion (FOC), cognition (catastrophic beliefs about labour pain) and attention (mindful awareness). Our results showed that MBCP increases unmedicated childbirths through an increase in mindful awareness, and in particular, nonreactivity to inner experiences. Neither a decrease in FOC nor catastrophic beliefs about labour pain were found to be mechanisms of change. In addition, unmedicated childbirth was positively associated with minutes of meditation practice. The more one meditated, the more one was inclined towards an unmedicated childbirth and vice versa. No relation was found between the attendance to MBCP sessions and unmedicated childbirth. **Conclusion:** Cultivation of greater mindful awareness, and more specifically nonreactivity to inner experience, in pregnant women with high FOC during the nine-week MBCP program appears to be a mechanism of change leading to unmedicated childbirths and less use of obstetric interventions, such as sCS. These findings have implications not only for birthing women but also for healthcare providers and policymakers. Several recommendations for future study include: a replication study to confirm our findings and recruitment of a larger and more heterogenous sample.

Open Paper symposium 14

Rumination and repetitive negative thinking 1

The mediating role of thought control between repetitive negative thinking and psychological distress

Ceren Gökdağ, Manisa Celal Bayar University, Manisa, Turkey; Servet Kaçar-Başaran, Pamukkale University, Denizli, Turkey

Introduction: Repetitive negative thinking (RNT), as an umbrella concept of the combination of rumination and worry, is defined as persistent and intrusive cognitive activity, including negative thoughts and scenes. RNT is a transdiagnostic factor strongly associated with many psychological problems such as depression, anxiety disorders, OCD, eating problems, and substance use (Ehring & Watkins, 2008). According to the Self-Regulatory Executive Function model (Wells & Matthews, 1996) and the avoidance theory of worry (Borkovec et al., 2004), how people approach or deal with RNT (e.g., their metacognitive beliefs and their attempts to control thoughts) can determine the link between RNT and psychopathology. McEvoy et al. (2013) showed the relationships among RNT and some thought control strategies such as punishment, worry, social control, and reappraisal. No study, however, has not empirically demonstrated the pathways of RNT, thought control, and psychopathology symptoms. This study aimed to investigate the mediating roles of thought control strategies in the relationship between RNT and psychological distress.

Method: A total of 453 adults (84% female; M= 26.01, SD= 8.46 of age) answered the Turkish versions of the Repetitive Thinking Questionnaire-10 (Kaçar-Başaran et al., in preparation), the Thought Control Questionnaire (Yorulmaz & Gençöz, 2008), and the Depression Anxiety and Stress-21 (Sarçam, 2018). We used a multiple mediation model in PROCESS MACRO (Hayes, 2017).

Results: Pearson correlation results showed that RNT was positively related to worry and punishment strategies and psychological distress, negatively related to distraction and social control subscales of the Thought Control Questionnaire. The multiple mediation analysis demonstrated that the direct effect of RNT on psychological distress was significant, B= .76, SE= .05, t= 16.39, p< .001. The total indirect effect was significant, B= .19, SE= .03, %95 BCa CI (.14 - .25). All specific indirect effects except reappraisal were also significant. Comparing these effects, the strongest indirect effect was those of punishment, B= .12, SE= .03, %95 BCa CI (.07 - .18).

Discussion: The findings replicated the crucial importance of RNT for emotional symptoms. Moreover, the supported hypothesis indicated that thought control strategies have mediating roles in the relationship between RNT and psychological distress. Especially punishing oneself after repetitive thinking might bring along emotional symptoms. This result is consistent with previous findings indicating the role of punishment as a maladaptive thought strategy for developing psychological disorders (e.g., Fehm & Hoyer, 2004; McEvoy et al., 2013). Thought control efforts fail because of not fully possible; this situation continues the threat of thoughts and causes distress.

Conclusion: In conclusion, the mediating role of thought control in the association between RNT and distress highlights the importance of the cognitive process. Cognitive-behavioral therapy and third-wave therapies (e.g., acceptance and commitment therapy, mindfulness-based therapy) can help people by teaching them how to deal with thoughts adaptively.

Assessing the short-term effects of detached mindfulness: a micro-intervention for repetitive negative thinking

Teresa Bolzenkoetter, Freie Universitaet Berlin, Berlin, Germany; Ulrike Zetsche, Freie Universitaet Berlin, Berlin, Germany; Lars Schulze, Freie Universitaet Berlin, Berlin, Germany; Babette Renneberg, Freie Universitaet Berlin, Berlin, Germany

Introduction: Ruminating and worrying too much is often reported by individuals suffering from psychological disorders. These thinking patterns can be subsumed under the term of repetitive negative thinking (RNT). RNT is defined as repetitively thinking about something negative and experiencing these thoughts as intrusive and difficult to disentangle from (Ehring & Watkins, 2008). RNT is about the “how” of the thinking (i.e., the process), rather than the “what” (i.e., the content). RNT predicts the onset and persistence of different psychological disorders such as depression or anxiety disorders (Ehring & Watkins, 2008; Struijs et al., 2021; Spinhoven, Drost, Rooij, Hemert, & Penninx, 2016). Therefore, RNT has been described as a transdiagnostic risk factor for mental health (Wahl et al., 2019). The idea of specifically intervening on observable and changeable processes has become more present in recent years (compare process-based therapy; Hayes, Hofmann, & Ciarrochi, 2020). One intervention that explicitly tackles RNT as a transdiagnostic process is metacognitive therapy (Wells, 2011). While preliminary evidence shows that metacognitive therapy as a multi-component intervention can be helpful (Normann & Morina, 2018), less is known if its individual components are effective in themselves. Therefore, we aim to investigate if the metacognitive technique “detached mindfulness” can be helpful as a stand-alone intervention in reducing RNT and improving affect.

Method: We are conducting an experience sampling study in participants with high levels of trait RNT. The study comprises two phases: a baseline phase and an intervention phase. During the 5-day baseline phase, participants rate their momentary levels of RNT and affect multiple times per day. During the 5-day intervention phase, participants additionally engage in either a detached mindfulness or an active control intervention.

Results: Data collection ends in May. At the conference, we will present data on the effectiveness of detached mindfulness as a stand-alone intervention and its feasibility in the form of a smartphone-based micro-intervention that is integrated into daily life. Discussion: Based on the findings, we will discuss the effectiveness of detached mindfulness as a stand-alone intervention and what these results imply for metacognitive therapy as a multi-component intervention. Further, we will discuss whether the daily life micro-intervention was feasible for participants and how our results can inform further studies or interventions that might also integrate micro-interventions.

Conclusion: Conclusions will be formed based on the results and under the light of current theory of metacognitive therapy. First, we expect our findings to extend our knowledge about the effectiveness of detached mindfulness. These findings could also impact how metacognitive therapy is used in clinical practice. Secondly, we expect our findings to inform about the feasibility of micro-interventions. If found to be feasible and effective, this and similar interventions could function as a low-threshold and low-cost intervention that individuals could perform on their own and without the supervision of a therapist.

Repetitive thinking mediates the relationship between neuroticism and depressive symptoms

Servet Kaçar-Başaran, Pamukkale University, Denizli, Turkey; Ceren Gökdag, Manisa Celal Bayar University, Manisa, Turkey

Introduction: Major Depressive Disorder (MDD), or depression, is a globally-prevalent mental health problem. Along with being a common disorder, since it includes the possibility of chronicity, the risk of suicide, and the impairment of functioning, prevention, identification, treatment, and defining the risk factors of depression are essential. It is known that many risk factors play a role in the onset of depressive symptoms, such as neuroticism (APA, 2013). Accordingly, the previous research suggested positive and significant associations between depressive symptoms and the level of neuroticism (e.g., Kaçar-Başaran & Arkar, 2022). Another concept that is thought to form depressive symptoms effectively is repetitive thinking. Worry and rumination are the two most frequently researched types of repetitive thinking (McEvoy et al., 2013). Studies revealed the close relationship between rumination, worry, and depressive symptoms (e.g., Papageorgiou & Wells, 2003; Şenormancı et al., 2013). Taken together, the available research suggests a mediational model in which neuroticism is associated with rumination and worry, which in turn is related to symptoms of depression. To date, there is some evidence for this mediational model in undergraduates (Muris et al., 2005), adolescents at risk for depression (Kuyken et al., 2006), and in clinically depressed individuals (Roelofs et al., 2008). However, the researchers stated that these findings should be tested in different cultures as well. Therefore, this study aimed to examine the mediating role of repetitive thinking between neuroticism and depressive symptoms in a sample diagnosed with MDD in Turkey.

Method: The sample consisted of 140 (74.3 % female) participants with MDD, which was considered according to an expert psychiatrist’s diagnosis/prediagnosis and relevant evaluations in line with the Structured Clinical Interview for DSM-5 Disorders (SCID-5). The participants did not have any psychiatric diagnosis other than MDD and completed the Short-Form Five-Factor Personality Inventory Emotional Instability Dimension (Tatar, 2016), Repetitive Thinking Questionnaire (McEvoy et al., 2010; Gülüm & Dağ, 2012), and Beck Depression Inventory (Beck, 1961; Hisli, 1988; 1989) in a quiet room after the clinical interview.

Results: According to the results, correlations between all scales were significant ($p < .01$). The mediation analysis demonstrated that repetitive thinking mediated the relationship between neuroticism and depressive symptoms $B = .14$, $SE = .04$, %95 BCa CI (.07 - .24).

Discussion: The present findings again emphasize the importance of neuroticism and repetitive thinking in the occurrence of depressive symptoms in Turkish clinically depressed patients. Neuroticism is also a risk factor for the emergence of repetitive thinking. Although this research was conducted only on depression, this model can be tested in different psychopathologies due to the transdiagnostic nature of neuroticism and repetitive thinking.

Conclusion: In conclusion, depression treatment can focus on strategies specifically designed to change ruminative responses and worry. These strategies can be incorporated into standard CBT for depression, such as a rumination-focused cognitive behavioral therapy program developed by Watkins et al. (2007).

Risk and protective factors of relapse in remitted patients. Ecological dynamics of emotion regulation use predict long-term symptoms in one year follow up after discharge

Teresa Boemo, Complutense University of Madrid, Madrid, Spain; Ivan Blanco, Autonoma University of Madrid, Madrid, Spain; Gonzalo Hervas, Complutense University of Madrid, Madrid, Spain; Alvaro Sanchez-Lopez, Complutense University of Madrid, Madrid, Spain

Introduction: The use of different emotion regulation (ER) strategies is purported to have differential effects on cognitions, emotions, and behaviors occurring in daily functioning and may reflect distinct risk and protective factors for different forms of affective psychopathology. The use of novel evaluation methodologies, such as experience sampling methods (ESM), allows us to understand how ER strategies are used in response to different contextual and motivational factors in daily life. These methodologies have rarely been applied in patients in remission of anxiety and/or depression disorders, which are problems typically characterized by forms of emotion dysregulation. The application of ESM has thus the potential to analyze how dynamics of ER use after discharge act as ecological predictors for the development of psychopathology after psychological treatment (relapse). In this study, we thus assessed the dynamics of use of different ER strategies that occur in patients' daily lives during remission and their relation to patients' long-term relapses across a 1-year follow-up after remission.

Method: Forty-two remitted patients who originally presented clinical symptoms of depression and anxiety disorders during treatment were derived to complete a 2-week ESM protocol and then 6 follow-ups (one each 2 months) across one year, after clinical discharge. The 14-day ESM protocol comprised 3 daily assessments per day of the momentary use of ER strategies in response to stress (rumination, avoidance, and positive reappraisal). Follow-ups were then conducted every two months for one year, including indicators of clinical relapse in depression and anxiety problems. Metrics on ER dynamics were extracted from the ESM protocol (mean, SD – variability-, and Root Mean Square of the Successive Differences (RMSDD) – instability) were considered as predictors of depression and anxiety relapses across the full year, using Logistic Regression Models.

Results: Results showed that the percentage of patients who relapsed across the 1-year 2-month follow-ups increased over time. The period with larger number of new relapses was at follow-up 3 (6 months after discharge), where it was found that 47% and 26% of the patients already showed relapses in depression and anxiety problems, respectively. We found that average daily use of rumination and the instability in the use of avoidance after remission both predicted higher numbers of relapses (Estimate= 1.46, $p=.006$, and Estimate= 0.24, $p=.005$, respectively). Furthermore, average daily use of positive reappraisal after remission predicted lower number of relapses across the 1-year follow-up (Estimate= -0.45, $p=.02$).

Discussion: These results highlight the importance of focusing on daily life ER dynamics to comprehend the factors involved in affective symptomatology and relapse risk after remission. The differential role of rumination and reappraisal use, as well as avoidance instability, could be used to generate new guidelines of relapse prevention, targeting these ER processes after discharge.

Conclusion: This study emphasizes the relevance of systematizing continuous ecological evaluations of patients' affective experience after remission through different methodologies (ESM and follow-up), as this may serve to achieve new fine-grained models and clinical strategies of relapse prevention.

Links between within-day event controllability, situational inferences, emotion regulation, and symptoms of depression

Noa Avirbach Shabat, The Hebrew University of Jerusalem, Jerusalem, Israel; Nilly Mor, The Hebrew University of Jerusalem, Jerusalem, Israel

Introduction: The way people react to negative life events affects how they regulate their emotions in response to events, as well as their well-being. One typical form of cognitive reaction involves inferring causes and consequences of these negative events. People who are characterized by a negative inferential style tend to assign internal, stable and global causes to negative life events, and infer negative consequences and characteristics of the self from the occurrence of these events. According to the hopelessness theory of depression, a negative inferential style is a risk factor for developing depression (Abramson et al., 1989). Until now, causal inferences were mostly investigated as a cognitive response style that puts people at risk for emotional disorders (Liu et al., 2015). However, causal inferences may fluctuate and vary across events in one's daily life. The current research had three aims: 1. to examine whether features of daily events (i.e., the degree to which they are perceived as controllable) affect the causal inferences people make for events; 2. to assess whether negative inferences are associated with emotion regulation strategy use, and in particular whether negative inferences are associated with rumination, reappraisal, behavioral disengagement, and problem-solving; 3. to investigate the moderating effect of depression on links between perceptions of events, inferences people make for the events, and the strategies they employ to regulate their emotional response to the events.

Method: Undergraduate students ($N = 113$) completed a two-week diary measure, in which they reported on negative events five times throughout each day. At the end of each day, they reported, for the two most negative events of the day, their perceived event controllability, causal inferences, use of emotion regulation strategies (i.e., rumination, reappraisal, behavioral disengagement, and problem-solving) and affect.

Results: We found that event controllability was associated with negative inferences, and that this relationship was stronger in higher levels of depressive symptoms. We also found that while in lower levels of depression making negative inferences increased the likelihood of engaging in brooding, in higher levels of depression this relationship was stronger. Furthermore, only in higher levels of depression **negative inferences also decreased the likelihood of engaging in reappraisal.**

Discussion: The results demonstrate that event controllability and situational inferences play an important role in the process of emotion regulation and dysregulation in every-day life. Our results further suggest that negative inferences may be more maladaptive for people with depression than for non-depressed people.

Conclusion: Overall, the current work emphasizes the importance of assessing causal inferences as situational, rather than trait-like, responses to daily stressors. This approach enables a glimpse at daily psychological processes that can improve our understanding of the emergence of depression. Research using ecological, real-life study designs will deepen our comprehension of the dynamics of cognitive and emotional reactions to daily events and psychopathology.

Disentangling the relationship between personality and emotion regulation in depression: an insight into the protective role of intra- and interpersonal emotion regulation

Desiree Colombo, Instituto Polibienestar, Valencia University, Valencia, Spain; Maja Wrzesien, Instituto Polibienestar, Valencia University, Valencia, Spain; Rosa Maria Baños, Valencia University, Valencia, Spain

Introduction: So far, a growing body of research has supported the association between personality traits and mental health. Among others, neuroticism and extraversion has received increasing attention. While high neuroticism is considered a risk factor for psychopathology, extraversion has been suggested as a protective factor for mental health, being associated with higher levels of psychological well-being (Uliaszek et al., 2010). These associations have been shown to be mediated by emotion regulation skills (Paulus et al., 2016; Pocnet et al., 2017), as well as individual differences in strategy use (Yoon et al., 2013). However, whether emotion regulation also moderates the association between personality traits and mental health is still unknown. The aim of this study was to disentangle the potential moderating role played by emotion dysregulation in the association between neuroticism, extraversion and depression.

Method: 576 individuals (285 m/ 290 f) with a mean age of 26.7 (SD=9.2; min=18, max=75) were surveyed using the Patient Health Questionnaire-9 (PHQ-9) for the assessment of depressive symptoms, the Difficulties in Emotion Regulation Scale (DERS) for measuring emotion dysregulation, and the NEO Five-Factor Inventory (NEO-FFI) to assess neuroticism and extraversion. Moderation models were examined using the PROCESS macro for SPSS (version 23, model 1) (Hayes, 2012).

Results: Neuroticism was positively associated with both depressive symptoms ($r=.634, p<.001$) and emotion dysregulation ($r=.713, p<.001$), whereas extraversion showed a negative correlation with depression ($r=-.304, p<.001$) and emotion dysregulation ($r=-.349, p<.001$). Interestingly, emotion dysregulation was found to moderate the association between neuroticism and depression (total model: $R^2=.473, F(3, 572) = 172.03, p<.001$; interaction: $B=.0034, 95\% CI [.0021, .0047], p<.001$). At low levels of emotion dysregulation, neuroticism had a weaker impact on depressive symptoms, whereas the association was stronger at high levels of emotion dysregulation. Regarding extraversion, the analysis showed a significant moderation effect between extraversion and depression (total model: $R^2=.394, F(3, 572) = 124.20, p<.001$; interaction: $B=-.0037, 95\% CI [-.0054, -.0019], p<.001$). At low levels of emotion dysregulation, extraversion failed to impact depression; while at high levels of emotion dysregulation, extraversion had a stronger negative impact on depressive symptoms.

Discussion: According to the literature, neuroticism and extraversion are considered risk and protective factors for mental health, respectively. In this study, we showed that emotion regulation skills might actually moderate this association. First, our findings show that owning adequate abilities to regulate emotions might lower the impact of neuroticism on depression vulnerability. Second, extraversion seems to be a protective factor against depression especially in individuals with high emotion dysregulation, who might fail to regulate emotions intrapersonally and benefit more from sociability and warm interpersonal relationships to regulate emotions and maintain psychological well-being.

Conclusion: Intrapersonal and interpersonal emotion regulation skills play a key role for mental health. Promoting these abilities could represent an important protective factor against depression, especially in subjects with high levels of neuroticism.

Intra-individual mechanisms of positive affect regulation deficits in depression: an experience sampling study

Ana Mar Pacheco-Romero, Universidad Complutense Madrid, Madrid, Spain; Oscar Martin-Garcia, Universidad Complutense Madrid, Madrid, Spain; Ricardo Rey-Saez, Universidad Complutense Madrid, Madrid, Spain; Teresa Boemo, Universidad Complutense Madrid, Madrid, Spain; Carmelo Vazquez, Universidad Complutense Madrid, Madrid, Spain; Alvaro Sanchez-Lopez, Universidad Complutense Madrid, Madrid, Spain

Introduction: Decreased levels of positive affect (PA) are a hallmark of depression. Current models propose PA deficits would be the result of a dysfunctional use of positive emotion regulation (ER) strategies (i.e., high use of dampening, low use of positive rumination), relying on a maladaptive activation of emotional preferences (EP, i.e., what people want to feel). Yet the role of these mechanisms in PA deficits in depression remains understudied. The aim of the current study was to broaden our understanding of these processes as they ecologically occur in daily life. An ESM protocol was conducted, testing if momentary EP influence the subsequent ER of positive emotions, and if these mechanisms are affected by depression symptomatology levels.

Method: A hundred and thirty-five undergraduate students with varying levels of depression symptoms completed a ten-day ESM study, assessing within-person changes in positive EP, use of ER strategies and PA levels three times per day. First, we tested the direct effect of EP and the use of ER strategies (i.e., positive rumination and dampening) on subsequent PA levels, as well as the direct effect of EP on subsequent ER strategies' use. Then, we analysed the moderating role of depression symptomatology levels in these models. Multilevel regression analyses to test these models were conducted using Mplus.

Results: Analyses supported significant direct effects of positive EP levels ($\beta = 0.11, p = .001$), use of dampening ($\beta = -0.13, p = .001$) and use of positive rumination ($\beta = 0.50, p = .001$) on subsequent PA levels. Positive EP levels predicted subsequent use of positive rumination ($\beta = 0.11, p = .001$) but not subsequent use of dampening. Depression symptoms only moderated the association between positive rumination and subsequent PA ($\beta = 0.20, p = .001$), evidencing the protective role of positive rumination among depressed individuals. Further, higher levels of depression symptoms were related to lower general PA ($\beta = -0.40, p = .001$) and higher overall use of dampening ($\beta = 0.30, p = .001$), but had no direct effects on positive EP nor in positive rumination use.

Discussion: These findings show that a motivation to feel positive emotions and the use of dampening and positive rumination influence moment-to-moment changes in PA during daily life functioning. Interestingly, a higher momentary use of positive rumination led to higher levels of PA, specifically for individuals with higher levels of depression symptoms. EP and dampening modulated PA similarly across all individual levels of depression. These findings inform on specific cognitive-affective mechanisms of positive ER that may be relevant to integrate in interventions aimed to counteract PA deficits in depressed individuals.

Conclusion: Daily fluctuations in PA seem to be related to differential use of EP and ER strategies. These findings cast light on the individual mechanisms involved in PA deficits in depression symptomatology.

Using the person-based approach to optimise an app-based behavioural activation intervention for adults with depression.

Jeffrey Lambert, Department for Health, University of Bath, Bath, United Kingdom; Zoe Anchors, Department for Health, University of Bath, Bath, United Kingdom; Paul Stallard, Department for Health, University of Bath, Bath, United Kingdom; Alice Pitt, Avon & Wiltshire Mental Health Trust, Bristol, United Kingdom; Colin Greaves, University of Birmingham, Birmingham, United Kingdom

Introduction: Behavioural Activation (BA) delivered via an app may be an effective and accessible way to reduce depressive symptoms in adults. However, a lack of acceptability and engagement in such apps may reduce their ability to improve outcomes. The person-based approach (PBA) involves collecting comprehensive feedback from potential users of the app. We aimed to use the PBA to improve the acceptability and engagement of an app based on behavioural activation for adults with elevated depressive symptoms.

Method: We recruited 16 adults with elevated depressive symptoms from the community. In study 1, nine participants took part in a think-aloud interview, where they provided feedback on the app in real-time. We tabulated findings and modified the app using criteria for prioritising changes. In study 2, we asked seven participants to use the modified app for two-weeks. After two-weeks, we interviewed participants about their experiences of using the modified app. We also held two patient and public involvement (PPI) meetings. One PPI meeting helped us plan the study, and one helped us interpret the findings.

Results: In study 1, participants identified two 'must have' changes, which were deemed critical to ensure the app aligned with the core values of BA. Specifically, participants were having problems planning and breaking down activities. We modified the app based on these findings ahead of study 2. In study 2, participants identified the following barriers: lacking visual engagement, tone and framing of the difficulty rating. Positives from both studies included: interface usability, having a clear rationale, examples of activities and progress and self-reflection features.

Discussion: The PBA provided in-depth insight allowing us to make key modifications concerning the acceptability and engagement of the app. We now plan to conduct a feasibility study to explore feasibility, acceptability, recruitment, retention and fidelity.

Conclusion: The PBA is a useful approach to refining mental health apps to make them more acceptable and engaging. This approach may be useful for other researchers when developing mental health apps.

Open Paper Symposium 16 Specific Phobias

ArachnophobiaRelief: A gamified spider app to reduce spider fear and avoidance

Anke Haberkamp, Philipps-University Marburg, Marburg, Germany; Tim-Uwe Romonath, Philipps-University Marburg, Marburg, Germany; Philipp Schmidt, Justus-Liebig-University Giessen, Giessen, Germany

Introduction: Tablets and smartphones are playing an increasingly important role in psychotherapy research. Various apps have been developed for treating anxiety disorders. Typically, they aim to improve anxiety symptoms via established CBT techniques, such as exposure. Since exposures are often considered very unpleasant for fearful individuals, we developed an App - ArachnophobiaRelief - that combines exposure with gamification elements (e.g. narrative background, level progression, points, and feedback) to increase motivation and decrease experienced distress.

Method: We tested a first version of our Spider App in a validation study with two groups of spider-fearful individuals, either playing our app or a non-spider associated app twice a day for about 12 min for 7 days. In an ongoing RCT, we combine one-session exposure-based therapy with the application of ArachnophobiaRelief to test whether spider-fearful individuals show an additional benefit. The validation study is already published, the RCT was preregistered via ClinicalTrials (NCT04423783). After we finished data collection, we plan to make ArachnophobiaRelief available to other researchers.

Results: The validation study demonstrated that spider-fearful individuals playing the app showed less avoidance behavior towards spiders (measured via behavioral avoidance test with a living spider; BAT) and lower anxiety of spiders (measured via spider fear questionnaire; SPQ) compared to individuals playing the control app. Criteria for clinical improvement were met by 17 % of the experimental group for behavioral avoidance and by 20 % for spider fear. First results from the RCT replicate the findings of the validation study. In addition, combining our app with an one-session exposure treatment further decreased avoidance behavior and spider fear. Notably, for behavioral avoidance, the effect was not stronger for our app compared to a non-spider associated app. However, spider fear was decreased more strongly when combining our app with exposure treatment compared to the control app.

Discussion: We discuss our findings with respect to treatment efficacy, participant's evaluation of the therapy and our app ArachnophobiaRelief. Additionally, we discuss implications for clinical practice.

Conclusion: Introducing gamification elements in digital interventions is a promising approach to increase patient's motivation, not only in the treatment of anxiety but also in other disorders. This has the potential to decrease attrition rates from psychotherapeutic interventions. We consider our app a useful tool to study these effects. However, further research on the optimal integration of gamification elements into digital interventions is necessary.

Machine learning prediction of exposure treatment response in patients with spider phobia based on clinical and neurofunctional data

Joscha Böhnlein, Institute for Translational Psychiatry, University of Münster, Münster, Germany; Elisabeth J. Leehr, Institute for Translational Psychiatry, University of Münster, Münster, Germany; Nils R. Winter, Institute for Translational Psychiatry, University of Münster, Münster, Germany; Kevin Hilbert, Department of Psychology, Humboldt-Universität zu Berlin, Berlin, Germany; Fabian Seeger, Department of Psychiatry, Psychosomatics, and Psychotherapy, Center for Mental Health, University Hospital of Würzburg, Würzburg, Germany; Ulrike Lueken, Department of Psychiatry, Psychosomatics, and Psychotherapy, Center for Mental Health, University Hospital of Würzburg, Würzburg, Germany; Udo Dannlowski, Institute for Translational Psychiatry, University of Münster, Münster, Germany

Introduction: Exposure therapy is the gold standard for the treatment of anxiety disorders, showing high effectivity of up to $d=1.3$. However, about half of the patients do not respond sufficiently. With the help of prediction approaches of therapy response using machine learning, we may stratify patients to the right treatment and thus improve these rates. Several data modalities have been examined as basis for such approaches to reach both high accuracy rates and clinical practicability, the two most promising being sociodemographic and

clinical data on the one hand and neurofunctional data like resting-state data on the other. In the presented project, we used both of these approaches to allow for a comparison of their usefulness and accuracy.

Method: In a bicentric study on patients with spider phobia as a model anxiety disorder, symptom severity was assessed with a behavioral avoidance test and the Spider Phobia Questionnaire at three times: Before a one-session virtual reality exposure treatment, after the treatment, and at a six-month follow-up. Additionally, a resting-state fMRI paradigm was conducted, and demographic and clinical data was assessed before the treatment. Because of different inclusion criteria, the sample size was $n=174$ for the clinical and demographic data prediction and $n=190$ for the neurofunctional data prediction. The samples of both sites were first combined and then, in a second approach, the sample of one site was used as an out-of-site replication sample for the other and vice versa. For both data bases we used a state-of-the-art machine learning protocol (Random Forests) to predict treatment response both directly after and six months after treatment. As neurofunctional data, we used region-to-region correlation matrices of the resting-state activity at pre-treatment.

Results: The treatment was highly effective in reducing behavioral avoidance and subjective fear of spiders both short- and long-term with response rates of 55.8% and 77.3%, respectively. Despite the fact that we only conducted a one-session exposure treatment, response further improved significantly from post-treatment to 6-month follow-up. We could predict short-term treatment response based on clinical and demographic data significantly above chance in the combined sample; however, neither long-term prediction based on these data nor prediction based on resting state (irrespective of the time point) did achieve accuracy rates significantly above chance. An out-of-site replication was also unsuccessful.

Discussion: The results suggest that easily obtainable data like questionnaires might surpass neurofunctional data as a basis for ML prediction in some cases. However, even these prediction models lack clinical utility at this point, given that accuracy rates were just exceeding chance level and an out-of-sample replication failed. We will present preliminary data with machine learning approaches combining the two data modalities.

Conclusion: Our study shows that one-session exposure treatment is effective in treating patients with spider phobia. Furthermore, it acts as proof-of-principle that this treatment response is predictable with the means of machine learning.

Testing your fear behaviour after a brief intervention for spider phobia is crucial for treatment success

Jacqueline Peters, University of Amsterdam, Amsterdam, Netherlands; Anna I. Filmer, University of Amsterdam, Amsterdam, Netherlands; Johnny B. Van Doorn, University of Amsterdam, Amsterdam, Netherlands; Vivian M. Metselaar, University of Amsterdam, Amsterdam, Netherlands; Renee M. Visser, University of Amsterdam, Amsterdam, Netherlands; Merel Kindt, University of Amsterdam, Amsterdam, Netherlands

Introduction: Influential theories suggest that exposure therapy changes fear-relevant cognitions by challenging maladaptive expectations, whereas affective changes follow later. During exposure treatment, a novel, fear-inhibiting memory trace is putatively formed, which competes with the original fear memory that can resurface over time. This may explain why numerous individuals relapse. A promising alternative to exposure treatment is memory reconsolidation interference, which is thought to change fear memories through a fundamentally different mechanism: instead of forming a new inhibitory memory, it targets the (affective value of the) fear memory itself, and thereby directly reduces avoidance behaviour when confronted with the feared situation. Memory reconsolidation interventions include a brief 'exposure' to the feared situation, which aims at reactivating the established fear memory, causing it to return into a labile state during which it can be targeted with the noradrenergic beta blocker propranolol. 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 brief exposure to 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). It was the aim of this double-blind study to conceptually replicate Soeter and Kindt's findings regarding the effectiveness of a memory reconsolidation intervention for spider fear, extending it to individuals who meet the DSM-5 diagnostic criteria for spider phobia. Further, we aimed to assess whether cognitive changes in self-reported spider fear automatically follow the treatment, or whether re-encountering the feared situation to test fear behaviour after disrupting reconsolidation is necessary. If so, we aimed to test whether there is a time-limited window after treatment during which cognitive changes can be triggered.

Method: In this pre-registered study, 69 individuals with spider phobia underwent a brief ~3-min exposure to a tarantula, followed by a pill of propranolol or placebo. Participants' self-reported spider fear was monitored for three months. In two groups (Propranolol and Placebo), participants returned for their post-assessment involving spider behavioural approach tasks to test fear behaviour two days after treatment, whereas participants in a third group received propranolol and returned for their post-assessment after four weeks (PropranololDelayed). Spider fear and avoidance behaviour was re-assessed at the 3-month and 1-year follow-up.

Results: Results showed that while there is a differential effect in spider approach behaviour, the strong and lasting decline in self-reported spider fear did not differ between the propranolol and placebo group. Strikingly, self-reported spider fear in the PropranololDelayed group decreased significantly less than in the other two groups and remained higher over the course of three months even after their delayed post-assessment.

Discussion: We found a strong fear reduction after a brief exposure to a tarantula in the propranolol and placebo group. Self-reported spider fear was more sensitive to expectancy effects than avoidance behaviour. Testing one's fear behaviour shortly after treatment seems necessary to initiate a meaningful decline in fear.

A validation study of innovative methods to measure interpretation biases in acrophobia

Beray Macit, Ruhr University Bochum, Department of Clinical Psychology and Psychotherapy, Mental Health Research and Treatment Center, Bochum, Germany; Felix Würtz, Ruhr University Bochum, Department of Clinical Psychology and Psychotherapy, Mental Health Research and Treatment Center, Bochum, Germany; Shari Steinman, West Virginia University, Department of Psychology, Morgantown, United States; Armin Zlomuzica, Ruhr University Bochum, Department of Behavioral and Clinical Neuroscience, Mental Health Research and Treatment Center, Bochum, Germany; Jürgen Margraf, Ruhr University Bochum, Department of Clinical Psychology and Psychotherapy, Mental Health Research and Treatment Center, Bochum, Germany; Marcella Woud, Ruhr University Bochum, Department of Clinical Psychology and Psychotherapy, Mental Health Research and Treatment Center, Bochum, Germany

Interpretation biases (IBs) play an important role in the etiology and maintenance of anxiety symptoms and disorders, respectively. IBs imply that disorder-relevant stimuli are dominantly processed as threatening, which, in turn, can trigger anxiety. IBs are therefore crucial

therapeutic targets in cognitive behavioral therapy. To improve existing treatment approaches, it is important to further specify our knowledge about IBs. IBs have been extensively studied in various anxiety disorders; however, in acrophobia, there is not much research yet on neither the nature of IBs nor their link to anxiety. As such, the present online validation study aimed to develop innovative methods to measure IBs validly and reliably in the context of acrophobia. We included a sample with varying levels of acrophobia (i.e., with low, moderate, and high symptom scores) using the Acrophobia Questionnaire (AQ; Cohen, 1977). To assess IBs, we developed three different tasks in which participants are asked to interpret acrophobia-relevant stimuli: a word-sorting task (Scrambled Sentences Task, SST) and two scenario tasks (Encoding Recognition Task, ERT; Heights Interpretation Questionnaire-German, HIQ-G). Data collection just finished and the sample includes a total of N = 298 participants. At this very moment we are preparing and running the data analyses. Using correlational analyses, we will first examine convergent validity, i.e., the relationship between levels of acrophobia and IBs, using the respective IB measures (SST, ERT, HIQ-G). In addition, we will examine the correlation among the three IB measures, and will also examine their internal consistency. Finally, regression analyses will be run to further specify and nuance the predictive validity of the assessed IBs. This presentation will summarize the main findings and will embed them into the broader literature on IBs in the context of anxiety. In addition, we would like to give an outlook on how IBs could be modified using Cognitive Bias Modification training techniques in clinical samples, e.g., as an adjunct to exposure therapy.

Open Paper Symposium 17

Digital training and interventions

Learning diagnostic skills online – Evaluation of a blended learning course in a multicenter randomized controlled trial

Gabriel Bonnin, Department of Clinical Child and Adolescent Psychology, Ruhr University Bochum, Bochum, Germany; Svea Kröber, Department of Clinical Child and Adolescent Psychology, Ruhr University Bochum, Bochum, Germany; Silvia Schneider, Department of Clinical Child and Adolescent Psychology, Ruhr University Bochum, Bochum, Germany; Ruth Von Brachel, Department of Clinical Child and Adolescent Psychology, Ruhr University Bochum, Bochum, Germany

Introduction: Clinical diagnoses determine if and how therapists treat their patients (Jensen-Doss & Weisz, 2008; Pogge et al., 2001). As misdiagnoses can have severe adverse effects (Margraf & Schneider, 2016; Merten et al., 2017), teaching evidence-based diagnostic skills during undergraduate, graduate, and postgraduate training of future clinical psychologists is highly important. The aim of our project was to improve teaching by developing a large set of high-quality videos with diagnostic interviews with trained actors. Together with introductory information and expert videos these were integrated into a blended learning course.

Method: The blended learning course consisted of an asynchronous online course (8 sessions) and synchronous face-to-face sessions (3 sessions). The online course included educational videos as well as sequences with simulated diagnostic interviews, provided with explanations and interactional elements, such as questions and automatic feedback. In the synchronous sessions participants could discuss questions about the online content with a teacher and apply their skills in role plays with their fellow students. The blended learning course was evaluated in a randomized-controlled trial at three universities in Germany (Ruhr-University Bochum, Philipps-University Marburg, University of Cologne). A total of 350 undergraduate psychology students were included in the study and randomly assigned to either the blended learning course or a synchronous university course parallelized in content. The primary outcome was the performance in a diagnostic interview with an actor, secondary outcomes consisted of a test on diagnostic knowledge as well as evaluation of the course and attitudes towards evidence-based assessment. To test whether students were equally good in administering a diagnostic interview after taking the blended learning course compared to students who took part in the synchronous course a noninferiority-analysis was conducted.

Results: At present, data collection is completed, and data analysis is well advanced. We will present the final results at the congress. Regarding the primary outcome preliminary analyses with 302 coded interviews (N=337) are reported here: A binomial logistic regression was performed to determine the effect of teaching condition (blended learning vs. synchronous) on the performance in a diagnostic interview. Teaching condition contributed significantly ($p = .004$) in predicting interview performance: The participation in the blended learning course had a positive effect, increasing the likelihood of passing the diagnostic interview, OR = 2.78 (95%-CI[1.41, 6.92]). Furthermore, multiple regression analyses showed that students participating in the blended learning course showed significantly higher diagnostic knowledge scores ($\beta = 0.134$, $p = .038$) and evaluated the course better on several evaluation instruments. There were no differences regarding the acceptance of evidence-based assessment between the two conditions.

Discussion: The findings will be discussed and compared with results of other studies. Furthermore, we will outline our future plans to disseminate the open access blended learning course to other universities or institutions of tertiary education in Germany.

Conclusion: We are convinced, that innovative teaching methods like our blended learning course will improve the diagnostic training of students, better prepare them for clinical practice and thus make an important contribution in improving patients' healthcare.

On-line psychoeducation: Could a 30-day challenge based on CBT improve mental health?

Renata Mello, Cognitiva: Renata Borja, Belo Horizonte, Brazil

Introduction: Western societies have increasingly valued effectiveness, competence, results and personal success as goals to fulfil. Very few people manage to balance their time, dedication, efforts, emotions and assertive thoughts to connect various areas of life. During the pandemic, stress situations increased and emotional inability, everyday distractions, as well as a lack of organization, planning and strategic vision have worsened. Therefore, to help people to become more functional and more assertive it is necessary to create a new understanding of the world and behaviors to cope with life situations. This work aims to show the viability of the application of CBT concepts in an online course for mental health support.

Method: Bibliographic research, online apps, online surveys. The analysis was held on qualitative and quantitative methods

Results: This research showed a significant improvement in changing habits, and emotional assertiveness. Almost 90% of people who completed all tasks or a lot of tasks answered that the challenge helped them a lot or extremely. The online Videos and tasks helped promote psychoeducation, emotional management and social connection. Cognitive mistakes (Freeman & Dewolf, 1992; Beck, 2014) were pointed out to assist in recognizing when and how often they are made, and consequently to help in dealing and avoiding these errors. The participants showed an overall improvement in mental health, including in unexpected areas such as bereavement.

Discussion: The advances in technology have change people's habits. The excessive use of social media has isolated people and cause hindrance to their lives. Young people are more connected virtually than physically which has been worsened by the pandemics. Some damaging behaviors such as procrastination, worry, compulsion, impulsiveness, and avoidance are far more common than ever. Mello (2017) in her research about success beliefs and behaviors in different generations saw that the younger groups had a self-perception as

less successful, capable, self-confident, and happy than the older generations. On the other hand, older people showed themselves to be more resilient, less pessimistic, less overall worried and less fearful of failure, which contributes to and is expressed in physical and emotional health. The younger generation is more familiar with digital tools, but also more impatient wanting very fast results, which causes vulnerability. This work was developed in an attempt to use digital tools to help people instead of hurting them.

Conclusion: This work shows that an online course with tasks can provide therapeutic benefits in preventive mental health. Moreover, digital tools can be used outside of private practice individually or in training groups with students, executives, and athletes or any other person/group of people who want to improve results in productivity, organization, changing habits to reach goals in a balanced and functional way. Not only does it empower people to find and fight against their dysfunctional thoughts but also helps them to plan their lives and to find balance in different moments and difficult situations.

Comprehensive digitally native services provide a digital ecology in which data can be used to develop more effective psychological assessments and interventions: a service-based case study

Frank R. Burbach, Healios, UK

Introduction: This paper explores how the 'digital ecology' created within comprehensive interconnected digital services can drive innovation in mental health (MH) services, the development of more efficient clinical pathways and the implementation of more effective CBT-based therapies. Digitally-native services which were set up to be remote, utilising apps and other digital technology from the outset, are ideally placed to develop a range of digital tools and approaches which utilise the insights from the 'active ingredients', 'feedback informed', 'data informed' and 'core processes' approaches.

Method: This service based case study will illustrate the potential benefits of digital innovations in mental health care by using examples from Healios, a digital service which offers a unique range of interconnected online assessments and interventions. Based on a foundation of digital routine outcome measurement (ROMs) Healios is developing new digital assessment procedures and personalised care, as well as digital training and service improvement initiatives, which illustrate some of the particular advantages offered by digital mental health. The digital ecology includes the following features: Secure specialist online clinical delivery platform and video link; CBT-based interactive therapeutic materials; mobile phone app; online screening & assessment. Interconnected digital clinical pathways (allowing clients to move between digital assessments and interventions) which have been successfully integrated with NHS services. Participation of the family/support network in clinical sessions (the Triangle of Care). Integrated clinical and service satisfaction outcome measures which allow seamless and efficient capture of ROMs; increasing capture of process data.

Results: The paper will describe and evaluate a number of innovative digital services and initiatives: Remote multi-disciplinary working & liaison. Multiple data sources/ triangulation; potential integration of wearable data Prediction of complex cases and development of more efficient clinical pathways. Development of new specialist autism assessments. Development of more personalised care: ROMs, feedback informed treatment & precision care?. Development of CBT-based interventions which complement videoconferencing CBT Emerging evidence for these interventions (service evaluations- ROMs; service user feedback) Multi-modal therapy- integrating video, text and app based approaches (CBT-Bytesize)

New digital cognitive remediation packages? Digital approach to training, supervision & quality assurance (audit); results of Healios clinician surveys. Healios Academy - online training in specialist assessments & interventions; evaluation

Discussion: The implications of a digital paradigm shift in MH and ND services will be explored. By focusing on the individual needs and characteristics of the referred person, and tracking their progress and responding to their feedback, services will increasingly be able to tailor the process of therapy, thereby maximising satisfaction and outcomes. The move to precision care may also herald a conceptual advance from existing evidence-based therapeutic approaches to process-based therapy.

Conclusion: The data which can be generated in comprehensive digitally-native services can be used to develop more effective psychological assessments and interventions.

Open Paper Symposium 18

Rumination and repetitive negative thinking 2

Relationship between daily task unrelated thoughts and negative affect – a network analysis.

Monika Kornacka, SWPS University of Social Sciences and Humanities, Katowice, Poland; Thierry Atzeni, Univ. Savoie Mont Blanc, LIP/PC2S, Chambéry, France; Izabela Krejtz, SWPS University of Social Sciences and Humanities, Warsaw, Poland; Catherine Bortolon, Univ. Grenoble Alpes, LIP/PC2S, Grenoble, France; Celine Baeyens, Univ. Grenoble Alpes, LIP/PC2S, Grenoble, France

Introduction: The literature lists a variety of adaptive (e.g. increased creativity; Baird et al., 2012) and maladaptive (e.g. impaired emotional regulation; Marchetti et al., 2016) consequences of task unrelated thoughts (TUT) ranging from daydreaming and mind-wandering to rumination. However, there is still no consensus on (1) the link between TUT intensity and negative affect and (2) the factors that might determine the deleterious impact of TUT on affect. Thus, the aim of the present study was to test, using the daily sampling method, what TUT characteristics are key factors linked to participants' negative affect in their daily functioning while controlling also for task characteristics.

Method: 214 participants from a non-clinical sample underwent a 7-day ecological momentary assessment of mood, TUT intensity and main characteristics (i.e. control, concreteness, temporal orientation, repetitiveness, valence, verbal feature), affect (anxiety and sadness) and task characteristics (stressfulness, interest, effort, motivation, competencies) measured 7 times by day. 8904 momentary observations were included in the cross-sectional analysis and 7002 in the lagged analysis where TUT and task characteristics were measured at time T and affect at time T+1.

Results: The data were analyzed using a network approach. First, the centrality indices (i.e. strength referring to the sum of the absolute edge weights between a given node and all other nodes) were computed for each node in a cross-sectional and lagged network including TUT characteristics and affect. Second, cross-sectional and lagged bridges' centrality indices (i.e. expected influence indicating which node in a network act as a "bridge" to other cluster accounting also for negative relations) were computed for three clusters: (1) TUT intensity and characteristics, (2) task characteristics, and (3) affect. Unsurprisingly the TUT valence was the most central node in the cross-sectional network examining the links between TUT intensity, its characteristics, and affect, followed by TUT intensity node, TUT concreteness, and control over the thoughts. In the network with lagged measures of affect the most central node was concreteness of thoughts followed by TUT intensity and control. In both networks, TUT intensity was negatively related to anxiety. In the network examining bridges between

TUT, task, and cross-sectional affect clusters the highest 1-step expected influence absolute values were observed for TUT valence, TUT intensity, and repetitiveness. While in the network with lagged affect measures the highest absolute values of the 1-step expected influence were observed for TUT intensity, repetitiveness, and valence.

Discussion: The results indicating the negative relation between TUT intensity and negative affect suggest that the use of TUT might be considered a form of experiential avoidance, as suggested by previous findings studies (e.g. Crosswell et al., 2019). However, particular TUT features are related to higher negative affect corroborating the theories on TUT differential outcomes in terms of emotional regulation depending on its characteristics and valence (Andrews-Hanna et al., 2014; Banks et al., 2016).

Conclusion: The results suggest repetitiveness and lack of control as key features for identifying the maladaptive TUT and being also a potential therapeutic target.

A randomized controlled trial of metacognition reflection and insight therapy for people with schizophrenia

Ilanit Hasson-Ohayon, Bar-Ilan University, Ramat-Gan, Israel; Libby Igra, Bar-Ilan University, Ramat-Gan, Israel; Adi Lavi-Rotenberg, Bar-Ilan University, Ramat-Gan, Israel; Paul Lysaker, Richard L. Roudebush VA Medical Center, Indiana, United States; Gil Goldzweig, The Academic College of Tel-Aviv-Yaffo, Tel-Aviv, Israel;

Introduction: Extensive research showed challenges in the self-experience of people with schizophrenia. These challenges were found to be related to symptomatology as well as to deficits in reflective abilities which are conceptualized as metacognition. Accordingly, updated psychotherapeutic approaches aim at addressing the self-experience in schizophrenia are metacognitive or mentalization based. The current study applied a randomized delayed trial of Metacognition Reflection and Insight Therapy (MERIT) to assess its effects on metacognition, symptoms and quality of life.

Method: Following recruitment and randomization, data from 54 adults diagnosed with schizophrenia was collected pre and post intervention and analyzed. Assessed outcome were symptoms, quality of life and metacognition. Data was analyzed via repeated measures of multivariate analysis of variance (MANOVA) as well as via the percentage of cases that showed significant Reliable Change Index (RCI).

Results: Findings included significant interaction effects between group (immediate intervention or waiting condition) and time (pre and post intervention) with regard to the metacognition domain of mastery and general symptoms. 22%-37% of participants showed significant RCI in metacognitive domains and 3.7%-11.1% of participants showed significant RCI in symptoms domains.

Discussion: Participating in MERIT seems to improve one's ability to use own reflective knowledge to cope with psychological challenges and to improve, or at least maintain, level of symptomatology. Special considerations of the context of the trial during covid-19 pandemic should be included in interpretation of findings.

Conclusion: metacognitive based psychotherapy can enhance one's sense of mastery and facilitate agency which is substantial to the recovery process of people with schizophrenia.

The role of rumination: A novel perspective investigating the collective relationships between empathic tendencies, rumination, social problem-solving and depressive symptomatology.

Barbara Dritschel, University of St Andrews, St Andrews, United Kingdom; Serena Sabatini, Exeter University, Exeter, United Kingdom

Introduction: Depression is positively associated with rumination, maladaptive empathic tendencies, and poor social problem-solving. This study explores the role of rumination in the relationship between empathy, poor social problem-solving and depressed mood. Maladaptive empathic tendencies, such as reduced perspective-taking and increased personal distress, are self-oriented, resulting in poor social problem-solving and depressive symptomatology. Through increasing self-focus, rumination could exacerbate such maladaptive empathic tendencies, consequently reducing successful social problem-solving and contributing to depressed mood. This study therefore investigates three novel concepts: (1) collective relationships between empathy, rumination, social problem-solving, and depressed mood, (2) rumination as a possible mediator between maladaptive empathic tendencies and poor social problem-solving, and (3) the relative contributions of these factors towards depressed mood.

Method: Questionnaires measuring depressive symptomatology, social problem-solving (Social Problem-solving Revised), rumination (Ruminative response style questionnaire) and empathy (Interpersonal reactivity index) were administered to 125 adults (M=21.61 years)

Results: Pearson's correlations, mediation, and hierarchical linear regression analyses were conducted. Different empathy components demonstrated unique associations with rumination, social problem-solving and depressed mood. The maladaptive empathy component, personal distress, was positively associated with poor social problem-solving and rumination. The adaptive empathy component, perspective taking, was positively associated with constructive social problem-solving. Rumination partially mediated the relationship between maladaptive empathy and ineffective social problem-solving. Rumination and social problem-solving style significantly predicted depressed mood, while empathy did not.

Discussion: The empathy component, perspective taking, facilitated problem solving while personal distress was associated with less effective social problem-solving. Rumination exacerbated maladaptive empathic tendencies, possibly due to increased self focus, subsequently encouraging maladaptive social problem-solving. While empathy did not uniquely contribute to depressed mood, rumination and social problem solving ability did, indicating that empathy may contribute indirectly through interacting with rumination to reduce social problem-solving ability, subsequently increasing depressed mood.

Conclusion: Interventions such as mindfulness that reduce excessive self-focus arising from the empathy component of personal distress and rumination might alleviate difficulties in social problem-solving, thereby reducing depressed mood.

The network structure of psychopathological and resilient responses to the pandemic: A COVID-19 psychological research consortium multi-country study

Alba María Contreras Cuevas, Université Catholique de Louvain (UCLouvain), Belgium, Louvain-la-Neuve, Belgium; Vanesa Peinado, University Complutense of Madrid, Madrid, Spain; Almudena Trucharte, University Complutense of Madrid, Madrid, Spain; Carmen Valiente, University Complutense of Madrid, Madrid, Spain; Carmelo Vázquez, University Complutense of Madrid, Madrid, Spain

Introduction: Although resilience is best conceptualized as healthy and stable functioning in the face of a potentially traumatic event, most research studying resilience responses to the COVID-19 pandemic has focused on self-reported resilience and cross-sectional designs. Established in March 2020, the COVID-19 Psychological Research Consortium (C19PRC) Study is a dynamic, longitudinal, multi-country study which aims to monitor the psychological impacts of the COVID-19 pandemic on the lives of adults living in the UK, Republic of Ireland, Spain, and Italy. To explore potential risk and protective resilience factors by examining one-year follow-up resilient patterns of response during the COVID-19 pandemic.

Method: Using data from four European countries over the first year (baseline) of the COVID-19 pandemic (N=3594), we categorised participants according to whether they exhibited absence/presence of distress (i.e., cut-off scores for either depression or anxiety) in two different time-point (baseline and one year follow-up). These combinations provide four different categories describing the pattern of responses a) resilience, b) delayed distress, c) recovered, and d) sustained distress subgroups. We will rely on network approach which has grown in popularity in the field of psychology over the last decade and estimate networks of depression and anxiety symptoms (from baseline) for each of the groups (a) - (d). Subgroups will be compared allowing us to study differences in network structure (connectivity and communities) associated with a resilient response.

Results: We will present the results of this analysis comparing the different patterns of psychological responses subgroups. Such differences may be indicative of elements of protection against or vulnerability to psychological distress.

Discussion: We will discuss the implications derived for this work to conceptualize resilience as a dynamic process.

Conclusion: The clinical implications of significant predictors of the resilience and the rest of psychological patterns of response are discussed.

Longitudinal study of predictors of belief in conspiracy theories and paranoia in uncertain times of COVID-19.

Vanesa Peinado, University Complutense of Madrid, Madrid, Spain; Carmen Valiente, University Complutense of Madrid, Madrid, Spain; Almudena Trucharte, University Complutense of Madrid, Madrid, Spain; Alba Contreras, Université Catholique de Louvain (UCLouvain), Belgium, Louvain-la-Neuve, Belgium; Carmelo Vázquez, University Complutense of Madrid, Madrid, Spain

Introduction: Since the onset of the COVID-19 pandemic, high rates of the general population agreed with conspiracy theories (Freeman, 2020), leading in some countries to a decline in adherence to prevention measures (Bierwaczzonek et al., 2020) and vaccination (Sallam et al., 2021). Beliefs in conspiracy theories and paranoid beliefs are distinct, but highly correlated psychological phenomena that share some psychological predictors (Alsuhibani et al., 2022). Our aims are to (1) determine the factor structure of both coronavirus-specific conspiracy beliefs and paranoia; (2) explore the predictive role of cognitive variables (e.g., jump-to-conclusion bias, reasoning style), psychological variables (e.g., loneliness, intolerance of uncertainty), and socioeconomic variables (gender, education, income) to these two constructs. Our study included variables specifically selected to be particularly relevant to the pandemic (e.g., COVID-19-related anxiety and economic threat), as well as significant variables reported by other studies (e.g., locus of control).

Method: Participants: 1.497 individuals from a large online research quota panel (selected by sex, age and political region stratified quotas) participated. Design: a longitudinal design was used in which the same survey was launched at two different time points: 26 days after the state of emergency was declared by the government 'T1' (between 7-13 April 2020) and one year later 'T2' (between 15-21 April 2021). Analyses: We will examine the factorial structure of the COVID-19-related Conspiracy beliefs and Paranoid beliefs with a Principal Components Analysis (PCA). Structural Equation Modelling (SEM) analysis will be performed to test the potential predicting role of each variable and the differential pathways.

Results: We will present results from exploring the factors involved in both, COVID-19 related conspiracy theories and paranoia. Results will describe the main predictors' variables found in both SEM pathways (i.e. conspiracy theories and paranoid beliefs) and those that are different.

Discussion: During the talk, a path model derived from the Structural Equation Modelling (SEM) will be presented and discussed.

Conclusion: Our findings will shed light on potential shared mechanisms as well as specific predictors underlying conspiracy theories and paranoid beliefs.

Mental health across two years of the COVID-19 pandemic: A 5-wave longitudinal study in the German general population

Maxi Weber, Clinical Psychology and Psychotherapy, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany; Sebastian Burchert, Clinical Psychological Intervention, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany; Marit Sijbrandij, World Health Organization Collaborating Center for Research and Dissemination of Psychological Interventions, Department of Clinical, Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, Amsterdam, Germany; Martina Patanè, World Health Organization Collaborating Center for Research and Dissemination of Psychological Interventions, Department of Clinical, Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, Amsterdam, Netherlands; Babette Renneberg, Clinical Psychology and Psychotherapy, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany; Christine Knaevelsrud, Clinical Psychological Intervention, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany; Sarah Schumacher, Clinical Psychology and Psychotherapy, Faculty of Health, HMU Health and Medical University, Potsdam, Germany

Introduction: Current research indicates that psychological distress increased at the onset of the COVID-19 pandemic in the general population. However, it is less established how mental health has changed in the long term following multiple pandemic waves and

lockdowns and which factors are associated with unfavorable symptom trajectories. Using data from the multinational COVID-19 Mental Health Survey, this longitudinal online study examines the mental health in the general population and predictors of change spanning two pandemic years in Germany.

Method: Mental health was assessed at five different time points with self-report questionnaires measuring symptoms of anxiety (Generalized Anxiety Disorder-7) and depression (Patient Health Questionnaire-9), posttraumatic stress (PTSD Checklist for DSM-5), and loneliness (“Do you feel lonely?”).

Results: First, we will present the trajectories of N = 634 adults relating to symptoms of depression, anxiety, posttraumatic stress, and loneliness between June 2020 and April 2022 using structural equation modeling. Second, loneliness and contamination-related thoughts and behaviour (Padua Inventory–Revised subscale) will be modeled as predictors of worsened depression and anxiety symptom courses during the pandemic. Demographic data, mental health at baseline, and COVID-related information will serve as covariates, including financial worries, being infected with COVID, and imposed regulations throughout the pandemic. The data analysis is still in progress.

Discussion: Results will be presented at the conference and will be thoroughly discussed.

Conclusion: The findings will help differentiate symptom courses between groups of individuals during the pandemic and may encourage targeted care or interventions for high-risk groups.

The Protective effect of culture on depression during Covid-19 Pandemic: A Romanian national study

Monica Bartucz, Babes-Bolyai University, Cluj-Napoca, Romania; Silviu Matu, Babes-Bolyai University, Cluj-Napoca, Romania; Daniel David, Babes-Bolyai University, Cluj-Napoca, Romania

Introduction: Previous studies suggested that collectivistic cultures protect vulnerable individuals from developing mood disorders through the mechanism of social support. Another hypothesis related to the role of culture states that collectivism buffers the impact of genetic and psychological vulnerabilities on mental health. We tested both the protective and the buffering effect of individualism in the relationship between psychological vulnerabilities in form of irrational cognitions and depression. We examined whether the protective effect of collectivism in relation to depression can be explained through the mechanism of social support.

Method: We measured individualism-collectivism for 41 Romanian counties and the Municipality of Bucharest (n = 2882) before the onset of the COVID-19 pandemic. Data for irrational cognitions, depression, and social support was collected online, during the lockdown in Romania (n = 5310).

Results: We found that individualism was a positive predictor for depression, $b = .03$, 95%CI [.02; .45], along with individual-level irrational beliefs, $b = .47$, 95%CI [.44; .51]. The interaction between irrational beliefs and individualism had also a positive effect on depression, $b = .004$, 95%CI [.00; .01]. The relationship between individualism and depression was not mediated by either explicit or implicit social support. Individualism was positively associated with the perceived availability of explicit social support, $b = .045$, 95%CI [.008; .076]. **Discussion:** As expected, both individualism and irrational cognitions were associated with depressive symptoms in the general population. Moreover, the relationship between irrational cognitions and depression was stronger in counties characterized by higher levels of individualism. However, the perceived availability of explicit social support was stronger among individuals living in more individualistic counties.

Conclusion: The results support a general protective and buffering effect of collectivism on mental health. Our results cast doubt that the mechanism for the general protective effect is related to social support.

Investigating the effects of COVID-19 on adolescent mental health using a longitudinal approach

Phuong Mi Nguyen, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany; Sandra Abrantes Diaz, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany; Frederic Berg, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany; Max Braun Rodrigues, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany; Fine Kullmann, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany; Silvia Schneider, Faculty of Psychology: Clinical Child and Adolescent Psychology, Bochum, Germany; Mar Rus-Calafell, Faculty of Psychology: Clinical Child and Adolescent Psychology and Clinical Psychology and Digital Psychotherapy, Bochum, Germany

Introduction: Restrictions in leisure activities, fewer social contacts, online classes and switching between face-to-face and online classes, omnipresent news reports about incidences and possibly severe courses of the disease are only some of the challenges young people are confronted with in this times of global pandemic. Studies could show that the pandemic situation has led to an increase in depressive and anxiety disorder symptoms (Christiansen et al., 2021). Similarly, there is evidence of higher psychological distress from COVID-19 when young people are from lower socio-economic backgrounds and have a migration background (Ravens-Sieberer et al., 2021). Data on the relationship between psychotic-like experiences (PLE) and the COVID-19 situation are still scarce. Based on Garety’s et al. (2001) the model of psychosis, these circumstances of COVID-19 may also contribute as stressful events to the appearance and persistence of PLE.

Method: The focus of the present study is to improve our understanding of the effects of the COVID-19 pandemic on a sample of German adolescents using a longitudinal approach. The psychological burden of approx. 1500 adolescents aged 13-17 was examined. Data was collected in collaboration with seven secondary schools in North Rhine Westphalia (Germany). COVID-19 related attitudes and burden was assessed using a newly validated questionnaire by Brailovskaia and Margraf (2020) (which includes information on COVID infection and course of the illness). Additionally, individual’s psychopathology was assessed using validated questionnaires on presence of unusual experiences, anxiety, depression, and behavioural strengths and difficulties. Furthermore, influence of socioeconomic status and migration status were examined.

Results: First baseline assessment was carried out in November/December 2020, and the first study follow-up will be conducted May/June 2022. Regression analysis will be applied to explore the effects of COVID-19 on the young person’s presence and persistence of unusual experiences, depressive and anxious symptomatology and behavioural difficulties at 6 months follow-up. As the follow-up survey is yet to take place, full data will only be available at the time of the conference.

Discussion: The results will be discussed against the background of the existing data implying negative effects of COVID-19 pandemic on adolescent’s mental health. In addition, the results may provide early novel evidence about the role of COVID-19 attitudes on persistence of psychotic-like experiences.

Conclusion: Implications for supporting the mental health of young people will also be formulated.

Interpretation bias as a clinical vulnerability marker for depression: new insights from large-scale validation of the scrambled sentence task

Nuria Martin-Romero, University of Alcala, Guadalajara, Spain; Alvaro Sanchez-Lopez, Complutense University of Madrid, Madrid, Spain

Introduction: Negative interpretation biases are theorized to be central mechanisms of depression risk and maintenance, representing not a mere mood-congruent correlate of occurring affective symptoms, but a stable cognitive vulnerability factor. Specifically, negative interpretation biases are hypothesized to remain relatively dormant during depression remission until being activated under conditions of high stress cognitive depletion. Negative interpretation biases would then be active and confer risk and maintain both clinical and subclinical forms of depression. Yet, empirical evidence on the specific conditions under which negative interpretation biases are active in remitted depressed individuals is still unclear, and further studies are required to clarify whether interpretation biases are equivalent in magnitude in remitted compared to clinically and sub-clinically depressed individuals.

Method: The present study aimed to assess the nature of interpretation biases and conditions for its activation in a formerly, subclinically and clinically depressed individuals. A large-scale validation of the Scrambled Sentence Task (SST), a well-established cognitive task designed to assess negative interpretation biases, was performed (total sample: 639 participants). The study comprised three experiments (Experiment 1: $n = 150$; Experiment 2: $n = 409$; Experiment 3: $n = 80$), in which different depression groups (i.e., formerly – Experiments 1 and 2 -, sub-clinically – Experiment 2 - and clinically depressed individuals – Experiment 3 -) were compared with never-depressed samples in their performance of the SST. Manipulations of cognitive depletion were used, using cognitive load manipulation conditions (i.e. keeping in mind complex series of numbers) while completing the task.

Results: In Experiment 1, analysis showed that formerly depressed compared to never-depressed individuals completed a higher proportion of negative sentences (i.e., demonstrated a higher negative interpretation bias) only when a cognitive load manipulation was used. In Experiment 2, analyses revealed that both formerly and sub-clinically depressed individuals completed higher proportions of negative sentences than never-depressed individuals. No significant differences between both groups were found. Finally, in Experiment 3, clinically depressed patients completed higher proportions of negative sentences than never-depressed individuals. Further comparisons analysis collapsing the samples of Experiments 2 and 3 showed that all depression groups (i.e., formerly, subclinically and clinically depressed) completed higher proportions of negative sentences than never-depressed individuals. Interestingly, formerly and sub-clinically depressed individuals did not differ in the magnitude of their interpretation biases, however, both groups completed lower proportions of negative sentences than clinically depressed individuals.

Discussion: Our results indicate that depression, under different conditions and severities, is characterized by negative interpretation biases. Interestingly, the magnitude of those biases did not differ across remitted and sub-clinically depressed samples when a cognitive load manipulation was used. However, both groups differed from clinically depressed individuals. These findings suggest that once depression remits, the magnitude of interpretation biases decrease but remain at subclinical levels.

Conclusion: Interpretation biases remain dormant during depression remission, yet under conditions facilitating its activation, they are exhibited at the same level than subclinical depressed individuals. Such negative interpretation biases after remission may confer risk for depression recurrence.

The sound of conviction: Testing the efficacy of voice-based feedback for cognitive restructuring in a randomized controlled trial

Jonathan Felix Bauer, Department for Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Maurice Gerczuk, Chair for Embedded Intelligence for Health Care and Wellbeing, University of Augsburg, Augsburg, Germany; Jarek Krajewski, Rhenish University of Applied Sciences, Cologne, Germany; Björn Schuller, Chair for Embedded Intelligence for Health Care and Wellbeing, University of Augsburg, Augsburg, Germany; Matthias Berking, Department for Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Introduction: The gold standard for treating depression is cognitive behavioral therapy (CBT). Within CBT, cognitive restructuring is an established technique that aims at transforming dysfunctional beliefs about the self into more functional ones. In their theory of interacting cognitive subsystems, Barnard and Teasdale (1991) criticized purely cognitive approaches to treating depression. They suggest that depressive schemas are maintained not by cognitive processes but also by embodied sensations. Therefore, targeting bodily states as well as cognitions may enhance the effectiveness of therapeutic interventions. Speech conveys cognitions in its linguistic content as well as emotional and bodily states in its paralinguistic characteristics (i.e., sound of the voice). Both linguistic as well as paralinguistic components of speech have been associated with depression (Baddeley et al., 2013; Cummins et al., 2015), making speech a promising target for therapeutic interventions. Modulating the voice to sound more convincing could be a way to promote a bodily state of agency, determination, and confidence, thereby enhancing adaptive coping and increasing the effectiveness of CBT interventions.

Method: The present study evaluated whether a targeted modulation of the voice can increase the effectiveness of cognitive restructuring. A total of 48 clinically depressed individuals were recruited and evenly allocated to a control and an experimental group in random order. All participants first received mood inductions, followed by four sessions of cognitive restructuring. In the first two sessions, participants read aloud reappraisal statements in response to statements expressing dysfunctional beliefs. In the last two sessions, they read aloud statements that reinforced functional, positive beliefs. Participants could pick from a set of predefined statements in response to functional and dysfunctional beliefs, respectively. Participants from the experimental group were instructed to let their voices sound convincing when reading the statements and received continuous feedback about the conviction in their voices. Before and after each session, participants rated their depressed mood.

Results: Results showed that reappraising dysfunctional beliefs reduced depressed mood equally in both groups, suggesting no increased efficacy due to the modulation of the voice, $F(1,47) = .89$, $p = .35$, partial $\eta^2 = .02$. When reinforcing functional beliefs, the experimental group showed a greater reduction of depressed mood compared to the control group, $F(1,46) = 4.83$, $p < .05$, partial $\eta^2 = .11$.

Discussion: Voice-based feedback increased the efficacy of cognitive restructuring only when participants reinforced functional beliefs but not when they reappraised dysfunctional beliefs. There are several possible explanations for these results. A training effect may have been

responsible for an increase in efficacy of the voice-based feedback in the reinforcement of functional beliefs, which constituted the second part of the intervention. Another explanation may be that reappraising dysfunctional beliefs with a convincing voice may have produced incongruence, hampering the interventions' success. Reinforcing functional beliefs with conviction in the voice may have facilitated adaptive coping and thereby increased the effect of the intervention.

Conclusion: This study shows the potential of targeting bodily states with voice-based feedback to increase the effectiveness of CBT.

Cognitive control biases in depression: A systematic review and meta-analysis

Leanne Quigley, Ferkauf Graduate School of Psychology, Yeshiva University, Bronx, United States; Thulasi Thiruchselvam, Centre for Addiction and Mental Health, Toronto, Canada; Lena Quilty, Centre for Addiction and Mental Health, Toronto, Canada

Introduction: Cognitive theories propose that impaired cognitive control of emotional material is a vulnerability factor for depression. Several narrative reviews have concluded that depression is characterized by biased cognitive control that favors negative over positive and neutral material in working memory, but to date there has been no systematic or empirical synthesis of the literature. As such, much remains to be established about the magnitude and clinical relevance of effects, the consistency of effects across studies, and potential moderators of effects.

Method: A systematic review and meta-analysis of 73 articles describing 77 independent studies (N = 4134 participants) was conducted. We searched the electronic databases EMBASE, PsycINFO, PubMed, Scopus, and Web of Science; the last search was conducted in January 2022. Correlated and Hierarchical Effects (CHE) models using robust variance estimation (RVE) were used to compute the pooled effect sizes and conduct moderator and subgroup analyses. Analyses were conducted with the clubSandwich and metafor R packages.

Results: Depression-vulnerable individuals, including individuals with diagnosed major depressive disorder (MDD), remitted MDD (rMDD), and dysphoria, showed significantly impaired cognitive control of negative stimuli relative to both neutral and positive stimuli. Control samples did not exhibit the aforementioned biases, and instead showed significantly worse cognitive control of positive stimuli relative to negative stimuli, and similar cognitive control of neutral stimuli relative to both negative and positive stimuli. Evidence for sample or methodological moderators of effect sizes was limited and inconsistent.

Discussion: The results support cognitive theories of the role of cognitive control biases in depression vulnerability. Future research is needed to further understand the mechanisms by which cognitive control biases may lead to depression via effects on higher-level cognitive functions and other processes. Based on our review, we recommend that researchers assess and examine directional and causal relationships between multiple cognitive control biases, investigate the causal relationships between general deficits and biases in cognitive control, select tasks that control for non-target influences on performance (e.g., processing speed), use sample sizes adequately powered to detect small effects, provide psychometric information on task indices, consistently report within-groups biases and between-groups comparisons of biases, and examine potential moderators of cognitive control biases at the individual level.

Conclusion: The present study is the first systematic review and meta-analysis of the literature on cognitive control biases in depression and provides a critical evaluation of the research to inform future research and theory. Future research is needed to ascertain the real-world utility of cognitive control biases for enhancing depression assessment, prediction, and treatment.

Differential efficacy of self-compassion and reappraisal mood repair strategies following retrieval of negative autobiographical memories.

Carmelo Vázquez, Universidad Complutense de Madrid, Madrid, Spain; Rosaria Maria Zangri, Universidad Complutense de Madrid, Madrid, Spain; Teodoro Pascual, Universidad Camilo Jose Cela, Madrid, Spain; Iván Blanco, Universidad Autónoma de Madrid, Madrid, Spain

Introduction: Differential efficacy of self-compassion and reappraisal mood repair strategies following retrieval of negative autobiographical memories. Mindfulness-based interventions (MBIs) have been frequently used for emotional regulation (ER) of laboratory-induced emotions. This preliminary study examined the differential restorative effect of different instructions (self-compassion, Benefit-finding reappraisal) and a control condition with no ER instructions following a negative Mood Induction Procedure (MIP) derived from the recall of a negative autobiographical event.

Method: Sixty-nine university students participated in the online study (81% women, mean age: 21 years). Following a guided recall of a personal negative event, participants were randomized to each mood repair condition [(Compassion: n = 24, Benefit Seeking: n = 19) or a control condition (n = 26)]. (The study continues and the sample will be expanded until the sample size indicated by G*Power is achieved: 30 per group).

Results: As expected, negative mood (sadness, shame, and guilt) worsened significantly after autobiographical recall in all groups ($p < .001$). Participants in the compassion and benefit reappraisal conditions showed a significant reduction in negative mood after the intervention ($p < .005$), which was not observed in the control group.

Discussion: These findings support the role of compassion and benefit-focused reappraisal as mood repair strategies after the recollection of negative personal events.

Conclusion: Implications in the context of autobiographical memory deficits in clinical populations are discussed.

Open Paper Symposium 21

Symptom dynamics among nightmare sufferers: An intensive longitudinal study

Britta Dumser, Ludwig-Maximilians-Universität (LMU), Munich, Germany; Gabriela G. Werner, Ludwig-Maximilians-Universität (LMU), Munich, Germany; Thomas Ehring, Ludwig-Maximilians-Universität (LMU), Munich, Germany; Keisuke Takano, Ludwig-Maximilians-Universität (LMU), Munich, Germany

Introduction: Nightmares are highly prevalent in the general population and are known to be closely associated with a variety of mental disorders (e.g., PTSD and depression). In recent years, there is growing evidence for factors that possibly contribute to nightmares, such as fear of sleep, pre-sleep arousal, and daily stress. However, the dynamic interplay between these factors is not yet sufficiently understood. We therefore investigated the immediate antecedences and consequences of nightmares in daily life. Specifically, we used intensive long-term assessments of a full month to investigate the night-to-night within-person associations between nightmares and relevant processes.

Method: Young women with regular nightmares (N = 16) maintained a sleep diary for a month; upon awakening, participants reported nightmares and sleep quality of the last night as well as the pre-sleep levels of arousal and levels of fear of sleep (which resulted in 461

observations across all participants). Simultaneously, participants wore an actigraph, which provided objective sleep parameters. We used a multilevel vector-autoregressive (VAR) model to explore the within-person associations between the following variables: nightmare distress, sleep quality, sleep efficiency (for sleep diary and actigraphy), somatic and cognitive pre-sleep arousal, fear of sleep and stressful events the day before.

Results: The multilevel VAR model showed that higher levels of fear of sleep and lower subjective sleep quality are significantly associated with higher levels of nightmare distress. Higher levels of fear of sleep were further significantly associated with lower subjectively measured sleep efficiency, whereas nightmare distress was not. Furthermore, we found individual differences in the strength of these associations, which implies that factors related to nightmares may vary across individuals. Pre-sleep arousal and stressful events the day before showed, however, no significant within-person associations with nightmares or fear of sleep. **Discussion:** These findings suggest that for some individuals suffering from regular nightmares fear of sleep seems to play an important role in their impaired sleep with a direct impact on perceived sleep efficiency. These findings provide additional information on fear of sleep as a possible promising treatment target to improve perceived sleep and should therefore be added to existing nightmare treatments. Furthermore, findings indicate that the between-person association between pre-sleep arousal and nightmare distress previously found in the literature might not play a crucial role on a within-person level. This finding could indicate that going to bed in an aroused pre-sleep state does not automatically lead to nightmare (distress) the same night.

Conclusion: Although these findings are not necessarily consistent with the theoretical models in the literature, the current study highlights the importance of further investigating within-person associations in factors mutually contributing to nightmares, because our results as well as previous studies point to individual differences. We therefore need to pay more attention to these individual differences and identify moderators. Further ecologically valid longitudinal approaches might inform future personalized interventions for nightmare sufferers.

Elaborating emotional schemas: The adaptation of Leahy's Emotional Schema Scale to Portuguese

David Dias Neto, ISPA, Lisboa, Portugal; Ana Nunes Da Silva, FP-UL, Lisboa, Portugal; Marta Matos, ISCTE, Lisboa, Portugal; Bruno Faustino, FP-UL, Lisboa, Portugal; Magda Roberto, FP-UL, Lisboa, Portugal

Introduction. Emotional schemas are critical cognitive processes involved in emotional processing. The Leahy Emotional Schema Scale (LESS) is a 50 item self-report with 14 theoretical dimensions, representing concepts, evaluations, attributions of emotions, and emotion regulation strategies. The present study aims the adaptation of the LESS to Portuguese and takes the opportunity to rethink the concept.

Method. 396 adult participants constituted the sample. Three other instruments (a symptom, emotion regulation and emotion difficulties scale) were selected to assess convergent validity.

Results. An exploratory principal component analysis was conducted. Parallel analysis revealed a 5-component structure - Negative evaluation of emotion, difficulties in reappraisal, difficulties in naturalizing personal feelings, need to be rational, simplistic view of emotion - which explained 48% of the variance. Components' internal consistency was adequate, and convergent validity supported significant correlations with difficulties in emotional regulation, emotional processing, and psychopathology. **Discussion.** The identification of 5 components deepens our understanding of the 14 original dimensions proposed. These dimensions may prove particularly relevant for assessment, case conceptualization and clinical decision making. **Conclusion.** Emotional schemas may be useful beyond the psychotherapeutic model, stressing the transtheoretical potential of the scale.

From victims to perpetrators of bullying: The role of irrational cognitions, externalizing problems, and parental attachment

Raluca Balan, Babeş-Bolyai University, Cluj-Napoca, Romania; Anca Dobrea, Babeş-Bolyai University, Cluj-Napoca, Romania; Robert Balazsi, Babeş-Bolyai University, Cluj-Napoca, Romania

Introduction: The transition from bullying victimization to bullying perpetration is well documented in the literature. However, the mechanisms linking bullying victimization to perpetration are not fully understood. One such plausible pathway is through the behavioral problems, which victims are likely to develop following exposure to bullying victimization. Numerous studies indicate that bullying victimization increases the risk of externalizing problems, which further act as a strong risk factor for involvement in bullying as a perpetrator (Ttofi et al., 2012). Evaluative cognitions or the way targets of bullying appraise the bullying incidents could be another factor that may account for the link between bullying victimization and perpetration. Bullying victimization had been consistently shown to impact the appraisals of the self, other and, the world (Cook et al, 2010). On the other hand, existing evidence emphasizes irrational cognitions as an antecedent to bullying perpetration behaviors (Cook et al., 2010). In addition, a large amount of research has documented the role of irrational cognitions in the onset and maintenance of youths' externalizing behaviors (Fives et al., 2011). These findings together suggest that is possible that bullying victimization does not operate exclusively through irrational cognitions or exclusively through externalizing problems to lead to further bullying perpetration, but rather through the serial pathway where irrational cognitions serve as first mediator and externalizing problems as the second mediator. The objectives of the current study were 1) to investigate the indirect effects of youths bullying victimization on bullying perpetration through irrational cognitions and externalizing problems. 2) to explore the moderating role of the type of parental attachment (secure vs. insecure) in the proposed model in explaining the association of bullying victimization and bullying perpetration.

Method: Data were collected from 269 adolescents (11-15 years) enrolled in middle public schools. Measures included Adolescent Peer Relations Instrument (Parada, 2000), Children and Adolescents Scale of Irrationality (Bernard & Cronan, 1999), Strengths and Difficulties Questionnaire self-report (Goodman, 1997), and Experiences in Close Relationships Scale (Fraley et al., 2011). Path analysis and moderated path analysis were conducted to explore the direct and indirect effects and moderating effects, respectively.

Results: The results indicate that bullying victimization was indirectly related to bullying perpetration separately through youths' irrational cognition as well as through externalizing problems. The serial indirect pathway from victimization to perpetration through irrational cognitions leading further to externalizing problems was also significant. However, the type of attachment that adolescents reported having toward their parents failed to moderate the indirect pathways, since all the interaction terms were non-significant.

Discussion: The study provided a complex model surrounding the trajectory from victim to victimizers of bullying—a cognitive path, a behavioral path, and a two-stage path from irrational cognitions to externalizing problems, emphasizing the heterogeneity of the victim-bullies' profiles.

Conclusion: These findings advance the field of prevention and intervention by identifying irrational cognitions and externalizing problems as important targets that anti-bullying programs should address to stop the transition from victims of bullying to perpetrator

The effectiveness of compassion focused therapy within clinical populations: A systematic review and meta-analysis

Leah Millard, Ming Wai Wan, Debbie Smith and Anja Wittkowski, The University of Manchester, UK

Background: Compassion focused therapy (CFT) was devised by clinical psychologist Paul Gilbert. Previous reviews have indicated the potential benefits of the intervention in both clinical and general populations. This systematic review and meta-analysis aimed to investigate the effects of CFT in improving compassion-based outcomes and reducing clinical symptomatology in those experiencing mental health difficulties.

Methods: A systematic search of five databases identified 14 studies from 2013 to 2021 that met the inclusion criteria. The search focused on randomised controlled trials (RCTs) and randomised pilot/feasibility studies that implemented Gilbert's CFT model. No restrictions were placed on language. A narrative synthesis was conducted. The outcome measures were compared from baseline to post-intervention and with an active comparator, waitlist control or treatment-as-usual. Random effects meta-analyses were measured on levels of self-compassion, fear of self-compassion and clinical symptomatology.

Results: Findings suggested that CFT was effective in improving outcomes from baseline to post-intervention. Results could not determine whether CFT was more effective as other psychological interventions. Meta-analyses indicated that CFT was superior in improving levels of self-compassion and reducing depressive symptoms, compared to waitlist control.

Conclusions: To the author's knowledge, this review was the first to examine the effectiveness of Gilbert's model of CFT in those experiencing mental health difficulties across randomised trials only. The results indicated that CFT has promising clinical implications, suggesting that the intervention increases compassion-based outcomes and reduces clinical symptomatology in those with mental health difficulties. Meta-analyses supported a number of these findings. To strengthen the evidence-base of CFT, future research is required into the long-term effects of CFT, as well as improvements in methodological rigour.

The effectiveness of modular transdiagnostic cognitive behavioral therapy versus treatment as usual for youths with school attendance problems: A Danish randomized controlled trial

Mikael Thastum, Aarhus University, Aarhus, Denmark; Johanne Jeppesen Lomholt, Aarhus University, Aarhus, Denmark; Daniel Bach Johnsen, Aarhus University, Aarhus, Denmark; Wendy Silverman, Yale University Child Study Center, New Haven, United States; Pia Jeppesen, University of Copenhagen, Copenhagen, Denmark; David Heyne, Leiden University, Leiden, Netherlands

Introduction: School attendance problems (SAPs) among youths is associated with negative outcomes such as low health-related quality of life, poor academic achievement, school dropout, and later unemployment. Approximately 14% of all Danish students miss school more than 10%. Studies show that the majority of youths with SAPs display a range of different mental health problems. Because SAPs are highly prevalent and are associated with negative outcomes and various mental health problems, there is a need for accessible, effective treatments for SAPs. We developed the Back2School (B2S) program, an outpatient modular transdiagnostic CBT intervention for youths with SAPs. The B2S was designed to combine with disorder-specific and generic CBT modules from a transdiagnostic modular CBT-program (The Mind My Mind, Jeppesen et al., 2017). As well as addressing a range of youth mental health problems, the B2S program strongly emphasizes collaboration with parents and school professionals as part of the intervention. The B2S consisted of a 3.5-hour clinical interview with the youth and parents aimed at designing a case-formulation and a treatment plan and preparing the family for the first therapy session; 10 one-hour sessions with the child and parents together (except for session 2 and 7 which was only with the parents); a 1-hour booster session with the child and parents together; and four school meetings. B2S has been found to be a feasible intervention for SAPs, with a significant increase in school attendance and reduction in youth mental health problems in a non-randomized feasibility study (Lomholt et al., 2020). The current RCT evaluated the effectiveness of the B2S intervention compared against treatment as usual (TAU).

Method: All participating families were self-referred. The inclusion criteria were: (a) youths enrolled in a public school within the region of central Denmark; (b) aged 6–16 years and in 0–9th grade; (c) parents reported more than 10% school absence during the previous three months of school. Primary outcome measures: 1) Hours of school attendance was assessed using parent retrospective reports of the youths' hours of school attendance during the ten school days immediately prior to Pre-, Post-, and 3 month FU treatment. 2) Days of school attendance was assessed using attendance data provided by the local municipalities' school attendance registries. Secondary outcome measures: Youth symptoms of emotional, behavioral, social difficulties and the interference caused by these difficulties were assessed using the Strength and Difficulties Questionnaire (youth and parent report; Goodman, 1997). Youth self-efficacy for handling school-related situations was measured using the Self-Efficacy Questionnaire for School Situations (Heyne et al., 1998). Parental self-efficacy for responding to their child's SAPs was measured using the Self-efficacy Questionnaire for Responding to School Attendance Problems (Heyne, Maric, & Totsika, 2016).

Results: The preliminary results of post and three-month follow results of the trial will be presented and discussed at the conference

Open Paper Symposium 22 PTSD

SmartPTBS: Intraindividual fluctuations of posttraumatic stress disorder symptomatology and coping strategies - insights from ecological momentary assessment.

Lena Schindler-Gmelch, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany & Faculty of Psychology, Technische Universität Dresden, Germany, Erlangen, Germany; Patrick Lorenz, Department of Psychotherapy and Psychosomatic Medicine, Medizinische Fakultät Carl Gustav Carus, Technische Universität Dresden, Germany, Dresden, Germany; Susann Steudte-Schmiedgen, Department of Psychotherapy and Psychosomatic Medicine, Medizinische Fakultät Carl Gustav Carus, Technische Universität Dresden, Germany, Dresden, Germany; Kerstin Weidner, Department of Psychotherapy and Psychosomatic Medicine, Medizinische Fakultät Carl Gustav Carus, Technische Universität Dresden, Germany, Dresden, Germany; Matthias Berking, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, Dresden, Germany; Julia Schellong, Department of Psychotherapy and Psychosomatic Medicine, Medizinische Fakultät Carl Gustav Carus, Technische Universität Dresden, Germany, Dresden, Germany; Clemens Kirschbaum, Faculty of Psychology, Technische Universität Dresden, Germany, Dresden, Germany

Introduction: Theoretical models and psychotherapy programs (e.g., Ehlers & Clark, 2000; Ehlers, Clark, Hackmann, McManus, & Fennell, 2005) have long since underlined the relevance of individual coping with symptoms for the development and maintenance of Posttraumatic Stress Disorder (PTSD). Notably, traditional self-report research has brought forth heterogeneous associations of coping

strategies such as self-blame, behavioral disengagement, acceptance, or use of instrumental support with symptom trajectories (e.g., Cofini, Carbonelli, Cecilia, Binkin, & Di Orio, 2015; Oni, Harville, Xiong, & Buekens, 2012; Rice, Overby, Boykin, Jeter, & Villarreal, 2014). As technology-based longitudinal investigations of symptom fluctuation and regulation in the daily lives of those affected have become feasible on a broad scale within the last decade (Kaplan & Stone, 2013), they bear high potential for disentangling the complex and individual patterns of symptomatology and coping. In particular, such assessments can be utilized for studying clinically relevant predictors of more or less intense symptom burden (McDevitt-Murphy, Luciano, & Zakarian, 2018). The aim of the SmartPTBS study was to utilize ecological momentary assessment (EMA) for insights into inter- and intraindividual variability of symptom severity and coping strategies. In particular, the predictive value of baseline symptom severity and coping/emotion regulation capacities was studied. Further, information on feasibility, attrition, and potential reactivity effects of EMA were assessed.

Method: Twenty participants clinically diagnosed with PTSD (95% female, mean age = 34.85, SD = 12.87) provided baseline data on symptom severity and coping strategies. After that, they participated in a four-week EMA phase with daily smartphone-based questionnaires on symptom severity and coping analyzed via multilevel models.

Results: First results confirmed both inter- and intraindividual variance of symptom severity and regulation during the EMA phase. Further, while no participants reported a worsening of symptomatology over the EMA phase, 25% experienced a subjective improvement over the course of EMA, and 40% a subjective change in applied coping strategies. Further in-depth insights into specific patterns of symptom clusters and regulation will be presented.

Discussion: The preliminary findings suggest both symptom severity and regulation to show considerable and intertwined fluctuation over everyday life. Further, the process of symptom and coping monitoring was perceived as undisruptive and, in some respect, beneficial for the individual, mirroring the classical therapeutic technique of symptom protocols.

Conclusion: The results stress the feasibility and relevance of longitudinal EMA assessments and the complex interplay of burdening and relieving mechanisms in PTSD. They provide support for the utilization of EMA as psychotherapy adjunct in order to more precisely tailor interventions.

What to think or how to think – is symptom reduction in posttraumatic symptomatology driven by change in posttraumatic cognitions or perseverative thinking?

Kristina Meyer, Charité Universitätsmedizin Berlin, Berlin, Germany; Nikola Schoofs, Charité Universitätsmedizin Berlin, Berlin, Germany; Andrea Hildebrandt, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany; Felix Bermppohl, Charité Universitätsmedizin Berlin, Berlin, Germany; Kathlen Priebe, Charité Universitätsmedizin Berlin, Berlin, Germany

Introduction: Patients with posttraumatic stress disorder (PTSD) report changes in what they think of the world and themselves, referred to as posttraumatic cognitions, and changes in how they think, reflected in increased levels of perseverative thinking. Posttraumatic cognitions and perseverative thinking are typical targets of psychotherapeutic interventions. In the present study, we investigate whether therapy-induced changes in either of the two aspects of thinking predict changes in posttraumatic symptom severity.

Method: N = 261 day clinic patients with posttraumatic symptomatology received trauma-focused cognitive behavioral therapy across M = 7.9 (\pm 1.8) weeks. The posttraumatic cognitions inventory (PTCI), the perseverative thinking questionnaire (PTQ), and the Davidson trauma scale (DTS) were applied pre- and post-intervention. Using latent change score models, we investigated whether change in PTCI or change in PTQ would better predict change in DTS.

Results: Overall, change in DTS was predicted by change in both PTCI ($\beta = .53, p < .001$) and PTQ ($\beta = .53, p < .001$). When modeling the DTS subscales separately, change in PTCI significantly impacted reexperiencing ($\beta = .58, p < .001$) and avoidance ($\beta = .52, p < .001$), but change in PTQ did not ($\beta = .09, p = .54$ and $\beta = .12, p = .36$, respectively). In patients with mild baseline symptoms, only change in PTCI ($\beta = .63, p < .001$) but not in PTQ ($\beta = .17, p = .07$) predicted DTS change, whereas both predictors were relevant in patients reporting severe baseline symptoms (PTCI: $\beta = .39, p < .001$; PTQ: $\beta = .43, p < .001$).

Discussion: Posttraumatic cognitions and perseverative thinking both proved to be driving forces of therapeutic change in posttraumatic symptomatology. In mild cases of posttraumatic symptoms or in cases where reexperiencing and avoidance are most prominent, our results suggest that posttraumatic cognitions are more relevant for posttraumatic symptom reduction than perseverative thinking.

Conclusion: Latent change score models are a useful tool to investigate determinants of therapeutic change in psychiatric disorders. For practitioners, this study underlines the importance of assessing the severity of posttraumatic symptoms, the severity of reexperiencing, and the severity of trauma-related avoidance at the beginning of psychotherapy. In cases with severe posttraumatic symptoms, our results suggest that focusing on perseverative thinking in addition to posttraumatic cognitions should have an additive beneficial effect. Targeting posttraumatic cognitions will likely be beneficial for patients with posttraumatic symptoms of all kinds and severity.

Mechanisms of change in telehealth-delivered writing interventions for adults with post-traumatic stress

Rachelle Dawson, Australian National University, Canberra, Australia; Reg Nixon, Flinders University, Adelaide, Australia; Alison Caelear, Australian National University, Canberra, Australia; Richard O'kearney, Australian National University, Canberra, Australia

Introduction: A variety of psychotherapies for post-traumatic stress involve the use of writing as a way to process, challenge or explore thoughts, feelings and memories. In addition, there is emerging evidence for the effectiveness of stand-alone writing interventions in reducing post-traumatic stress symptoms (PTSS). However, there remains questions regarding the mechanisms that produce such outcomes. The present study reports on results from a randomised control trial of three telehealth-delivered writing interventions on reductions in PTSS among adults with clinical or subthreshold PTSD.

Method: Community participants (n = 83) were randomised into one of three conditions: two trauma-focussed writing interventions that involved writing about a past traumatic event, and one positive-experiences writing intervention that involved writing about a past positive event. All interventions involved three weekly one-hour telehealth appointments with 20 minutes of writing in each appointment. There were two aims of the study: (1) to assess the effectiveness of the writing interventions on reductions in PTSS (using PCL-5) and reductions in depression, anxiety and stress (using DASS-21), and (2) to assess mechanisms that may account for outcomes, and whether these differ between interventions. Candidate mechanisms included perceived social support, self-compassion, post-traumatic cognitions, and expectancy violation (which refers to a mismatch between pre-writing fears and the occurrence of these fears during writing). Symptoms were assessed at pre-intervention, mid-intervention, one-week follow-up, and one-month follow-up. Effectiveness outcomes were assessed using linear mixed effects modelling, and mechanisms outcomes were assessed using multiple mediation regression analyses.

Results: Analyses of the effectiveness of the interventions on reduction in PTSS found a significant effect of time ($F(2, 70.05) = 77.28, p < .001$), but no between-group differences ($F(2, 75.28) = 1.77, p = .177$). A similar pattern of results occurred for secondary outcomes

(depression, anxiety and stress). At the time of this abstract submission, mediation analyses are in progress and will be presented in the presentation by September. It is hypothesised that the three interventions will differ with regards to what mechanisms produced their relative effectiveness. These differences are hypothesised to occur based on the differing theoretical underpinnings of each of the writing interventions.

Discussion: The results of this trial demonstrated that all three writing interventions had a reduction in PTSS, depression, anxiety and stress, with no significant between-group differences. Mediation analyses hope to shed light on what the mechanisms are that account for these outcomes, and whether they differ across the interventions .

Conclusion: Findings aim to provide insight into the mechanisms by which different writing interventions may produce outcomes in adults with subthreshold and clinical PTSD, which in turn provides insight into the clinical utility of writing interventions for this population.

Do changes in dysfunctional posttraumatic cognitions predict PTSD symptom clusters differentially?

Hannah Schumm, LMU Munich, Munich, Germany; Antje Krüger-Gottschalk, WWU Münster, Münster, Germany; Anne Dyer, ZISG Mannheim, Mannheim, Germany; Barbara Cludius, LMU Munich, München, Germany; Keisuke Takano, LMU Munich, München, Germany; Georg Alpers, School of Social Sciences, Mannheim, Germany; Thomas Ehring, LMU Munich, Munich, Germany

Introduction: Numerous studies have shown that trauma-focused psychological treatments for post-traumatic stress disorder (PTSD) are effective. However, many patients remain burdened by symptoms after treatment, calling for a refinement of existing treatments. Therefore, research has started to focus on investigating processes of change during treatment, especially the role of dysfunctional posttraumatic cognitions. Dysfunctional posttraumatic cognitions have been shown to be strongly associated with PTSD symptom severity, and to decline during trauma-focused treatments. More importantly, several studies have now given evidence that over the course of trauma-focused psychotherapy, changes in dysfunctional cognitions predicted symptom changes unidirectionally. However, existing studies have investigated the influence of dysfunctional posttraumatic on overall PTSD symptom severity, even though PTSD is well-known for its multidimensionality. It is therefore currently unknown whether the symptom clusters of PTSD – re-experiencing, avoidance, changes in mood and cognitions as well as hyperarousal – are affected uniformly. A closer examination on how changes in dysfunctional cognitions exert their influence on the different symptom clusters would allow for a more detailed understanding of the relevant processes and, in turn, inform the development and refinement of treatment for individuals with PTSD. The present study therefore investigates the differential effects of posttraumatic cognitions on the PTSD symptom cluster over the course of trauma-focused psychotherapy.

Method: Sixty-one patients took part in an effectiveness study evaluating trauma-focused CBT for PTSD in routine clinical care. The treatment was based on a modularized phase-based approach. Patients filled out measures of dysfunctional posttraumatic cognitions and PTSD symptom severity every five weeks. Dysfunctional cognitions were measured using the Posttraumatic Cognition Inventory, and symptom severity was measured with the PTSD-Checklist for DSM-5. Using linear mixed models, we explored whether dysfunctional cognitions predicted both overall PTSD symptom severity as well as severity of the four clusters (re-experiencing, avoidance, changes in mood and cognitions, hyperarousal) at the following measurement point. Differential effects of dysfunctional cognitions on the various PTSD symptom clusters were expected.

Results: : Over the course of therapy, both dysfunctional cognitions and PTSD symptoms decreased. Dysfunctional cognitions were a predictor of subsequent total PTSD symptom severity, although this effect was non-significant when time was added as an additional predictor into the model. Analyses regarding the differential effects on the PTSD symptom clusters yielded somewhat mixed results. In line with the hypotheses, changes in clusters avoidance and changes in mood and cognitions were predicted by dysfunctional cognitions. Contrary to hypotheses, dysfunctional cognitions did not predict the cluster hyperarousal, but did predict re-experiencing.

Discussion: : The results are compared with previous findings, as well as discussed and interpreted in light of employed statistical models. The present study was partly able to replicate previous findings on the role of dysfunctional posttraumatic as possible mechanism of change in trauma-focused treatment. As expected, differential predictive effects of posttraumatic cognitions on the four PTSD symptom clusters were found. Possible explanations for unexpected findings are discussed.

Conclusion: The present study provides preliminary evidence that dysfunctional posttraumatic cognitions affect PTSD symptom clusters differentially, highlighting the importance of more nuanced investigations.

One-year predictors of symptoms of PTSD, anxiety and depression in SARS-CoV-2 survivors: Psychological flexibility and major life events as main predictive factors

Inês A. Trindade, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention (CINEICC), Faculty of Psychology and Educational Sciences, Coimbra, Portugal; Helena Pinto, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention (CINEICC), Faculty of Psychology and Educational Sciences, Coimbra, Portugal; Diogo Carreiras, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention (CINEICC), Faculty of Psychology and Educational Sciences, Coimbra, Portugal; Lara Palmeira, Coimbra University Hospital, Coimbra, Portugal; Marco Pereira, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention (CINEICC), Faculty of Psychology and Educational Sciences, Coimbra, Portugal; Sérgio A. Carvalho, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention (CINEICC), Faculty of Psychology and Educational Sciences, Coimbra, Portugal

Introduction: COVID-19 survivors present elevated risk of developing psychiatric sequelae, including post-traumatic stress and depression symptoms, and may present with high levels of distress and impairment even months after recovery. This study aims to examine the longitudinal predictors of symptoms of PTSD, anxiety, and depressive in a sample of SARS-CoV-2 survivors.

Method: The SARS-CoV-2 survivors sample included 61 adult participants (mean age 36.6 years; 90.2% women) who had been infected with the SARS-CoV-2 virus by the baseline assessment moment. All participants were Portuguese. Participants were recruited online and completed an internet survey with self-report measures at both assessment moments, in January/February 2021 (baseline) and January/February 2022 (follow-up). This study first analyzed the correlations of demographic (e.g., age, gender, marital status, having children), clinical (e.g., perception of COVID-19 symptom severity, comorbid physical illness), and psychological variables (infection-related shame [CISS], resilience [RSA], psychological flexibility [CompACT]), measured at baseline, with symptoms of PTSD (PCL-C), anxiety, and depressive (HADS), measured at follow-up. The baseline factors identified as having significant correlations with the three outcomes at follow-up were entered as predictors in three separate linear regression models aiming at examining which factors explain PTSD, anxiety, and depressive symptoms at follow-up.

Results: Having a psychiatric diagnosis at baseline was associated with higher levels of anxiety and depressive symptomatology at follow-up, and having children at baseline was linked to a higher level of PTSD symptoms at follow-up. A higher number of recent major life events and higher levels of shame related to the SARS-CoV-2 infection, measured both at baseline, were positively associated with PTSD, anxiety, and depressive symptoms at follow-up. Resilience and psychological flexibility at baseline were negatively correlated with symptoms of PTSD, anxiety, and depression at follow-up. The regression model for PTSD symptoms ($R^2 = 0.42$) presented the following significant baseline predictors: having children ($\beta = .32$; $p < .01$), number of recent major life events ($\beta = .34$; $p < .01$), and psychological flexibility ($\beta = -.36$; $p < .01$). Anxiety at follow-up ($R^2 = 0.40$) was predicted by number of major life events ($\beta = .29$; $p < .05$) and psychological flexibility ($\beta = -.29$; $p < .01$). Number of recent major life events ($\beta = .32$; $p < .01$) was the sole predictor of depressive symptoms at follow-up ($R^2 = 0.43$).

Discussion and Conclusion: A higher number of major life events appears to be a determining factor for the presentation of higher levels of psychopathological symptoms after a SARS-CoV-2 infection. At the same time, psychological flexibility appears to be a protective mechanism against the presentation of PTSD and general anxiety symptomatology by survivors. This finding suggests that the application of psychological therapies that aim to foster this process (such as Acceptance and Commitment Therapy [ACT]) may be beneficial for decreasing trauma-related and anxiety symptoms in SARS-CoV-2 survivors with such complaints. These findings go in line with previous literature on the importance of psychological flexibility for mental health (e.g., Kashdan & Rottenberg, 2010) and the efficacy of ACT for anxiety disorders (Gloster et al., 2020). There is also evidence that psychological flexibility may be a buffer against the impact of past major life events (Fonseca et al., 2020).

PTSD and COVID-19: when repeated lockdowns hinder mental health!

Abdel. H Boudoukha, Nantes Université, Nantes, France; Anne Congard, Nantes Université, Nantes, France; Arnaud Sapin, Nantes Université, Nantes, France; Amélie Bret, Nantes Université, Nantes, France; Jean-Michel Galharret, Nantes Université, Nantes, France; Oscar Navarro, Université de Nîmes, Nîmes, France; Ghazlane Fleury-Bahi, Nantes Université, Nantes, France

Introduction: COVID-19 has forced the implementation in many countries of measures to limit its spread such as lockdown. Covid-19 is therefore a prolonged period of chronic stress with traumatic characteristics for some (Sun et al., 2020; Ganascia, 2020; Casagrande et al., 2020). To our knowledge, there are no studies conducted on the effect of repetition of lockdown. Our longitudinal research studies the impact of three successive lockdowns on post-traumatic stress in France. We hypothesize that mental health deteriorates with each successive confinement. More specifically, the prevalence of post-traumatic stress should increase with the repetition of confinements.

Method: Three samples of adults were drawn during the first weeks of each of the three lockdowns. A total of 1316 participated in the study for the first lockdown (T1), 591 for the second lockdown (T2), and 474 for the third one (T3). The samples had a mean age of $Mt1 = 32.8$ ($SDt1 = 11.7$), $Mt2 = 37.0$ ($SDt2 = 13.4$) and $Mt3 = 38.3$ years ($SD = 13.1$). The male-female distribution was similar to the for all three measurement times. Participants were recruited through social networks. They completed a set of questionnaires via Qualtrics including the PCL-5 which assesses the intensity of post-traumatic stress disorder and its dimensions (reexperiencing, avoidance, mood alteration and hyperreactivity).

Results: An ANOVA showed a significant difference in posttraumatic stress intensity and dimensions between the three measurement times (TSPT_avoidance: $\eta^2 = .189^{***}$, TPST_reexperiencing: $\eta^2 = .273^{***}$, TSPT_altera: $\eta^2 = .327^{***}$, TSPT_hyp_reac: $\eta^2 = .313^{***}$, TSPT_total: $\eta^2 = .373^{***}$). Post-hoc analyses indicated that participants reported a significant increase in all of their posttraumatic symptoms between the first and second lockdowns and then all of these symptoms stabilized between T2 and T3 (no significant change between the second and third lockdown). Logistic regression showed that the time of measurement significantly predicted the proportion of participants suffering from a diagnostic level of post-traumatic stress ($\chi^2(2) = 181$, $p < .001$). This prevalence increased significantly from 16.2% in T1 to 43.3% in T2 ($OR = 3.9$, $p < .001$) and then stabilized from 43.3% in T2 to 38% in T3 ($OR = 0.82$, $p = .109$).

Discussion: Analyses show that post-traumatic stress levels were particularly high during the last two lockdowns and continued during the third lockdown. Many psychosocial issues are raised during this period of health crisis. These results will be discussed with regard to the restrictions proposed by the government and the perspectives of public actions in terms of accompaniment during the confinement but also following such a health crisis.

Open Paper Symposium 23

Digital interventions for depression

The effects of a web-based behavioural activation intervention on motivational and volitional outcomes in individuals with depression

Claudia Mueller-Weinitschke, Department of Rehabilitation Psychology and Psychotherapy, Institute of Psychology, University of Freiburg, Freiburg, Germany; Jürgen Bengel, Department of Rehabilitation Psychology and Psychotherapy, Institute of Psychology, University of Freiburg, Freiburg, Germany; Lena Violetta Krämer, Department of Rehabilitation Psychology and Psychotherapy, Institute of Psychology, University of Freiburg, Freiburg, Germany

Introduction: Behavioural activation (BA), which is an effective treatment for reducing depressive symptoms, aims at increasing positively reinforcing activities. To become and maintain active, a behavioural intention (motivation), as well as capacities to transform intentions into action (volition) are required. According to the Health Action Process Approach (Schwarzer, 2016), a behavioural intention is determined by positive and negative outcome expectancies and motivational self-efficacy. Volitional competencies consist of the sub-facets of action and coping planning, coping and recovery self-efficacy, and action control. Previous research has shown, that individuals with depression experience motivational and volitional deficits regarding their ability to be active in everyday life. Within an intervention study, we investigated the effect of a BA intervention on these motivational and volitional variables.

Method: We conducted a randomized controlled trial with a parallel design. Participants were recruited via a large German healthcare insurance company. 128 subjects (age: 18-65, depression diagnosis in SCID-5, meeting no exclusion criterion) were randomly assigned to the intervention group (IG; immediate access to the intervention) or the control group (CG; participation after follow-up assessments). The assessment of motivational and volitional outcomes was based on pre-existing scales adapted for use in BA and depression. Assessments took place at baseline (t1), eight weeks (t2), and six months (t3) after randomisation using online questionnaires. Data were analysed on an intention-to-treat basis using linear mixed models.

Results: Aside from negative outcome expectancies all assessed motivational and volitional outcomes changed over the course of 3 months with significant differences between the IG and CG. The IG showed a greater increase in positive outcome expectancies (interaction effect

group \times time: $F(1, 119.2) = 5.27$; $p = 0.023$), motivational self-efficacy ($F(1, 119.7) = 9.02$; $p = 0.003$) and intention ($F(1, 115.5) = 5.57$; $p = 0.020$) than the CG. Similar results were found for the volitional outcomes, with significantly higher increases in the IG in action planning ($F(1, 118.5) = 18.35$; $p < 0.001$), coping planning ($F(1, 119.2) = 5.27$; $p = 0.023$), coping self-efficacy ($F(1, 114.7) = 14.19$; $p < 0.001$), recovery self-efficacy ($F(1, 116.5) = 8.43$; $p = 0.004$), and action control ($F(1, 116.4) = 19.49$; $p < 0.001$). These mean differences correspond to medium and large effect sizes ranging from $d = 0.32$ for intention to $d = 0.82$ for coping planning.

Discussion: In this study, we successfully implemented a motivational-volitional model as a framework for behaviour change in clinical psychology, with volitional variables displaying the greatest changes. It should be considered, however, that these findings are based on exploratory analyses of a trial with depression as its primary outcome. In order to be sensitive and not to miss any effects, we did not perform an alpha error adjustment. A possible mediation between the motivational-volitional variables, activity and depressive symptoms should be analysed further, preferably via studies with greater statistical power or via experience sampling designs.

Conclusion: This is the first study to show, that motivation and volition can be improved by a web-based BA intervention in individuals with depression.

Digital interventions for the treatment of depression

Isaac Moshe, University of Helsinki, Helsinki, Finland; Yannik Terhorst, Ulm University, Ulm, Germany; Paula Philippi, Ulm University, Ulm, Germany; Matthias Domhardt, Ulm University, Ulm, Germany; Pim Cuijpers, Vrije Universiteit Amsterdam, Amsterdam, Netherlands; Ioana Cristea, University of Pavia, Pavia, Italy; Lasse Sander, Albert-Ludwigs-University Freiburg, Freiburg, Germany

Introduction: The year 2020 marked 30 years since the first paper was published on the use of a computer-based CBT intervention for the treatment of depression (Selmi et al., 1990). Since then, hundreds of RCTs have been conducted assessing the efficacy of digital interventions for diverse populations and across a variety of settings. Digital interventions have been proposed as a scalable, cost-effective way of reducing the treatment gap in mental healthcare, reducing waiting list times, enabling access for rural or hard-to-reach communities and lessening the stigma associated with seeking support. As an increasing number of public and private healthcare systems adopt digital interventions to meet the growing demand for treatment - fueled by the rapid acceleration of remote care due to the COVID-19 pandemic - an in-depth understanding of the efficacy, effectiveness, and limitations of digital interventions is both timely and important. This talk presents findings from the largest meta-analytic review of digital interventions for the treatment of depression conducted to-date (Moshe et al., 2021).

Method: A systematic literature search identified 83 studies ($N = 15,530$) that randomly allocated participants to a digital intervention for depression versus an active or inactive control condition. Random-effects multilevel meta-regression was used to assess the difference in outcomes between digital interventions and controls and examine the relationship between study-level covariates and effect size (moderators of treatment outcome).

Results: Overall, we found a significant medium effect size of digital interventions compared with all control conditions ($g = .52$). Significant differences were found between control conditions (WLC: $g = .70$; attention: $g = .36$; TAU: $g = .31$). Interventions that involved human therapeutic guidance had significantly higher effect sizes ($g = .63$) than self-help interventions ($g = .34$). Outcomes were significantly lower in effectiveness trials ($g = .30$) than efficacy trials ($g = .59$). No significant difference in effect size was found between smartphone-based apps and computer- and Internet-based interventions, nor between human-guided digital interventions and face-to-face psychotherapy for depression, although the number of studies in both comparisons was low.

Discussion: The findings provide strong evidence for the efficacy of digital interventions for the treatment of depression for a variety of populations and across a number of different settings. However, with little more than 25% of participants on average completing the full intervention in real-world settings, adherence outside of highly controlled settings remains a major challenge.

Conclusion: Digital interventions may have a major role to play in reducing the current treatment gap in mental healthcare that overcomes many of the obstacles associated with traditional face-to-face therapy. However, to realize the full potential of digital interventions it is now time to turn our attention to implementation science and bridging the research-to-practice gap. We conclude by proposing several important future research directions to this end.

Early patient involvement in the design of a blended smartphone application and dashboard for depression (TOTEM)

Veerle Ross, UHasselt - School of Transportation Sciences - Transportation Research Institute (IMOB) - Agoralaan, 3590 Diepenbeek; FARESA Evidence-Based Psychological Centre, Hasselt, Belgium; Kris Brijs, UHasselt - School of Transportation Sciences - Transportation Research Institute (IMOB) - Agoralaan, 3590, Diepenbeek, Belgium; Geert Wets, UHasselt - School of Transportation Sciences - Transportation Research Institute (IMOB) - Agoralaan, 3590, Diepenbeek, Belgium; An Neven, UHasselt - School of Transportation Sciences - Transportation Research Institute (IMOB) - Agoralaan, 3590, Diepenbeek, Belgium; Hélène Dirix, UHasselt - School of Transportation Sciences - Transportation Research Institute (IMOB) - Agoralaan, 3590, Diepenbeek, Belgium; Nele Jacobs, FARESA Evidence-Based Psychological Centre, Hasselt; VUB - Brussels School of Governance - Pleinlaan 2, 1050, Brussels, Belgium

Introduction: Depression is a leading cause of avoidable suffering worldwide. Existing therapy must be optimized to reach more people more effectively, with fewer resources. Recent technological developments are essential to optimize therapy. However, early patient or user involvement is crucial. To this end, we are developing TOTEM (i.e., (mobile) platfOrm using evidence-based inTervEntions for (Mental) health), together with patients from the very beginning. The TOTEM platform (i.e., smartphone application and dashboard) for people suffering from depression is based on cognitive behavioral therapy and behavioral activation principles. It uses objective monitoring (e.g., activity/travel-related behavior) and human-in-the-loop AI machine learning to allow highly tailored blended care, combining face-to-face therapy with online modules and Just-in-Time Adaptive Intervention (JITAI) mechanisms. To be sure that TOTEM fits the needs of patients and health professionals, we adopted a co-creation development process. This study describes the first step in this process. End-users (i.e., patients with depression) and experts (e.g., psychologists) evaluated the usefulness of an existing smartphone Health & Travel Behavior (HTB) application and feedback report, initially developed for cardiac patients that allows monitoring and improving travel-related physical activity.

Method: Semi-structured interviews were conducted following a presentation demonstration of the application and the feedback report. Due to COVID, the presentations and interviews were organized online. A prospective perspective was used because participants did not formulate their opinions based on user experience but on a demo. In total, 16 interviews were conducted (e.g., 14 patients and 2 experts), then transcribed and analysed.

Results: Participants were enthusiastic about the application. Most participants rated the app a 7 or above on a scale from 1 to 10. Participants perceived the app as user-friendly, relevant, clear, useful, and attractive. Among others, it was indicated that the application would supplement standard care (e.g., weekly consultations). It would encourage people to engage in more activities, and most individuals would be interested in using the app as an external motivator. However, emotional aspects were currently underemphasized in the app (e.g., assessment of feelings). Increased tailoring and push notifications would be useful as well. Again, most participants were quite enthusiastic about the feedback report as it consistently scored at least a 6 out of 10. Participants did indicate that the report should be better tailored to depression. For example, the psycho-education focused too much on physical aspects instead of mental health. Nevertheless, participants perceived the feedback report as clear, useful, and relevant. Finally, experts also suggested to tailor the intervention towards different depression phases.

Discussion & conclusion: Both end-users and experts considered an application with a feedback report to monitor and improve travel-related physical activity as a valuable addition to standard care for depression. Of course, the application needs to be tailored towards the population of depressive patients (e.g., more focus on other activities than physical activities) and cannot be used as a standalone application. Ecological momentary assessment could increase attention towards feelings and emotions. The current insights will be applied to the TOTEM platform, which will be further subjected to co-creation.

Efficacy of a smartphone-based Reappraisal Training against depression and benefits of enhancing it with facial expression

Klara Capito, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Lena Schindler-Gmelch, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Lydia Helene Rupp, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Robert Richer, Machine Learning and Data Analytics Lab, Department Artificial Intelligence in Biomedical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Misha Sadeghi, Machine Learning and Data Analytics Lab, Department Artificial Intelligence in Biomedical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Bjoern Eskofier, Machine Learning and Data Analytics Lab, Department Artificial Intelligence in Biomedical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany; Matthias Berking, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany

Introduction: The Interacting Cognitive Subsystems Approach (ICS) considers closely interacting alterations of cognition, facial expressions, and affect as underlying mechanisms for development and maintenance of depression (Barnard & Teasdale, 1995). Classical cognitive behavioral therapy (CBT) focuses on cognition as one central mechanism of change (i.e., via cognitive reappraisal), which then, in turn, also influences depressive affect. While CBT is the gold-standard psychotherapeutic intervention in depression, issues of high relapse rates and therapy resistance remain (Hans & Hiller, 2013; Cuijpers et al., 2014). Interestingly, studies have shown that the injection of botulinum toxin into the musculus corrugator supercilii (frowning muscle) can effectively reduce depressive symptoms (Rudorfer, 2018). Based on these findings and considering the mechanisms proposed in the ICS, one plausible mechanism of enhancing therapy effects could be integrating facial expressions. Those, however, have long since been considered hard to quantify on the one hand, and difficult to modify on the other. Smartphone- and sensor-based interventions could provide a promising solution, as with technical advancements they become increasingly sensitive to subtle physical processes and increasingly flexible to apply for specific psychotherapeutic techniques, such as cognitive reappraisal. Thus, the aim of our study is to evaluate the effectiveness of reducing depressed mood with a smartphone-based information processing training, combining different aspects of cognitive reappraisal and facial expression feedback in depression.

Method: We report on an ongoing randomized controlled trial with $n = 128$ individuals with a diagnosis of depression and $n = 128$ healthy controls. Three active groups will be receiving a smartphone-based intervention after an induction of depressed mood. Interventions will either be 1) verbal cognitive reappraisal, 2) verbal cognitive reappraisal enhanced by affect expressions or 3) a facial muscle training focusing on antidepressant expressions. A control group will receive a placebo intervention for comparison. To evaluate the effectiveness of the interventions comparisons of the four groups at three different points in time are planned. Furthermore, psychometric data, psychophysiological data, and video recordings including depth data will be analyzed by means of machine learning methodologies, in order to detect depression, affect and subtle changes in facial expressions.

Results: It is expected that verbal cognitive reappraisal enhanced by antidepressant facial expressions is more effective in reducing depressed mood than verbal cognitive reappraisal only, and that both, in turn, are more effective than the placebo condition. Furthermore, it is hypothesized that the antidepressant facial muscle training is effective compared to the placebo intervention.

Discussion: Preliminary pilot data will be presented and discussed in the context of current clinical practice.

Conclusion: If shown to be effective, the intervention is planned to become part of an automated app-based biofeedback training as an innovative option in depression treatment. Keywords: depression, cognitive reappraisal, facial expressions, smartphone-based intervention

iCAN: Intelligent, chatbot-assisted outpatient aftercare for depression in adolescents and young adults

Hannah Streit, Friedrich-Alexander-Universität Erlangen-Nürnberg, Lehrstuhl für Klinische Psychologie und Psychotherapie, Erlangen, Germany; Stefan Lüttke, Department of Psychology, University of Greifswald, Greifswald, Germany; Christian Aljoscha Lukas, mentalis GmbH, Nürnberg, Germany; Eva-Lotta Brakemeier, Department of Psychology, University of Greifswald, Greifswald, Germany; Matthias Berking, Friedrich-Alexander-Universität Erlangen-Nürnberg, Lehrstuhl für Klinische Psychologie und Psychotherapie, Erlangen, Germany

Introduction: Approximately 11 % of adolescents and young adults meet diagnostic criteria for depression during their lives (Merikangas et al., 2010), and hospitalisation rates have been rising steadily (Plener et al., 2015). At the same time, relatively few individuals receive outpatient psychotherapeutic treatment, resulting in a lack of appropriate aftercare (Fegert et al., 2019). One possibility to bridge this gap are smartphone-based interventions (SBI), which in the treatment of depression have been shown to be effective in children and adolescents (Grist et al., 2019), especially if accomplished by guided components such as E-Coaches (Baumeister et al., 2014). The iCAN app offers a SBI following inpatient stay for adolescents and young adults diagnosed with depression to cover the waiting-period until the start of outpatient treatment. It includes an app-based competence training with an individually tailored training plan, including automated components based on cognitive-behavioural-therapy techniques. Further, an artificial-intelligence-based chatbot provides feedback to common issues in depression, aiming to enhance adherence and motivation. On a last note, weekly eCoaching sessions support the

attainment of the individual training goals and the uptake of outpatient treatment. In sum, the intervention aims to reduce relapse rates, decrease depressive symptoms, and facilitate the transition to outpatient treatment after hospitalisation.

Method: The 12-week iCAN-intervention for adolescents and young adults is currently evaluated in a two-armed randomized-controlled-trial comparing the intervention group (routine care + iCAN) with a control group (routine care only). Remission status, depressive symptoms, and successful transition to outpatient treatment are assessed at baseline (start of the SBI, directly after inpatient stay), and after 6 weeks, 12 weeks (end of the SBI), and 3 months, respectively. In addition, depressive symptoms are assessed weekly via app.

Results: It is expected that participants with access to the iCAN-app will show a greater decrease in depressive symptoms 12 weeks and 3 months after baseline compared to participants who have access to routine care only. Furthermore, participants in the intervention group are expected to access outpatient treatment more often and earlier, if indicated.

Discussion: If shown to be effective, the implementation of iCAN into routine care is intended.

Conclusion: iCAN provides an easy to disseminate smartphone-based intervention for adolescents and young adults in the aftercare of depression after inpatient stay, of which efficacy is evaluated in the current study.

Open Paper Symposium 24 - Emotion regulation in children and adolescents

Cognitive flexibility and emotion regulation as transdiagnostic mechanisms underlying psychopathology in clinically referred youths

Jakke Coenye, UGent, Oostkamp, Belgium; Lien Goossens, UGent, Gent, Belgium; Sandra Verbeken, UGent, Gent, Belgium; Jolien Braet, UGent, Gent, Belgium

Introduction: An increasing amount of reports sound the alarm about our youngsters mental health state. Research on underlying mechanisms of both internalizing and externalizing problems is needed. Recently, attention has been drawn to the role of deficits in cognitive flexibility (CF), the ability to adapt our thoughts and behavior to changes in our surroundings and context, as a possible risk factor for psychopathological development, yet research among children and adolescents is lacking. Therefore, the present study investigated the transdiagnostic relationship between CF and internalizing and externalizing symptom. Moreover, adaptive and maladaptive emotion regulation strategies were investigated as possible mediators of this relationship.

Method: 191 clinically-referred children and adolescents (65% female; mean age = 12.65; SD = 2.99) filled out questionnaires on their use of emotion regulation strategies and their parents reported on their CF capabilities and symptomology. Structural equation modelling was used to cross-sectionally test the hypotheses.

Results: Results revealed that CF was cross-sectionally related to both internalizing (.28, $p < .001$) and externalizing (.73, $p < .001$) symptoms. However, this relationship was not mediated by adaptive or maladaptive emotion regulation strategies.

Discussion: These findings suggest that impairments in cognitive flexibility increases vulnerability for psychopathology in children and adolescents. In particular, this relationship seems to be transdiagnostic (internalizing and externalizing symptoms). Surprisingly, emotion regulation did not mediate the CF-psychopathology relationship. Implications for theory and future research are discussed. Clinically, these results highlight the importance of cognitive regulatory processes, such as cognitive flexibility, as targets for clinical intervention.

Conclusion: Cognitive flexibility is a possible important mechanism underlying a wide range of disorders among youths. More research is needed, however, especially concerning its relationship with emotion regulation.

Assessment of emotion-regulation skills of children and adolescents in game-based situations.

Oana David, Babes-Bolyai University, Cluj-Napoca, Romania; Cristina Tomoiaga, Babes-Bolyai University, Cluj-Napoca, Romania; Liviu Fodor, Babes-Bolyai University, Cluj-Napoca, Romania; Ioana Iuga, Babes-Bolyai University of Cluj-Napoca, Romania, Cluj-Napoca, Romania

Introduction: Emotional problems in children and adolescents are a major concern with negative impact for their future development as adults. RETHink is a therapeutic game with demonstrated results that is based on the rational-emotive behavioral therapy (REBT), with seven levels built to train various emotional regulation skills. The first level trains the ability of emotion recognition, the second level trains the relaxation and mindfulness skills and the third level teaches the player the difference between rational and irrational cognitions. In the fourth level, participant learns the cognitive change ability and in Level 5 a problem-solving method. Level 6 is focused on positive bias and the final level encompasses all abilities from the previous levels and trains compassion. Each level has a section that can be used for the assessment of the targeted skills within the level. Our study aims at investigating the reliability and validity of the evaluation modules from the RETHink game with regard to the assessment of emotion regulation abilities in children/adolescents.

Method: In accordance with established guidelines, we recruited 196 children and adolescents aged 8 to 16 years old ($M = 12.77$, $SD = 3.10$). 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. With regard to the validity aspect, we investigated construct validity (convergent, discriminant and differentiation by "known group" analyses) and criterion validity (concurrent validity analysis).

Results: Preliminary results showed statistically significant positive associations between the scores obtained by the participants and the emotion control measure with the situational responsibility measure. In terms of predictive validity, the regression model was statistically significant in the case of situational responsiveness. Moreover, in terms of the reliability of the RETHink game, after applying the Cronbach's alpha test, we obtained an average value for the internal consistency.

Conclusion: Preliminary analyses showed that the RETHink Game can be successfully used for assessment of emotion-regulation skills of children and adolescents.

Predictors of youth academic burnout: the role of attachment and cognitive emotion regulation

Ioana Alexandra Iuga, Babeş-Bolyai University, Cluj-Napoca, Romania; Oana David, Babeş-Bolyai University, Cluj-Napoca, Romania; Marie Danet, University of Lille Nord de France, Lille, France

Introduction: School burnout can be viewed as a consequence of mismanaged school-related stress, manifesting through symptoms of exhaustion from studying, cynicism directed at studying and reduced efficacy in relation to school work. Secondary education students experience high levels of stress, a recent survey conducted by the Organization for Economic Co-operation and Development across 72 countries revealing that 66% of students reported feelings of stress related to poor grades and 59 % reported stress related to evaluation

contexts (OECD, 2017). Several studies have shown that a secure attachment is associated with confident, eager, attentive and resourceful exploration of the environment, especially when the child is facing disappointment or challenges such as high academic pressure. In youth samples, the association between attachment security and adaptive emotion regulation is highlighted, with securely attached youth showing increased positivity, coherence of content and affect, lower emotion dysregulation, less dysfunctional anger, and the use of adaptive cognitive emotion regulation strategies. The main aim of the study is to examine whether cognitive emotion regulation strategies mediate the relationship between children's attachment security and academic burnout symptoms. A second objective is to explore the role of age, gender and school type (public or private) in the aforementioned relationship. Method: Children (N = 470) aged 8 to 16 who are enrolled in either public or private Romanian schools were administered a series of questionnaires assessing attachment security, use of specific emotion regulation strategies and levels of academic burnout symptoms. The relationships are to be examined using path analysis methods. Results: We expect that higher attachment security predicts lower levels of academic burnout. Adaptive emotion regulation strategies mediate the relationship between attachment and burnout symptoms. Discussion: Researching student burnout is relevant for a number of reasons. At a policy level, research on this topic helps professionals understand student behavior by exploring how burnout influences their collaboration with the institution, fellow students and professors. At a student level, burnout has been related to a series of mental health problems and adjustment difficulties, such as increased depressive symptoms, decreased levels of life satisfaction, reduced quality of sleep, somatic symptoms, and academic trajectories with a higher risk of dropout and lower academic achievement. Conclusion: Given the limited research carried out in Europe on this topic, it is of special importance to explore specific predictors of children's academic burnout that can serve as the basis of educational and psychotherapeutic prevention and intervention programs and better public policies.

Keeping it Real: Using interactive virtual reality to assess and intervene with aggressogenic social information processing and emotion regulation in children

Bram Orobio De Castro, University of Amsterdam, Amsterdam, Netherlands; Sophie Alsem, Utrecht University, Utrecht, Netherlands; Rogier Verhoef, Utrecht University, Utrecht, Netherlands; Anouk Van Dijk, University of Amsterdam, Amsterdam, Netherlands; Esmee Verhulp, Utrecht University, Utrecht, Netherlands

Introduction: Aggressive behavior problems place a burden on children, their relatives, and society. It is predicted by specific social information-processing patterns (SIP) and interventions targeting these patterns are relatively effective. Notwithstanding these impressive findings, an underappreciation of the emotional nature of aggressive behavior limits our understanding of SIP and its application to more effective intervention. Aggressive behaviors tend to be emotional responses to highly engaging stimuli, such as being threatened, disadvantaged, or having power over others. The tendency of aggressive children to respond aggressively to such challenging situations is shaped by emotionally salient experiences in their past, such as aversive experiences with parents and peers, and moderated by child emotionality. Yet current SIP assessment and intervention presuppose a degree of 'calm, cool & collected' reflection that is unlikely to capture the actual fast, automatic, and emotional processing that occurs when actual aggressive incidents arise. Similarly, attempts to change SIP are less emotionally engaging than the aversive life experiences that have shaped aggressive children's SIP, as even the most effective cognitive behavioral interventions to date do not involve practice of SIP in actual aggression eliciting situations. Method: In our present projects we examined and changed emotional social information processing and behavior in actual highly engaging emotional situations that evoke aggressive responses. We used interactive virtual reality exposure to aggression provoking social interactions to (1) assess individual SIP patterns of children with aggressive behavior problems and (2) to develop and test individually tailored cognitive behavioral treatment in an RCT.

Results: I will demonstrate the interactive virtual reality environment we developed to this end, and show the promising results of our assessment trial and clinical randomised controlled trial, each with N > 100 participants with aggressive behavior problems. Virtual reality assessment and intervention were generally found to be respectively more valid and more effective than traditional methods.

Discussion: I will discuss the advantages and limitations of interactive VR, both in terms of validity and efficacy, and in terms of client satisfaction and costs.

Open Paper Symposium 25 Developing new interventions

Developing and adapting a guided low-intensity behavioral activation intervention targeting depression in people with dementia for the Swedish context (The INVOLVERA Study)

Frida Svedin, Uppsala University, Uppsala, Sweden; Oscar Blomberg, Uppsala University, Uppsala, Sweden; Anders Brantnell, Uppsala University, Uppsala, Sweden; Paul Farrand, University of Exeter, Exeter, United Kingdom; Louise Von Essen, Uppsala University, Uppsala, Sweden; Anna Cristina Åberg, Dalarna University, Falun, Sweden; Joanne Woodford, Uppsala University, Uppsala, Sweden

Introduction: Dementia continues to increase worldwide, with numbers set to rise from 50 million in 2021 to 150 million by 2050. Global health and social care policies highlight a need to support people with dementia to 'live well'. This is of particular importance given the high burden caused by dementia on individuals, informal caregivers, and society. Depression is highly prevalent in people with dementia. Whilst evidence-based psychological interventions (e.g. Cognitive Behavioral Therapy (CBT)) have been shown effective, access remains limited. To overcome this psychological 'treatment gap', global efforts have been made to increase access via provision of low-intensity CBT. Behavioral activation (BA), an example of an evidence-based low-intensity CBT approach, may represent a solution for people with dementia and depression in Sweden. Given the promise of BA, research was conducted in the United Kingdom to develop and examine feasibility of a low-intensity BA intervention tailored to people with dementia. Findings indicated the intervention feasible and acceptable to people with dementia and their informal caregivers. Given the promise of the intervention, development work has taken place in Sweden to maximise acceptability, relevancy, and feasibility in the Swedish context.

Method: A mixed-methods study involving people with dementia, informal caregivers, healthcare professionals, and non-governmental organisations (NGOs) to co-design and adapt the intervention for the Swedish context. Through iterative phases, interviews and focus groups were conducted with all stakeholders to gain feedback on the intervention. Results informed adaptations to improve intervention acceptability, relevancy, and feasibility. Interviews and focus groups were analysed using framework content analysis according to Normalization Process Theory (NPT) constructs (Coherence, Cognitive Participation, Collective Action, Reflexive Monitoring). Alongside, a Public Involvement group was established to further inform the intervention design.

Results: Preliminary results indicate facilitators include: (1) intervention has the potential to fill a large psychological treatment gap given lack of current support (Coherence); (2) objectives and potential benefits of intervention were understood and agreed by stakeholders (Coherence). Barriers include: (1) lack of involvement and engagement from politicians, decision-makers, and managers (Collective Action); (2) lack of appropriate workforce providing guidance to the intervention in Sweden (Collective Action); (3) NGOs not recognising their potential role in the intervention (Cognitive Participation); (4) lack of time and financial resources (Collective Action); (5) healthcare professionals and NGOs acting gatekeepers for informal caregivers accessing support (Cognitive Participation).

Discussion: Psychological needs of people with dementia and depression are currently unmet by Swedish healthcare. The proposed intervention has potential to meet unmet psychological needs and global priorities to support people with dementia to 'live well'. Given barriers to intervention implementation are common, NPT provides a useful framework for understanding potential barriers and facilitators to implementation from the intervention development phase. Understanding barriers and facilitators to implementation at the intervention development phase may enhance future implementation potential if intervention is shown effective.

Conclusion: Results inform the development of a tailored intervention, optimised to improve maximise acceptability, relevancy, and feasibility for people with dementia and depression. A subsequent feasibility study will further examine the feasibility and acceptability of the intervention.

Let It Go – A randomized controlled pilot study exploring the utility of sadness in an emotion-based approach-avoidance modification training in the context of stress

Lydia Helene Rupp, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Marie Keinert, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Stephanie Böhme, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Lena Schindler-Gmelch, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Björn Schuller, Chair of Embedded Intelligence for Health Care and Wellbeing, Universität Augsburg, Augsburg, Germany; Björn Eskofier, Machine Learning and Data Analytics Lab, Department of Artificial Intelligence in Biomedical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; Matthias Berking, Department of Clinical Psychology and Psychotherapy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Introduction Chronic stress affects up to 33% of adults (APA, 2017) and is a risk and maintaining factor for mental illness. Thus, there is a need for easy-to-disseminate and effective interventions to prevent stress-related mental disorders. App-based stress management trainings could fulfil this need by providing accessible interventions. Dysfunctional beliefs are promising targets for mobile interventions since they may increase stress (Kuroda, 2016), and play a role for various clinical conditions. Therefore, modifying evaluations of these beliefs might reduce subjective stress. A fitting method are approach-avoidance modification trainings (AAMTs), which can be used to modify stimulus evaluations (Wiers et al., 2010). However, the standard AAMT includes approach- and avoidance reaction of little valence, such as swiping or joystick motions. As emotions may influence judgement and evaluative reactions (Clore & Huntsiger, 2007), they are a viable target to further enhance the valence, and thus the effectiveness of AAMTs. The emotion of sadness is an especially fitting candidate for the avoidance reaction in the AAMT, as it may promote disengagement from unattainable goals.

Method This randomized controlled pilot study evaluated an innovative emotion-based and smartphone-delivered AAMT (eAAMT) to modify dysfunctional stress-related beliefs. Due to their association with disengagement and approach, sadness and positive emotions (e.g., happiness, love) were chosen as avoidance and approach reactions, respectively. A sample of individuals with elevated stress ($n = 30$) completed the app-based stress management training in four 30-minute sessions on four consecutive days. Participants were allocated to either a swipe- or a sadness-enhanced AAMT or an inactive control group. During the training, participants pushed dysfunctional stress-related statements away (by swiping or displaying sadness) and pulled functional stress-related statements closer (by swiping or by displaying positive emotions). The primary outcome was change in subjective stress (as assessed by the Perceived Stress Scale [PSS]-10) from pre- to post-assessment. Additional outcomes included depressiveness, emotion regulation and evaluations of stress-related dysfunctional beliefs.

Results As this is a pilot study with a small sample size, we chose to focus on effect sizes to evaluate the efficacy of the eAAMT approach. Descriptive data showed that the decrease in subjective stress was larger in the sadness group compared to the control and swipe groups, with moderate to large effect sizes (Hedge's g (sadness vs. control) = .80, g (sadness vs. swipe) = -.76 in favor of the sadness group). The effect size for the decrease in subjective stress in the control compared to the swipe group was small ($g = .18$).

Discussion This pilot study supports the efficacy of the eAAMT paradigm for targeting dysfunctional beliefs. The large effect size for the decrease of subjective stress in the emotion group suggests that the eAAMT approach has promise and should be evaluated in further studies with larger samples. As dysfunctional beliefs are a symptom of several psychiatric illnesses, further studies could evaluate the efficacy of this training in clinical populations.

Conclusion The current pilot study offers preliminary evidence for the effectiveness of an emotion-enhanced AAMT as a mobile intervention to modify dysfunctional beliefs.

Effect of a classical conditioning intervention on social processes associated with paranoid beliefs: Evidence from two experimental studies.

Almudena Trucharte, Complutense university, Las Rozas de Madrid, Spain; Anton P Martinez, Sheffield University, Sheffield, United Kingdom; Carmen Valiente, Complutense university, Madrid, Spain; Vanesa Peinado, Complutense university, Madrid, Spain; Regina Espinosa, Camilo Jose Cela University, Madrid, Spain; Richard Bentall, Sheffield University, Sheffield, Spain

Introduction: Paranoid beliefs can be found on a dimensional continuum in both general and clinical populations ranging from less severe to more dysfunctional forms. Deciding whether others are trustworthy or not is a complex and subjective human aspect based on the evaluation of others' intentions. Significant efforts have been made to elucidate the mechanisms involved in the development and maintenance of such beliefs. Specifically, some studies highlight the role of negative self and other schemas. Given the importance of social aspects involved in paranoid cognitions, it has been recommended to study these processes in social contexts that lead to the activation of self and other schemas. Thus, we aimed to explore the efficacy of a brief classical conditioning (CC) intervention focused on modifying self and other schemas assessed through a social inference task (study 1) as well as trustworthiness judgments (study 2) in non-clinical populations.

Method: For study 1, 160 university students performed a social inference task consisting of the presentation of everyday social scenarios, on which participants had to evaluate social feedback from a self and other perspective. For study 2, 300 participants from the general population completed an online implicit priming trust task where self-relevant and other relevant information was presented in the screen before judging the trustworthiness of face stimuli. In both studies these tasks were performed before and after CC interventions, which involved being randomly allocated to three conditions. In each of these conditions information about the self was always paired with either happy face stimuli (positive condition), angry face stimuli (negative condition) or neutral face stimuli (control condition).

Results: In study 1, results showed that participants in the positive condition had a better self-appraisal in the social inference task compared to the other conditions. Whereas in study 2, no significant findings were found for changes in implicit trustworthiness judgements before and after the CC intervention.

Discussion: Results from study 1 demonstrated that even a brief CC intervention can be effective in changing the way participants evaluated social feedback from a self-perspective. However, findings from study 2 revealed that this CC intervention was not enough to modify trustworthiness judgements. Limitations of these studies as well as methodological differences between them (e.g., offline vs online) will be discussed.

Conclusion: These findings shed light on the underlying mechanisms regarding social cognition processes which are crucial in understanding the formation and maintenance of paranoid beliefs. Furthermore, this CC intervention revealed to be specifically related to social evaluative concerns rather than trustworthiness processes. Future research should replicate these findings in subclinical and clinical populations.

Open Paper symposium 26

Fear conditioning and extinction1

COVID-19-related anxiety enhances maladaptive fear learning and generalization processes - a fear conditioning study during the pandemic

Alexander Hauck, Saarland University, Saarbrücken, Germany; Tanja Michael, Saarland University, Saarbrücken, Germany; Diana Ferreira De Sá, Saarland University, Saarbrücken, Germany

Introduction: The COVID-19 pandemic has been accompanied by many limitations in daily life. Rather than simply being an impactful incident, it must be considered an anxiety-provoking event and is associated with health and existential fears. Since the onset of the pandemic, there has been a significant increase in stress and anxiety-related symptoms in the general population. Thus, high COVID-19-related anxiety might enhance the development and maintenance of pandemic-related anxiety disorders. To understand how pandemic-related fears influence the development of anxiety disorders, the effects of pandemic fear on underlying fear learning processes, such as fear acquisition and generalization, must be examined.

Method: Between August and December 2020, 220 healthy students from German universities participated in a pre-registered online-study, where the effects of high COVID-19-related anxiety on the learning and generalization of fear were investigated. Participants had to answer questions about COVID-19-related anxiety symptoms and were divided into two groups (high vs. low COVID-19-related anxiety). Using a differential fear conditioning paradigm with traumatic film clip as unconditioned stimulus (US) and US-expectancy ratings as dependent variable, the extent to which participants with high COVID-19-related anxiety showed impairment in fear learning and generalization was examined.

Results: Results suggest that participants with high COVID-19 related anxiety show a tendency toward impaired fear learning in acquisition, indicated by worse discrimination between an aversive (CS+) and non-aversive conditioned stimulus (CS-). Additionally, participants with high COVID-19-related anxiety showed significantly worse discrimination between CS+ and highly similar but non-aversive generalized stimuli (GSs) in fear generalization, indicating stronger generalization of fear. Furthermore, greater levels of general fear in participants with high COVID-19-related anxiety could be observed throughout the all experiment.

Discussion: As expected, participants with high COVID-19-related anxiety showed both impaired fear learning and generalization. These results indicate that the COVID-19 pandemic, as a fear-provoking event, might contribute for a higher risk of the development of anxiety disorders in some individuals.

The combined trauma film and fear conditioning paradigm elicits only moderate and short-term psychological distress and is thus ethically justifiable

Tanja Michael, Saarland University, Saarbrücken, Germany; Alexandra Brückner, Saarland University, Saarbrücken, Germany; Diana Ferreira De Sá, Saarland University, Saarbrücken, Germany

Introduction: The trauma film paradigm is a commonly used experimental analogue to study the effects of psychological trauma under controlled laboratory conditions. More recently, many studies have combined the trauma film with fear conditioning paradigms. Researchers using either the original or the combined trauma film paradigm are regularly asked by ethics committees to provide information that the paradigms are not harmful for participants. While researchers affirm that they observe no clinically significant distress in their participants, it has not been systematically studied whether in the long-term participation meets criteria for minimal risk research. The aim of the current study was therefore to investigate the psychological impact of the paradigm at three different points in time: a) immediately after participation (T1), b) after two days (T2), c) 2-3 weeks later (T3). **Method:** The experiment is a registered study that examined as its principal research question extinction mechanisms in a combined trauma film and fear conditioning paradigm. Neutral faces served as conditioned stimuli (CS) and traumatic film clips as unconditioned stimuli (US). Results concerning extinction were reported elsewhere. 41 participants agreed to also partake in the detailed assessment of the psychological impact of the study at T2 and T3. Psychological distress related to the experiment was measured with the Revised Impact of Event Scale (IES-R) at all points in time as well as with 7-point rating scales administered at T2 and T3. The scales measured: 1) Study-related impairment on well-being, 2) Affect when thinking about the trauma film clips, 3) Regret about participating in the study.

Results: Exposure to the traumatic film clips led to measurable levels of symptoms on the IES-R at T1. However, symptoms decreased significantly from T1 to T2, and again to T3. Participants reported improved study-related well-being at T3 compared to T2 as well as less negative affect when thinking about the study. Expressed regret about having participated in the study was low at T2 and did not significantly decrease further at T3.

Discussion: Results indicate that the combined trauma film and fear conditioning paradigm elicits moderate trauma-analogue symptoms and distress in healthy participants. However, the psychological impact of the paradigm is short-lived and not clinically relevant.

Conclusion: The study provides preliminary evidence that the combined trauma film and fear conditioning paradigm is not harmful for participants and thus ethically justifiable.

The role of expectancy violations in human fear extinction

Lotte Stemerding, University of Amsterdam, Amsterdam, Netherlands; Vanessa Van Ast, University of Amsterdam, Amsterdam, Netherlands; Merel Kindt, University of Amsterdam, Amsterdam, Netherlands

Introduction: Notwithstanding the progress that has been made in the effectiveness of exposure therapy, it is relatively unknown how individuals can better profit from corrective learning. It is suggested that the strength of the inhibitory memory is crucially affected by expectancy violations and that increasing their size and/or occurrence can improve exposure outcomes. Alternatively, suggestions for clinical implementations of the inhibitory learning model emphasize the awareness of expectancy violations rather than manipulating them directly. There is, however, little experimental evidence for a beneficial effect of either directly or indirectly increasing expectancy violations on extinction learning and the return of fear. Understanding the mechanisms through which expectancy violations affect inhibitory learning is crucial to optimize exposure therapies. We will present data from two experimental studies investigating potential methods to strengthen inhibitory learning.

Method: In two fear-conditioning studies we investigated whether directly increasing expectancy violations (Experiment 1) or increasing awareness to expectancy violations (Experiment 2) during extinction reduces return of fear one day later. Two female avatars served as conditioned stimuli (CSs) and a mild electrical stimulus to the wrist as unconditioned stimulus (US). Conditioned responding was measured through fear potentiated startle (FPS) and skin conductance responses (SCR), and we measured cognitive expectancy ratings. In both experiments, fear acquisition took place on day 1, extinction on day 2, and a return of fear test on day 3. Experiment 1 utilized different contexts to signal low or high CS-US reinforcement. This enabled us to manipulate outcome expectancies during extinction while keeping acquisition the same between groups, which is essential to make a just comparison in the test phase. In Experiment 2 we manipulated explicit attention to expectancy violations in one group, while using a standard extinction procedure in the other group.

Results: In Experiment 1, we found higher outcome expectancies at the start of extinction in the high expectancy group, but no differences in extinction retention on conditioned responding between the groups. The data from Experiment 2 is still being collected.

Discussion: We found no evidence for a direct role of expectancy violations in extinction learning. This suggests that inhibitory learning may instead be strengthened by increasing awareness to expectancy violations, rather than through effects of lower-level associative learning. We are testing this hypothesis in our second experiment. We will further discuss the benefits and pitfalls of translating theories of associative learning to the clinical field.

Conclusion: Our data shows that stronger expectancy violations do not improve extinction outcomes, but this does not exclude a potential role for expectancy violations in exposure therapy. It does indicate, however, that we should be careful in directly translating ideas from lower-level associative learning theory to clinical practice. The results from our second experiment will shed light on the effects of increasing attention to expectancy violations during extinction.

Open Paper Symposium 27

Treatment of children/adolescents in different contexts

A cognitive behavioural therapy smartphone app for adolescent depression and anxiety: co-design of ClearlyMe using novel processes

Sophie Li, Black Dog Institute, Randwick, Australia; Melinda Achilles, Black Dog Institute, Randwick, Australia; Stephanie Habak, Black Dog Institute, Randwick, Australia; Samantha Spanos, Black Dog Institute, Randwick, Australia; Aliza Werner-Seidler, Black Dog Institute, Randwick, Australia; Bridianne O'dea, Black Dog Institute, Randwick, Australia

Introduction: Fewer than 80% of adolescents with depression or anxiety receive evidence-based treatment. This is in part due to workforce shortages, cost and a lack of treatment accessibility. Digital interventions have the potential to overcome these barriers. However, there are no commercially available evidence-based cognitive behavioural therapy (CBT) smartphone apps specifically designed for adolescent depression and anxiety. The aim of this project was to address this gap by developing ClearlyMe – a new CBT smartphone app for adolescent depression and anxiety.

Method: We engaged in a novel co-design process with adolescents (n=36), parents (n=15), and mental health professionals (n=32) informed by the co-design literature and commercial product design processes. Co-design involved: 1) discovery of users' needs, views and preferences by conducting focus groups and 'gamestorming' activities; 2) defining app features through ideation workshops, user experience activities (e.g., Crazy Eights) and user consultations; 3) designing therapeutic CBT content and visual features; and 4) testing and refining prototypes. Users were involved at every stage and the process was iterative so that findings were carried forward to ensure continued refinement of concepts and features.

Results: Our findings validated the need for a CBT smartphone app designed with and for adolescents that utilises the ubiquitous, 'in-the-pocket' nature of smartphones. There was a preference for vibrant colours and illustrations and in contrast to other studies, users did not endorse gamification and chatbots as features. Preferences were largely consistent between the three user groups. However, adolescents preferred an app that could be used autonomously and without professional support, whereas mental health professionals desired a product that could be used as a therapy adjunct. These findings have culminated in the development of ClearlyMe, a CBT smartphone app for adolescent depression and anxiety that responds to differing users' needs by having the capacity to be used autonomously by adolescents, while also containing features and functionality to support its use as a CBT therapy adjunct.

Discussion: We devised and implemented a novel co-design process to develop ClearlyMe, a new CBT smartphone app designed with and for adolescents with depression and anxiety. Inclusion of adolescents, parents and mental health professionals throughout the entire co-design process provided unique insights and unanticipated feature preferences. Co-design was critical to the development of a novel, innovative digital intervention in the context of a rapidly evolving digital world. The impact of our co-design process on factors such as uptake, engagement and effectiveness are currently being evaluated in a fully powered (N=500) randomised controlled trial of ClearlyMe when used with and without guided support.

Conclusion: Our co-design process has the potential to offer a framework for other researchers and clinicians wishing to design digital mental health interventions for young people.

Development and Usability of the KibA app: An mHealth Application to Support Exposure Therapy for Childhood Specific Phobias

Annelieke Hagen, Leiden University, Leiden, Netherlands; Anke Klein, Leiden University, Leiden, Netherlands; Jasmin Rahemenia, Leiden University, Leiden, Netherlands; Thomas Ollendick, Virginia Tech, Blacksburg, United States; Maaike Nauta, University of Groningen, Groningen, Netherlands; Erwin De Gier, Trifork, Amsterdam, Netherlands; Silvia Schneider, Ruhr University Bochum, Bochum, Germany

Introduction: Specific phobias in children are highly prevalent and can have a great impact on their development. The treatment of choice is exposure-based cognitive behavioral therapy. However, it has been found that exposure is often not used enough during treatment and at home. Many families struggle with completing the home practice assignments for different reasons; e.g. they forget, are not sure what to practice, how often or where to find suitable practice materials or locations. A mobile app could facilitate exposure at home which may enhance treatment outcome. This paper describes the development of the KibA (Kids Beat Anxiety) app including the results of a usability study.

Method: The KibA app is developed for children from 7 to 14 years. The app aims to increase exposure, includes personalized practice exercises on different levels, has a reward system, a photo and video option, some game elements such as unlocking exercises and extra achievements, a child-friendly interface, and is available for Android and Apple. The app is connected to a therapist environment where therapists can enter specific exposure exercises for a child and can follow their progress. The development of the app consisted of 4 stages and included 32 children between the ages of 6 and 14 years and their parents, a group of researchers and therapists, and a group of 4 IT specialists who programmed the app. Throughout the development process all the parties involved brainstormed about every new version of the app, a group of children from the general population tested the app in a school setting, another group of children tested the app for a week at home, finally the app was tested by children with a specific phobia as an add-on to their treatment.

Results: The iterative process and the inclusion of all different parties led to the development of an evidence-based child-friendly app with good usability as rated by children and their parents. The app has the potential to facilitate exposure, especially for home practice.

Discussion: The app is currently tested in a RCT in which all children receive a short, intensive exposure treatment for a specific phobia, the one-session treatment (following the protocol of Öst & Ollendick, 2001). After the treatment children are motivated to practice at home for four weeks, one group does this with assistance of the KibA app and one group receives treatment as usual, consisting of tips of the therapist on how to practice at home. In the presentation the development and usability study will be discussed in light of the ongoing RCT and will include experiences of performing the one-session exposure treatment and using the KibA app in clinical practice in regular mental health clinics in the Netherlands and Germany.

Conclusion: The KibA app is developed following guidelines for mHealth apps (Whiteside, 2016) and is found to be a user-friendly app with potential of facilitating exposure at home for children with a specific phobia.

Treatment plan for female adolescents in the grip of chronic suicidality

Marthe Van De Koppel, Depression Expertise Centre for Youth at GGZ Oost Brabant, Oss, Netherlands; Saskia Merélie, 113 National Dutch Suicide Prevention Centre, Amsterdam, Netherlands; Yvonne Stikkelbroek, Depression Expertise Centre for Youth at GGZ Oost Brabant/Utrecht University, Oss/Utrecht, Netherlands; Paul Van Der Heijden, Reinier van Arkel, s Herthogenbosch, Netherlands; Jan Spijker, Pro Persona/Radboud University, Nijmegen, Netherlands; Arne Popma, Amsterdam UMC/Child and Youth department of the Dutch Association for Psychiatry, Amsterdam, Netherlands; Daan Creemers, Depression Expertise Centre for Youth at GGZ Oost Brabant, Oss, Netherlands

Introduction: A psychological autopsy study among 35 relatives of adolescents (aged 10 to 19 years old) who died of suicide in the Netherlands (Mérelle e.a. 2020) demonstrates a subgroup of female adolescents with chronic suicidal behavior and severe internalizing problems. This subgroup is recognized in the Dutch clinical field and there seems to be a lack of knowledge about how to treat this chronic suicidal behavior, resulting in stagnation of care and growing demoralization among patients, parents and mental health care providers. The aim of this paper is to describe characteristics of the suicidal process, to describe the challenges experienced in providing mental health care for this subgroup and to formulate preliminary recommendations.

Method: A case description from the psychological autopsy study and review of relevant literature.

Results: The persistent suicidal threat and the following despair of the patient and its parents are forcing the mental health care provider into an impasse: the primary focus of treatment is to guarantee the patient's safety, whereby the treatment of underlying problems is underexposed. Due to the chronicity of the suicidal ideation and behavior in a phase where identity formation and developing cognitive and emotional regulation skills are important developmental tasks, we suppose that there is a risk for developing a suicidal identity.

Discussion: Based on expert knowledge we make recommendations including 1) treating suicidality as a transdiagnostic phenomenon with its own meaning and function, 2) implementing an autonomy-promoting treatment policy, 3) aiming on continuity of care and prevention of repeated referrals of the patient by creating a multidisciplinary network of care providers and 4) making chronic suicidality tolerable for the care provider.

Conclusion: We propose preliminary practical recommendations in our quest for optimal mental health care for chronic suicidal adolescents

Open Paper Symposium 28 **Mindfulness and compassion**

Mindful2Work: Multi-method studies of the effectiveness of a mindfulness-based program combining physical exercise, yoga and mindfulness for employees with burnout-complaints

Esther I. De Bruin, University of Amsterdam, Amsterdam, Netherlands

Introduction: Mindful2Work is a 6-week program combining physical activity, yoga and mindfulness meditations, targeting (work-related) stress complaints from a body-mind perspective.

Method: We combined a top-down approach (researcher-driven outcome measures) with a bottom-up approach (personal goals and interview data) to investigate the effects on 98 employees with at least moderate (work-related) stress. Effects on personal goals, well-

being (stress, anxiety, depression, sleep, affect, happiness), functioning at work (dropout, mental and physical workability, work satisfaction), as well as training-specific aspects as mediating mechanisms (mindful awareness, self-compassion, emotion regulation strategies) were assessed

Results: Nearly all measures showed no change during the wait-list period, with only negative affect and physical workability showing small statistically significant improvements. Medium to large effect size improvements directly after training and at all follow-ups were found on primary outcomes stress (0.62–1.17), and risk for dropout from work (0.55–1.00), and largest effects occurred on personal goals (0.98–1.46). Improvements in well-being and functioning at work were medium directly after training, and at follow-up 1 (six weeks later) and 2 (six months later), and large at follow-up 3 (one year later). The training-specific measures showed small to medium effects after training and at follow-up 1. From the interviews (n = 9), two main categories of effects emerged: well-being and acquired insights. Mediating mechanisms were found to be Acting with Awareness and Self-Compassion.

Discussion: This presentation combines findings of 4 different studies all approaching effectiveness from a different angle; qualitative, quantitative analyses were combined with mediation analyses. Overall, Mindful2Work showed substantial and long-lasting improvements according to researcher-driven measures as well as participants' own reports. Limitations such as a lack of control group are discussed.

Conclusion: Mindful2Work showed substantial and long-lasting improvements according to researcher-driven measures as well as participants' own reports.

Mindfulness-based interventions and body awareness

Marbella Pérez-Peña, UCLouvain, Louvain-la-Neuve, Belgium; Jessica Notermans, UCLouvain, Louvain-la-Neuve, Belgium; Olivier Desmedt, UCLouvain, Louvain-la-Neuve, Belgium; Katleen Van Der Gucht, KU Leuven, Leuven, Belgium; Pierre Philippot, UCLouvain, Louvain-la-Neuve, Belgium

Introduction: Body awareness (BA) has long been proposed as a working mechanism of mindfulness-based interventions (MBIs), yet research on the mediating role of BA is scarce. Hence, the present study assesses the impact of an 8-week MBI on self-reported and indirect measures of BA, investigates the potential mediating role of BA in the relationship between an MBI and symptomatology, evaluates the impact of an MBI on important psychological processes (i.e., experiential avoidance, rumination, self-efficacy, and self-discrepancy), and explores whether these variables act alongside BA in mediating the relationship between an MBI and symptomatology.

Method: A non-randomized controlled trial was conducted with 148 participants (n = 89 in the MBI group; n = 59 in the control group) who completed questionnaires assessing BA and the above-mentioned psychological processes before and after an MBI. A sub-sample of participants (n = 86) completed a task that evaluates BA indirectly.

Results: Results showed a significant effect of MBI on the self-reported BA but not on the indirect measure of BA. The MBI significantly reduced symptomatology, and this effect was mediated by regulatory and belief-related dimensions of BA. Multiple mediator models showed a significant mediation via various pathways involving improved BA and various transdiagnostic psychological processes.

Discussion: The present study's results replicate prior findings showing that self-reported BA is an important outcome and mechanism of MBIs. Findings suggest that self-regulation, attention regulation, listening to the body, and trusting the body are the aspects of BA that are most important in explaining how an MBI reduces psychological symptomatology. The present study builds on current literature by showing that it is the interaction of particular aspects of BA with other psychological processes (e.g., rumination, experiential avoidance, etc.) that explains the effect of an MBI on symptomatology.

Conclusion: Findings support the conclusion that self-reported BA is positively impacted by an MBI and that an interplay of mechanisms associated with BA help explain an MBI's effects on symptomatology.

The role of attentional processing of emotional information as a mechanism of change in mindfulness and compassion interventions

Pablo Roca, Complutense University of Madrid, Madrid, Spain; Carmelo Vazquez, Complutense University of Madrid, Madrid, Spain; Gustavo Diez, Nirakara, Complutense University of Madrid, Madrid, Spain; Richard J. McNally, Harvard University, Cambridge, United States, Rosaria Maria Zangri, Universidad Complutense de Madrid, Madrid, Spain

Introduction: While the benefits of Meditation-Based Programs have been well documented, the mechanisms underlying these benefits have not been fully elucidated. Based on the general framework of cognitive theories (Beck, 1987) and cognitive models of meditation (Bishop et al., 2004), clinical researchers have hypothesized that changes in attentional biases may be one of the key mechanisms underlying the benefits of meditation practice in emotional distress and wellbeing (Ford et al., 2021; Garland et al., 2015; Kiken and Shook, 2012; Vago and Silbersweig, 2012). Therefore, this study aimed to examine whether: (1) formal training in mindfulness and compassion meditation could modify the distribution of attentional resources towards emotional information; and (2) changes in attentional processing of emotional information after the meditation programs mediate the improvements in psychological distress, emotion regulation, and wellbeing.

Method: A sample of 103 participants enrolled in the study: 36 in the mindfulness program (MBSR), 30 in the compassion program (CCT), and 37 in the control group (CG). The assessment before and after the programs included the completion of an emotional Attentional Blink task (AB) together with self-report measures of psychological distress, emotion regulation, and wellbeing.

Results: MBSR and CCT reduced similarly the AB deficit, while no changes were found in the control group. This AB reduction was found for the different emotional stimuli (i.e., negative, positive, and neutral), showing a significant disengagement of first target emotions and significant accessibility of second target emotions to consciousness. The effects of both meditation programs on the psychological measures were mediated by changes in the AB and emotion regulation skills.

Discussion: Taken together, these results highlight the potential effects of standardized mindfulness and compassion meditation programs on attentional biases toward emotional information. Meditation may promote more flexible and balanced attention to emotional information, which may be a key transdiagnostic mechanism underlying its benefits on emotional distress and wellbeing.

Conclusion: Meditation training is postulated as a feasible alternative to modify the attentional processing of emotional information, which is an important result considering the limited effectiveness of traditional Attentional Bias Modification procedures (Cristea et al., 2015).

Testing a brief and low intensity self-compassion intervention for state body shame among adult women: a randomized controlled trial

Fidan Turk, University of Sheffield, Sheffield, United Kingdom; Stephen Kellett, Sheffield Health and Social Care NHS Foundation Trust, Sheffield, United Kingdom; Glenn Waller, University of Sheffield, Sheffield, United Kingdom

Introduction: Body shame is a risk factor for body dissatisfaction and eating disorders. Self-compassion interventions have been suggested as potentially effective way to address body shame. This study compared two brief (15-minute) self-compassion interventions to reduce state body shame with a matched control condition.

Method: Participants were randomly allocated to an active compassion condition (n = 23), control compassion condition (n = 23) or an educational control condition (n = 23). The active self-compassion condition consisted of the effective components for reducing state body shame identified in the feasibility trial. Measures of state body image and state shame were collected pre-intervention, post-intervention, and a day after the intervention as a follow-up. Subjective units of body shame (SUBS) were intensively measured during all interventions.

Results: Both self-compassion interventions were equally effective at protecting against deterioration of state body shame compared to the educational control condition ($np2 = .07$). Both self-compassion were effective at reducing state shame compared to the educational control condition with medium effect size ($np2 = .08$). Reductions to state shame were retained at follow-up. There was no effect of the interventions on the body image ($np2 = .04$). **Discussion:** The findings demonstrate the promise of brief self-compassion interventions as protective factor against state body shame.

Conclusion: The study is critiqued, and the treatment implications are discussed in terms of brief self-compassion exercises holding promise as evidenced-based 'homework' exercises.

Open Paper Symposium 29 Fear conditioning and extinction2

The predictive value of extinction learning in posttraumatic stress disorder

Miriam Lommen, University of Groningen, Groningen, Netherlands; Yannick Boddez, University of Ghent, Ghent, Belgium

Introduction: Individual differences in fear learning have been associated with anxiety-related psychopathology. In patients with posttraumatic stress disorder (PTSD), extinction learning seems to fail. Few studies have tested whether this is a consequence of PTSD symptomatology or rather a pre-trauma vulnerability factor that puts individuals at risk to develop PTSD. A previous prospective study in soldiers found reduced extinction learning pre-deployment to be predictive of PTSD symptoms after deployment, when controlling for stressor severity, PTSD symptoms at baseline and neuroticism (Lommen et al., 2013). The present study tested whether this finding could be replicated in another high-risk sample, namely firefighters.

Method: A fear conditioning paradigm was conducted in a sample of 508 firefighters at the baseline assessment of a 4-year prospective study. PTSD symptoms and stressor severity were repeatedly assessed with self-report questionnaires (at baseline, 6 months later and at 1 year). Neuroticism was measured with a self-report questionnaire at baseline.

Results: Reduced extinction was associated with higher PTSD symptom severity at baseline, but did not predict PTSD symptom severity at follow-up. Higher PTSD symptom severity at baseline and higher reported stressor severity over the year predicted higher PTSD symptoms in the period of 1 year follow-up.

Discussion: Extinction learning was not a predictor of PTSD development in a sample of fire fighters, with which this study fails to replicate earlier findings in other high risk profession samples. The results show that extinction learning might not be a general risk factor 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.

Conclusion: 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 reduced extinction learning that can be used as in clinical practice as prevention, specifically in high risk populations, or to improve PTSD treatment.

Reduced electrodermal fear conditioning in children and early adolescents with high psychopathic traits: a clinical sample study

Anastasiya Ivanova-Serokhvostova, Department of Psychiatry and Forensic Medicine, Institute of Neurosciences, Universitat Autònoma de Barcelona., Barcelona, Spain; Beatriz Molinuevo, Department of Psychiatry and Forensic Medicine, Institute of Neurosciences, Universitat Autònoma de Barcelona., Barcelona, Spain; David Torrents-Rodas, Faculty of Psychology, Philipps-Universität Marburg., Marburg, Germany; Iris Pérez-Bonaventura, Department of Mental Health, Corporació Sanitària Parc Taulí. Department of Clinical and Health Psychology, Universitat Autònoma de Barcelona, Barcelona, Spain; Montserrat Corrales, Department of Psychiatry, Hospital Universitari Vall d'Hebron. Group of Psychiatry, Mental Health and Addictions, Vall d'Hebron Research Institute. Biomedical Network Research Centre on Mental Health. Department of Psychiatry and Forensic Medicine, Univer, Barcelona, Spain; Albert Bonillo, Department of Psychobiology and Methodology of Health Sciences, Institute of Neurosciences, Universitat Autònoma de Barcelona, Barcelona, Spain; Rafael Torrubia, Department of Psychiatry and Forensic Medicine, Institute of Neurosciences, Universitat Autònoma de Barcelona., Barcelona, Spain

Individuals with high psychopathic traits seem to be more resistant to traditional therapeutic interventions and it is important to understand the etiological mechanisms of psychopathy development in order to prevent and design novel individualized interventions (De Brito et al., 2021). Deficits in fear conditioning related to adult psychopathy have been replicated in several studies, especially at physiological (emotional) level, but not the cognitive one (Hoppenbrouwers et al., 2016; Kozhuranova et al., 2019). However, evidence in children and adolescents is scarce and inconsistent. This research aimed to expand knowledge about fear conditioning in psychopathy and its dimensions in child and early adolescent clinical populations. Participants were 45 boys (outpatients) aged 6-14 years ($M = 10.59$, $SD = 2.04$). They were assessed with the parents' and teachers' versions of the Child Problematic Traits Inventory (CPTI; López-Romero et al., 2019) which provides scores on three psychopathy dimensions (Grandiose-Deceitful, Callous-Unemotional, and Impulsive-Need for Stimulation) as well as a Total score representing psychopathy as a whole. A fear conditioning paradigm (Neumann et al., 2008) for children and adolescents was used. Conditioned stimuli (CS+ and CS-) were geometric shapes and the unconditioned stimulus (US) was an unpleasant sound of metal scraping on slate (83 dB). Difference scores (CS+ minus CS-) in skin conductance responses (SCR) and self-

reported cognitive and affective measures were considered as indices of fear conditioning. Multiple regression analyses were performed to examine the predictive capacity of the distinct psychopathy dimensions and also of the two-way interactions between dimensions over fear conditioning indices. Results showed that: a) deficits in fear conditioning were related to some psychopathy dimensions but not to psychopathy as a unitary construct; b) the Impulsivity-Need for Stimulation dimension was a predictor of impaired fear conditioning at a cognitive level; c) the interaction of Callous-Unemotional and Impulsivity-Need for Stimulation dimensions was a significant predictor of impaired electrodermal fear conditioning; d) by contrast, Grandiose-Deceitful dimension was marginally associated with a greater electrodermal fear conditioning. These findings confirm the notion that psychopathic traits are associated with deficits in fear conditioning in child and adolescent clinical populations and provide evidence for a multidimensional approach to youth psychopathy. In this sense, the results give support to the notion that psychopathy dimensions could be rooted in distinct underlying etiologic-dispositional factors, therefore, different profiles may need different interventions.

Sleep hypnosis improves subjective sleep quality but not extinction memory after exposure to analog trauma

Marie Roxanne Sopp, Saarland University, Saarbrücken, Germany; Edith Friesen, Saarland University, Saarbrücken, Germany; Tanja Michael, Saarland University, Saarbrücken, Germany

Introduction: Trauma-focused cognitive behavioral therapy (TF-CBT) is the first-line treatment for posttraumatic stress disorder (PTSD). It is believed that exposure and fear extinction are important therapeutic agents of TF-CBT. Despite its effectiveness, rates of treatment non-responders and drop-outs are nevertheless substantial. It has been suggested that TF-CBT may be enhanced by targeting post-treatment sleep. Basic research shows that post-learning sleep, particularly slow wave sleep (SWS), promotes both memory consolidation and subsequent recall. Sleep may thus promote recovery by strengthening the memory content acquired in psychotherapy. The current study used a combined trauma film and fear conditioning paradigm to investigate whether a sleep hypnosis designed to increase SWS and sleep quality improves recall of fear extinction and reduces analog PTSD symptoms.

Method: In two subsamples (online/laboratory), 211 healthy individuals underwent a fear conditioning experiment using a highly aversive film clip as unconditioned stimulus. On the next day, they were repeatedly presented with the stimuli previously paired with the aversive film clip (fear extinction training). On the evening of the same day, the experimental group received an intervention promoting deep sleep (sleep hypnosis), whereas the control group listened to a non-fictional text spoken by the same voice. Sleep hypnosis was thus timed to enhance post-extinction sleep. During the night, participants of the laboratory subsample additionally underwent assessment of sleep physiology (polysomnography). On the following morning, recall of fear extinction and generalization as well as analog intrusions and rumination related to the traumatic film clip were assessed.

Results: Both groups showed a decline in subjective sleep quality in the night following the conditioning procedure. However, the experimental group reported improved sleep quality after sleep hypnosis, whereas the control group showed a further deterioration. With respect to objective parameters of sleep, no group differences were observed. In contrast to our hypotheses, sleep hypnosis had no effects on fear extinction retention and generalization and did not lower intrusions and rumination. **Discussion:** The finding showing that the sleep hypnosis had positive consequences for subjective sleep quality is encouraging, as it suggests that sleep hypnosis may be used in the context of trauma and other distressing life events after which subjective sleep problems are commonly reported. However, in contrast to our assumption and previous research, sleep hypnosis did not affect SWS parameters. This lack of effects could be related to the fact that we assessed sleep physiology only in a subsample of participants under ambulatory conditions. Finally, we did not find any indications of sleep hypnosis affecting fear extinction processes and analog PTSD symptoms. These findings converge with recent evidence suggesting that sleep hypnosis does not target the processes underlying memory processing during sleep.

Conclusion: The findings indicate that sleep hypnosis could be beneficial for improving subjective sleep quality in traumatized individuals with PTSD symptoms.

Special Interest Group

Worry, rumination and repetitive thinking: case formulation, Internet-based treatments and survey on practitioners' worries

Giovanni Maria Ruggiero, Sigmund Freud University, Italy, Patricia Pascoal, Universidade Lusófona, Lisboa, Portugal, Gerhard Andersson, Linköping University, Sweden

Introduction. Repetitive Thinking (RT) is a form of thought repetitive, frequent, attentive manner about oneself and one's world (Segerstrom, Stanton, Alden, & Shortridge, 2003). Rumination and Worry have been grouped under the construct of RT (Ehring & Watkins, 2008; Watkins, 2008). Worry is a chain of thoughts and images focused on adverse predictions, negatively affect-laden and relatively uncontrollable (Borkovec, Robinson, Pruzinsky, & DePree 1983). Rumination is defined as thoughts that repetitively focus the individual's attention on his or her negative feelings and symptoms, their causes, meanings and consequences (Nolen-Hoeksema & Morrow, 1991). What are we, CBT practitioners, perseverately thinking about (Patrícia M. Pascoal) Psychotherapists trained in cognitive behavioral therapy approaches know the detrimental effects of RT, most commonly worry and rumination, as an etiological and a maintenance factor of a person's emotional maladjustment and mental health problems. In the current exploratory qualitative study, we used a survey online aimed at European CBT-trained psychotherapists to know their accounts of their worries and ruminations about their clinical practice and their perception of the impact of RT on their practice. We defined worry as repetitive negative thinking focused on future events and rumination as repetitive negative thinking about past events. Currently, data has just started being collected through the EABCT newsletter. We hope our results have implications for identifying vulnerability for emotional distress in CBT practitioners and inform supervision practices. Focusing case formulation on Worry, Rumination and RT: Life themes and plans Implicated in Biases: Elicitation and Treatment (LIBET) (Giovanni M. Ruggiero). Cognitive behavioral therapy (CBT) approaches use case formulation procedures based on the diathesis stress conceptualization model and arranged in three dimensions: 1) emotional vulnerability (present in patients' consciousness in terms of core beliefs); 2) coping strategies; and 3) cognitive processes focused on Rumination, anxious and anger Worry have been grouped under the construct of RT (Ehring & Watkins, 2008; Watkins, 2008). which is a form of thought repetitive, frequent, attentive manner about oneself and one's world (Segerstrom, Stanton, Alden, & Shortridge, 2003). LIBET (Life themes and plans Implications of biased Beliefs: Elicitation and Treatment) is a case formulation method grounded on both the CBT diathesis stress model and cognitive processes belonging to the "third wave" process based CBT. LIBET aims to provide a significant contribution to the validation of process based CBT case formulation model Internet-based treatments for GAD and worry: an overview (Gerhard Andersson) Internet-based cognitive behaviour therapy (ICBT) has been around for more than 20 years. The aim of this presentation is to provide an overview on applications for worry and GAD with a focus on controlled trials. Methods: Narrative historical overview. Results: ICBT for GAD and worry has been tested in at least 20 controlled trials showing a large between-group effect size against no treatment. In addition, long-term effects have been documented. There is however a need for comparative trials against face-to-face CBT and also studies on specific age groups such as older adults and young persons. **Conclusion:** ICBT is a promising treatment option for GAD and worry.

Technical demonstration 1

YME-Explore Your Meanings: A digital platform using Virtual Reality to explore self-identity”

Guillem Feixas, University of Barcelona, Spain

Core beliefs and self-schemas are key concepts in CBT. They encompass generalizations about the self (also applied in the construal of others) that are abstracted from past experiences and used for understanding present situations (usually manifested in automatic thoughts) and for shaping future expectations. Corresponding to a large extent with one's self-concept, they result from perceptions of oneself in terms of aptitudes, competencies, and values. Schemas and beliefs about self and others vary from person to person but within a person they are relatively stable and resistant to change. Modification of self-schemas is a main objective of common CBT practice to promote long-lasting changes. They are traditionally explored during the clinical interview, using the thought record or with questionnaires. Explore Your Meanings (EYME) is a digital platform designed to assist therapists in conducting a conjoint exploration of their patients' schemas as applied to self and others. Based on the repertory grid technique, EYME (eyme-vr.com) enables a transformative assessment process that begins with an automatized, structured interview for identifying significant others. The ideal self (“How I would like to be”) is also included to identify personal goals along with other aspects of the self (e.g., “self before the panic attack”, “self-when drinking alcohol”) adapted to the patient's complaint. Next, the characteristics (constructs or descriptors) used to describe self and others are elicited with a series of automated comparative questions, and the patient rates self and others according to these characteristics in a user friendly interface. EYME analyzes the resulting data matrix by computing of self-discrepancy and other measures of cognitive structure as well as detecting cognitive conflicts in the construction of self and others. The more innovative feature of EYME is the use of correspondence analysis (a multivariate statistical procedure) to provide a graphical representation of the patient's construal of self and others in both navigable 3D (in a computer screen) and Virtual Reality (VR). The use of a VR headset (ready for exploration by participants), allow patients to have an immersive experience based on their views of self and significant others, mapped according to their cognitive system, and to explore possibilities for change with the guidance of the therapist.

*Montesano, A., ... Feixas, G. (2021). Does virtual reality increase the efficacy of psychotherapy for young adults with mild-to-moderate depression? A study protocol for a multicenter randomized clinical trial. *Trials*, 22(1), 916. <https://doi.org/10.1186/s13063-021-05809-1>*

Feixas, G., M., García-Gutiérrez, A., & Alabèrnia-Segura (July, 2021). Explore Your Meanings-EYME: Using Virtual Reality to Explore Self-identity. Presented at the 32nd. Congress of Psychology (online).

PANEL DEBATES

Panel Debate 1

Training and Supervision: Reimagining the future of CBT

Chair: Keith Dobson, University of Calgary, Calgary, Canada

Andrea Ashbaugh, University of Ottawa, Canada, Helen Macdonald, BABCP, UK, Dmitrii Kovpak, , North West State Medical University, St. Petersburg, Russian Federation, Yusuf Sivrioğlu, Uludag University Medical School, Turkey

Discussant, Mehmet Sungur, Istanbul Kent University, Turkey

The musician B. B. King once said that “Education is the most powerful weapon you can use to change the world”, and this saying certainly holds true for professions and their practices. The future of CBT is in the hands of our trainers and supervisors, and those who they train. This symposium presents diverse perspectives on training, both in the abstract and from the vantage of experts who provide training. The discussion will begin with a broad overview of some of the major issues in training and education (Dobson), and then move to how national organizations can create and disseminate guidelines to help with training and supervision practices, and how these guidelines have been implemented in the form of training and supervision credentials in Canada (Ashbaugh). The symposium will then focus on the ways in which training and supervision can be, and has been implemented in various European settings, including at the national level in England (MacDonald), Russia (Kovpak) and internationally (Sivrioglu). The panel discussion will conclude with a broader perspective from a former EABCT President about the imminent need for evidence- based training and supervision models and practices, and the future direction of CBT, with a focus on training the next generation of practitioners (Sungur). The panel discussants will each be limited to a shorter 10-minute presentation time, to enable interaction among presenters, questions and audience participation.

Panel Debate 2

How important are core fears in CBT for anxiety?

Jonathan Huppert, The Hebrew University of Jerusalem

Paul Salkovskis, University of Oxford, UK

Carmen Luciano, University of Almería, Spain

Todd Farchione, Boston University, USA

When conducting exposure therapy, how important is it to consider the patient’s core fear? Core fears are the ultimate underlying fears one has regarding their anxiety if they do not avoid or engage in safety behaviors. Typically, one accesses these fears via the downward arrow technique, repeatedly asking “and then what would happen?” until one arrives at an ultimate concern. Core fears can vary widely, for example, we have found that patients with OCD who engage in checking rituals do so for a variety of motivations including: fear of harm to oneself, fear of harming others, fear of losing precious objects, fear of losing control, and fear of social ostracization. Very little has been written about core fears despite their importance and common use clinically.

The current panel debate investigates the role of core fears in CBT for anxiety. The specific mechanisms underlying anxiety and its treatment have been under debate. Some of the proposed mechanisms involve generic learning such as acquiring distress tolerance. According to these approaches including the unified protocol and ACT, exposure to generic fear-inducing stimuli should be as potent as exposure to personalized feared stimuli. Within emotional processing theory, exposure must address the idiosyncratic meaning that the fear holds for an individual. Thus, it is critical to address also the underlying core fears. Cognitive therapy typically focuses on core beliefs. However, it has not always addressed core fears as distinct from core beliefs. Each of these approaches calls for a different approach for designing therapy. The role of core fears will be discussed from the perspectives of cognitive therapy, ACT, the unified protocol, and emotional processing theory.

ROUNDTABLES

Roundtable 1

Science Diplomacy shared Leadership: A CBT Insight on conflict resolution and pandemic crisis

Chair: Mauro Galluccio, EANAM-European Association for Negotiation and Mediation, Brussels, Belgium

Paul Gilbert, University of Derby, UK

Aimée Karam, University Medical Center, Balamand University, Beirut, Lebanon

The world faces a range of major challenges that include climate change, terrorism, pandemic, health issues at large, political instability and serious escalating differences between the haves, have nots and have lots. These all contribute to the threats to security and safety in complex environments. Therefore, creating social contexts that build resilience, and prevent harmful behaviours is an important endeavor for shaping a world that would support flourishing and mental well-being. One important approach to these issues on an international scale is called scientific diplomacy. This brings together scientific research for understanding how groups and nations can work together on the causes and prevention of the challenges that face humanity. The focus of this symposium will outline science diplomacy as an important approach to global relations. A core process is to understand how people conceptualise problems, how do they reason and the belief systems that underpin both positive and unhelpful international relationships. Speakers will address the contributions that the CBT approaches to complex mental states offers to this field, support adaptive decision-making and impact on the crucial challenges that face humanity

Roundtable 2

Ethical issues in supervision

Chair: Andreas Veith, DGVT and Center for Psychotherapy, Dortmund, Germany

During the last years ethical issues have become an important theme in psychotherapy. And of course they are in supervision as well. They might appear as ethical questions or conflicts that arise in the therapeutic process and are questioned by the supervisee or ethical issues that are discovered by the supervisor and brought into supervision. But also the supervision setting and the relation between supervisor and supervisee itself might be confronted with ethical questions like boundaries, power or hierarchical dependencies.

The roundtable will start with a report of Nikola Petrovic on a survey in which supervisors have been asked which ethical issues they face in their everyday work.

Then experts in supervision will share their view on different ethical issues in supervision on the basis of case examples, discuss how to cope with them and what is needed to raise awareness for ethical issues in supervision.

Participants of the roundtable will be:

Anna Ehnvall, Sweden.

Associate Professor in Psychiatry, Gothenburg University, clinical psychiatrist and licensed psychotherapist, CBT trainer and supervisor. Runs supervision programs as well as courses in psychotherapy training in Gothenburg.

Carmem Beatriz Neufeld, Brazil.

Head of the Cognitive Behavioral Intervention and Research Laboratory- LaPICC-USP, Associate Professor at the Department of Psychology, Faculty of Philosophy, Sciences and Languages of Ribeirão Preto, University of São Paulo. President of the Latin-American Federation of Cognitive and Behavioral Psychotherapies - ALAPCCO (2019-2022/2022-2025), President of the Association of Evidence Based Teaching and Supervision - AESBE (2020 -2023)

Nikola Petrović, Serbia.

CBT therapist and an Associate professor at the University of Belgrade, Faculty of Philosophy, Department of Psychology. President of the Ethical Committee of the Serbian Psychological Association as well as a member of the Ethics Board of EFPA. His PhD was also related to ethical issues in psychotherapy and he organized one of the biggest ethical surveys of CBT psychotherapists that was done in 36 European countries as part of an EABCT scientific project.

Agnieczka Popiel, Poland.

Psychiatrist, CBT psychotherapist and supervisor, professor at the University of Social Sciences and Humanities Warsaw and director of the 4-year postgraduate training program: School of Cognitive -Behavioural Therapy, as well as Advanced Clinical Studies and Therapy Excellence Center and the outpatient Clinic of Cognitive-Behavioural Therapy. Together with Dr Ewa Pragłowska she edited the first handbook on CBT supervision (2013) in Poland. Research area: trauma and PTSD.

Andreas Veith, Germany.

CBT therapist, supervisor and Head of the Center for Psychotherapy in Dortmund, which is a cbt training center and outpatient therapy center of the German Association for Behavior Therapy (DGVT). Runs supervision programs as well as courses in psychotherapy training.

SKILLS CLASSES

Clinical Skills Class 1

An integrated CBT treatment for psychosis: Strategies to optimize the treatment and mistakes to avoid

Antonio Pinto, University of L'Aquila, Naples, Italy

The therapy of psychosis, has undergone several changes in recent years. From an initial work on skills, to the strengthening of problem-solving skills and information processing until a new way of managing the symptoms. Third-generation therapies and the identification of metacognitive deficits also enabled us to enhance and improve the standard CBT approach to the treatment of this disease. However, in clinical practice, the presence of therapeutic errors that often represent one of the causes of failure of therapies and drop-out by patients, is still rather frequent.

There are several elements that can influence the negative course of therapy, such as:

The presence of prejudices and old theories about the nature of the pathology could be considered one of the central errors in the treatment of schizophrenia. It should be difficult, in fact, to overcome the pessimism about the outcome of this disease if we consider it only a chronic disease characterized by a progressive deterioration of the brain structures.

The presence of other elements can still contribute to create misunderstanding and confusion in approaching this disease as, for instance: the greater or lesser timeliness of the intervention, the appropriate use of pharmacological therapies, the assumptions on which to base the therapeutic alliance, the greater or smaller sharing of the objectives to be achieved, the target of therapeutic intervention, the possibility or not to include patients in structured and integrated protocols, the choice of the individual or group setting, etc.

Some old strategies have also proved to be a failure to treat these patients, such as trying to change at all costs patients' opinions about the content and the nature of their (delusional) ideas; it is also increasingly revealed that an error does not take into account, before starting a personalized therapeutic program, the presence of neurocognitive and metacognitive deficits, the presence of which can have a decisive influence on the course of therapy and the outcome of the disease itself.

Key learning objectives

To show participants the strategies and techniques to overcome issues mentioned above, to improve the therapeutic alliance and to make the therapeutic path easier for both the patient and the therapist, to improve the efficacy of the techniques, and to personalize the case formulation.

Implication for everyday clinical practice of CBT

Providing the participants with the elements to apply in their daily clinical practice strategies evidence based and not to commit the usual methodological errors that too often cause dropouts or poor therapeutic efficacy.

Dr. Antonio Pinto is Psychiatrist and CBT Therapist, Former Adjunct Professor at University of Bologna, member, supervisor and teacher of Italian Association of CBT, Chief of Rehabilitation program and Director of the Neurocognitive Rehabilitation Program at the DMH in Pollena (Naples), Italy. He is a professor in the official postgraduate Italian schools of CBT for Psychologists. He is Past Board Member of the EABCT, as "Scientific Coordinator". He is chair, within the EABCT, of the Special Interest Group on Psychosis. He is EMDR Psychotherapist and Supervisor. He belongs to the Board of SITCC as International Rep.

Key References

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Clinical Skills Class 2

EFFICIENT IN STRESS - process-based prevention of PTSD program for groups at high risk of job/duty related traumatization.

Agnieszka Popiel, SWPS University of Social Sciences and Humanities, Warsaw, Poland and Ewa Pragłowska, SWPS University Clinic of Cognitive-Behavioural Therapy, Warsaw, Poland

Studies published until 2020 indicate low effectiveness of primary (pre-trauma) preventive interventions. The theoretical assumptions of the training took account of the basic psychological processes maintaining emotional disorders, and in particular, coping-self efficacy as the core of the seven-factor PTSD model developed as the basis for conceptualisation of PTSD in therapy. While the purpose of the therapy is to reduce the distress associated with PTSD by influencing the beliefs on self-efficacy, in prevention, a targeted influence of the development of these beliefs would result in resilience to trauma symptoms. Effectiveness of the training was confirmed in the study "PTSD-Diagnosis-Therapy-Prevention" where the group of 145 candidates for the Polish State Fire Service took part in the 15 hours training and was compared to the control group of 159 candidates who participated in the standard TAU. The results (PTSD symptoms at follow-up after one year of active service) indicate that not only the symptoms of PTSD, but also the avoiding strategies were less intense in the group that underwent the training.

Key learning objectives

"Efficient in Stress" is the program of primary prevention designed for first responders to prevent PTSD by enhancing coping self-efficacy in face of emotional consequences of traumatic stress. This goal is obtained by teaching skills of emotion regulation via physiological (relaxation, biofeedback), cognitive (psychoeducation, identification of thinking patterns, cognitive restructuring, attention training) and behavioral (problem solving and using social support skills) pathways. They will be presented across the 7 modules of the training protocol. The program that has proved its efficacy prevention of PTSD in a longitudinal study on firefighters can be also easily applied for any group of increased risk for PTSD. Given the individual, social and economical costs of PTSD, especially in groups at high risk of job/duty related traumatization and present situation in Europe any attempt to develop an effective prevention program is important.

Agnieszka Popiel MD, PhD, psychiatrist, psychotherapy supervisor, professor at the SWPS University Warsaw, Poland and Ewa Pragłowska PhD, clinical psychologist, supervisor
Both co-chair the SWPS University School of Cognitive-Behavioural Therapy – a 4 year postgraduate training program, and the SWPS University Clinic of Cognitive-Behavioural Therapy. Clinical and research area: psychopathology and treatments for posttraumatic stress disorder – efficacy, effectiveness and predictors of outcome

References

- Popiel, A, Zawadzki, B., Pragłowska, E, Habrat, P., Gajda, P (2019). Efficient in stress. Programme of PTSD prevention for persons exposed to professional traumatisation. Gdańsk: Gdańsk Psychological Publishing House
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Clinical Skills Class 3

Identifying and working with maladaptive therapist modes in CBT Supervision

Jason Roscoe, University of Cumbria, Lancaster, UK

Research suggests therapist schemas (e.g. demanding standards, self-sacrifice) contribute to difficulties in CBT training, clinical practice and supervision (Haarhoff, 2006). This workshop will explore how therapist schemas present in supervision in the form of safety seeking behaviours, emotions such as anxiety, anger and shame and inflexible rules and negative automatic thoughts about the supervisor or supervisee. Collectively they can be understood as 'modes' which are situations specific ways of coping with schemas through either surrender, avoidance or over-compensation (Young et al., 2006). These experiences of supervision where key components are often omitted when a mode is activated such as showing recordings of therapy sessions or avoidance of active methods (e.g. supervisor modelling or role play) may indicate supervisory drift (Pugh & Margetts, 2020; Roscoe, in press).

Implications: If supervisors do not anticipate or respond to behaviours that arise from these schemas there is a risk of issues arising such as supervisee avoidance of video feedback, collusion, alliance ruptures or supervisory drift. In this skills class it is hypothesised that supervision interfering behaviour are manifested within supervision sessions through maladaptive therapist modes (Pugh, 2019). As it stands, current CBT training may not equip CBT Therapists to place much emphasis on identifying and responding to dysfunctional interpersonal processes within therapy or supervision.

Key learning objectives

By the end of the class delegates will be able to:

- Recognise problematic therapist modes that may arise within the supervisory relationship which left unmanaged may lead to supervisory drift
- Have an awareness of a range of tools that can be used by supervisor and supervisee to pre-empt and respond the activation of certain modes in supervision
- Understand how their own therapist schemas influence their beliefs about supervision and behaviour as a supervisor or supervisee and how these may manifest as specific modes
- Apply bespoke formulation within supervision to notice, name and manage modes to reduce the likelihood of rupture, collusion or drift.

Jason Roscoe is a BABCP accredited Cognitive Behavioural Psychotherapist and Supervisor. He is also Senior Lecturer in CBT at the University of Cumbria and currently undertaking a PhD centred around Supervisory drift and has published two papers on this topic (see background reading) and recently presented an open paper on Therapist schemas and supervisory drift at the joint EABCT / BABCP annual conference in Belfast and conducted a national workshop for the BABCP Supervision Special Interest Group on managing interpersonal processes in CBT Supervision.

References and background reading

- Haarhoff, B. A. (2006). The importance of identifying and understanding therapist schema in cognitive therapy training and supervision. *New Zealand Journal of Psychology*, 33, 126–131.
- Pugh, M. (2019). Working with maladaptive therapist modes: An actionexperiential approach to supervision. *Schema Therapy Bulletin*, 3, 10-14.
- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2006). *Schema therapy: A practitioner's guide*, Guilford press.
- Roscoe, J (in press) Conceptualising and managing supervisory drift; *The Cognitive Behaviour Therapist*

Clinical Skills Class 4

Working with moral injury in PTSD

Hannah Murray, Oxford Centre for Anxiety Disorders and Trauma & Sharif El-Leithy, Traumatic Stress Service, London, UK

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

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.

Clinical Skills Class 5

Psychological First Aid

Lata McGinn, Yeshiva University and Cognitive Behavioral Consultants, New York, USA

The COVID-19 pandemic is an unrelenting global crisis that has unleashed a cascade of economic and sociopolitical 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. 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. 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 pandemic impacts 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. 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 strength and resilience and reduce the emergence of clinically significant symptoms. This presentation will provide participants with the necessary tools to help individuals cope with the mental health consequences of the war and other adverse and traumatic crises that are common in our lives. Participants will learn to navigate trauma exposure and chronic stress related to such crises and learn evidence-based CBT strategies that foster adaptive coping and build strength and resilience.

Learning Objectives:

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

- Understand what constitutes adverse and traumatic events and reactions
- Apply Psychological First Aid (PFA) during crises, adverse and traumatic events to build resilience.

Lata K. McGinn, PhD is a tenured Professor of Psychology and Director of the CBT training program at the Ferkauf Graduate School of Psychology, Yeshiva University and Co-Founder of Cognitive and Behavioral Consultants (CBC), an evidence-based center. She specializes in the vulnerability, prevention, treatment, and dissemination of stress, anxiety, trauma, OCD, depression, and related disorders using CBT.

References:

McGinn, L. K., Bonavita, & L., Buerger, W. (in press). Disaster trauma. *Cognitive Behavioral Strategies in Crisis Intervention* (Second edition). Eds. Dattilio & Freeman, A. NY: Guilford Press.

McGinn, L. K., & Spindel, C. B. (2007). Disaster trauma. *Cognitive Behavioral Strategies in Crisis Intervention*. Eds. Dattilio & Freeman, A. NY: Guilford Press.

Mental and Substance Abuse Team (2011), *Psychological First Aid: Guide for Field Workers*. World Health Organization, War Trauma Foundation and World Vision International

Clinical Skills Class 6

How to get angry without getting destructive? Acceptance and commitment therapy for anger regulation in children and adolescents

Shimrit Telraz Cohen, Beit Berl College, Kfar Saba, Israel

This Skill Class will focus on implementing Acceptance and Commitment Therapy to regulate anger and aggression in children and adolescents. Anger is defined as a negative emotional response to an event perceived as provoking or crossing personal boundaries. Anger is linked to aggressive behaviour and interpersonal problems and is a significant part of the symptomatology of many psychological problems. Anger is also a natural and functional response that can motivate us to act in the face of a real or perceived threat and motivate communication processes regarding interpersonal conflicts. Expressing anger becomes problematic when it is excessive, out of control, causes aggressive behaviour and causes distress or dysfunction. Children and adolescents who have difficulty regulating anger and aggression may fall into a vicious circle and suffer from social rejection and complications in further development (Sukhodolsky et al., 2016). Acceptance and commitment therapy offers a solution to anger management difficulties and aggression by promoting psychological flexibility, which is the ability to respond appropriately to environmental demands while maintaining a connection to inner values. According to the approach, children and adolescents who have difficulty controlling anger exhibit psychological inflexibility and are trying to avoid contact with inner experiences and convert them into aggressive behaviour. Thoughts and feelings also trigger them without the ability to notice and observe them. In the workshop, we will learn the six processes that promote psychological flexibility and how to apply specific techniques for regulating anger and aggression in children and youth.

Learning Objectives:

By the end of the class, participants will be able to:

1. Diagnose different disorders in children and adolescents related to anger regulation.
2. conceptualize a formulation of anger and aggression control difficulties according to the model of acceptance and commitment therapy

3. Plan an acceptance and commitment treatment model for anger dysregulation in children and adolescents. 4. Apply various techniques across six core processes designated to increase psychological flexibility and improve anger regulation.

Shimrit Telraz Cohen is a clinical psychologist and supervisor in CBT. She is the student counselling service director and a lecturer in the art therapy program at "Beit-Berl" College. she is also a lecturer in the clinical psychology program at Rupin college in Israel. In the past, she was the head psychologist in the behavioural dysregulation unit for children and adolescents at "Geha" mental health centre.

Background readings:

Sukhodolsky, D. G., Smith, S. D., McCauley, S. A., Ibrahim, K., & Piasecka, J. B. (2016). Behavioral interventions for anger, irritability, and aggression in children and adolescents. Journal of child and adolescent psychopharmacology, 26(1), 58-64 Eifert, G. H., & Forsyth, J. P. (2011). *The application of acceptance and commitment therapy to problem anger. Cognitive and Behavioral Practice, 18(2), 241-250.* Tiffet, E. D., Roberts, M. Z., Underwood, S. B., & Forsyth, J. P. (2022). *Acceptance and Commitment Therapy (ACT) for Problematic Anger: A Case Study. Clinical Case Studies, 15346501221080931.*

Skills Class 7

The use of deliberate Practice for the acquisition of CBT skills in supervision and training

Dan Sacks, International deliberate practice society, Jerusalem, Israel and **Anna-Maija Kokko**, International Deliberate Practice Society, Mikkeli, Finland

There are a number of factors that lead to expert-level performance psychotherapy. For example, theoretical knowledge and extensive clinical experience are likely to be fundamental to psychotherapy expertise. Yet despite their importance, declarative knowledge and clinical experience do not necessarily lead to expert-level performance. Furthermore, despite the broad consensus on the importance of clinical supervision, research regarding its effectiveness on client outcome is mixed. In light of this, attempts have been made to pinpoint what distinguishes the most effective therapists. There is a growing consensus regarding the importance of behavioral rehearsal for expertise in CBT, but there is still no robust learning framework that fully incorporates findings from the science of expertise.

A form of learning termed Deliberate Practice (DP) has shown particular promise. Deliberate Practice is a research-supported learning framework for skill acquisition and refinement, with the number of hours committed to DP consistently predicting expertise across numerous fields, including psychotherapy. Deliberate practice incorporates three core principles that we shall rehearse in this skills class:

- Identify a skill deficit
- Define a small learning goal
- Implement rehearsal and feedback loop
- The final goal of the skills class is to give you the knowledge needed to start using deliberate practice as an augmenting component to supervision and training.

Learning objectives:

- Identify personal skill deficits
- Define small, personalized learning goals
- Implement behavioral rehearsal
- Give actionable feedback
- Implement ongoing difficulty assessment and adjustment

Dan Sacks is a Clinical Psychologist and certified Deliberate Practice coach. He is secretary of the board for the International Deliberate Practice Society. Dan teaches Deliberate Practice and CBT in numerous psychotherapy schools, workshops and supervision settings to professionals globally. Founder of the Israeli Center for Deliberate Practice and author of "The Use of Deliberate Practice in CBT Supervision: From Declarative to Procedural Knowledge", a chapter in the upcoming SpringerNature "Handbook of Training and Supervision in CBT".

Anna-Maija Kokko is a Psychologist, Cognitive Psychotherapist, supervisor, trainer and certified Deliberate Practice coach. She is president of the board for the International Deliberate Practice Society. Anna-Maija uses Deliberate Practice in CBT training and supervision, applying Deliberate Practice in the enhancement of numerous methodological skills (CBT, CBASP, ST skills) and common psychotherapists' interpersonal and intrapersonal skills.

Background Readings:

Ericsson, K. A. (2008). Deliberate practice and acquisition of expert performance: a general overview. Academic emergency medicine, 15(11), 988-994.

Vaz, A. & Rousmaniere, T.G. (2022). Clarifying Deliberate Practice for Mental Health Training. From Sentio.org, can be found

here: https://drive.google.com/file/d/1MFdWU-fRI-2EKN2rdvFsExPcJ8-OOC_A/view?usp=sharing Rousmaniere, T., & Vaz, A. Deliberate Practice in Cognitive Behavioral Therapy.

Skills Class 8

An experiential introduction to ACT in the context of psychedelic assisted therapy

Sarah Bateup, Clerkenwell Health, London, UK

ACT has a strong evidence-base as an effective intervention for many mental health disorders (Forman, Herbert, Moitra, Yeomans and Geller, 2007, Zettle, 2105, Luoma, Sabucedo, Eriksson, Gates and Pilecki, 2019). ACT is being used within Psychedelic research (see Zeifman, Wagner, Watts, Kettner, Mertens and Carhart-Harris, 2020, Sloshower et al., 2019) and that both psychedelic therapy and ACT have been shown to help people gain clarity of their values, leading to behavioural change (Swift et al., 2017). Using ACT, alongside psychedelic medications, is based on the idea that psychedelic medications may amplify the effect of ACT (Sloshower et al., 2020). ACT has been identified as being synergistic with the proposed mechanisms of change of psychedelic compounds (Walsh and Thiessen, 2018, Luoma, Sabucedo, Eriksson, Gates and Pilecki, 2019, Sloshower et al., 2020). The hypothesis that psychedelics invoke a transient neuroplasticity (Ly et al., 2018) suggests that patients would get additional benefit from being actively engaged in a psychological therapy that has an existing evidence-base.

This skills class will present how ACT can be used in the three stages of Psychedelic Assisted Therapy (PAT). In this skills class we will focus on the importance of the preparation stage. Participants will learn to use Values and other ACT process in a series of experiential exercises.

Learning Objectives

1. Participants will have an overview of how ACT can be used in the context of PAT
2. Participants will have an understand of the preparatory stage of PAT
3. Participants will develop skills using values and values-based actions in the preparatory stages of PAT

Most recent research in the field of psychedelic assisted therapy have used a similar three stage process of delivering treatment. However, not all research uses an evidence-based therapy. Outcomes from PAT studies show promise and it is possible that PAT will become a mainstream treatment for many conditions including treatment resistant depression, PTSD and Borderline Personality Disorder. This will have training implications for psychological therapists. It might be argued that exposing today's clinicians to PAT may reduce future barriers to adoption. Additionally, therapists are being recruited for research trials around the world and attending this workshop may encourage more therapists to participate in trials. Participants should note that attendance at this skills class does not mean that they are suitably qualified to deliver PAT.

Dr Sarah Bateup has delivered 30,000+ hours of CBT and ACT. She has taught at Kings College London and Exeter University. Sarah was Head of Therapy Research and Training at COMPASS (Psychedelic Research) and is now head of training at Clerkenwell Health (Psychedelic Research).

Key references

Sloshower et al. (2020), Psylocybin assisted therapy of major depressive disorder using Acceptance and Commitment Therapy as a therapeutic frame, *Journal of Contextual Behavioural Science*, 15, 12-19.

Walsh, Z. & Thiessen, M.S. (2018), Psychedelics and the new behaviourism: considering the integration of third-wave behaviour therapies with psychedelic-assisted therapy, *International Review of Psychiatry*, 30, 343-349

Skills Class 9

Deep CBT for anxiety disorders and beyond: assessing and treating core fears.

Elad Zlotnick and Jonathan D. Huppert, The Hebrew University of Jerusalem, Israel

Core fears are the ultimate underlying fears one has regarding their anxiety if they do not avoid or engage in safety behaviors. Typically, one accesses these fears via the downward arrow technique, repeatedly asking "and then what would happen?" until one arrives at an ultimate concern. Core fears can vary widely, for example, we have found that patients with OCD who engage in checking rituals do so for a variety of motivations including: fear of harm to oneself, fear of harming others, fear of losing precious objects, fear of losing control, and fear of social ostracization. Very little has been written about core fears despite their importance and common use clinically. And even less research has been conducted on them. Addressing core fears in clinical practice requires accurate assessment of underlying fears. In practice it is often challenging to identify core fears and to guide patients to address them. In order to address these problems we developed a structured interview in order to assist research and clinical practice. Furthermore, we believe that focusing on core fears during CBT for anxiety boosts the efficacy of therapy.

THE skills class IS aimed at Experience in cognitive-behavioral treatment of anxiety (in adults and/or children) is needed in order to follow this skills class

Learning Objectives:

Participants will acquire the following skills:

- Assessing core fears using a structured approach
- Dealing with obstacles when identifying core fears
- Targeting core fears within in-vivo exposures and behavioral experiments
- Designing imaginal exposure to target core fears

Prof. Jonathan Huppert (clinical psychologist) is a Professor of clinical psychology at The Hebrew University of Jerusalem. His work focuses on understanding the nature and treatment of OCD, anxiety and affective disorders with a focus on understanding the mechanisms involved in the maintenance of pathological anxiety and depression and their treatment. Most recently, he has been working on expanding our understanding of interventions using imagery. Elad Zlotnick (clinical psychologist) is an advanced PhD candidate in clinical psychology at The Hebrew University of Jerusalem. His work focuses on understanding core fears, their assessment, and impact on psychotherapy.

Background Readings:

1. Huppert, J. D., & Zlotnick, E. (2012). Core fears, values, and obsessive-compulsive disorder: a preliminary clinical-theoretical outlook. *Psicoterapia Cognitiva e Comportamentale*, 18 (1), 91–102.

2. Murray, S. B., Treanor, M., Liao, B., Loeb, K. L., Griffiths, S., & Le Grange, D. (2016). Extinction theory & anorexia nervosa: Deepening therapeutic mechanisms. *Behavior Research and Therapy*, 87, 1–10. <https://doi.org/10.1016/j.brat.2016.08.017>

Clinical Skills Class 10

Using CBT approaches with student teachers: Preventative approaches for supporting young people post covid.

Stephanie Evans, University of Cumbria, Lancaster, UK

The wellbeing and mental health of teachers and pupils is slowly becoming an important part of settings and schools. Jones (2020) identifies that it is necessary for a whole school to adopt a cultural shift that encompasses wellbeing at the heart of its agenda. The wellbeing of adults and pupils is inextricably linked (Harding et al., 2019), and when teaching about wellbeing it is difficult to separate as factors that impact on adults, and also on pupils. This is why some of the activities included in this session will support both adults and children. The World Health Organisation (WHO, 2012) states that mental health disorders cannot be separated from human rights issues. The vulnerability of a person to mental health conditions will be increased if their lives are linked to certain risk factors. These might include: loneliness lack of education poverty malnutrition bullying racial/sexual harassment exposure to aggression, violence and

trauma abuse power imbalances early childhood experiences It is therefore important that while establishing understanding of our own wellbeing we also work on approaches to prevention, particularly if we know that we are at risk. Graham and Truscott (2020) consider wellbeing as an inter-related term that includes many of the above factors. It is an individual responsibility to understand what drives our own wellbeing, as well as acknowledging the impact of risk factors/environment (Borrelli et al., 2014). During and post pandemic, I have been working with student teachers on their ability to manage their own wellbeing, and in turn, to understand the impact on pupils and families in schools. I have used a wellbeing module approach to implement CBT activities to develop preventative strategies, and raising awareness of their triggers and responses. Learning Objectives

By the end of the class participants will be able to:

1. Consider how to encourage the concept of resilience as a 'fuel' for better mental health in students/young people/children.
 2. Develop an understanding of how to promote responsibility for personal well-being and mental health in students/young people/children
 4. Have knowledge of support mechanisms and be updated on current legislation regarding well-being and mental health
- Stehanie has worked in education for 31 years. She began teaching in Primary schools across Wiltshire, Stoke-on-Trent, and Germany and Cyprus with Forces children. She has been a Principal Lecturer at the University of Cumbria for 17 years. She undertook CBT training 5 years ago and is a part time counsellor. She uses the knowledge gained through her CBT training within her university role she is the wellbeing and safeguard lead within the Institute of Education.*

Background readings:

Bennett-Levy J. (2004) Oxford Guide to Behavioural Experiments in Cognitive Therapy (Oxford Medical Publications). Oxford: Oxford University Press.

Coleman.J (2021) The Teacher and the Teenage Brain Routledge

McManus, F., Van Doorn, K. and Yiend, J. (2012) Examining the effects of thought records and behavioral experiments in instigating belief change. Journal of Behavior Therapy and Experimental Psychiatry, 43(1): 540–7

Siegel, D.J. and Bryson, T.P. (2012) The Whole-Brain Child. London: Robinson.

Clinical Skills Class 11

Compassion and metacognition in Cluster A Personality Disorders: Conceptualizing and treating schizoid, paranoid, and schizotypal personality

Simone Cheli, University of Florence, Florence, Italy

Cluster A personality disorders (PDs) are characterized by odd, eccentric thinking or behavior. They include paranoid (PPD), schizoid (SZPD) and schizotypal personality disorder (SPD). Although there are several experimental studies, there are not therapeutic guidelines to rely upon. The goal of this skill class is to summarize new evidence and practical tools for assessing and treating Cluster A PDs. A growing body of research suggests that many diagnosed with PDs and psychosis experience deficits in metacognition or the ability to form integrated ideas about themselves and others. They also struggle to regulate their brain's evolved systems for decoding and responding to communication signals, and for generating a self-soothing response to either internally or externally perceived threats. Cluster A PDs, severe forms of psychopathology at the crossroads between PDs and psychosis, are an understudied area of psychotherapy that we suggest considering from these deficits in metacognition and socially evolved systems. On the one hand, research suggests that impairment in self-reflectivity and self-compassion interact in fueling Cluster A pathology. On the other hand, we are collecting evidence on the feasibility and effectiveness of interventions targeting metacognition and compassion.

By end of the class participants will be able to conceptualize and treat PPD, SZPD, and SPD through a metacognition and compassion based approach to cognitive-behavioral therapy. Skill class involves didactic and experiential methods, including compassion practices and learning exercises based on case discussion. Key Learning Objectives

Participants will be able to

- Assess PPD, SZPD, and SPD and, specifically, deficits in metacognitive and self-soothing functioning;
- Outline a treatment plan for targeting these deficits;
- Use a variety of narrative and experiential practices in promoting metacognition and compassion.

Cluster A personality disorders report high prevalence and scarce treatment options. This skill class will present the key elements and research al Practice supporting a psychotherapy for PPD, SZPD, and SPD.

Simone Cheli, Psy.D., Ph.D., is adjunct professor at the School of Human Health Sciences of the University of Florence, and founding president of Tages Onlus, a charity member of Mental Health Europe. He is a CBT therapist with a specific expertise in metacognitively oriented psychotherapy, compassion-focused therapy, and mindfulness-based cognitive therapy. He is member of MERIT Institute and HITOP Consortium and author of almost 100 peer-reviewed papers and book chapters. His main research question is how a schizotypal organization of personality may manifest in either healthy oddity or severe forms of fragmentation.

Key References

Cheli S. (2020). Assessment and treatment planning for schizotypal personality disorder: A metacognitively oriented point of view. Psychiatric rehabilitation journal. <https://doi.org/10.1037/prj0000429>

Cheli, S., Cavalletti, V., Mancini, F., & Goldzweig, G. (2021). What if metacognition is not enough? Its association with delusion may be moderated by self-criticism. Current Psychology. <https://doi.org/10.1007/s12144-021-02451-7> National Library of Medicine (U.S.). (2021). Compassion and Metacognition in Schizotypal Personality (CMBT). <https://clinicaltrials.gov/ct2/show/NCT04764708>

Clinical Skills Class 12

Working with identity conflicts: How to detect and treat them in the context of CBT?

Guillem Feixas, Universitat de Barcelona, Spain

Our patients struggle to improve their mental health and wellbeing. However, the need for change is sometimes in conflict with implicit and idiosyncratic reasons for persistence in current dysfunctional patterns. From a constructivist point of view, well-intended recommendations for change in problematic thoughts and behaviors might involve some degree of transformation in the patient's sense of identity. Although internal and motivational conflicts have received some attention in clinical psychology only a few methods have been developed for assessing these conflicts and gauging their relevance for understanding therapeutic resistance. Also, the role of internal conflict resolution as a therapeutic ingredient deserves further investigation. We have adapted the repertory grid, a semi-structured interview for the elicitation and analysis of the constructs a person uses to construe self and others, to detect internal conflicts (a desirable change in one construct implies an undesirable change in the other). A meta-analysis of the studies comparing different conditions (e.g., depression, bulimia, fibromyalgia) with control groups indicated that these patients were more than three times more likely to present conflict in their grids compared to controls (OR=3.43; 95% CI: 2.50-4.69). A case study will be presented to illustrate the method employed to identify these internal conflicts and their clinical implications. Also, results from different studies will be presented supporting the association between conflict resolution and psychotherapy outcomes. These data support the idea that the pursuit of change requires a delicate balance between the need for change and the need for psychological continuity as a key self-identity process.

Key learning objectives:

1. Understand the rationale for a dilemma-focused approach to enhance standard CBT.
2. Identify the cases in which a dilemma-focused approach might be of interest.
3. Describe the "magic wound" technique as a way to discover the reasons for not pursuing change (as a way to potentiate internal resources for change).
4. Experience the laddering technique for exploring the core of the person's meaning system.

Guillem Feixas is a Clinical Psychologist and Psychology Professor at the Universitat de Barcelona with training in different approaches including CBT, existential and systemic. He founded and is now the Director of several training programs for therapists, and leads a research group on Intervention in Clinical and Health Psychology. He has supervised 20+ doctoral dissertations and published over 100+ peer-reviewed articles and 10+ books. Implications for everyday clinical practice of CBT Clinicians and researchers of any stage of development will receive training in internal conflict identification and resolution, empowering them to deal with patients who show ambivalence or resistance to change, or show contradictions in their verbal expressions and/or behaviors.

Key references

- Aguilera, M., Paz, C., ... Feixas, G. (2022). Cognitive-Behavioral and Personal Construct Therapies for Depression in Women with Fibromyalgia: A Randomized Controlled Trial. *International Journal of Clinical and Health Psychology*, 22(2), 100296. <https://doi.org/10.1016/j.ijchp.2022.100296>
- Feixas, G., & Compañ, V. (2016). Dilemma-focused intervention for unipolar depression: a treatment manual. *BMC Psychiatry*, 16: 235. doi: 10.1186/s12888-016-0947-x

IN-CONGRESS WORKSHOPS

Thursday 8th September 9.00 – 12.00

Workshop 1: Rethinking CBT: Positive CBT as a proven strategy for a new way of living

Fredrike Bannink, Owner practice, Amsterdam, Netherlands

Rethinking CBT: "Positive CBT captures the essential importance of building on positive feelings, motives, imagery, memories and behaviors. It changes what we focus on and how we work in helping people change." This quote by Prof.dr. Paul Gilbert says it all: Positive CBT offers a different approach not only for our clients but also for ourselves, therapists, as an antidote against burnout and general negativity. Positive CBT integrates positive psychology and solution-focused brief therapy within a cognitive-behavioral framework. It focuses not on what is wrong with people and how to repair the worst, but on what is right with them and how to create the best. In this interactive workshop Fredrike Bannink presents her model of Positive CBT, now used worldwide, and the research and practice of the individual and group treatment protocols.

Key objectives

After the workshop the attendants will have:

- knowledge of positive CBT and how it is different from traditional CBT
- knowledge of the differences between working from the analysis paradigm and synthesis paradigm
- an overview of the two treatment protocols (individual and group protocol)
- skills to enhance positive emotions and have more hopeful and optimistic conversations
- a few practical positive CBT tools, such as designing positive FBA's

Dr. Fredrike Bannink MDR is a clinical psychologist and lawyer. She is a trainer and supervisor of the Dutch Association for Behavioral and Cognitive Therapies and founder and past chair of the Dutch Positive CBT section and EABCT's SIG Positive CBT. She is an international keynote speaker, trainer and author of 50 books. www.fredrikebannink.com

References

Bannink, F.P. (2012). *Practicing Positive CBT*. Oxford: Wiley-Blackwell.

Bannink, F.P. & Geschwind, N. (2021). *Positive CBT: Individual and Group Treatment Protocols*. Boston: Hogrefe Publishing

Geschwind, N., Arntz, A., Bannink, F., & Peeters, F. (2019). Positive cognitive behaviour therapy in the treatment of depression: A randomized order within-subject comparison with traditional cognitive behaviour therapy. *Behaviour Research and Therapy*, 11, 119-130.

Geschwind, N., Bosgraaf, E., Bannink, F. & Peeters, F. (2020). Positivity pays off: Clients' perspectives on positive compared with traditional cognitive behavioural therapy for depression. *Psychotherapy*, 57, 3, 366-378.

Thursday 8th September 14.00 – 17.00

Workshop 2: Fine-tuning transdiagnostic imagery rescripting

Remco Van Der Wijngaart, Dutch Institute for Schema Therapy, Maastricht, Julie Krans, Radboud University & Pro Persona Research, Nijmegen, the Netherlands

Imagery rescripting is nowadays regarded as an evidence-based technique for treating different disorders, such as PTSD, social anxiety disorder, and personality disorders (Morina et al., 2017). The therapeutic goal is to generate corrective emotional experiences in aversive memories/images using mental imagery. However, it is not always easy to identify and target the core need in the image effectively. This workshop is aimed at participants with at least a basic knowledge of imagery rescripting who would like to become more proficient and confident in using imagery rescripting for different disorders. This workshop uses the model of basic emotional needs as a guiding compass for effective imagery rescripting. The workshop focuses on three components: (1) correctly identifying and targeting the basic emotional needs in the image (2) rescripting by the therapist and then by the client (3) common challenges

Key learning objectives:

Understanding and applying the basic needs model to guide effective imagery rescripting

Adequately intervening in the image as the therapist, then helping the client rescript themselves

Becoming more confident in handling common challenging situations

Implications for the clinical practice of CBT

CBT therapists are often confronted with clients who express the frustration that they know on a cognitive level that their core negative beliefs are not realistic, but still 'feel them to be true'. Imagery rescripting bridges the gap between 'knowing' and 'feeling', and can be offered as a stand-alone treatment or integrated in CBT

Training methods: The workshop contains instruction, demonstration (role-play/video), and exercises in group and pairs.

*Remco van der Wijngaart works as a psychotherapist in a private practice in Maastricht, the Netherlands. Initially trained in CBT, he was later trained and supervised in schema therapy by Jeffrey Young, with imagery rescripting as one of the most frequently used techniques in this therapy model. Since 2000 he has been providing accredited courses in schema therapy worldwide. He produced and directed several productions, e.g., *Fine Tuning Imagery Rescripting*, and is the author of the 2021 book *Imagery Rescripting, theory and practice*. Julie Krans is an assistant professor in clinical psychology at the Radboud University, and senior researcher at Pro Persona Overwaal centre for anxiety, OCD, and PTSD. Her research focuses on imagery rescripting and schema therapy for chronic psychological disorders. She recently co-founded a European consortium for research collaboration and clinical dissemination of imagery rescripting. She was trained as a CBT therapist and has clinical experience with imagery rescripting.*

References:

Morina, N., Lancee, J., & Arntz, A. (2017). Imagery rescripting as a clinical intervention for aversive memories: A meta-analysis. *Journal of Behavior Therapy and Experimental Psychiatry*, 55, 6-15. <https://doi.org/10.1016/j.jbtep.2016.1003>.

Van der Wijngaart, R. (2021). *Imagery Rescripting, theory and practice*. Pavilion Publishing. West Sussex, UK.

<https://www.pavpub.com/mental-health/psychology/imagery-rescripting-theory-and-practice>.

Arntz, A., Rijkeboer, M., Chan, E. et al. (2021). Towards a Reformulated Theory Underlying Schema Therapy: Position Paper of an International Workgroup. *Cognitive Therapy and Research*, 45, 1007-1020. <https://doi.org/10.1007/s10608-021-10209-5>.

Friday 9th September 9.00 – 12.00

Workshop 3: Working with complexity in PTSD

Sharif El-Leithy, Traumatic Stress Service, London, UK and **Hannah Murray**, 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 forthcoming clinical handbook, 'Working with complexity in PTSD: A cognitive therapy approach', will be 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.

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).

Friday 9th September 14.00 – 17.00

Workshop 4: Mindfulness-based Cognitive Therapy: The Story So Far and New Directions

Willem Kuyken, University of Oxford, UK

Can we envisage a world without the devastating effects of depression, and mental health is a fundamental human right?

Mindfulness-based cognitive therapy (MBCT) was first developed to address one of the world's most pressing public health challenges – depression. Depression affects > 230 million people across the world and will likely affect one billion people at some point during their lifetime. MBCT for depression uses psychological understanding of depression to help people learn the skills that can prevent depressive relapse and recurrence. Numerous randomized controlled trials have demonstrated it is effective, at least as effective as anti-depressant medication. It is increasingly accessible around the world. We will briefly overview the story to date of mindfulness-based cognitive therapy (MBCT), including definition, theory, effectiveness, cost-effectiveness and implementation.

The last decade has seen innovation in MBCT curricula and developments in translational science. Also, it is becoming increasingly clear that MBCT teaches foundational skills of attention and self-regulation that can be used to support mental health and unlock human capital in different populations and contexts. Our work in Oxford has adapted MBCT to begin to support different groups of people (e.g., students, teachers and health care professionals), in different contexts (e.g., NHS, education, workplaces, prisons, parliaments) learn skills to support their well-being and effectiveness. The evidence for MBCT's broader acceptability, effectiveness and cost-effectiveness is growing.

Key learning objectives:

This workshop will explore these themes and new applications.

- How do we define mindfulness? Where do values and ethics fit in? We'll "unpack" mindfulness, distilling its myriad meanings and offering a coherent, practical definition.
- What is the theoretical premise and evidence base for MBCT?
- How can we as cognitive therapists use these skills to:
 - Support our well-being and effectiveness?
 - Embody these skills in our work?
 - Teach these skills to our clients?
- Signpost further training opportunities.

[Willem Kuyken](#) is the Riblat Professor of Mindfulness and Psychological Science at the University of Oxford, United Kingdom, and Director of the University of Oxford Mindfulness Centre. His work is focused on depression and its prevention and treatment across the lifespan. He has published more than 100 peer-reviewed journal articles, including key papers on the effectiveness, mechanisms, and implementation of both cognitive therapy and mindfulness-based programs.

Reference:

Feldman, C. and Kuyken, W. (2019) [Mindfulness. Ancient Wisdom Meets Modern Psychology](#), published by Guilford Press.

All delegates will receive a sample chapter from Mindfulness Ancient Wisdom Meets Modern Psychology and extensive set of resources.

Saturday 10th September 9.00 – 12.00

Workshop 5: Understanding and assessing moral injury in clinical practice

Stephanie Houle and, Andrea Ashbaugh, University of Ottawa, Canada

Research and clinical interest in moral injury (MI), the psycho-spiritual consequences of events that deeply transgress one's moral values, has grown exponentially over the last decade. The pattern of distress that characterizes MI includes intense feelings of guilt, shame, and anger, loss of trust in oneself and others, and troubling existential and spiritual dissonance. Conceptualizations of MI are largely founded in the military mental health literature, although the application of this construct, including research supporting its clinical relevance, has been shown in other populations (e.g., health care, refugees). While debate continues as to whether existing diagnoses and treatment approaches adequately address MI, ample research shows that MI is uniquely associated with mental health outcomes such as PTSD and suicidality. As such, there is growing consensus that MI is deserving of targeted mental health intervention.

Key learning objectives:

Through presentations, activities and case discussions participants will acquire:

- 1) An up-to-date understanding of MI, including: conceptualization relevant to an interdisciplinary care environment; knowledge of associations among MI and specific mental health problems; and ongoing controversies surrounding MI and their implications for nosology and treatment.
- 2) Familiarity with existing evidence and development efforts related to interventions for treating the distress associated with MI in clinical practice, including fit with existing trauma-informed evidence-based treatments.
- 3) Familiarity with existing methods (e.g., questionnaires, interview strategies), common challenges and practical skills for assessing MI in practice.

Implications for the clinical practice of CBT:

Moral injury (MI) represents a collection of experiences associated with, but not specifically captured by, existing diagnoses (e.g., PTSD). Research is ongoing to develop an evidence base for interventions specific to MI, however given significant associations with clinical impairment and suicidality, proper guidance regarding best practice in intervention for MI-related problems is urgently needed. Our workshop presents a comprehensive overview of the state of the evidence regarding the conceptualization of MI as a clinically relevant construct, including current assessment methods and interventions for MI. We will discuss at length how clinicians can best integrate this evidence with existing evidence-based, trauma-informed cognitive-behavioural therapies (Cognitive Processing Therapy, Compassion-Focused Therapy and Acceptance and Commitment Therapy) to address the distress associated with MI in their clinical practice. *Stephanie Houle is a PhD Candidate (ABD) in Clinical Psychology at the University of Ottawa. She has garnered national recognition regarding her work on moral injury and trained clinically with Canadian Armed Forces members suffering operational stress injuries. Andrea Ashbaugh, PhD, C.Psych is an Associate Professor at the University of Ottawa and former President of the Canadian Association of Cognitive and Behavioural Therapies. Her research focuses on cognitive factors implicated in a variety of problems, including moral injury-related distress.*

Reference:

Currier, J.M., Drescher, K.D., & Nieuwsma, J. (Eds). (2021). *Addressing moral injury in clinical practice*. American Psychological Association.

Saturday 10th September 9.00 – 12.00

Workshop 6: Why we should start caring about sustainability of CBT and how this can be applied in clinical practice for relapse prevention in depression

Claudi Bockting, University of Amsterdam

A crucial part of the treatment is the prevention of relapse and recurrence. Sequential Preventive Cognitive Therapy (PCT), as started after remission, is effective in preventing relapse and recurrence in recurrent depression, also as alternative to long term use of antidepressants and on top of antidepressants. A short overview will be given of the effectivity of PCT as studied in several Randomised Controlled Trials (Bockting et al., 2018, 2009, 2005, Biesheuvel-Lelieveld, 2017, de Jonge et al., 2019) as well as the application of PCT in pregnant women that wish to stop antidepressants (Brouwer et al., 2020).

Specific ingredients of PCT will be discussed, interventions will be demonstrated (video) and role played, including the use of positive imagery to evaluate schemata and beliefs. Divers types of PCT, that is video- based-PCT, face to face PCT, guided self-help-PCT in primary care and guided internet-based PCT will be demonstrated. The latest insights based on Individual Patient Data analyses will be shared to inform clinicians on what works for whom in relapse prevention (Breedvelt et al., 2021). Clinical and research implications will be discussed.

Key learning objectives:

- Gain knowledge on risk factors of relapse in depression and anxiety disorders
- Gain knowledge on the evidence for psychological interventions developed to prevent relapse
- Gain knowledge on the evidence personalization of relapse prevention strategies (that is PCT, MBCT, antidepressants)
- Knowing the key interventions of PCT
- Being able to apply the main interventions (also via videocall, self-help)

As scientist practitioner and a professor of Clinical Psychology in Psychiatry at Amsterdam University Medical Centers/co-director the interdisciplinary Centre for Urban Mental Health at the University of Amsterdam Claudia's focus is on common mental health disorders (such as depression and relapse prevention (for a personal profile in Lancet Psychiatry see:

[https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(20\)30562-9/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30562-9/fulltext)). She studies with her team potentially modifiable etiological factors of onset, relapse and chronicity using an interdisciplinary complex systems approach. She is a (co-)author of 170 peer reviewed publications. She developed PCT implemented in clinical guidelines (English; under review, Spanish, 2021, Dutch 2009) and wrote several chapters on relapse prevention for English textbooks (e.g. *The Oxford Handbook of Mood Disorders*). She was the main editor of 11 clinical handbooks including treatment manuals. In addition, she developed several other treatment manuals for common mental health conditions, including e- interventions and chatbots (fellow at the World Health Organisation). In 2014 she was awarded with a Fellowship at Beck Institute International Scholarship Philadelphia. For more information see www.claudibocking.com.

References

- Biesheuvel-Leliefeld, K. E. M., Dijkstra-Kersten, S.M.A., van Schaik, D.J.F., van Marwijk, H. W. J., Smit, F., van der Horst, H.E., Bockting, C. L. H. (2017). Effectiveness of supported self help in recurrent depression: a randomised controlled trial in primary care. *Psychotherapy and Psychosomatics*, 86(4), 220-230, doi: 10.1159/000472260.
- Breedvelt J. J. F., Warren F. C., Segal Z., Kuyken W., Bockting C. L. H. Continuation of Antidepressants vs Sequential Psychological Interventions to Prevent Relapse in Depression: An Individual Patient Data Meta- Analysis. *JAMA Psychiatry*. Published online May 19, 2021. doi:10.1001/jamapsychiatry.2021.0823
- Brouwer, M. E., Molenaar, N. M., Burger, H., Williams, A. D., Albers, C., Lambregtse-van den Berg, M., & Bockting, C. L. H. (2020). Tapering antidepressants while receiving digital Preventive Cognitive Therapy during pregnancy: An experience sampling methodology trial. *Frontiers in Psychiatry*. doi.org/10.3389/fpsy.2020.574357
- Bockting, C. L. H., Schene, A. H., Spinhoven, P., Koeter, M. W. J., Wouters, L. F., Huyser, J., & Kamphuis, J. H. (2005). Preventing relapse/recurrence in recurrent depression using cognitive therapy. *Journal of Consulting and Clinical Psychology*, 73, 647-657. doi: 10.1037/0022-006X.73.4.647.
- Bockting, C. L. H. (2009). Preventive cognitive therapy in recurrent depression. Houten: Bohn Stafleu van Loghum.
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- de Jonge, M., Bockting, C. L. H., Kikkert, M. J., van Dijk, M. K., van Schaik, D. J. F., Peen, J., . . . Dekker, J. J. M. (2019). Preventive cognitive therapy versus care as usual in cognitive behavioral therapy responders: A randomized controlled trial, *Journal of Consulting and Clinical Psychology*, 87(6), 521-529. doi:10.1037/ccp0000395

Saturday 10th September 9.00 – 12.00

Workshop 6

Why we should start caring about sustainability of CBT and how this can be applied in clinical practice for relapse prevention in depression

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- Biesheuvel-Leliefeld, K. E. M., Dijkstra-Kersten, S.M.A., van Schaik, D.J.F., van Marwijk, H. W. J., Smit, F., van der Horst, H.E., Bockting, C. L. H. (2017). Effectiveness of supported self help in recurrent depression: a randomised controlled trial in primary care. *Psychotherapy and Psychosomatics*, 86(4), 220-230, doi: 10.1159/000472260.
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Bockting, C. L. H. (2009). No more: workbook for prevention of relapse in depression. Houten: Bohn Stafleu van Loghum.

Bockting, C. L. H., Klein, N. S., Elgersma, H. J., van Rijsbergen, G. D., Slofstra, C., Ormel, J., . . . Burger, H. (2018). Effectiveness of preventive cognitive therapy while tapering antidepressants versus maintenance antidepressant treatment versus their combination in prevention of depressive relapse or recurrence (DRD

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Posters

Poster Session 1

■ Adult Mental Health: Processes and interventions.

■ Professional Issues

1. Reach Out to Me: the involvement of another person in imagery rescripting Interventions
Hila Sorka, The Hebrew University of Jerusalem, Israel
2. Does Imagery Rescripting selectively change emotional memory of aversive experiences but not the memory for factual information?
Milena Aleksic, Department of Psychology, LMU Munich, Germany
3. Imagery rescripting in schema therapy and compassion focused therapy: The similarities and differences of the two protocols with indications for clinicians.
Julia Bączek, SWPS University of Social Sciences and Humanities, Warsaw, Poland
4. Keep calm, and carry on: Suppression training improves mental health
Zulkayda Mamat, University of Cambridge, UK
5. Intolerance of uncertainty: A risk or protective factor for moral pain?
Michelle Birch, University of Ottawa, Canada
6. Efficacy of cognitive-behavioral therapy (CBT) in anger management: A systematic review
Judith Castro Egea, Fundació Althaia - Xarxa Assistencial Universitària, Manresa, Spain
7. The experience and expression of anger in hoarding
Wenting Chen, University of New South Wales, Sydney Australia
8. Evolution of pharmacological usage during a transdiagnostic group intervention based on the Unified Protocol in the Spanish Public Health System: Results at 12 months of follow-up.
Óscar Peris Baquero, Universidad de Zaragoza, Teruel, Spain
9. Gender differences in the application of the Unified Protocol for transdiagnostic treatment of emotional disorders: A narrative review
Óscar Peris Baquero, Universidad de Zaragoza, Teruel Spain
10. Completion of cognitive-behavioral interventions in a public adult mental health service
Yolanda Martinez Ortega, Althaia, Xarxa Assistencial i Universitària de Manresa, Spain
11. Predicting mental health in fire fighters in a 2-year longitudinal study
Miriam Lommen, University of Groningen, the Netherlands
12. The role of material, social and emotional resources in the prediction of intimate partner violence revictimization by the same or different aggressors.
Ana Bellot Valenzuela, Universidad Autónoma de Madrid, Spain
13. Intimate partner violences pre and during COVID-19: results from the International sexual health and reproductive (I-SHARE) survey in Luxembourg
Alice Einloft Brunnet, Univeristé Paris Nanterre, France
14. Patient satisfaction with digital group-based CBT for domestic violence: Preliminary findings.
Merete Berg Nettet, St. Olav's University Hospital, Trondheim, Norway
15. Adverse childhood experiences and loneliness: a meta-analysis
Miruna Gabriela Canache, Babeş-Bolyai University, Cluj-Napoca, Romania
16. Finding predictors of treatment adherence and drop-out in two group psychological interventions
Marta Espinosa Guardiola, Guardiola Hospital Clinic de Barcelona, Spain
17. The self of self-criticism and the dysregulation of emotions
Ausiàs Cebolla Marti, Universitat de València, Spain

18. Development and validation of the European Portuguese version of the Multidimensional Emotional Disorder Inventory (MEDl) in a community sample
Marco Pereira, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention, Portugal
19. Machine learning based positive and negative specific autobiographical memory classification
Hale Yapıcı Eser, Koc University Graduate School of Health Sciences, Istanbul, Turkey
20. The efficacy of guided and unguided game-based CBT in reducing distress in college students
Cristina Tomoiaga, Babes-Bolyai University, Cluj-Napoca, Romania
21. Research advances in the implementation of transdiagnostic interventions for addressing emotion dysregulation
María Vicenta Navarro Haro, University of Zaragoza, Spain
22. Extending our understanding of the association between symptoms of emotional disorders and distress intolerance, negative automatic thoughts, and irrational beliefs: A network analysis approach
Razvan Predatu, Babes-Bolyai University Cluj-Napoca, Romania
23. Categorical vs dimensional assessment of emotional disorders: A clinical case using the Multidimensional Emotional Disorders Inventory
Óscar Peris Baquero, Universidad de Zaragoza e Instituto de Investigación Sanitaria de Aragón Teruel Spain
24. Exposure to intrusive thoughts using virtual reality
Eliška Nosková, National Institute of Mental Health Klecany, Czech Republic
25. Translation and validation of the Japanese version of the State Cognitive Fusion Questionnaire
Rae Na Kang, Graduate School of Human Sciences, Waseda University, Japan
26. Hunger increases negative and decreases positive emotions in women with a healthy weight
Mégane Ackermans, University of Groningen, the Netherlands
27. The effect of hunger-induced negative emotions and habitual emotion regulation on food intake in women with a healthy weight
Mégane Ackermans, University of Groningen, the Netherlands
28. Cognitive developmental level and psychopathological symptoms
Selin Tutku Tabur, Hasan Kalyoncu University, Ankara, Turkey
29. Degree of suggestibility and avatar embodiment in virtual reality. Individual differences in personality and therapeutic implications.
José Ruiz-Rodríguez, University of Barcelona, Department of Clinical Psychology and Psychobiology, Spain
30. A latent profile analysis of technostress related to the use of New Information and Communications Technologies (NICT): a transdiagnostic approach
Patrícia M. Pascoal, Universidade Lusófona de Humanidades e Tecnologias, Lisbon, Portugal
31. Is psychological change really non-linear? Initial study on the comparison of the pace of therapeutic change between videoconferencing psychotherapy and face-to-face therapy.
Diego Fernández-Regueras, Universidad Autónoma de Madrid, Spain
32. Internet-based psychological intervention for prolonged grief disorder: a pilot study protocol in Brazil
Alice Brunnet Einloft, Université Paris Nanterre, France
33. Early shame experiences and psychopathology: the mediating role of social support and self-compassion
Daniel Seabra, Center for Research in Neuropsychology and Cognitive Behavioral Intervention, Coimbra, Portugal

34. Empathy, compassion and attitudes towards transgender individuals: a preliminary analysis in a community sample of Portuguese adults.
Sérgio Carvalho Andrade, Lusófona University, Lisbon, Portugal
35. Closing the gap between empirical evidence and clinical practice: implementing virtual reality in an outpatient psychotherapy setting - A mixed-methods feasibility study
Julia Wöllner, MEU - Study Center of Diploma University of Applied Science, Magdeburg, Germany
36. Improving students' self-esteem with an online group intervention based on the Fennell model: an open-label, uncontrolled pilot trial
Luana–Maria Alexa, West University of Timisoara, Romania
37. An innovative EMDR online application: Tested for You!
Klara De Cort, Maastricht University- Expertisecentrum, Mondriaan Mental Health Center, the Netherlands
38. Paralinguistic predictors of psychotherapy outcomes in ecological online environments: Proof-of-concept study
Snir Barzilay, The Hebrew University of Jerusalem, Israel
39. Measuring interpretation biases using the AST-D-II: disorder-specific or unspecific?
Marius Kunna, Ruhr University, Bochum, Germany
40. Emotions embodied: a meta-analysis on emotion perception and interoception
Anna Pohl, Institute of Clinical Psychology and Psychotherapy, Germany
41. Distributional semantic models and affective structure
Horea-Radu Oltean, Babeş-Bolyai University, Romania
42. Emotion regulation as a mechanism of change in group cognitive behavior therapy for anxiety and depression
Nina Reinhold, Research Unit for Psychotherapy and Psychopathology, Slagelse, Denmark
43. Predictive processing in depression.
Irene Ramos-Grille, Consorci Sanitari de Terrassa, Spain
- Professional Issues**
44. Challenges in psychotherapy: the views of patients, therapists, and supervisors
Sven Alfonsson, Karolinska Institutet, Stockholm, Sweden
45. Experience of managing countertransference through self-guided imagery in meditation among healthcare professionals
Olaug Julie Aasan, Oslo University Hospital, Norway
46. Learning in cognitive-behavioral therapy of clinical psychologists in training
Yolanda Martínez Ortega, Althaia, Xarxa Assistencial i Universitària de Manresa, Spain
47. Observational coding system of the therapist-client interaction for the study of the therapeutic relationship
Maria Cristina Guerrero- Escagedo, Universidad Autónoma de Madrid, Spain
48. Personality and discomfort in a therapeutic skills training program using experiential methodology
Adela Fusté-Escolano, Faculty of Psychology, University of Barcelona, Spain
49. Saudi therapists' lived experience of self-awareness
Noor Abdullah Al-Khudair, Al Faisal University, Riyadh, Saudi Arabia

Posters on online platform only

50. Relevance and utility of pilot studies: The example of the Mempositiv Program for female survivors of intimate partner violence
Ana Asunción Antón Riquelme, Universidad Complutense de Madrid, Spain
51. The feasibility, acceptability and utility of a CBT based single session online intervention, the Common Elements Toolbox (COMET) for UK university students
Maria Loades University of Bath, UK
52. A randomized controlled trial of a cognitive behavioral therapy-based online group self-help program: 3-Month follow-up
Minkyung Yim, Korea University, Seoul, South Korea

Poster Session 2

■ Adult Mental Health: Depression, Anxiety, OCD, Trauma,

1. The effect of Individual cognitive behavioral therapy on anxiety, depression and quality of life of the elderly living in a community
Radka Kozáková, University of Ostrava, Department of Nursing and Midwifery, Czech Republic
2. VR-Moodboost: An innovative Virtual Reality intervention for treating depression
Nancy Schipper-Kramer Freher, Amsterdam University Medical Centers, the Netherlands
3. The efficacy of CBT for depression in China in comparison with other countries: a systematic review and meta-analysis
Keith Dobson, University of Calgary, Canada
4. Disentangling the mechanism underlying the effect of memory bias on depression: the role of savouring
Marta Miragall Montilla, University of Valencia, Spain
5. Metacognition and behavioural activation: associations between metacognitive beliefs and daily consequences of depressive symptomatology.
Julia Beatriz Cano-López, University of Málaga, Spain
6. New stage of behavioural activation programme – the development of D-press project in an outpatient ward
Joanna Salbert, Warsaw Institute of Psychiatry and Neurology, Poland
7. Preventative cognitive training for depression: health-economic insights
Constance Nève De Mévergnies, University of Ghent, Belgium
8. Belief updating in depression in response to positive and negative performance feedback: the influence of current affect and affect-regulation strategies
Edith Stadlmeier, University of Koblenz-Landau, Germany
9. The effect of peripheral information on the intensity of affective responses in depression
Tamar Amishav Eisenstock, The Hebrew University of Jerusalem, Israel
10. Networked as a group - evaluation of video-based outpatient group CBT for depressive disorders
Jana Schneider, MEU - Study Center of Diploma University of Applied Science, Magdeburg, Germany
11. Risk behaviors and depressive symptoms in Brazilian teenagers
Beatriz Neufeld, University of São Paulo, Brazil
12. The experience of adults bereaved by suicide and their stigma
Juana Bretón López, Universitat Jaume I, Castelló, Spain
13. Adoption of DBT treatment and changes in burnout and concerns in treating suicidal behavior in Hispanic therapists receiving a DBT Intensive Training
María Vicenta Navarro Haro, University of Zaragoza, Spain
14. The impact of aversive childhood experiences, self-criticism, and entrapment on desire for suicide
Paula Castiljo, University of Coimbra, Portugal.
15. Negative emotional memories and suicidality: the mediating role of entrapment, moderated by self-compassion and distress tolerance
Paula Castiljo, University of Coimbra, Portugal
16. Comorbid depression and treatment of anxiety disorders, OCD, and PTSD: diagnosis versus severity
Joppe Klein Breteler, Radboud University, the Netherlands
17. Study protocol: Optimizing cognitive-behavioral therapy for social anxiety disorder using the factorial design: what works best and how does it work?
Dajana Šipka, University of Bern, Switzerland

18. Beneficial effects of role reversal in comparison to role-playing on negative cognitions about other's judgments for social anxiety disorder
Hanieh Abeditehrani, University of Amsterdam, the Netherlands
19. Effect of individual cognitive behavioral therapy for antidepressant-resistant social anxiety disorder in resting-state functional MRI
Kohei Kurita, Chiba University, Chiba city, Japan
20. Fear learning, interpretation bias training and global-local processing in social anxiety: an individual differences study
Snir Barzilay, The Hebrew University of Jerusalem, Israel
21. Social Anxiety is Associated with a Deficit in Positive Updating even while Neutralizing the Impact of Avoidance
Reut Zabag, Bar Ilan University, Israel
22. Cognitive-behavioral therapy versus integrative CBT augmented with virtual reality (ICBT-VR) for medical students with generalized anxiety disorder
Popa Octavian Cosmin, George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu, Mures, Romania
23. Basic processes and clinical applications of mental imagery in generalised anxiety disorder: a systematic review
Lauren Stavropoulos, University of New South Wales, Sydney, Australia
24. The role of conditioning experiences in the aetiology of anxiety disorders: testing a novel questionnaire
Gaëtan Mertens, Tilburg University, the Netherlands
25. The association between salivary fibroblast growth factor-2 and physiological and psychological components of human stress and anxiety.
Emma Bryant, University of New South Wales, Sydney, Australia
26. Disgust-based approach-avoidance modification training for individuals suffering from elevated stress: A randomized controlled pilot study
Hannah Streit, Friedrich Alexander-Universität Erlangen-Nürnberg, Germany
27. University students who are dealing with severe stress and their coping strategies
Jóhanna Bernhardsdóttir, University of Iceland, Reykjavík, Iceland
28. (Exploratory) research on spontaneous emotion regulation after stress induction
Jente Depoorter, Department of Experimental Clinical and Health Psychology, Ghent University, Belgium
29. Moderate aerobic endurance training as an adjunct to trauma-focused psychotherapy: study protocol of a randomized controlled trial
Charina C. Lüder, Saarland University, Germany
30. The role of maladaptive posttraumatic cognitions on treatment outcomes in a sample of inpatients with post-traumatic stress disorder
Silvia Gradl, Karl Landsteiner University of Health Science, Vienna, Austria
31. Blended cognitive behaviour therapy for PTSD delivered in routine care: a feasibility study
Johan Lundin, Karolinska institutet, Stockholm Sweden
32. Implementing Post-Traumatic growth in a couples' cognitive behavioral conjoint treatment PTSD protocol: successes and challenges
Yael Shoval-Zuckerman, Bar Ilan University, Israel
33. The effect of online social appraisal on mood and intrusive memories after an analogue trauma experience
Lisa Espinosa, Karolinska Institutet, Stockholm Sweden
34. Group metacognitive therapy for OCD. A pre-post study.
Otto Weingartner Enríquez, Consorci Sanitari del Maresme, Spain
35. esTOCma, an app developed to dismiss self-stigma and increase mental health literacy about obsessive-compulsive disorder: how does it perform in a clinical sample?
José López-Santiago, Servicio de Salud Mental, Gerencia Atención Integrada de Albacete, Spain
36. Efficacy of a mental health app intervention on family members of OCD patients
José López-Santiago, Universitat de València, Spain
37. Mental health literacy and stigma associated with obsessive-compulsive content dimensions: effectiveness of an intervention via smartphone
José López-Santiago, Universitat de València, Spain
38. Usability and feasibility of esTOCma, a gamified mobile application to reduce stigma and increase mental health literacy associated with obsessive-compulsive disorder
José López-Santiago, Universitat de València, Spain
39. Psychological treatment of a person with obsessive compulsive disorder
Rafael Gil Ortega, Universidad Autónoma de Madrid, Spain

40. Motivation, treatment expectancy and credibility as predictors of outcome in difficult to treat patients with OCD using concentrated exposure treatment
Håvard Opstad, Møre og Romsdal Hospital Trust, Molde Hospital, Norway
41. Treatment adherence as predictor of outcome in concentrated exposure treatment for obsessive-compulsive disorder
Kristian Tjelle, Helse Møre og Romsdal Molde, Norway
42. Predictive value of extinction, avoidance and generalization for exposure therapy outcome
Naomi Carpentier KU Leuven, Belgium
43. Effects of a positive affect online induction in people with fear of public speaking
Marta Miragall Montilla, University of Valencia, Spain
44. Usage characteristics as predictors of dropouts and adherence in Internet-based CBT (ICBT) for panic disorder
Hadar Arnon The Hebrew University of Jerusalem, Israel
45. The Bergen 4-Day Eide treatment for panic disorder: replication in a new setting
Thorstein Eide, Olsen, Center for Crisis Psychology, University of Bergen, Norway
46. The map of cognitive processes in flight anxiety: a path analysis
Roxana Oltean, Babeş-Bolyai University, Romania

Posters on virtual platform only

47. Mental health in emerging adults: An analysis of the interplay among protective resilience and social support factors on the risk for depression and anxiety
Patricia Regina Mecha, Universidad Complutense de Madrid, Spain
48. Study of slow art observation technique for young adults with depression
Kristina Timonen, University of Turku, Finland
49. What makes a perinatal woman suicidal? A grounded theory study
Holly Reid, University of Manchester UK
50. "Do you know the lakes of Africa?": associations of anticipatory processing with different dimensions of perfectionism are over and above the social anxiety.
Gamze Şener, University İstanbul Turkey
51. Exploring the role of virtual reality technologies for relaxation and anxiety management in different application domains
Susanna Pardini, University of Padua, Padova, Italy
52. Predictors of PTSD clusters in women victims of intimate partner violence.
Ignacio Montorio Cerrato, Universidad Autónoma de Madrid, Spain
53. Managing emotions in panic disorder: a Critical review of studies related to emotional Intelligence, alexithymia, emotion regulation, and coping
Abdellah Oussi, Unversite Paris Nanterre, France
54. Mindfulness-based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR) in the treatment of Post-Traumatic Stress Disorder (PTSD): a Systematic Literature Review
Carolina Wagner, Coventry University, UK

Poster Session 3

Children and Adolescents

1. The role of exposure in the treatment of anxiety in children and adolescents: A systematic review and meta-analysis
Katharina Sommer, Mental Health Research and Treatment Center (MHRTC), Ruhr-University Bochum, Germany
2. Side effects of exposure therapy in children and adolescents with anxiety disorders
Verena Pflug, Mental Health Research and Treatment Center, Ruhr University, Bochum, Germany

3. What explains social anxiety in adolescents with social anxiety disorder and health controls? the applicability of the Clark and Wells' model
Diana Vieira Figueiredo, University of Coimbra, Portugal
4. An ACT-based case study of social anxiety disorder in adolescence
Francisca Alves, University of Coimbra, Portugal
5. Adolescent social anxiety: a new maintenance model and intervention implications
Anne Miers, Leiden University, the Netherlands
6. Differential conditioning effects in children with anxiety disorders compared to children without anxiety disorders
Tabea Flasiński, Mental Health Research and Treatment Center, Ruhr-University Bochum Germany
7. Comparison of effects of online and face-to-face problem-solving training on anxiety traits and cognitive distortions in upper elementary school students
Chikaze Sugiyama, J. F. Oberlin University, Tokyo, Japan
8. Effects of cognitive restructuring on anxiety in elementary school students: a comparison of face-to-face and online interventions
Shunsuke Koseki, J. F. Oberlin University, Tokyo, Japan
9. Examining the effectiveness of a coping skills intervention for anxiety for junior high school students amidst the COVID-19 pandemic
Rina Kishino, J. F. Oberlin University, Tokyo, Japan
10. The efficacy of a compassion, acceptance, and mindfulness-based pilot intervention for test anxiety: a case study with a high school student
Cláudia Pires, University of Coimbra, Portugal
11. The role of repetitive negative thinking in accounting for gender differences in depression and anxiety levels during adolescence
Fabiola Espinosa, Complutense University of Madrid, Spain
12. Children's depression following Intimate partner violence exposure: the effect of time and experiences of revictimization
Román Ronzón-Tirado, Universidad Autónoma de Madrid, Spain
13. Thought-fusion beliefs in children and youth with OCD – predictors of treatment outcome?
Marie Louise Reinholdt-Dunne, Forskningsenheden MODIG and Dept. of Psychology, University of Copenhagen, Denmark
14. Metacognitive group therapy for children and youth with OCD – a pilot study
Marie Louise Reinholdt-Dunne, Forskningsenheden MODIG and Dept. of Psychology, University of Copenhagen, Denmark
15. Empathy and different bullying roles in children and adolescents – a systematic review and meta-analysis
Alexandra-Marie Sabou, Babeş-Bolyai University, Cluj-Napoca, Romania
16. Barriers to emergency department clinicians' confidence in providing paediatric trauma-informed care
Nimrah Afzal, University of Bath, UK
17. Experiences of conducting adolescent community reinforcement approach, A-CRA, in compulsory institutional care for youth
Ida Mälarstig, Karolinska Institute, Stockholm, Sweden
18. Future-oriented cognition: link to mental health problems and mental well-being in preschool-aged children
Jessica Marks, Mental Health Research and Treatment Centre (MHRTC), Ruhr-University, Bochum, Germany
19. Positive parenting skills: Preliminary results from a transdiagnostic group program in clinical population
Sara Lera-Miguel, Hospital Clinic, Barcelona, Spain
20. The contribution of child self-reported measures for the assessment of Sluggish Cognitive Tempo
Belén Sáez Vicens, University of Valencia & University of the Balearic Islands, Spain
21. A compassion-based intervention for adolescents living in residential care homes
Maria Do Céu Salvador, University of Coimbra, Portugal
22. Children and adolescents with autism spectrum disorder compared to those with attention-deficit/hyperactivity disorder: exploring gender, age, and parent differences
Julia Offermans, UvA minds and the Research Institute of Child Development and Education, University of Amsterdam, the Netherlands
23. Effectiveness of online cognitive behavioral therapy (CBT-PAC) to understand children with autism spectrum tendencies and to deal with parenting stress: a pilot study protocol
Tomoko Kawasaki, CHIBA University, Japan
24. Quell the dwell: rumination mediates the relationship between gender and insomnia in adolescents.
Sophie Li, Black Dog Institute, Australia

25. A randomized clinical noninferiority trial of group-delivered vs internet-delivered parent training for children with disruptive behavior problems
Johanna Engelbrektsson, Karolinska Institutet and Stockholm Health Care Services Region, Stockholm, Sweden
26. The transdiagnostic role of schemas and metacognitive beliefs across different types of aggression.
Esperanza García-Sancho, University of Cordoba, Spain
27. Psychopathological dimensions and its relationship with emotional regulation and temperament in a sample of adolescents
Daniel Adrover Roig, Universitat de les Illes Balears, Palma, Spain
28. Preliminary investigation of ADHDCoach, an internet-based intervention for parents of children diagnosed with ADHD
Costina-Ruxandra Păsărelu, Babeş-Bolyai University, Cluj-Napoca, Romania
29. Co-development of a digital mental health intervention for parents of children with ADHD: a mixed methods study
Costina-Ruxandra Păsărelu, Babeş-Bolyai University, Cluj-Napoca, Romania
30. The FEST program for 10–12-year-old children with high functioning autism: Friendship and emotion skills training.
Dagmar Kr Hannesdóttir, University of Iceland, Department of Psychology, Iceland
31. Prevalence of adverse childhood experiences in children and adolescents with autism spectrum disorder
Mireia Querol González and Aurelia Rafael Linares, Universidad Autónoma de Barcelona Spain
32. Psychometric properties of the Turkish form of Piaget Developmental Tasks Inventory (IPTD)
Mehmet Hakan Turkcapar, Social Sciences University of Ankara, Turkey
33. Neural markers of emotion regulation in childhood maltreatment: Prospective association with psychopathology
Stefania Maria Crisan, Babeş-Bolyai University, Cluj-Napoca, Romania
34. The relationship between psychopathic traits and social behavioral problems in children and early adolescent boys from a clinical population
Aurelia Rafael Linares, Barcelona, Spain
35. Is a brief body scan helpful for adolescent athletes' sleep problems and anxiety symptoms?
Lis Johles, Stockholm, Sweden
36. New insights into the transdiagnostic role of attachment relationships for explaining and treating psychopathology in middle childhood.
Lien Goossens, Ghent University, Belgium
37. Body dissatisfaction and low self-esteem in elementary school-aged children: The role of media pressure and a positive parent-child relationship
Jolien De Coen, Ghent University, Belgium
38. Middle Childhood attachment-based family therapy: restoring secure attachment relationships in 8- to 12-year-old children referred to treatment for mental health problems
Leen Van Vlierberghe, Catholic University Leuven, Belgium
39. The role of parental thoughts, emotion regulation, and actions in the relationship between parental style and children's mental problems
Ioana Alexandra Iuga, Evidence based psychological assessment and interventions Doctoral School, Babeş-Bolyai University, Romania
40. Conscious and resilient? associations between temperament, emotional awareness, and emotion regulation strategies in youth
Sarah Struyf, Ghent University, Belgium
41. Closing the gap between early detection and prevention: the experiences of public health care workers in a multi-modal school-based depression and suicide prevention programme
Marloes Braam, GGZ Oost Brabant | Radboud University, the Netherlands
42. Protocol to explore the efficiency of a translational intervention to improve child mental health by enriching the school and family environment with mentalization (iMentalize)
Sergi Ballespí, Universitat Autònoma de Barcelona, Spain

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43. Efficacy of intensive cognitive behavioral therapy for paediatric obsessive-compulsive disorder: preliminary results of a randomized controlled trial
Laura Hermida Barros, Hospital Clínic of Barcelona, Spain
44. Efficacy of intensive exposure and response prevention in children and adolescents with obsessive-compulsive disorder: 3 and 6-month follow-up results
Eduard Forcadell, Hospital Clínic of Barcelona, Psychiatry and Child and Adolescent Psychology Service, Spain

45. Cognitive behavioral play therapy (Cbpt) and aggressive behavior and conduct disorders: A single case study
Argento Ornella, Research Center "CBPT-Cognitive Behavioral Play Therapy", Rome, Italy
46. Culturally adapting CBT Program START NOW for migrants
Lyla Schwartz, University of Basel, Switzerland
47. Relationship between social foster care institutional staff's knowledge of behavioral theories and their efficacy in fostering children in residential care. (moved from in person)
Ayako Takii, The Joint Graduate School in Science of School Education, Hyogo University of Teacher Education, Japan

Poster Session 4

Behavioural medicine, Public Health, Covid 19 and Sexual Health

Behavioural Medicine

1. The role of metacognition in the prediction of depressive and anxiety symptoms in chronically ill patients
Agata Kolodziejczyk, Department and Clinic of Psychiatry, Wroclaw Medical University, Poland
2. Can CBT provide a new way of living with endometriosis? Results of a qualitative feasibility study
Cornelia Weise, Philipps-University of Marburg, Germany
3. Comparing effects of cognitive-behavioral therapy and acceptance and commitment therapy for chronic pain
Saša Jerko, University Rehabilitation Institute, Ljubljana, Republic of Slovenia
4. Understanding the emotional functioning after acquired brain injury: the role of interoception
Marta Miragall Montilla, University of Valencia, Spain
5. Internet-delivered Acceptance and Commitment Therapy added to multimodal pain rehabilitation: a cluster randomized controlled trial
Nina Bendelin, Pain and Rehabilitation Centre, Department of Health, Medicine and Caring Sciences, Linköping University, Sweden
6. The predictive role of photo-based behaviors on muscle dysmorphic disorder symptoms and the moderation effect of body functionality appreciation among male adult Instagram users.
Paolo Mancin, Department of General Psychology, University of Padova, Italy
7. The relationship between cognitions and fatigue in a community sample
Nusaibah Islam, University of New South Wales, Sydney, Australia
8. Interdisciplinary cognitive - behavioural therapy for odontophobia and dental anxiety related to psychological trauma.
Yngvill Ane Stoke Westad, Møre and Romsdal County Dentist Department Molde, Norway
9. Implementation and verification of the medication counselling using the cognitive behavioral therapy approach in the community pharmacy for the patient with insomnia: a study protocol
Motohisa Hirose, Chiba University, Japan
10. Cognitive-Behavioural Therapy to approach a neurological functional disorder (NFD): developed from a case
Aleix Jorba Chacón, Althaia, Xarxa Assistencial Universitària de Manresa Spain
11. Treatment of sleep disturbances in refugees: preliminary results of a context-sensitive group therapy program
Britta Dumser, Ludwig-Maximilians-Universität, Munich, Germany
12. Be a mom, a web-based CBT intervention for maternal mental health in the postpartum period: efficacy results at four months post-intervention among women with low and high risk for postpartum depression
Fabiana Monteiro, Center for Research in Neuropsychology and Cognitive and Behavioral Intervention, University of Coimbra, Portugal
13. Psychosocial functioning in adolescents with a congenital heart disease: The role of attachment and emotion regulation.
Saskia Mels, Ghent University Hospital, Belgium
14. Emotion dysregulation during assisted reproductive treatments: usefulness of a brief Unified Protocol Preventive Program to learn emotion regulation skills.
Verónica Martínez-Borba, Universitat Jaume I, Castellón, Spain.
15. Quantitative and qualitative opinion of women who participated in an online Unified Protocol Preventive Program during assisted reproductive techniques
Verónica Martínez-Borba, Universitat Jaume I, Castellón, Spain.

16. User's opinion about the use of smartphone applications to provide online psychological CBT-based programs during assisted reproductive techniques
Verónica Martínez-Borba, Universitat Jaume I, Castellón, Spain.
17. Study protocol for the randomized controlled trial of the Mind programme: an Acceptance and Commitment Therapy and compassion-based intervention for women with breast cancer
Inês A. Trindade, University of Coimbra, Center for Research in Neuropsychology and Cognitive-Behavioral Intervention, Portugal

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18. Psychological support needs of highly distressed patients with chronic illnesses in Japan
Kotone Hata, Waseda University Saitama, Japan
19. Cognitive-behavioural therapy in a patient with fibromyalgia
Markella Fiste, Aegean College-Psychiatric Hospital of Athens Dromokaiteio, Greece
20. Adherence to self-management and psychosocial variables in type 1 diabetes patients; differences in impact of adherence between adults and adolescents
Emi Tajima, Waseda University, Saitama, Japan
21. Description of a treatment program incorporating positive memory work into a trauma-focused cognitive-behavioral treatment for women survivors of IPV. Development and preliminary results (MEMPOSITIV project).
Alejandro Miguel-Alvaro, Complutense University of Madrid, Spain

Marital and sexual

22. Initial validation of the first diagnostic interview for sexual dysfunctions (DISEX) following the diagnostic guidelines of DSM-5 & ICD-11.
Rebekka Schwesig, Technische Universität Dresden, Germany
23. Personality Factors and attachment styles in men with premature ejaculation
Cátia Oliveira, Universidade Lusófona do Porto, Portugal
24. The Female Sexual Subjectivity Inventory" (FSSI): adaptation and validation for the Portuguese women
Cátia Oliveira, Universidade Lusófona do Porto, Portugal
25. A validation study of the female sexual self-efficacy in the Portuguese population
Cátia Oliveira, Universidade Lusófona do Porto, Portugal
26. Sexual functioning and sexual satisfaction: Influence of sexual distress in the Portuguese population
Cátia Oliveira, Universidade Lusófona do Porto, Portugal
27. Impact of sexual attraction and self-efficacy in the presence of female sexual pain
Cátia Oliveira, Universidade Lusófona do Porto, Portugal
28. Preliminary validation of the Emotional Ambivalence in Couples Scale (EACS)
Isabel Cabrera Lafuente, Universidad Autónoma de Madrid, Spain

Public Health

29. Development and application of a positive emotion training (PoET)
Christina Totzeck, Clinical Psychology & Psychotherapy, Ruhr University, Bochum, Germany
30. The CONFAMI study: exploring parents' experiences, risks and resources during confinement
Rafika Zebdi, Université Paris Nanterre, France
31. Predictors of long-term benzodiazepine prescribing in Sweden: population-based register-based study
Kayoko Isomura, Centre for Psychiatry Research, Karolinska Institutet, & Stockholm Health Care Services, Region Stockholm Sweden
32. A stepped-care programme of online psychological interventions for healthcare workers with psychological distress: study protocol for the RESPOND-HCWs randomised trial
Roberto Mediavilla Torres, Universidad Autónoma de Madrid, Spain
33. Creative evidence-based communication about mental health
Ketevan Abdushelishvili, Tbilisi Family Mental Health Center, Georgia
34. The cultural adaptation of a psychosocial stepped-care programme for labour migrants living in the Netherlands.
Rinske Roos, Vrije Universiteit, Amsterdam, Netherlands
35. Long-term outcomes at 24- and 36-month follow-up in the intervention arm of the randomized controlled trial of prompt mental health care
Robert Smith, Norwegian Institute of Public Health, Norway

36. The extension of the cognitive-behavioural model from individual-level analysis to regional- and country-level analysis: an empirical investigation
Silviu Matu, Babes-Bolyai University, Romania

COVID-19

37. Rumination and meta-cognition during the lockdown: the effect of cognitive control training
Celia Domingo-Gil, Universidad Complutense de Madrid, Spain
38. Ecological Momentary Assessment (EMA)-based smartphone app to measure anxiety levels during the COVID-19 pandemic.
Claudia Rodríguez-Torrella Hospital Clínic de Barcelona, Spain
39. Psychological consequences of experiencing the COVID-19 coronavirus pandemic: early maladaptive schemas, mental health and well-being
Joanna Urbanska, Adam Mickiewicz University, Poznan, Poland
40. Mental health problems and needs of frontline healthcare workers during the COVID-19 pandemic in Spain: a qualitative analysis
Roberto Mediavilla Torres, Universidad Autónoma de Madrid, Spain
41. Perceptions of the use of telehealth during COVID-19 pandemic by professionals and patients of the Spanish public mental health system
María Vicenta Navarro-Haro, University of Zaragoza, Spain
42. How do we cope with generalized anxiety disorder symptoms during the COVID-19 Pandemic?
Yasemin Meral Ögütçü, Izmir University of Economics, Turkey
43. Latent profiles of psycho-spiritual distress and associated dispositional characteristics in the context of moral stressors experienced during the COVID-19 pandemic
Stephanie Houle, University of Ottawa, Canada
44. The Bergen 4-Day treatment for panic disorder during the covid pandemic
Kay Morten Hjelle, University of Bergen, Norway
45. Psychological factors in postcovid adaptation - alexithymia, social and health anxiety
Julia Kamburidis, Sofia University Sofia, Bulgaria
46. Death anxiety in the COVID-19 pandemic: testing REBT models of psychopathology and psychological health of death anxiety.
Elisa Dumitru, Babeş-Bolyai University Cluj-Napoca, Romania
47. Mind the Mom – an e-mental health tool grounded on CBT to promote maternal mental health in the context of the COVID-19 pandemic: results on its usability and acceptability
Fabiana Monteiro, Center for Research in Neuropsychology and Cognitive and Behavioral Intervention, University of Coimbra, Portugal
48. European CBT therapists transitioning to remote CBT during the pandemic: theREMOTEcbt project
Marija Mitkovic-Voncina, SRABCT, Serbia

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49. Fear of COVID-19 and ability to stay mindful affects subjective mental health during the COVID-19 pandemic
Giedre Zalyte, Laboratory of Behavioral Medicine, Neuroscience Institute, Lithuanian University of Health Sciences Lithuania

Poster Session 5

■ Long term Mental Health. ■ Eating Disorders, Addiction ■ Older adults

Eating Disorders

1. Orthorexic eating behaviors are not all pathological: A French validation of the Teruel Orthorexia Scale (TOS)
Clotilde Lassin, Université Toulouse-Jean Jaurès France

2. Determining the potential link of self-compassion with eating pathology and body image among women: a longitudinal mediational study
Fidan Turk, University of Sheffield, UK
3. Predicting intuitive eating in women through positive body image factors: the role of body compassion vs. body acceptance by others
Marta Miragall Montilla, Polibienestar Research Institute, University of Valencia, Spain
4. Restrictive intake moderates the relationship between binge eating and binge drinking in college youths
Marta Miragall Montilla, Polibienestar Research Institute, University of Valencia, Valencia, Spain
5. Binge eating and emotional (dys)regulation in a Portuguese community sample: the protective role of self-compassion and committed action.
Sérgio Carvalho Andrade, Lusófona University, Lisbon, Portugal
6. Relationship between eating disorders and obsessive-compulsive disorder: Analysis of obsessive dysfunctional beliefs with eating and body image content
Martha Giraldo-O'meara, University of Prince Edward Island Charlottetown, Canada
7. Orthorexia nervosa-related beliefs: associations with orthorexia, food restriction and obsessive symptoms
Martha Giraldo-O'meara University of Prince Edward Island Charlottetown, Canada
8. A new mobile app to address the dysfunctional beliefs and the internal dialogue about eating and body image: Protocol for a randomized controlled trial
Martha Giraldo-O'meara University of Prince Edward Island Charlottetown, Canada
9. Changes in eating disorder symptoms during inpatient treatment: associations with eating disorder diagnoses, depression, and anxiety
Kärol Soidla, University of Tartu, Estonia
10. Satisfaction with meaningful life domains and the course of anorexia nervosa
Sanne Van Doornik University of Groningen, the Netherlands
11. Punishment sensitivity and the persistence of anorexia nervosa: High punishment sensitivity is related to a less favourable course of anorexia nervosa
Nienke Jonker, University of Groningen, the Netherlands
12. A trainee counsellor's assessment and treatment of a former Athlete with OCD and a comorbid eating disorder.
Alexandra Bletsis, The American College of Greece, Athens, Greece
13. Effectiveness in weight loss maintenance of cognitive behavioral therapy-based group treatment for obesity: A systematic review
Aina Pineda Comellas, Fundació Althaia -Xarxa Assistencial i Universitària de Manresa, Spain
14. When (not) eating Causes Distress: Applying the Tripartite model of Emotion Regulation to Picky Eating in Young Children
Juliette Taquet, Ghent University, Belgium
15. The Portuguese short form (seven-items) Eating Disorder Examination-Questionnaire: Validity and reliability of a non-nested version in middle aged and older women
Ana Telma Pereira, Faculty of Medicine, Coimbra University, Portugal
16. The Portuguese version of the Screen for disordered eating: Validity and reliability in middle aged and older women
Ana Telma Pereira, Faculty of Medicine, Coimbra University, Portugal

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17. Emotional Schema and eating behaviors: Mediator role of emotional dysregulation and moderator role of perfectionism
Şener Gamze, Zeynep Lal Caan Koç University İstanbul Turkey
18. Detection of post-traumatic stress disorder in adolescents with eating disorders admitted to a day hospital
Flavia Piazza Suprani, Institute of Neuroscience, Hospital Clinic of Barcelona, Spain

Addictions

19. Emotion regulation and codependence linked to cocaine use
Vera Walburg, Institut Catholique De Toulouse France
20. Smoking mostly alone as a risk factor for cannabis use and use-related disorders
Jean Chassagne, Centre d'Etudes et de Recherche en Psychopathologie et Psychologie de la Santé, University Jean Jaurès Toulouse France
21. Examining social media posts of General #selflove Discourse and within alcohol and other drug recovery: A topic modelling approach
Kelly L Ziemer University of California, Berkeley, USA
22. Cognitive behavioral therapy for cryptocurrency addiction: A propos of a case
Esther Martin Santander, Althaia, Xarxa Assistencial Universitària de Manresa Spain
23. Associations between risky alcohol use and empathy: drinking motives as a moderator
Isabelle Baltariu Bulai, University of Groningen, the Netherlands

24. Spanish adaptation and validation of the Gambling Symptom Assessment Scale (G-SAS) in the general population.
Laura Diaz Sanahuja, Universitat Jaume I Castellón de la Plana Spain
25. Craving in gambling disorder: a systematic review
Núria Mallorquí-Bagué, Hospital de la Santa Creu i Sant Pau, Biomedical Research Institute Sant Pau (IIB Sant Pau), Spain
26. Self-regulation profiles in addictive behaviors among adolescents: A transdiagnostic approach
Eva Van Malderen, Ghent University, Belgium
27. Craving, emotion regulation and treatment outcome differences in cocaine use disorder according to the severity of withdrawal symptoms at inpatient detoxification treatment
Alba Palazón-Llecha, Hospital de la Santa Creu i Sant Pau, Biomedical Research Institute Sant Pau (IIB Sant Pau). Spain

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28. Cognitive-behavioral treatment plus contingency management for a smoker with obesity: A case study
Gloria García-Fernández, Department of Psychology, University of Oviedo Spain
29. A randomized controlled trial of cognitive-behavioral treatment plus contingency management for smokers with overweight or obesity
Gloria García-Fernández, Department of Psychology, University of Oviedo Spain
30. Online vs in-person smoking cessation treatment: difference in abstinence rates
María Barroso-Hurtado, Smoking Cessation and Addictive Disorders Unit, University of Santiago de Compostela. Spain
31. Measurement Invariance of The Internet Gaming Disorder Scale Across Age, Gender, and Informant
Iulia Cosa, Babeş-Bolyai University, Romania
32. “SinHumo App”: Development of a novel smoking cessation App as a complement to a cognitive-behavioral intervention to quit
Daniel Suárez-Castro, Smoking and Addictive Disorders Unit, University of Santiago de Compostela. Spain

Longer term mental health and Older Adults

33. Intrusive Mental Images in Borderline-Personality Disorder: Perspectives and Implications for Psychotherapy
Julia Kroener, Christophsbad Goeppingen Germany
34. IRIS – A two-session short intervention using imagery rescripting to treat non-suicidal self-injury in Borderline Personality Disorder. Results from a Randomized Controlled Trial.
Julia Kroener, Christophsbad Goeppingen, Germany
35. Personality Disorders in a Sample of Argentinean CBT Outpatients
Alicia Facio, Asociacion Terapia Cognitiva y Conductual del Litoral, Argentina
36. Promoting well-being in a clinical sample of young adults with paranoid tendencies; a Randomized Clinical Trial
Regina Espinosa, Camilo José Cela University Madrid Spain
37. Reactivity in response to a psychosocial stress-inducing virtual reality scenario
Anna Francova, National Institute of Mental Health/Third Faculty of Medicine (Charles University) Klecany/Prague Czech Republic
38. Effects of a group-based Cognitive-Behavioral Therapy (CBT) program in patients with a first-episode psychosis (FEP): A pilot study.
Judith Castro Egea, Fundació Althaia, Xarxa Assistencial Universitària de Manresa Spain
39. Do cognitive function profiles differentiate subtypes of unipolar affective disorder?
Joana Guarch I Domènech, Hospital Clínic Barcelona, Universitat De Barcelona, Spain
40. Heightened state rejection sensitivity during bipolar depression relates to an increase in suicidal ideation
Anna Ehnvall, Institute of Clinical Neuroscience, Gothenburg University, Sweden