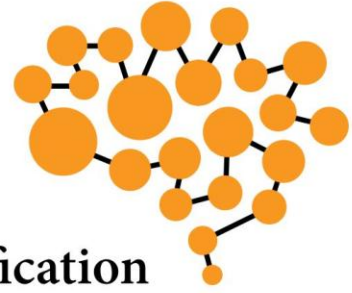


ACBM

Association for Cognitive Bias Modification



21-23 JUNE 2026, GHENT, BELGIUM

The 5th annual conference of
the Association for Cognitive
Bias Modification (ACBM)



Abstract book

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(in order of appearance)

Day 1 Sunday, 21 June

25 YEARS OF CBM RESEARCH: QUA VADIS?

Session type: Keynote lecture

Time: 13.30-14.30, Sunday, June 21st

Location: Aula P.J. Triest

Session Chair: Ernst Koster, Ghent University

Cognitive bias modification has been around for a quarter century. In this talk I will reflect on the question of what CBM has delivered and where improvements are still needed. I will argue that CBM has been crucial in exposing challenges related to measurement, theoretical conceptualization, and clinical implementation. Despite considerable progress in some areas, major steps can still be taken to improve both the theoretical foundation as well as clinical potential of CBM research

INTEGRATING COGNITIVE AND COMPUTATIONAL APPROACHES TO UNDERSTAND AND TARGET RISK FACTORS FOR DEPRESSION AND ANXIETY

Session type: Symposia

Time: 14.40-16.00, Sunday, June 21st

Location: Aula P.J. Triest

Session Chair: Kristof Hoorelbeke, Experimental Clinical and Health Psychology, Ghent University, Belgium

Cognitive models highlight the role of cognitive biases, cognitive control deficits, and maladaptive thought patterns in the onset and maintenance of internalizing disorders. However, it remains unclear how these variables interrelate to predict future symptoms and how they can be effectively targeted. This symposium brings together four studies that integrate cognitive theory, computational methods, and intervention science to advance understanding of cognitive risk processes in depression and anxiety.

The first presenter, Gabrielle Van Tomme, examines how cognitive biases and cognitive control functions jointly contribute to internalizing symptoms. Using Bayesian Network Analysis in a mixed clinical-nonclinical sample, the study identifies interpretation bias as a central hub linking depression, anxiety, and memory biases, situating cognitive control within the Combined Cognitive Bias framework.

Next, Annabel De Clercq presents findings from a large prospective study investigating how cognitive-emotional processes, including cognitive control and cognitive biases, predict depressive symptoms at one-month follow-up. Advanced predictive modelling will identify processes most predictive of depression.

In the third presentation, Alvaro Sanchez-Lopez evaluates whether an online cognitive bias modification procedure produces transfer effects on attentional and interpretation bias and enhances clinical response to subsequent CBT. Results indicate that pre-treatment bias modification yields cognitive changes and improves overall symptom reduction. Finally, Kristof Hoorelbeke introduces a novel computational simulation method for identifying cognitive intervention targets. Applied to rumination networks, simulations reveal key intervention targets and substantial individual variability in expected treatment response. Together, these presentations illustrate how integrated cognitive and computational approaches can inform more precise, efficient, and personalized intervention strategies.

Interconnected vulnerabilities: A network analysis of depression-related cognitive biases and cognitive control processes in a mixed depressive-anxious sample

Speaker: Gabrielle Van Tomme, Experimental Clinical and Health Psychology, Ghent University, Belgium

Objective:

Cognitive vulnerability factors are central to the aetiology of internalizing disorders. While the Combined Cognitive Bias Hypothesis suggests that attentional, interpretational, and memory biases interact to maintain depression and anxiety, the role of cognitive control within this interplay remains unclear. This study investigated the structural relationships between internalizing complaints, cognitive biases and cognitive control components.

Methods:

In this cross-sectional study, using a mixed clinical and non-clinical sample, 226 participants with varying levels of depression and anxiety completed five cognitive tasks measuring shifting, interference control, and cognitive biases. Bayesian Network Analysis was employed to map the dependencies between depression, anxiety, cognitive biases (attention, interpretation, implicit and explicit memory) and cognitive control functions (shifting, interference control). Centrality and edge stability were evaluated using node centrality indices and probability measures for edge inclusion.

Results:

The network revealed evidence for edges between nearly all variables, except for interference control and attention bias which remained independent from the structure. Interpretation bias emerged as a central hub, showing connections to depression, anxiety and implicit memory bias. Depression was directly linked to both anxiety and interpretation bias. Notably, cognitive control deficits (shifting) were integrated into the broader network, suggesting they may facilitate or moderate the maintenance of biases.

Conclusion:

This study provides the first network-based evidence for the integration of cognitive control within the Combined Cognitive Bias framework. The central role of interpretation bias suggests it may be a primary driver of cognitive vulnerability, acting as a bridge between emotional symptoms and other cognitive dysfunctions.

How Cognitive Control and Cognitive Biases Shape Depression Outcomes: A Computational Approach

Speaker: Annabel De Clercq, Experimental Clinical and Health Psychology, Ghent University, Belgium

Objective:

Depression is a highly prevalent mental disorder, and although cognitive behavioural therapy (CBT) has strong empirical support, many patients do not achieve full remission and remain at risk of relapse. Recent cognitive theories have extended Beck's classical model of depression by incorporating findings on cognitive control deficits, biases in attention, interpretation, memory, and emotion regulation difficulties. However, little is known about how these cognitive-emotional mechanisms jointly predict future symptoms, nor about their conditional roles in depression.

The present prospective study aims to identify cognitive and emotional factors that best predict depressive symptoms at one-month follow-up, and identify which cognitive-emotional mechanisms provide a necessary condition for the presence or persistence of elevated depressive symptoms after one month.

Method:

In this prospective study, 500 participants at risk for depression between 18 and 65 years old from the UK completed self-report measures assessing depressive symptoms, emotion regulation, cognitive distortions, automatic thoughts, dysfunctional attitudes, early adverse experiences, and subjective cognitive control. Participants also performed cognitive tasks assessing cognitive control (updating, shifting) and cognitive biases in attention, interpretation, and memory. Depressive symptoms were reassessed after one month. Analyses will examine how baseline cognitive-emotional features relate to follow-up depressive symptoms and symptom change using advanced computational approaches, including predictive modelling, and necessary condition analysis (NCA) to identify potential necessary conditions for depressive symptom outcomes.

Results:

Data collection is ongoing and will be completed in March, along with the planned analyses.

Conclusion:

Findings will clarify the predictive value of interacting cognitive and emotional mechanisms in depression.

Interpretation Bias Modification Improves Psychotherapy Outcomes: Evidence From a Randomized Controlled Study Combining Online Contingent Attention Training and CBT

Speaker: Alvaro Sanchez-Lopez, Personality Evaluation and Clinical Psychology, Complutense University of Madrid, Spain

Objective:

To examine whether an online cognitive bias modification program (the Online Contingent Attention Training; OCAT) promotes transfer effects on interpretation bias indicators and enhances subsequent symptom change during cognitive-behavioral therapy (CBT).

Method:

Fifty-six adults with mild depressive and/or anxiety symptoms were randomly assigned to active OCAT (n = 26) or sham-control training (n = 30). Participants completed 10 daily sessions and were assessed at baseline (T1) and post-training (T2) on attentional and interpretation bias indices and emotional symptoms. Subsequently, all participants received a standardized five-session group CBT program and were reassessed post-treatment (T3). Mixed ANOVAs examined training effects (T1–T2) and CBT-related change (T2–T3), with additional analyses evaluating overall transfer from baseline to post-CBT (T1–T3).

Results:

Significant Group × Time interactions (T1–T2) indicated that OCAT selectively reduced negative interpretation bias indicators, alongside parallel reductions in attentional bias. These cognitive shifts were accompanied by decreases in depressive and anxiety symptoms. Although both groups improved during CBT (T2–T3) without differential interaction effects, analyses of cumulative change (T1–T3) revealed larger overall symptom reductions among participants who received active bias training. These results support a transfer from interpretation bias modification to enhanced global treatment gains.

Conclusion:

Targeting interpretation bias prior to psychotherapy yields measurable cognitive transfer effects and may amplify overall therapeutic improvement. Pre-treatment cognitive bias training thus proves to strengthen downstream responsiveness to CBT, underscoring its value as a complementary intervention to optimize psychotherapy outcomes.

A Computational Simulation Method to Identify Cognitive Intervention Targets and Optimize Treatment Strategies: The Case of Rumination

Speaker: Kristof Hoorelbeke, Department of Experimental Clinical and Health Psychology, Ghent University, Belgium

Objective:

Intervention research is costly, resource-intensive, and slow, creating a need for innovative methods that can efficiently identify promising treatment targets and intervention strategies before launching full-scale clinical trials. To address this gap, we present a novel computational simulation method and evaluate its potential for identifying treatment targets, comparing the expected effects of (theoretical) standalone and combined cognitive interventions, and exploring individual variability in treatment response. We apply this approach to rumination, a key risk factor for depression.

Method:

95 adults at risk for depression completed $\geq 50\%$ of a 21-day ecological momentary assessment. Idiographic network models were estimated and Control Theory principles applied to identify intervenable nodes and simulate effects of Cognitive Training, Self-System Therapy, Metacognitive Therapy, and combined intervention approaches on rumination and related variables.

Results:

Constructs from self-regulatory and metacognitive models of rumination appeared among the most intervenable variables. Promotion focus and Negative beliefs about rumination produced the greatest simulated impact, with Negative beliefs showing particularly broad influence across the network. Simulated intervention effects remained focal, and intervention order did not affect outcomes. Substantial individual variability in simulated treatment response was observed.

Conclusion:

Control Theory offers a promising framework for identifying cognitive and emotional intervention targets, prior to resource-intensive empirical testing. The computational simulation approach provides a valuable preparatory step for guiding intervention development. However, the method appears less suitable for examining effects of intervention sequence. Findings underscore the importance of individual differences in rumination dynamics and highlight opportunities for tailoring interventions to personalized cognitive-emotional profiles.

CBM IN OCD: CURRENT EVIDENCE AND EMERGING APPROACHES
Session type: Symposia
Time: 14.40-16.00, Sunday, June 21st
Location: Room Virgiel
Session Chair: Lars Rothkegel, Clinical Psychology, University of Potsdam, Potsdam
<p>Obsessive-Compulsive Disorder (OCD) is a debilitating, chronic condition characterized by intrusive thoughts and compulsive behaviors. Despite the efficacy of established treatments like exposure with response prevention, many patients do not experience sufficient therapeutic benefits. Cognitive biases in OCD may contribute to this treatment gap, highlighting the need for targeted interventions that address these biases to enhance existing therapies. The first symposium talk will introduce a novel stimuli set for assessing attention processes in OCD, while the second will explore the interplay between the dynamics of attention bias and interpretation bias as well as OCD symptoms. The third talk will demonstrate how a qualitative approach can be applied to modify interpretation bias in youth and the fourth talk will present meta-analysis data on the impact of interpretation bias training on both bias and OCD symptoms. Together, these insights aim to deepen our understanding of cognitive biases in OCD and pave the way toward more effective, bias-targeted therapeutic approaches.</p>
A Novel Video-Based Stimuli Set for Attention Allocation Research in OCD
Speaker: Amit Lazarov, School of Psychological Sciences, Tel Aviv University, Tel Aviv, Israel
<p>Background: Research of attention allocation in OCD has solely used pictorial stimuli. Yet, pictures are limited in their ability to portray real-world situations, which are dynamic and ongoing in nature. Addressing this gap, we developed and validated a novel video-based stimulus set comprised of two corresponding subsets – an ‘obsession-provoking’ subset (videos depicting obsession-provoking situations) and a ‘compulsive act’ subset (videos showing the performance of compulsive acts).</p> <p>Methods: In three separate studies participants rated the different videos on subjective experienced discomfort and positive feelings. Participants also completed measures of OCD, anxiety, and depression. In study 1 we compared the ratings of individuals with high and low levels of OC symptoms (analogue samples). In Study 2 we compared participants with clinical OCD to both anxious and healthy control participants. Study 3 was a correlational study among participants from the general population.</p> <p>Results: For the obsession-provoking subset, OC participants experienced more discomfort than controls (Studies 1 and 2). In Study 3, only OC symptoms were positively associated with discomfort scores. For the compulsive act subset, compared with controls, OC participants demonstrated a larger reduction in discomfort between the compulsive act and the obsession-provoking videos, and experienced more positive feelings (Studies 1 and 2). In Study 3, only OC symptoms were positively associated with reduction in discomfort scores and with positive feelings scores. The two video-based stimulus subsets showed sound psychometric properties.</p> <p>Conclusion: The current study is the first step in substantiating a novel OCD video-based stimulus set addressing both obsessions and compulsions.</p>
Attentional dynamics in a disgust related scrambled sentence task and their relation to interpretation bias and C-OCD symptoms
Speaker: Lars Rothkegel, Clinical Psychology, Universität Potsdam/University of Potsdam, Potsdam, Germany
<p>Objective: Disgust is crucial in developing and maintaining contamination-based OCD (C-OCD), with its resistance to extinction posing treatment challenges. Cognitive biases, like disgust-specific interpretation bias, may contribute to this resistance. However, our Scrambled Sentence Task (SST) with 60 disgust-related sentences showed no correlation</p>

between interpretation bias and disgust sensitivity or C-OCD symptoms—contrary to our hypotheses. This study aimed to explore the reasons for this lack of correlation.
 Method: 104 participants conducted a disgust-specific SST while their eye movements were being recorded. Time-based analyses of attentional deployment and their relation to disgust sensitivity/C-OCD symptoms as well as sentence interpretation were conducted. For each point in time, the relation of fixations on a neutral vs. disgusting word was computed and related to interpretation as well as questionnaire results.
 Results: The early phases within a trial were crucial for a correlation between attention and questionnaire results, the latter phases were crucial for a correlation between attention and interpretation.
 Conclusion: The absence of an interpretation bias relation to OCD symptoms in a disgust specific SST might result from a specific attentional pattern in disgust – an initial but short orientation towards and a latter and longer avoidance of the disgusting word for all participants, whereas the latter avoidance phase was more predictive of the interpretation of the sentence than the orientation phase. We therefore suggest that before attempting to modify attentional or interpretation bias regarding disgust it might be useful to investigate the individual bias pattern.

Towards implementation of Interpretation Bias training for youth with OCD: A qualitative approach

Speaker: Elske Salemink, Clinical Psychology, Utrecht University, Utrecht, The Netherlands

Objective: Cognitive Bias Modification–Interpretation (CBM-I) training has been put forward as a promising new intervention for youth with psychopathology. Recent RCTs showed that online CBM-I training designed to reduce dysfunctional interpretations in youth with Obsessive Compulsive Disorder (OCD) has therapeutic benefits on OCD symptoms. In addition, there are practical benefits as the online and automated nature of the training allows for 24/7 accessibility, is cheap and an easy to implement intervention. An important next step is to start to implement the training.

Method: Our implementation plan is based on the Replicating Effective Programs model. We conducted repeated consultation rounds with adolescents (with and without OCD); their parents; and patient organizations using qualitative focus-groups and think-out-loud procedures. In addition, we held structured interviews with healthcare professionals to determine how the training can be optimally integrated into the care pathway and what is required for this.

Results: We are currently finishing up data-collection.

Conclusion: Our ultimate goal is to improve treatment for youth with obsessive-compulsive disorder by working towards implementation of CBM-I training in mental health care. To achieve optimal implementation, qualitative research with patients (end-users); their parents and health care professionals was conducted and will be presented in the symposium.

A Meta-analysis of Cognitive Bias Modification for Interpretation (CBM-I) in Obsessive-Compulsive Disorder

Speaker: Daniel Tönsing, Department of Psychology, University of Basel, Basel, Switzerland

Background: The current meta-analysis synthesizes the effects of cognitive bias modification training for interpretation bias (CBM-I) on maladaptive interpretation biases (IB) and obsessive-compulsive (OC) symptoms as well as the training and sample characteristics influencing these effects.

Methods: Electronic databases were searched and studies reviewed for inclusion based on eligibility criteria (targeting OC-relevant IB; assessing IB and/or OC symptoms as outcomes, randomly allocating to conditions). A meta-analytic approach was employed to assess standardized mean changes in IB and clinical symptoms. Additionally, several training

characteristics—including intervention dosage, stimulus specificity, material, and presentation modality—were explored for their potential to moderate effectiveness. Results: On average, CBM-I resulted in a significant reduction in maladaptive IB across studies independent of domain or targeted bias. However, the transfer to OC symptoms was mixed and might be dependent on methodological factors. Within training conditions, multi-session protocols were associated with larger symptomatic changes compared to single-session protocols. While CBM-I yielded mostly significant symptom reduction when compared to passive waitlist controls, these effects were often lower when compared to active placebo or psychoeducation conditions. Notably, successful modification of the cognitive mechanism did not consistently result in improved behavioral performance on stressor tasks (e.g., Behavioral Approach Tasks).

Conclusion: Our findings indicate that CBM-I is effective in modifying the underlying cognitive mechanisms of OCD. While its impact on trait symptoms is currently less robust, the results suggest that higher-dosage interventions with increased stimulus specificity, CBM-I serves as a promising complementary tool for targeting the cognitive drivers of obsessive-compulsive disorder.

CAN'T STOP THESE THOUGHTS – ASSESSMENT AND MODIFICATION OF COGNITIVE BIASES RELATED TO WORRY AND RUMINATION

Session type: Individual Oral Presentation

Time: 16.20-17.20, Sunday, June 21st

Location: Aula P.J. Triest

Session Chair: Yannick Vander Zwalmen, Ghent University

Understanding how task persistence relates to worry: the mediating role of attentional control

Speaker: Nathan Pond, School of Psychology, Social Work and Public Health; Oxford Brookes University; UK

Uncontrollable worry about a number of future events or activities is a cardinal feature of generalised anxiety disorder. Research suggests that high worriers may have a reduced capacity for attentional control (the ability to intentionally ignore distracting information or shift attention from one topic to another). Interestingly, attentional control also plays a key role in the ability to engage in task persistence (sustained effort and attention during a task despite cognitive overload and emotional strain). Given the putative attentional control-worry association, high worriers may have poorer attentional control capacity and thus may experience greater difficulties in persisting with a difficult task or a long-term goal. The aim of the study was to explore whether high worry participants have greater difficulties in persisting with a difficult task, and whether this effect was mediated by a deficit in attentional control capacity. Participants were presented a series of tasks and questionnaires to assess worry and attentional control capacity. Participants also completed a 3-back task but were given the option to quit the task early. Bayesian linear regression models were fit to determine whether worry predicted time spent persisting with the 3-back task and attentional control capacity. Furthermore, a Bayesian mediation model was run to assess whether the relationship between worry and time spent persisting was mediated by attentional control capacity. We will discuss the implications of these findings on our understanding of how high worriers perform when completing difficult tasks, and how attentional control influences this relationship. Future research directions will be discussed.

Modifying Interpretation Bias and Memory Distortion to Reduce Worry: A Pilot Study

Speaker: Ya-Chun Feng, College of Social Sciences, National Sun Yat-sen University, Kaohsiung, Taiwan

Objective

Worry is associated with maladaptive cognitive processes. Our prior findings indicate that individuals with high worry or GAD demonstrate more negative interpretation-related memory distortions, suggesting a potential role of biased interpretation related memory in maintaining worry. Yet, few studies have attempted to modify both interpretation and its associated memory distortions. To address the gap, the present study developed a cognitive bias modification targeting both interpretation and interpretation-related memory distortions, with the goals of enhancing benign interpretation bias, reducing memory intrusions, and examining the causal contribution of memory processes to worry.

Method

A pilot experimental study was conducted to evaluate the feasibility of this training approach. Participants were randomly assigned to an interpretation–memory training condition (IM) or a control condition (CON). The pre-test assessment and the first training session were completed in the laboratory, followed by eight online training sessions and a lab post-test. Worry, anxiety, and interpretation bias were assessed at both time points. Additional memory tasks, autobiographical memory task and self-referent encoding task, were administered to capture changes in memory processes.

Results

Preliminary results showed that worry levels decreased following IM training. Self-relevant memory became more positive (in trend) in the IM condition compared with the CON condition. However, no clear improvement was observed in positive autobiographical memory.

Conclusion

These findings provide initial support for the feasibility of this dual-target training. The approach shows potential for reducing memory distortions and improving aspects of positive memory processing. Additional findings and theoretical implications will be discussed in the presentation.

Training Memory Suppression in Ruminators: Evidence from a Two-Session Think/No-Think Study

Speaker: Honglei Ou, Vrije Universiteit Brussel

Recent research has begun to explore whether memory suppression paradigms can contribute to improvements in mental health. The Think/No-Think (TNT) task is commonly used to investigate intentional memory suppression by instructing participants either to retrieve learned associations (“Think”) or to actively prevent related memories from entering awareness (“No-Think”). Prior findings suggest that individuals high in rumination show impaired memory suppression performance within a single TNT session.

The present study examines whether repeated TNT training across two sessions can produce a training effect that enables high ruminators to improve their ability to suppress unwanted memories. In addition, our previous work has found significant reductions in state rumination following completion of a TNT task. A multi-session design provides an opportunity to test whether such reductions are stable over time, thereby evaluating memory suppression as a potential Cognitive Bias Modification (CBM) approach.

In the current study, participants with high and low trait rumination completed two TNT training sessions in two days. State rumination was assessed before and after each session, as well as at a 24-hour online follow-up (the third day). Emotional responses toward target memories were also measured throughout the task to examine changes in affective reactivity.

We hypothesize that two-session TNT training will produce practice-related improvements in high ruminators, reflected in successful suppression performance during the second session and reduced negative emotional responses to associated memories. Findings will inform whether repeated memory suppression training may serve as an intervention targeting maladaptive rumination.

Disentangling trait and state rumination: The role of cognitive control in rumination termination

Speaker: Kean J. Hsu, Department of Psychology, National University of Singapore, Singapore

Objective: Rumination, a cognitive vulnerability in depression, is thought to stem from deficits in cognitive control that hinder disengagement from repetitive negative thinking. Yet rumination has primarily been assessed via self-report tools that are prone to recall biases, rather than state-based measures of rumination that enable more direct assessment of rumination termination. The present study used an in-vivo measure of state-based rumination termination to examine the differential associations of cognitive control processes (e.g., inhibition, set shifting, updating of working memory) with state and trait rumination.

Method: 129 individuals recruited from the local community attended a single laboratory visit, where they completed measures of cognitive control, self-report measures of trait rumination and psychopathology symptom severity, and a task-based measure of state rumination termination.

Results: Greater impairments in set-shifting were associated with increased difficulty disengaging from rumination on a state-based in-vivo rumination termination task, but not with self-reported trait rumination. No significant associations were found between inhibition or updating and either form of rumination.

Conclusion: The present findings underscore the clinical utility of in-vivo methodologies for capturing the contextual nuances of rumination, often missed by static self-report tools. Moreover, the study contributes to the growing literature on cognitive mechanisms underlying state-based rumination, offering potential implications for developing targeted interventions to address this transdiagnostic feature in various mental health disorders.

FOOD AND EATING RELATED COGNITIVE BIASES – ASSESSMENT AND MODIFICATION

Session type: Individual Oral Presentation

Time: 16.20-17.20, Sunday, June 21st

Location: Room Virgiel

Session Chair: Elske Salemink, Department of Clinical Psychology, Utrecht University, the Netherlands

Eye-Tracking in the Dot-Probe Task With Food Stimuli: A Time-Slicing Approach

Speaker: Yoan Mihov, Department of Psychology, University of Fribourg, Fribourg, Switzerland

Objective

Early studies in bulimia nervosa indicated that attention bias (AB) to food, measured with the dot-probe task, may be a valid marker of eating disorder psychopathology. Interpretation of these findings was limited, however, by the indirect AB measure used – reaction time.

Eye-tracking offers a direct measure of attention, which can improve the dot-probe task. Importantly, a time-slicing analysis of eye-tracking data can reveal the temporal dynamics of AB. We carried out two studies to test this assumption.

Methods

In both studies, participants completed several tasks, including the dot-probe task with eye-tracking and food stimuli. Eye-tracking data were analyzed with a time-slicing procedure developed in R.

All study procedures were approved by the Ethics Committee of the Department of Psychology, University of Fribourg. Written informed consent was obtained from all participants prior to enrollment. Recruitment took place at the University of Fribourg.

Results

Data was collected from n=40 participants in the first study and n=49 in the second study. In both studies, dwell time was higher for food than for neutral stimuli, demonstrating an AB towards food. In both studies, AB was higher for high-caloric than low-caloric food stimuli in a specific time window, between 500 and 1000 milliseconds after stimulus presentation onset. A meta-analytic aggregation of both studies suggested that AB is related to self-reported eating restraint.

Conclusion

The combination of the dot-probe task with time-slicing eye-tracking data analysis does provides important insights into the temporal trajectory of attention bias.

Feasibility and potential effectiveness of an Imaginal Retraining for individually selected foods in daily life

Speaker: Mareike Röttger, Department of Psychology & Center for Cognitive Neuroscience, University of Salzburg, Austria

Objective: Since mental imagery plays a strong role in food craving processes, performing avoidance movements in the imagination might help reduce craving and consumption of specific foods. Such Imaginal Retrainings show promising results with self-guided intervention procedures using one general imagination script for all participants. Artificial intelligence could now enable scalable individualization of the imagination scripts, while smartphone applications can enable guided interventions in daily life.

Methods: In this pre-registered pilot study, 30 participants individually select three avoidance foods, and afterwards go through three study phases lasting one week each: a baseline phase with food-specific craving and consumption measures but no intervention, a guided intervention phase with three daily Imaginal Retraining prompts and continued craving and consumption measurement, and a self-guided intervention phase during which participants can start the Imaginal Retraining at any time. Each Imaginal Retraining session requires the selection of one individualized food (for which craving is measured right before and after the session) and one of three avoidance scenarios. Participants can also decide to physically act out the avoidance movement or just imagine it. After the study, there is one post-assessment day with craving and consumption measures, a feasibility questionnaire, and a structured feasibility interview.

Results: While data collection is currently ongoing, I will present results on the feasibility, barriers and improvement possibilities of the intervention, the number of training completions by study phase and movement execution, the perceived vividness, satisfaction, and pleasantness of the Imaginal Retraining, session- and phase-level craving changes, and phase-level consumption changes.

The role of strategies in approach-avoidance training efficacy: Preliminary findings from the ManyAATs project

Speaker: Sercan Kahveci, Paris-Lodron-University Salzburg

Approach-avoidance training (AAT) has been utilized to reduce problematic appetitive behaviors across a wide range of domains. Early strong outcomes and promise of an implicit pathway towards healthy self-control have given way to subsequent mixed and disappointing findings. Rather than assuming a uniformly weak effect size, we hypothesize that AAT works for some people and not others, based on which deliberate strategies they use to perform the task (e.g., ignoring the stimuli, so that “avoiding” desired stimuli no longer elicits response conflict). We will record the use of these strategies and manipulate their occurrence by evaluating various modifications to an online single-session irrelevant-feature AAT where participants repeatedly avoid 6 chocolate stimuli and approach 6 fruit stimuli with

keypresses, with the correct direction indicated by a frame around the food. Pre/post outcomes include stimulus-specific desire-to-eat ratings, hypothetical food selection, and desire to change daily intake of chocolate and fruit. We will recruit 600 participants assigned to 1 of 6 conditions: (1) sham AAT with equal approach and avoidance of both foods; (2) regular active AAT; modified AATs in which the frame appears consistently (3) 500 ms or (4) 800 ms after the stimulus, or (5) randomly either 0 ms or 500 ms after the stimulus; and (6) an AAT with 500 ms of stimulus-to-frame delay, that rewards rapid correct responses with points trial-by-trial. We will present preliminary outcomes on strategy usage rates per condition and their moderation effect on training efficacy.

Applying episodic future thinking to facilitate a healthy lifestyle: a lab study

Speaker: Nienke Jonker, Clinical Psychology and Experimental Psychopathology, University of Groningen, the Netherlands

Objective. The persistent high prevalence of obesity shows that current efforts to promote a healthy lifestyle are insufficient to turn the tide. It is therefore critical to help individuals in their endeavours to start, and adhere to, a healthier lifestyle and if needed achieve long-term weight loss. I propose that an intervention targeting individuals delay discounting, a dimension of self-control, has the potential to realize exactly this. This study tested the immediate effect of a novel application of the episodic future thinking (EFT) technique that integrates individuals' personal long-term health goals (health-EFT) on delay discounting and food related decision making in a lab setting. We expect that participants in the health-EFT group will (1) have lower delay discounting rates, (2a) are less likely to initiate eating and (2b) if they initiate eating will eat less kcal, than the participants in the control group. **Method.** Participants were 172 first year Psychology students. Participants formulated long-term health goals and concrete steps to obtain these goals. Furthermore they performed an exercise to practice imagery. Afterwards they were randomly assigned to the Health-EFT or the control condition consisting of an episodic recent thinking assignment. Outcomes were delay discounting and eating initiation and calories eaten during a bogus attention task. **Results and conclusion.** Data collection was finished two week ago and results will be presented during the conference.

Day 2 Monday, 22 June

YOUTH LONELINESS THROUGH A COGNITIVE-BEHAVIOURAL LENS: RISKS, RESILIENCE AND INTERVENTION

Session type: Keynote lecture

Time: 09.15-10.15, Monday, June 22nd

Location: Aula P.J. Triest

Session Chair: Jennifer Lau, Queen Mary University of London

Youth loneliness has become an urgent global health issue. Although loneliness can be a normal part of growing up, in some young people it can become persistent and predict long term mental and physical health challenges. Cognitive-behavioural loops are central to understanding how loneliness can become persistent and importantly can inform interventions designed to help young people manage loneliness. In this lecture, we will first explore how loneliness is described and experienced in young people and how this varies with accounts provided by older adults. Next I will describe how cognitive and behavioural factors are proposed to influence and perpetuate negative cycles between loneliness and social withdrawal. Finally, I will present data that support these frameworks from longitudinal, ecological momentary assessments and experimental cognitive bias modification designs. Future directions are discussed.

FROM NOVEL ASSESSMENTS TO TRACKING THERAPEUTIC CHANGE IN THE CONTEXT OF ANXIETY-RELATED INTERPRETATIONS AND EXPECTANCIES

Session type: Symposia

Time: 10.30-11.50, Monday, June 22nd

Location: Aula P.J. Triest

Session Chair: Elske Salemink, Department of Clinical Psychology, Utrecht University, the Netherlands

Anxiety, trauma, and loneliness are prevalent symptoms that are associated with significant impact on daily life. Better understanding of those problems and the mechanism of change in treatment is paramount.

Seminal cognitive models of psychopathology argue that it is not only specific events that play a role in psychopathology, but, more importantly, individuals' perceptions of those events that are crucial. The current symposium focuses on the role of perceptions, interpretations, and expectancies to understand anxiety, trauma, and loneliness and change in their treatment.

First, Jennifer Lau (United Kingdom) will present data whether threat perceptions of social situations maintain loneliness. Using novel experience sampling methods (ESM), it was shown that negative and positive perceptions predict state loneliness. Second, Marcella Woud (Germany) combines an adapted Selective Interrogation Task with the trauma film paradigm to test whether biases in information seeking predicts intrusion-related distress and changes in expectations intrusions. Third, Hadas Okon-Singer (Israel) investigated whether the larger interpersonal distance maintained by individuals with social anxiety is associated with an estimation bias in which others are perceived as physically closer than they actually are. Novel computerized and ecological tasks were designed and a distance estimation bias was established in social anxiety. Fourth, Elske Salemink (the Netherlands)

shifts towards treatment. By analysing within and between session changes, the importance of interpretation biases as mechanisms of change in treatment of social anxiety was shown. The symposium offers novel instruments to assess and understand (change in) perceptions, interpretations, and expectancies in anxiety, trauma, and loneliness.

Exploring the relationships between perceptions of social interactions and momentary loneliness in young adults

Speaker: Jennifer Lau, Wolfson Institute of Population Health (WIPH), Queen Mary University of London (QMUL), UK

Objective: This study aimed to explore the role of negative and positive perceptions in contributing to high rates of loneliness in young people, a sub-group of the population who report and experience elevated feelings of loneliness.

Method: We used experience sampling methods (ESM) to examine the bidirectional, concurrent and temporal relationships between negative, as well as the absence of positive, perceptions of social interactions and momentary loneliness, controlling for momentary negative affect. Ninety-one university students (aged 18-24) completed short questionnaires about their mood, momentary loneliness levels and social interactions six times a day for seven days, via their mobile phones.

Results: Linear mixed-effects models showed that negative perceptions ($\beta = 0.07, p = .009$) and positive perceptions ($\beta = -0.06, p = .034$) of social situations predicted concurrent and increases in state loneliness. However, state loneliness did not significantly predict temporal increases in negative or positive perceptions. Trait loneliness moderated these effects ($\beta = -0.07, p = .002; \beta = 0.07, p = .001$) albeit in an unexpected direction. Amongst individuals with higher trait loneliness, the association between negative perceptions and state loneliness was weaker.

Conclusion: Loneliness is a growing public health issue and has negative impacts on mental health including anxiety and depression. Consistent with influential psychological models that propose that threat perceptions of social situations maintain loneliness through feedback loops, here we show that negative and positive perceptions predict state loneliness. While requiring replication, trait loneliness moderated some of these effects.

Selective Interrogation of Information and Intrusive Memories

Speaker: Marcella Woud, Clinical Psychology and Experimental Psychopathology, Georg-Elias-Mueller-Institute of Psychology Georg-August-University Göttingen, Germany

Objective

Experiencing trauma may be linked to biased cognitive processing, reflected in selectively seeking more negative than positive information about the event and its consequences. This negative interrogation bias may predict both symptoms and negative expectations. The present study tests whether such a bias predicts intrusion-related distress and changes in expectations about the intensity and controllability of intrusions.

Method:

Participants first completed questionnaires assessing, among other variables, expectations regarding intrusions and current mood. They then viewed four established trauma film clips. Afterwards, they again completed mood and expectation measures and performed an adapted version of the Selective Interrogation Task (SIT). During the SIT, participants were presented with negative and positive information about the trauma films and were instructed to interrogate information concerning possible reactions following the films. Finally, expectations were assessed a third time. Subsequently, participants completed an online 7-day intrusion diary, recording the frequency of and distress associated with intrusions.

Results:

To date, N = 90 participants have been tested; the total sample size is expected to reach N = 115 by the end of March 2026. Initial interim analyses suggest associations between

intrusions, associated distress, expectations regarding the intensity and controllability of intrusions, and interrogation bias.

Conclusion:

These preliminary findings align with theoretical assumptions, suggesting that a stronger negative interrogation bias may be associated with greater intrusion-related distress and more negative expectations. The adapted SIT provides a novel tool to assess trauma-related cognitive biases and enables the study of individual differences in information-seeking in posttraumatic stress research.

Social Anxiety and the Perception of Personal Space

Speaker:Hadas Okon-Singer, Psychology Department, University of Haifa, Israel

Objective

Individuals with social anxiety often maintain larger interpersonal distances from others, particularly strangers. We investigated whether this preference for distance is associated with an estimation bias, in which others are perceived as physically closer than they actually are.

Method

Across a nonclinical and a clinical sample of individuals with Social Anxiety Disorder (SAD), participants completed novel computerized and ecological tasks designed to measure preferred and estimated interpersonal distance. In the computerized task, participants marked their preferred comfortable distance from a figure on the screen, and subsequently indicated their distance estimation. In the ecological task, participants placed a chair at a comfortable distance from an interviewer and subsequently replicated that distance in a hallway to measure their estimation.

Results

Across both clinical and nonclinical populations, higher levels of social anxiety were associated with a distance estimation bias, which was correlated with distance preference bias. For example, in ecological settings, participants with SAD estimated that unfamiliar others were closer to them than they actually were ($M = 17.7$, $SD = 32.4$) compared to controls ($M = 0.7$, $SD = 20.1$; $p = .004$). This estimation bias predicted preferred distance in both computerized ($r = .36$, $p = .02$) and ecological tasks ($r = .64$, $p < .001$), indicating that perceptual distortion severity is associated with actual approach-avoidance behavior.

Conclusion

These results establish distance estimation bias in social anxiety, suggesting a potential role in explaining avoidance behavior. These results will be discussed in the context of established attention and interpretation biases.

Dynamic changes in interpretation bias as predictors of social anxiety symptom change during CBT

Speaker:Elske Salemink, Department of Clinical Psychology, Utrecht University, the Netherlands

Objective:

This is the first study to examine within and between session changes in interpretation biases as mechanisms of change in individual cognitive-behavioral therapy for social anxiety disorder (SAD).

Method:

Twenty-eight patients completed multiple interpretation bias assessments, measured using both strategic (sentence completion, self-report) and automatic (grammatical decision) tasks and weekly measures of SAD symptoms.

Results:

Preregistered Bayesian analyses results yielded strong evidence for bidirectional, time-lagged, weekly associations between changes in positive and negative interpretation biases and symptom reduction over the course of CBT. The effect of interpretations on subsequent symptoms were more consistent than the effect of symptoms on interpretations, suggesting

an important unidirectional and potentially causal link. Increases in earlier, strategic positive biases and decreases in later, negative strategic biases were most consistently associated with symptom reduction.

Conclusion:

Together, these findings provide support for cognitive models that highlight the importance of interpretation biases as mechanisms of change in treatment of SAD.

MEASURING AND MODIFYING ATTENTION WITH THE DUAL PROBE TASK: NEW APPLICATIONS

Session type: Symposia

Time: 10.30-11.50, Monday, June 22nd

Location: Room Virgiel

Session Chair: Mike Rinck, Behavioural Science Institute, Radboud University, Netherlands

This symposium highlights new applications of the Dual Probe Task (DPT), showing how versatile it is. Many researchers have been waiting for a reliable and affordable tool to study attentional biases for various stimuli in different disorders. The DPT promises to be just that: Much more reliable than the Dot Probe Task, and much cheaper than eye tracking. First applications of the task focused on social anxiety, and the four presentations in this symposium show that it can be applied to many other topics, too. Mike Rinck presents two studies from two different labs that assess attentional avoidance in spider fear, Konrad Schweizer speaks about attention for bodies in body image disturbances, and Julian Basanovic about attention for concrete vs. implication thinking styles. Finally, Dan Rudaizky takes a step forward by showing that the DPT can also be used to modify (rather than assess) attention, in this case for alcohol stimuli, with effects on behavior. The presenters will highlight specific features of their DPT applications, and they will address problems and pitfalls they discovered. An easy-to-use environment for designing DPTs will also be presented by Konrad Schweizer, allowing researchers to quickly develop their own task versions.

Measuring avoidance of spiders with the Dual Probe Task

Speaker: Mike Rinck, Behavioural Science Institute, Radboud University, Netherlands

Objective:

This study evaluated the Dual Probe Task (DPT) as a measure of attention bias in spider fear. Unlike the Dot-Probe Task, the DPT is designed to test later attentional avoidance rather than early vigilance, and it promises to be highly reliable. In a recent DPT study (Basanovic et al., 2025), higher levels of spider fear were indeed associated with more attention to butterflies than spiders. The current study replicates and extends these findings.

Method:

One-hundred unselected participants with varying levels of spider fear completed the "Spider Anxiety Screening" and two dual probe tasks that presented spiders and butterflies simultaneously, one with videos and the other one with images. Each DPT contained 100 dual test probes. Afterwards, participants rated how threatening the videos and images were to them.

Results:

Participants attended more to butterflies than to spiders, both for videos and images. These attentional biases were highly reliable, and correlated with both self-reported spider fear and reported threat value of the stimuli. In fact, the latter was a better predictor of attention bias than the former.

Conclusion:

The Spider-Butterfly DPT promises to be a reliable measure of attention bias in spider fear. It can be used with videos or images of these animals. The individual threat value of the stimuli may be a valuable predictor of the size of the attention bias. However, we also noted a few problems and pitfalls of the DPT methodology and of the interpretation of DPT results. These will also be discussed.

Body Image Disturbance Related Attentional Biases to Thin Compared to Overweight Model Videos

Speaker:Konrad Schweizer, Behavioural Science Institute, Radboud University, Netherlands

Objective

Body image disturbances have been consistently linked to attentional preferences for stimuli reflecting desirable, yet difficult-to-attain, appearance standards. On social media, generative artificial intelligence reduces the cost and technical barriers for producing and disseminating highly unattainable body representations, potentially further shifting appearance norms. At the same time, researchers can use it to create more ecologically valid experimental stimuli and makes using videos instead of images a possibility for the first time. We developed a body image based dual-probe task to examine whether body image disturbances are associated with selective attention toward thin versus overweight AI-generated model videos.

Method:

A total of 112 females participated. They first completed a body image disturbance assessment battery, followed by a 100-probe dual-probe task. The task used validated AI-generated stimuli, showing movie pairs of low-body weight models (thin ideal) pitted against highly similar higher-body weight models.

Results:

Greater body image concerns were associated with more correct probe identifications behind thin compared with overweight models, indicating an attentional bias toward thin-ideal stimuli. Internalization of appearance ideals and perceived pressure to be thin were stronger predictors of this effect than general weight and shape concerns. The dual-probe task demonstrated high internal consistency.

Conclusion:

Our replication of a thin-focused attentional bias supports the validity of the body image dual-probe task. AI-generated body stimuli appear to evoke attentional patterns comparable to traditional stimuli, suggesting their usefulness for future body image research and their potential relevance for the increasingly AI-driven social media environments.

Measuring attentional bias for concrete vs implicational thinking styles

Speaker:Julian Basanovic, Psychology, University of Exeter, UK

Objective:

Cognitive theories of rumination propose that rumination is maintained by a preference for “implicational”, as compared to “concrete”, thinking styles for negative events (Watkins, 2004), and that training individuals toward concrete thinking styles can reduce vulnerability to dysphoria and rumination (Watkins, et al. 2009). However, to date the assessment of preferences for thinking styles has been measured via self-report or experimenter ratings. The present study aims to test whether individuals who differ in trait rumination and depression symptoms show attentional preferences for implicational vs. concrete information on a performance based attentional bias assessment (video-based dual-probe paradigm).

Method:

120 non-select participants completed self-report assessments of depression and trait rumination. Participants next completed an assessment of attentional bias to concrete vs. implicational thinking styles using a video-based dual-probe paradigm. Following this,

participants completed a scenario completion task intended to manipulate participants toward either a concrete or implicational thinking style. Following this the attention assessment task was completed again.

Results:

Data collection is nearing completion. Analyses will determine the association between measures of depression and rumination and attentional bias, and whether attentional bias and thinking style changes from pre- to post- scenario completion training. Analysis will also examine the variance and reliability of the attentional bias measure at each assessment time.

Conclusion:

The results of this study will reveal 1) whether individual differences in depression symptoms and trait rumination correspond to attentional preferences for implicational vs. concrete thinking styles; 2) whether change in thinking styles corresponds to change in attentional preferences.

Attentional bias to alcohol advertising causes elevated consumption via increased alcohol-related craving

Speaker: Dan Rudaizky, School of Population Health, Curtin University, Australia

Objective: Alcohol advertising can induce craving and increase alcohol consumption, though individuals vary in their susceptibility. Recent findings suggest that attentional allocation toward alcohol adverts predicts subsequent craving and consumption. However, methodological limitations leave key issues unresolved, including whether attention to alcohol adverts causally impacts craving and consumption. This study tested the hypothesis that attentional allocation to alcohol adverts increases their impact on consumption via craving using the Dual Probe Task (DPT) as an attentional manipulation tool.

Method: Seventy-one undergraduate students who reported enjoying drinking beer were exposed to beer and soft drink adverts in a DPT designed to manipulate attentional allocation toward or away from beer adverts. Following advert viewing, relative craving for beer versus soft drinks and preferential beer consumption were assessed. A mediation model examined whether this attentional manipulation influenced consumption via craving.

Results: The attentional manipulation was successful, with participants in the "attend beer adverts" condition displaying disproportionate attentional allocation toward beer adverts and those in the "avoid beer adverts" condition showing disproportionate attentional allocation away from beer adverts. Mediation analysis confirmed that the attentional manipulation influenced beer consumption following advert viewing via its effect on beer craving.

Conclusion: These findings demonstrate that the DPT can effectively modify attentional allocation toward alcohol adverts, which causally influences alcohol consumption, mediated by craving. Beyond assessment applications, this study shows the DPT is a versatile and effective tool for attentional modification paradigms with implications for interventions to mitigate harmful effects of alcohol advertising.

DEPRESSION RELATED COGNITIVE BIASES – ASSESSMENT AND MODIFICATION

Session type: Individual Oral Presentation

Time: 12.10-13.10, Monday, June 22nd

Location: Aula P.J. Triest

Session Chair: Marcella Woud, Clinical Psychology and Experimental Psychopathology, Georg-Elias-Mueller-Institute of Psychology Georg-August-University Göttingen, Germany

Beyond Depression Severity: Interpretation Biases and Rumination Distinguish Latent Suicide Risk Profiles

Speaker: Irene Muñoz-Conejo, Personality, Assessment, and Clinical Psychology. Universidad Complutense de Madrid. Madrid (España)

Objective:

Depression is strongly associated with suicidal ideation; however, not all individuals with elevated depressive symptoms develop suicidal thoughts. This study aimed to identify latent clinical profiles based on depressive symptoms (CES-D), hopelessness (BHS), and suicidal ideation (FSII), and to examine whether cognitive biases and emotion regulation strategies differentiate and predict profile membership.

Method:

A sample of 232 participants completed the CES-D, BHS, FSII, RRS and ERQ, as well as an experimental task assessing attention and interpretation biases. Latent Profile Analysis (LPA) was conducted using depression, hopelessness, and ideation scores as indicators. Profiles were compared in terms of cognitive biases and emotion regulation strategies. Multinomial logistic regression analyses tested whether these variables predicted class membership. Sensitivity analyses were conducted to examine the robustness of findings.

Results:

A three-profile solution provided the best fit (lowest BIC; entropy = .88). Profiles differed not only in symptom severity but also in cognitive characteristics. The high-risk profile was characterized by greater negative interpretation bias and higher levels of rumination. Attentional bias did not significantly differentiate profiles. Multinomial regression analyses indicated that interpretation bias and rumination significantly increased the likelihood of belonging to the high-risk profile ($p_s < .01$). These findings remained stable across sensitivity analyses.

Conclusion:

Suicide risk profiles appear to reflect not only differences in symptom severity but also distinct cognitive vulnerabilities. Interpretation bias and rumination may help identify a subgroup at heightened suicide risk, highlighting potential targets for prevention and cognitive bias modification interventions.

How do depressed patients experience Online Contingent Attention Training (OCAT)? A qualitative study

Speaker: Sarah Struyf, Ghent University

Objective: Biased information processing contributes to the development and maintenance of emotion dysregulation and affective disorders such as depression. Interactive attention trainings that promote positive resolution of emotionally ambiguous material have been shown to modify attention and interpretation biases and improve emotion regulation in non-clinical samples. However, little is known about how such trainings are subjectively experienced by depressed patients, and how these experiences may inform the optimization and clinical implementation of CBM interventions.

Method: This qualitative study is embedded within a randomized controlled trial evaluating a 10-day Online Contingent Attention Training (OCAT) in hospitalized patients with depression. All participants ($n = 150$; aged 18-65) receive psychoeducation prior to training and are randomized to active conditions (OCAT, OCAT+) or an OCAT-sham control condition. In the active conditions, participants are instructed to consistently generate positive sentence interpretations and receive emotion-contingent visual feedback on attention to positive versus negative words, as well as feedback on processing speed. The OCAT+ condition additionally include brief motivational videos before each session. In contrast, the OCAT-sham condition does not provide emotion-contingent instructions or feedback and includes speed feedback only.

Semi-structured interviews were conducted immediately post-training with ten participants from the active conditions to inquire about their experiences combining online training with inpatient treatment. Transcripts are analyzed using thematic analysis.

Results: Analyses are ongoing, and final themes will be presented at the conference.

Conclusion: This qualitative component provides process-level insight into patient experiences of OCAT, complementing quantitative RCT findings and informing future optimization and clinical implementation.

Game-based Brief Interventions for Activity Change

Speaker: Justin Dainer-Best, Psychology, Bard College, USA

Objective: Interventions like behavioral activation or acceptance and commitment therapy are, in part, based on the relationship between behavior and mood. Mood-incongruent positive activity may help change affect—and that a bias away from positive experiences may maintain depressive symptoms. Online interventions may be effective at affect/behavior change, especially when they provide participants with alternative thought patterns. This talk discusses recent brief intervention work using text-and-image-based games as a means of testing a mechanistic question: would providing positive feedback in a game-based, brief behavioral psychoeducation intervention influence game change (in-game activities) or short-term activity change (positive activities one week later)? If either change happened, would they accompany symptom improvement?

Method: Participants were 171 US adults (47% women, 52% white; 28.4 yo) who completed questionnaires (depression, stress, and anxiety) and a story-based binary decision game.

Participants were randomized to play the game or to also receive encouraging feedback following positive activities. All participants then completed surveys one week later.

Preregistered mixed-effects models compared change over time between conditions.

Results: The positive feedback condition was associated with changes in positive decisions in game, but not with activity change from baseline to follow-up. Both groups showed minor symptom change.

Conclusion: While games show promise for both mechanistic study and intervention, this intervention did not show efficacy. Bias towards negative information and negative behavior have been shown to maintain depression, but either the intervention failed to alter this bias or the alteration was not seen in the time frame of the follow-up.

Investigating The Effects Of Gamified Cognitive Bias Modification (GCBM) On Mood And Depressive Symptoms

Speaker: Rumeysa Kuruoglu, Psychology Department, Manisa Celal Bayar University, Turkey

Objective

Emotion recognition biases in depression are well-established and may play a causal role in depression. Penton-Voak et al. (2012) developed a Cognitive Bias Modification (CBM) intervention targeting the bias in emotional expression perception, but despite robust training effects on emotion perception, the effect on mood was unreliable. We developed a gamified version (GCBM) of the intervention to address potential limitations and tested its effects on immediate mood and depressive symptoms.

Method

Study 1 (N = 58) tested GCBM's effect on classifying ambiguous facial expressions. Study 2 (N = 916) compared a single session of GCBM, CBM, and control on immediate mood in healthy participants (ages 18-30). Study 3 (N = 672) recruited participants with self-reported depression (ages 18-30) who completed 4 GCBM sessions over 8 days, with a 2-week follow-up.

Results

Study 1 results showed that GCBM led to more 'happy' classifications of ambiguous faces ($B = 1.73, p < .001$). Study 2 showed that GCBM improved immediate mood in comparison to

CBM control ($B = 3.64$, $p = .003$) and CBM training ($B = 1.73$, $p = .044$). Study 3 showed that GCBM shifted responses to emotional faces ($B = 1.54$, $p < .001$), sustained at 2-week follow-up ($B = 1.44$, $p < .001$), but showed no immediate mood improvement ($B = 1.41$, $p = .44$) or reduction in depressive symptoms ($B = .30$, $p = .67$).

Conclusions

While GCBM improved the emotion recognition bias, evidence for mood and depressive symptoms improvement is weak.

ASSESSMENT AND MEASUREMENT OF COGNITIVE BIASES – NOVEL MATERIALS AND RESEARCH CONSIDERATIONS

Session type: Individual Oral Presentation

Time: 12.10-13.10, Monday, June 22nd

Location: Room Virgiel

Session Chair: Amit Lazarov, School of Psychological Sciences, Tel Aviv University

More Questions And Answers About Reaction-Time Preprocessing And Reliability

Speaker: Sercan Kahveci, Department of Psychology & Centre for Cognitive Neuroscience, Paris-Lodron-University Salzburg, Salzburg, Austria

Objective: Reliability is crucial for measurement of psychological variables, including cognitive biases (CB). Despite recent work on reliability in CB, many questions remain prevalent in the research community, such as what to do with an observed negative reliability, and which data preprocessing methods yield the best reliability for the variety of tasks in use. I aim to answer these questions.

Method: We utilize simulations to clarify the interpretation of negative reliabilities. We also apply a pre-processing multiverse analysis to the implicit association task to clarify whether analysis recommendations for the approach-avoidance task, obtained through multiverse analysis, also generalize to this different paradigm.

Results: Negative split-half reliabilities or Cronbach's alphas, no matter how far below zero, relate to a test-retest correlation of zero; split-half reliabilities below -1 can be corrected with a proposed modification of the Spearman-Brown formula. The approach-avoidance task preprocessing guidelines do not generalize to the implicit association task.

Conclusion: Negative reliabilities should be interpreted as a reliability of 0, though it is recommended to also report the actual negative value rather than coerce it to 0. Every CB paradigm likely requires its own unique preprocessing pipeline, given that the bias effect is expressed in different aspects of the task (e.g., slow vs. fast RTs, error trials).

Disentangling Cognitive Biases in Depression and Social Anxiety: Development and Validation of a Novel Experimental Stimulus Set

Speaker: Myriam Virgós González, Complutense University of Madrid

Objective:

This study aimed to design and validate a set of stimuli to assess common and specific cognitive biases in depression and social anxiety through a two-phase design.

Method:

In Phase 1, 300 sentences reflecting prototypical cognitions typically involved in social anxiety and depression (and related to self-perception, others' perception about me, and my perception about others) were generated. These items were rated by 40 experts (academics and clinicians), allowing selection of the most representative stimuli. In Phase 2, a subset of 42 optimal items was administered using a Scrambled Sentence Task to clinical and control

participants (N=43) to examine associations between cognitive biases and clinical symptomatology.

Results:

Expert rating led to 46% of items being assigned to definitive categories, yielding a refined stimulus set. In the clinical pilot, differences between groups for interpretation biases, but not for attentional biases, were revealed. Interpretation biases were associated with depression, anxiety, and social anxiety symptoms. Exploratory analyses indicated that the comorbid group showed the highest interpretation bias indices, consistent with greater symptom severity. Item-category analysis supported the specificity of selected items in capturing prototypical categories associated with depression and social anxiety.

Conclusion:

This study provides a validated stimulus set for assessing shared and disorder-specific cognitive biases in depression and social anxiety, offering a novel tool for experimental psychopathology and cognitive bias modification studies.

Identifying the Unique Structure and Correlates of Negative Thinking about Socio-Environmental Crises in Young Adults

Speaker: Chris R. H. Brown, Bournemouth University

Objective:

Evidence suggests that biased attention to Negative Thoughts/Thinking (NT), such as worry/rumination, is a precursor to anxiety and depression. Traditionally, research has focused on NT about personal concerns (e.g., social, occupational, health) which often impact us directly. However, in recent years, the stressors we are exposed to are increasingly about socio-environmental crises, e.g., climate change, global conflicts; which constitute indirect, uncontrollable, and often global abstract threats. Currently, however, the structure and pattern of NT about socio-environmental crises (NT-SEC), or whether it reflects a distinct phenomenon from conventional trait NT, is not known.

Methods:

To identify the structure and correlates of NT-SEC, a novel self-report measure of NT-SEC was created, with potential items generated along the interacting dimensions of controllability, specificity, and temporal focus.

Results:

Exploratory factor analysis of these items in a sample of young adults (ages 18-25) revealed a three-factor model, consisting of involuntary-abstract, detail-oriented, and intentional-reflective NT-SEC. Whilst all facets of NT-SEC correlated with poorer mental health (depression, anxiety, climate anxiety), some facets of NT-SEC appeared more maladaptive. With involuntary abstract NT-SEC most predictive of poorer mental health and attentional control. Conversely, reflective-intentional NT-SEC was the most adaptive, with a weaker relationship to poor mental health, and a positive relationship with adaptive emotion regulation strategy use (e.g., acceptance) and engagement with individual climate action.

Conclusion:

Importantly, these relationships were all independent of trait worry, indicating a potentially unique pathway to the development of poorer mental health, affecting even those not predisposition to NT.

Tailoring materials for CBM-I through lived experience of anxiety

Speaker: Nusaibah Islam, King's College London

Objective: In our daily life, we are constantly faced with uncertainty which we interpret in different ways to create meaning. Frequently interpreting this information negatively is known as negative interpretation bias. Cognitive Bias Modification for Interpretation (CBM-I) helps shift this bias. CBM-I involves listening to situations which commonly trigger anxiety, however, the ending of these situations are kept ambiguous. Users are prompted to imagine positive endings to these situations to help shift the negative bias. A limitation we sought to

address in our iteration of CBM-I, named Learning Effective New Strategies (LENS), is to ensure that individuals were presented with situations pertinent to their life experiences. We aimed to tailor CBM-I materials by identifying common anxiety-provoking situations for people as a function of their age, gender, and ethnicity.

Method: We conducted interviews (N=80) with people from different age, gender, and ethnic backgrounds to assess diverse anxiety experiences. We then thematically analysed the interviews and summarised the different group experiences (e.g., South Asian men aged <30 years; Black women aged >30 years). These summaries were then fed into a large language model (e.g., GPT, Gemini) to generate scenarios for LENS. Finally, the scenarios were reviewed by individuals from those specific backgrounds with experiences of anxiety to ensure the scenarios were relatable and harmless.

Results: This presentation will discuss how CBM-I materials were shaped by those with lived experience of anxiety to create a treatment that is safe, relevant, and accessible to all regardless of their age, gender, and ethnicity.

ATTENTION AND INTERPRETATION BIASES IN ANXIETY WITHIN REAL-WORLD DIGITAL CONTEXTS

Session type: Symposia

Time: 14.10-15.30, Monday, June 22nd

Location: Aula P.J. Triest

Session Chair: Jeremy Pettit, Center for Children and Families, Florida International University, USA

Much of the literature on cognitive biases in anxiety has relied on controlled laboratory paradigms that may not capture how these biases unfold in real-world social environments. This symposium brings together four studies that leverage ecologically valid social media contexts to examine attention and interpretation biases in anxiety.

The first three presentations use eye-tracking methods to examine how context shapes attention allocation to social threat. Lazarov and colleagues demonstrate that socially anxious individuals show sustained attention to social stimuli in a conventional laboratory task but attentional avoidance when identical stimuli are embedded in a realistic social media context, highlighting the critical role of task context. Extending this work to adolescents, Pettit and colleagues introduce a novel Instagram-based eye-tracking paradigm and show that anxiety severity is associated with selective avoidance of evaluative cues on social posts, rather than disengagement from social images broadly. In the third presentation, Hallel and colleagues further document attentional avoidance of social stimuli among socially anxious individuals during free viewing of an authentic Instagram profile, reinforcing the relevance of digital platforms for understanding anxiety-related attention patterns. Finally, Falcone and colleagues shift focus to interpretation bias, finding that adolescents' tendency to interpret ambiguous social information as threatening moderates the association between social media use and anxiety.

Collectively, these studies demonstrate the importance of ecological validity in cognitive bias research and highlight how anxiety-related attention and interpretation biases manifest in digital environments. The symposium advances vulnerability–stress frameworks and informs the development of more context-sensitive cognitive bias modification interventions.

The Effect of Context on Attention Allocation in Social Anxiety Disorder when using social media: An Eye-tracking Study

Speaker: Amit Lazarov, School of Psychological Sciences, Tel Aviv University, Israel

Objective: Eye-tracking attentional research in social anxiety has yielded diverging results, showing either sustained attention or attentional avoidance. A possible explanation might be the ecological validity of tasks used to assess attention, or put differently, the context in which the stimuli are presented. Past research has indeed shown sustained attention when stimuli are presented in "conventional" laboratory tasks, while showing avoidance in more ecological-valid settings. Here, we directly explored the potential effect of the context on attention allocation patterns in social anxiety.

Method: Participants with high (n=60) and low (n=60) levels of social anxiety freely viewed the same set of 12 socially relevant and 12 neutral stimuli. Half of the participants in each group viewed these stimuli in a conventional laboratory context (the Matrix group), while the other half viewed the same stimuli in a more real-world ecological-valid context (the Facebook group). We assessed participants' dwell time on each stimulus type. We also assessed participants' subjective experiences (of fear and avoidance) in response to the different stimuli.

Results: A Group-by-AOI-by-Task interaction emerged showing that in the real-world context, socially anxious participants presented attentional avoidance of social stimuli, while sustained attention emerged in the conventional task. Conversely, non-anxious participants presented the same attention allocation pattern (sustained attention) across both tasks/contexts. Groups did not differ in their subjective reactions across the two tasks.

Conclusions: Context of stimuli presentation affects attention allocation patterns in social anxiety, which bares implications for attention bias modification training in the disorder.

From Faces to Feeds: Attention to Social Threat Using Realistic Social Media Stimuli with Adolescents

Speaker: Jeremy Pettit, Center for Children and Families, Florida International University, USA

Objective: Traditional attention-bias paradigms anxiety have relied largely on decontextualized stimuli (e.g., emotional faces), despite the fact that adolescents increasingly encounter social evaluation through digital platforms. We developed a novel Instagram-based eye-tracking task designed to capture attention to social threat in a more ecologically valid context.

Method: 110 adolescents (M age=15.2 years; 62% female; 73% Hispanic) freely viewed a mock Instagram feed containing 24 posts for three minutes while eye movements were recorded. Twelve posts depicted social situations and 12 posts depicted nonsocial situations. 10 research assistants naïve to study hypotheses independently rated all posts for social content on a 1 (not at all social) to 5 (very much social) scale, confirming separation between social (mean ratings > 3) and nonsocial items (mean ratings < 2). Each post included realistic captions and visible "likes," providing indicators of social evaluation. Participants also completed measures of anxiety symptoms and state anxiety immediately following the task.

Results: Both anxiety severity and state anxiety were significantly associated with reduced gaze time to "likes" on social posts (p 's < .05), not nonsocial posts. Associations remained statistically significant after controlling for age and gender (p 's < .05). No associations emerged for attention to the images themselves.

Conclusions: Anxious adolescents selectively avoid evaluative social feedback rather than disengaging from social content more broadly. By moving from faces to feeds, this work demonstrates the value of ecologically valid paradigms for understanding how attention relates to anxiety in real-world environments and points toward novel targets for intervention.

Social anxiety is related to avoidance of social stimuli when using Instagram

Speaker: Hadar Hallel Fabian, School of Psychological Sciences, Tel Aviv University, Israel

Background: Individuals with social anxiety disorder (SAD) frequently engage in behavioral avoidance by refraining from participating in face-to-face interpersonal interactions or by enduring such interactions with pronounced anxiety and distress. Importantly, however, the social world is rapidly changing. Physical in-person encounters are no longer the sole medium for social interactions, as social media platforms (SMPs) have become a central part of daily social life. Nevertheless, research examining attention allocation during interpersonal communication in these novel digital environments remains scarce.

Methods: Socially anxious and non-anxious participants completed a free-viewing eye-tracking task in which they were presented with four WhatsApp conversations. These conversations were an elaboration of four items taken from the Liebowitz Social Anxiety Scale (LSAS; items 15, 18, 21, and 24). Importantly, each conversation included two social and two neutral sections. Subsequently, participants were also asked to rate each section in terms of the fear and avoidance they subjectively experienced. Lastly, participants were asked to report their preferred mode for interpersonal communication.

Results: Socially anxious participants exhibited greater attention allocation toward the social sections. Socially anxious participants rated the social sections as more fear and avoidance inducing compared with the neutral sections and with non-anxious participants. Socially anxious participants also reported a significantly stronger preference for WhatsApp over face-to-face interpersonal communication compared with nonanxious participants. Yet, the attention allocation findings remained unchanged after controlling for communication preference as a covariate.

Conclusion: Socially anxious individuals demonstrate an attentional bias toward social stimuli during interpersonal communication on SMPs, diverging from prior findings regarding attention allocation in more traditional face-to-face social contexts.

When Scrolling Becomes Stressful: Social Interpretation Bias as a Moderator of the Association Between Social Media Use and Adolescent Anxiety

Speaker: Marissa Falcone, Center for Children and Families, Florida International University, USA

Objective: Associations between adolescents' social media use and anxiety are inconsistent and small in magnitude, suggesting that exposure alone may be insufficient to explain risk. Instead, individual differences may determine when and for whom social media use becomes anxiogenic. We examined social interpretation bias as a moderator of the association between social media use and anxiety. We also examined active and passive social media use.

Method: 146 community-recruited adolescents ages 13–17 (60% female; 74% Hispanic) reported on their social media use (active, passive) and anxiety symptoms. Social interpretation bias was assessed using a validated task in which adolescents read ambiguous social scenarios and selected the interpretation they believed most likely.

Results: Overall duration of social media use was significantly associated with anxiety symptoms ($p = .016$). This association was qualified by interpretation bias ($p = .014$); at high levels of interpretation bias, high social media use was associated with high anxiety ($p = .005$). In contrast, at low levels of interpretation bias, social media use was not related to anxiety ($p = .347$). These effects were specific to passive use and did not emerge for active use.

Conclusions: For adolescents prone to interpreting social information as threatening, passive exposure to others' curated content appears particularly linked to anxiety. Results underscore the importance of moving beyond simple exposure models toward vulnerability–stress frameworks that consider how cognitive biases interact with digital environments. This

work highlights socially threatening interpretation bias as a potential target for prevention and intervention efforts.

THE TRANSDIAGNOSTIC NATURE OF EXPECTANCIES: THEORETICAL, EXPERIMENTAL AND CLINICAL PERSPECTIVES

Session type: Symposia

Time: 14.10-15.30, Monday, June 22nd

Location: Room Virgiel

Session Chair: Elinor Abado, Clinical Psychology and Experimental Psychopathology, University of Göttingen, Germany. PLEASE NOTE: Last conference my tag had my previous affiliation (Haifa). I think it is still recorded somewhere but Göttingen is the current one :)

Expectancy bias is a core feature of many mental disorders and a key transdiagnostic mechanism in psychopathology. This symposium integrates theoretical, experimental, and clinical perspectives on how negative expectancies emerge, persist, and change. The first talk introduces the PRIMER framework, a process model describing expectancy updating and persistence across six stages while integrating cognitive and behavioral biases—such as attentional and interpretational biases, cognitive immunization, avoidance, and imagery—within a unified expectancy (updating) perspective. The second talk examines how experimentally generated positive social feedback influences self-evaluations in individuals with major depressive disorder, individuals with other psychiatric disorders, and healthy participants, and investigates cognitive immunization as a moderator of belief updating. The third talk focuses on fear of public speaking and shows that individuals who more strongly update negative expectations during a public speaking imagery task experience greater fear reduction during subsequent exposure, highlighting expectation updating as a predictor of treatment response. The final talk tests the interplay between expectancy and interpretation biases in relation to intolerance of uncertainty. Results indicate that expectancies directly predict both interpretations and intolerance of uncertainty, while interpretations do not mediate this relationship, further underscoring the transdiagnostic role of expectancies across cognitive biases and individual traits. Together, these findings position negative a-priori expectancies as a central and modifiable mechanism in psychopathology, suggesting that targeting expectancy updating and persistence may enhance personalized and transdiagnostic interventions.

Why do expectancies persist in spite of disconfirmatory evidence? The PRIMER framework

Speaker: Erik Mueller, Psychology, University of Marburg, Germany

Expectancies shape how we think, feel, and behave, and may be either adaptive or maladaptive. Why do expectancies often persist in spite of disconfirmatory evidence? While several expectancy-stabilizing mechanisms have been suggested in the literature not all of these mechanisms have yet been integrated into a single framework. In this talk, I will present the PRIMER framework, which delineates the process of expectancy updating and persistence as a sequence of six stages (Prediction, Response Selection, Interpretation, Meaning Making, Expectancy Updating and Retention) during which expectancy-stabilizing mechanisms may occur. The framework organizes different strands of research on cognitive and behavioral biases (e.g. attentional biases, interpretational biases, cognitive immunization, avoidance, imagery) from an expectancy or belief updating perspective. Furthermore, it shows the many different pathways that lead to expectancy persistence in spite of disconfirmatory evidence, which is of particular clinical relevance. Finally, as I will

illustrate for the context of negative affect and negatively valenced expectancies, the framework helps to systematically investigate when and how potential moderators influence if an expectancy remains in spite of disconfirmatory evidence.

When Praise Fails: Social Feedback in Depression

Speaker: Matthias Schmitz, Clinical Psychology and Psychotherapy of Adulthood, RPTU University Kaiserslautern-Landau, Germany

Objective: Individuals with Major Depressive Disorder (MDD) show impairments in integrating positive information into their self-concept, including positive social feedback. The present study examines whether and to what extent positive social feedback alters self-evaluations in individuals with MDD compared to a clinical control group and healthy controls. Additionally, the role of cognitive immunization in moderating belief updating is investigated.

Method: Participants rated themselves on 20 personality traits (10 positive, 10 negative) using a 10-point Likert scale at baseline (T1). They then played a standardized board game with four other participants and subsequently received experimentally generated positive feedback on the same traits, presented as aggregated peer evaluations. Self-evaluations were reassessed afterward (T2). Changes from T1 to T2 indexed the impact of positive social feedback.

Cognitive immunization was assessed using the CISI scale. The sample comprises 174 participants assigned to three groups: individuals with MDD, individuals with other psychiatric disorders, and healthy controls, diagnosed using the SCID-5 and the Beck Depression Inventory-II.

Results: Data collection is ongoing. At the time of submission, 133 participants have been recruited. Results are expected in spring 2026.

Conclusion: This study will advance understanding of how positive social feedback influences self-concept in MDD and clarify the contribution of cognitive immunization, with potential implications for targeted psychotherapeutic interventions.

Individual differences in expectation updating before an exposure intervention predict the reduction of fear of public speaking

Speaker: Sascha Duken, Department of Clinical Psychology, Utrecht University, the Netherlands

Objective: Anxiety symptoms such as fear of public speaking represent a significant burden to individuals and society. While exposure interventions are generally effective in reducing anxiety, many people do not benefit from it. Individual differences in people's tendency to update negative expectations when they encounter corrective positive information may explain such differences in intervention outcomes. We investigated whether expectation updating in an imagined presentation predicted a reduction of fear of public speaking in an exposure intervention.

Method: In a first session, young adults with high fear of public speaking (N = 64) completed an online imagery presentation task. They imagined giving a graded presentation, guided by a written scenario that included multiple instances of positive social feedback. At the beginning and end of the imagined presentation, participants self-reported their negative expectations.

In a second session (at least one day later), participants completed an online exposure intervention. They performed several public speaking tasks with the goal to challenge their negative beliefs and consequently reduce their fear of public speaking. Before and after the intervention, participants reported their fear of public speaking.

Results: People who updated their negative expectations more when receiving positive feedback in an imagery task, experienced a greater reduction of fear of public speaking when completing an exposure intervention (compared to people who did not update their negative expectations in the imagery task).

Conclusion: Individual differences in the propensity to change negative expectations can predict who benefits from an anxiety intervention. This promises new opportunities for cost-effective personalized interventions.

Linking Expectancy and Interpretation Biases: A Transdiagnostic Mediation Model of Intolerance of Uncertainty

Speaker: Elinor Abado, Clinical Psychology and Experimental Psychopathology, University of Göttingen, Germany

Objective: Expectancy and interpretation biases are widely considered transdiagnostic markers of psychopathology, yet their interaction remains understudied. If a causal relationship exists between these biases, modifying one may influence the other and reduce associated symptoms. Intolerance of uncertainty (IU) is a transdiagnostic trait linked to biased interpretations and their modification. The present study tested a mediation model in which expectancies were hypothesized to precede interpretations, which in turn were expected to predict trait IU. Accordingly, interpretations were hypothesized to mediate the relationship between expectancies and IU.

Method: A total of 314 unselected participants completed a novel task designed to simultaneously manipulate and assess expectancy and interpretation biases. Participants rated their agreement with sentences describing potentially anxiety-provoking everyday situations that varied in bias type (expectancy vs. interpretation) and valence (positive vs. negative outcomes).

Results: Negative interpretations and expectancies were positively correlated with trait IU, whereas positive interpretations and expectancies were negatively correlated with IU.

Comparable patterns emerged for additional anxiety and depression measures. Mediation analyses revealed significant direct paths from expectancies to interpretations and from expectancies to IU. However, interpretations did not mediate the relationship between expectancies and IU.

Conclusion: These findings highlight a central transdiagnostic role of expectancy biases in psychopathology. Interventions targeting maladaptive expectancies—alongside interpretation biases—may therefore yield broader clinical benefits than approaches focusing on a single bias. This is in line with the combined cognitive bias hypothesis, which suggested that it is more ecological and informative to study cognitive biases in unison, rather than separately.

ASSESSING ATTENTION BIASES IN SOCIAL ANXIETY AND RELATED PHENOMENA – NOVEL TASKS AND INSIGHTS

Session type: Individual Oral Presentation

Time: 15.50-16.50, Monday, June 22nd

Location: Aula P.J. Triest

Session Chair: Julian Basanovic, Psychology, University of Exeter, UK

When Does Avoidance of Positive Faces Occur in Individuals with High Social Anxiety?

Speaker: Xinyu Zhang, Developmental and Educational Psychology, Psychology, Leiden University, The Netherlands

Objective:

Cognitive models of social anxiety suggest that individuals with high social anxiety (HSA) may avoid attending to positive social stimuli, particularly under social threat. However, it remains unclear whether attention to positive social stimuli is related to state anxiety and at what time scale avoidance of positive stimuli occurs. The present study therefore examined the effects of state anxiety and stimulus duration on attention to happy faces in HSA individuals.

Method:

Social threat was manipulated by providing different instructions. State anxiety was measured before and after the instructions. Specifically, half of the 32 HSA participants were told they would be required to give a speech at the end of the experiment. Attention to happy (vs. neutral) faces was assessed using a dot-probe task with stimulus durations of 500 ms and 1500 ms. Attentional responses were indexed separately as avoidance and approach scores.

Results:

A repeated-measures ANCOVA showed a significant interaction between change in state anxiety and stimulus duration on avoidance scores ($p = .019$). Follow-up analyses showed that stronger increases in state anxiety were correlated with larger differences in avoidance between the two stimulus durations, with greater avoidance at 500 ms compared to 1500 ms.

Conclusion:

These findings suggest that state anxiety influences when attentional avoidance of positive faces in HSA individuals occurs. Avoidance appeared to emerge at an earlier stage of processing under higher state anxiety. In order to contextualize the findings, we aim to compare this pattern to how low-anxious individuals attend to positive social stimuli.

Attentional biases to real-world behaviours and real-world experiences in Social Anxiety Disorder

Speaker: Kean J. Hsu, Department of Psychology, National University of Singapore, Singapore

Cognitive models of social anxiety propose that attentional biases for social threat play a role in the development and persistence of social anxiety. Empirical findings suggest socially anxious individuals may exhibit both orienting biases towards social threat and later avoidance biases away from threat relative to healthy control individuals based on laboratory paradigms. However, these laboratory measures of attentional bias in social anxiety often do not demonstrate strong ecological validity, whether regarding the stimuli presented or how biases are associated with real-world behaviors and experiences. This individual talk will present results from our team's work examining how attentional biases for threat manifest on more naturalistic measures of attentional bias and predict real world behavior after a brief follow-up period. In one study of community individuals ranging in social anxiety symptom severity ($N = 45$), we found that greater fixation on threat stimuli was associated with more avoidance behaviours and stronger avoidance of threat stimuli was associated with lower self-reported social interaction frequency over a one week follow-up period. In another study, we found that relative to healthy control individuals, individuals with Social Anxiety Disorder exhibit biased attention towards negative self-relevant evaluative content based on an in-lab social dyad interaction task, as well as hypervigilant scanning when reviewing a recording of the social dyad interaction. Our findings highlight how attentional biases for threatening stimuli may manifest in the real world. Future directions for research and implications for clinical interventions, both psychotherapeutic and computerized cognitive trainings, will be discussed.

Reconnection or Disconnection: The influence of Ostracism on Attention Biases and Safety Behaviours

Speaker: Deepshikha Prasad, Department of Psychology, Heriot-Watt University, Scotland, United Kingdom

The experiments aimed to study the effect of ostracism on safety behaviours and attention biases in an ecological and scalable way. To assess feasibility, we conducted an in-lab study with electronic confederates who ostracised a participant. Based on the findings and participant feedback, we adapted the study to run online with a webcam-based eye tracker. We examine how ostracism influences attention biases and safety behaviours like reduced

mimicry, decreased self-disclosure change in people with varying levels of social anxiety and autistic traits.

In both experiments, in a pre-test post-test design, 13 participants engaged in a modified get-acquainted task in two stages with two other participants, who unbeknownst to the participants were a playback of pre-recorded confederates. Each person took turns making two speeches and voted for the one they liked the most. During this, the participant experiences ostracism; they are voted least liked. The spontaneous mimicry, self-disclosure, and attention allocation are measured during both pre-ostracism and post-ostracism speeches.

In the feasibility study, ostracism led to an increase in the number and intimacy of self-disclosures. Attention to oneself increased after ostracism, while attention to the confederates remained unchanged. Frequency of spontaneous mimicry was unaffected. In the online study, we expect ostracism would moderate the relationship between social anxiety and spontaneous mimicry, self-disclosure, and self-focused attention. We also expect that ostracism would moderate the relationship between autistic traits and spontaneous mimicry, self-disclosure, and self-focused attention.

Experiencing social exclusion might increase self-focused attention and self-disclosure reflecting increased self-consciousness and pro-social affiliative behaviour.

Referential focus moderates depression-linked attentional bias for emotional information

Speaker: Julian Basanovic, Psychology, University of Exeter, Exeter, United Kingdom

Objective:

This research examined whether self-referential processing amplifies depression linked and social anxiety linked attentional biases for emotional information. Building on Ji et al. (2017), we tested whether inducing a self-versus other referential focus moderates negative self-schema expression and attentional prioritisation of positive and negative trait words.

Method:

Across two online studies, participants completed a Self-Referent Encoding Task (SRET) embedded within a dot probe attentional bias paradigm. Participants were randomly assigned to a self-referential or other referential processing condition. In Study 1 (N = 175), depressive symptoms were assessed using the DASS 21; in Study 2 (N = 222), social anxiety symptoms were assessed using the SIAS. Multilevel models tested interactions between symptom severity, processing condition, and word valence on endorsement of trait adjectives and attentional bias indices.

Results:

In both studies, self-referential processing moderated the association between symptoms and self-schema expression. Higher symptom severity predicted greater endorsement of negative traits and reduced endorsement of positive traits, but only in the self-referential condition. Attentional bias showed the same moderation pattern: increasing symptoms predicted greater attentional prioritisation of negative over positive words in the self-referential condition, whereas the opposite or no pattern emerged in the other referential condition. Across both studies, endorsement patterns were associated with attentional bias only when processing was self-referential.

Conclusion:

Across depression and social anxiety, self-referential focus reliably unmasks disorder linked negative self-schema and corresponding attentional biases. The findings support self-schema cognitive models of depression and social anxiety and highlight referential focus as a determinant of emotional processing biases.

ASSESSMENT OF HEALTH (AND ILLNESS)-RELATED COGNITIVE BIASES
Session type: Individual Oral Presentation
Time: 15.50-16.50, Monday, June 22nd
Location: Room Virgiel
Session Chair: Marcella Woud, Clinical Psychology and Experimental Psychopathology, Georg-Elias-Mueller-Institute of Psychology Georg-August-University Göttingen, Germany
Assessing Cognitive Biases in Pregnancy: A Comparative Study of High-Risk, Normal-Risk, and Nonpregnant Women.
Speaker: Vanessa Cywiak, Faculty of Medicine- Psychiatry Technion – Israel Institute of Technology Haifa Israel
<p>Abstracts must not exceed 250 words. The following structure for abstracts is recommended.</p> <p>Objective: High-risk pregnancies (approx. 30% of all cases) are significant antecedents for maternal affective disorders. However, the specific cognitive-emotional mechanisms underlying this risk remain unclear. This study compared cognitive processing in women with high-risk pregnancies to those with normal-risk pregnancies and non-pregnant controls to identify distinct phenotypic markers.</p> <p>Methods: A total of 403 participants (118 high-risk pregnancy, 148 normal-risk pregnancy, 137 non-pregnant controls) completed measures of anxiety (STAI-S) and intolerance of uncertainty, alongside three cognitive tasks using infant faces: attentional bias, inhibitory control (Go/No-Go), and emotional evaluation. Analysis employed Linear Mixed Models, Principal Component Analysis (PCA), and Random Forest classification.</p> <p>Results: High-risk pregnant women exhibited distinct cognitive profiles characterized by slower reaction times and greater bias toward positive and neutral stimuli. PCA identified emotional evaluation and inhibitory control as the primary drivers of group variance. The Random Forest model achieved high classification performance (F1 scores .81–.88), identifying intolerance of uncertainty and biases toward happy/neutral stimuli as the most influential predictors.</p> <p>Conclusions: Pregnancy risk status is associated with specific alterations in cognitive-emotional processing. These findings suggest that intolerance of uncertainty and specific cognitive biases may serve as early and objective markers for affective vulnerability in high-risk populations, and help understand how cognitive and emotional processes differ between groups, for early preventive intervention.</p>
Multisensory Integration in Chronic Pain: General Feature or Disorder-Specific Alteration?
Speaker: Einav Gozansky, Institute for Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
<p>Objective. Humans continuously process information from multiple sensory modalities. Multisensory integration (MI) enhances perceptual reliability by combining inputs across senses. Evidence suggests MI is altered in some pain conditions, but it is unclear whether this reflects general feature of chronic pain or is specific to central pain disorders. This study aimed to extend the previous investigation of audio-visual MI mechanisms to include the effects of nociceptive stimuli, examining it in healthy individuals and patients with chronic low back pain (cLBP).</p> <p>Methods. Thirty healthy participants and 30 patients with cLBP completed two newly developed MI pain tasks: a pain-induced multisensory illusion paradigm and a reaction time task with unimodal and bimodal visual, auditory, and nociceptive stimuli. Stimuli were</p>

applied to the arm or lower back in counterbalanced order. Reaction time data were analyzed using mathematical and computational modeling, including race model analysis.

Results. Both groups showed faster responses to bimodal than unimodal stimuli ($p < .001$), with no group differences. Race model analysis revealed significant violations across all stimulus combinations and sites in both groups ($p < .001$), indicating bimodal stimuli were processed more efficiently than predicted by independent race models. In the multisensory illusion task, both groups reported fewer visual flashes when paired with painful stimulation ($p < .001$).

Conclusions. In two newly developed MI pain tasks, we show that pain integrates with visual and auditory signals in a manner comparable to other sensory modalities. Notably, MI is preserved in cLBP, indicating that alterations are condition-specific rather than a universal feature of chronic pain

Eye-Tracking Evidence for Cognitive Bias in Fibromyalgia Patients and Its Clinical Correlates

Speaker: Oscar Martin-Garcia, Department of Psychology, Rey Juan Carlos University, Spain

Objective: To examine attentional and interpretative biases toward pain in fibromyalgia using the Scrambled Sentence Task (SST), focusing on group differences and the relation of cognitive bias and clinical variables.

Method: The sample consisted of 66 patients with fibromyalgia and 19 healthy controls. Participants completed the Scrambled Sentences Task (SST), a cognitive task in which six-word scrambled sentences containing both pain-related and non-pain emotional words were presented. Participants were instructed to form a grammatically correct five-word sentence, allowing either a pain-related or a neutral/positive interpretation. Attentional bias was calculated as the proportion of fixation time on pain-related versus emotional words, measured using eye-tracking, while interpretative bias was operationalized as the proportion of pain-related sentences generated.

Results: Patients with fibromyalgia showed significantly greater attentional and interpretative biases than controls. A strong positive association was observed between attentional and interpretative biases, indicating that greater attention to pain-related words was linked to more pain-related sentence constructions. Mediation models revealed significant indirect effects of attentional bias on clinical outcomes through interpretative bias, including pain, fatigue, catastrophizing, kinesiophobia, and emotional symptoms. Moreover, longitudinal mediational models indicated significant indirect effects of cognitive bias on pain perception and emotional symptoms 7 months after.

Conclusion: Findings suggest fibromyalgia exhibit attentional and interpretative biases toward pain-related information. These cognitive biases are strongly interrelated and consistently associated with key clinical variables. Therefore, interventions targeting the modification of pain-related cognitive biases could represent a promising avenue for improving subjective experience of pain.

Fatigue-related attention and interpretation biases in people with multiple sclerosis and survivors of breast cancer

Speaker: Gabriella Tyson, Department of Psychology, King's College London, United Kingdom

Objective

This study investigated fatigue-related attention and interpretation biases in people with multiple sclerosis (MS) and breast cancer survivors (BCS) compared to healthy controls (HC). The study aimed to identify if these cognitive biases are transdiagnostic mechanisms underlying fatigue across different physical health conditions and if they correlate with symptom severity, distress, disability, and cognitive-behavioural responses. Additionally, the study compared the reliability of web-based versus laboratory-based cognitive bias testing.

Method

Participants (MS = 120; BCS = 80; HC = 156) completed the Visual Probe Task (VPT) to assess attentional bias (AB) and a recognition task to assess interpretation bias (IB). Self-report questionnaires measured fatigue (CFQ), distress (HADS), functional impairment (WSAS), and cognitive-behavioural responses to symptoms (CBRQ).

Results

Results indicated a significant difference in interpretation bias between individuals with long-term conditions and healthy controls ($p = .003$), though no significant difference was found for attentional bias. No significant differences in AB or IB were observed between the MS and BCS groups. Testing condition (online vs. lab) did not significantly influence the results. Within the clinical groups, IB was significantly correlated with fatigue severity ($r = .33$), functional impairment ($r = .39$), and fear avoidance ($r = .38$).

Conclusions

The findings support a transdiagnostic model of fatigue, suggesting that fatigue-related interpretation biases are common across different health conditions. These biases appear to be linked to increased symptom severity and maladaptive responses, representing potential modifiable targets for intervention. The study validates web-based assessments as a reliable alternative to lab-based testing for these populations.

Day 3 Tuesday, 23 June

TOWARDS A MECHANISTIC UNDERSTANDING OF THE ROLE OF ERROR MONITORING IN SOCIAL ANXIETY

Session type: Early Career Keynote lecture

Time: 09.15-10.45, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: George A. Buzzell, Florida International University, USA

Cognitive models suggest that social anxiety involves biased cognitive processing that impacts what is learned and remembered within social situations. As one example, studies leveraging non-invasive neural recordings find that social anxiety symptoms are associated with heightened “error monitoring”, which refers to the ability to self-monitor and detect one’s errors. However, it remains unclear whether heightened error monitoring plays a causal role in the maintenance and worsening of social anxiety symptoms more broadly. Motivated by the long-term goal of informing brain-based treatment approaches, this talk will present a novel theoretical model for understanding the role of error monitoring in social anxiety. Briefly, this model proposes that heightened error monitoring leads to biased memory encoding and worsened self-evaluations of performance within social settings, forming the basis of a negative feedback loop that maintains or exacerbates broader social anxiety symptoms. Consistent with the predictions of this model, I will review data demonstrating that: 1) social anxiety symptoms are associated with heightened error monitoring within social contexts, 2) heightened error monitoring predicts biased encoding of social errors into memory, and 3) biased encoding of social errors in turn predicts worsened self-evaluations of one’s social performance. Although existing evidence for the theoretical model remains correlational, I will also briefly outline ongoing studies seeking to provide more direct tests of the proposed model, as well as attempts to establish ecologically valid extensions of this work.

NECESSITY IN COGNITIVE BIAS RESEARCH: IDENTIFYING WHAT MUST HOLD FOR PSYCHOPATHOLOGY

Session type: Early Career Keynote lecture

Time: 09.15-10.45, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Igor Marchetti, University of Florence, Italy

Understanding the cognitive mechanisms underlying psychopathology is central to improving prevention and treatment. Experimental research has shown that cognitive biases are associated, to varying degrees, with vulnerability to mental disorders. However, this work has primarily relied on a probabilistic, sufficiency-oriented logic (i.e., if X, then probably Y), focusing on biases that increase the likelihood or severity of psychopathology. In contrast, causal necessity has received virtually no attention, despite its potential to identify cognitive conditions that must be present for psychopathology to emerge or persist (i.e., if not X, then never Y). This presentation introduces necessity logic as a complementary framework for cognitive bias research and outlines how Necessary Condition Analysis (NCA) can be used to examine whether specific cognitive biases are necessary, though not sufficient, conditions for clinically relevant symptoms or disorders. By identifying what must hold for

psychopathology, necessity-based approaches may refine cognitive theories, clarify boundary conditions, and inform more targeted prevention and intervention strategies.

FROM LAB TASKS TO REAL-WORLD CONTEXTS: ADVANCING APPROACH BIAS MODIFICATION FOR SUBSTANCE USE

Session type: Early Career Keynote lecture

Time: 09.15-10.45, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Alla Machulska, University of Siegen, Germany

Integrating Cognitive Bias Modification (CBM) into traditional psychotherapy may enhance treatment response and accessibility by targeting implicit processes implicated in maladaptive behavior. In substance use, automatic tendencies to approach substance-related stimuli (“approach biases”) play a central role in the persistence of alcohol and nicotine use. Approach Bias Modification (ApBM) aims to retrain these tendencies by systematically pairing substance-related stimuli with avoidance responses. While this paradigm has shown firm effects in individuals with alcohol use disorder, particularly in inpatient settings, findings in other contexts such as risky alcohol consumption or cigarette smoking have been more heterogeneous. One potential explanation concerns the role of context with regard to both bias assessment and modification. In particular, laboratory-based assessments implicitly assume that approach biases reflect fairly stable, trait-like tendencies. However, emerging evidence suggests that these biases may be context-dependent processes that are differentially activated in substance-related situations. As a result, assessments conducted in neutral laboratory environments may underestimate both the extent and potential change of such biases. Similarly, trainings conducted in settings that have not been implicated in substance use may show limited transfer to real-world behavior. Delivering trainings in ecologically valid contexts, for instance by using digital formats such as smartphones applications (apps) and virtual reality (VR), may therefore enhance ApBM’s treatment effects. This keynote will address the role of context in both the assessment and modification of approach biases in alcohol and nicotine use. Drawing on a series of studies, laboratory-based and real-world assessments will be compared, as well as trainings delivered in the lab, in VR, and at home via apps. Implications for theory, methodology, and the future avenues for the assessment and modification of cognitive biases will be discussed.

RESIDENTIAL TREATMENT - AN OPPORTUNITY TO MODIFY APPROACH BIASES IN ADDICTION

Session type: Symposia

Time: 11.00-12.00, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Edwin Schenkel, Georg-Elias-Müller-Institute of Psychology Department of Clinical Psychology and Experimental Psychopathology, Georg-August-Universität Göttingen, Göttingen, Germany

Automatic processes play vital roles in the development and maintenance of alcohol use disorder (AUD) and nicotine dependence. Modifying these processes during residential treatment, particularly alcohol approach-avoidance tendencies via researcher-administered approach bias modification (ApBM) has proven effective at reducing relapse rates after treatment. However, inconsistent effects are reported with ApBM across different addictions

(e.g., alcohol, tobacco), delivery modes (e.g., in person, online, smartphone) and treatment settings (e.g., withdrawal, rehabilitation and outpatient). Responding to these differences, this symposium presents an overview of the current state of ApBM in AUD and nicotine disorder in residential settings. First, Victoria Manning will present a novel way to deliver ApBM through Virtual Reality, including its feasibility, acceptability, and clinical outcomes. Then, Charlotte Wesser will give an update on the efficacy and clinical value of adding ApBM for nicotine cessation treatment in alcohol dependent patients who smoke. Finally, Edwin Schenkel will show the value of adding clinician-administered ApBM to naturalistic treatment settings that vary in therapeutic approach, on both feasibility and relapse prevention. Overall, in addition to providing an overview of the current state, we hope to stimulate future research to fill current gaps, with the aim of promoting and accelerating the translation of ApBM from the experimental setting into routine clinical practice.

Virtual Reality-Approach Bias Modification (VR-ApBM) during acute alcohol withdrawal: A pilot study

Speaker: Victoria Manning, Turning Point, Eastern Health Clinical School, Monash University, Melbourne, Australia

Objective: Traditional, computer-based ApBM is effective among alcohol patients, but considered boring and monotonous. Delivering ApBM through VR offers an immersive, multisensory approach that is potentially more engaging and acceptable. In this mixed methods pilot study, we explored the safety, feasibility, acceptability, and preliminary effectiveness of VR-ApBM for inpatients undergoing alcohol withdrawal treatment.

Methods: 29 participants completed up to four VR-ABM sessions. Descriptive and inferential statistics assessed quantitative measures of acceptability, usability, physical and mental distress, craving, and approach-bias. Thematic analysis of semi-structured interviews explored user experiences.

Results: Regarding safety, participants reported significant reductions on the Subjective Units of Distress Scale, both within and across sessions ($p=.027$). Mean scores on the Cybersickness in VR Questionnaire were less than half the cut-off for concerns. Mean scores on the Theoretical Framework of Acceptability Questionnaire were all above 3, indicating good acceptability, but feasibility was poor with a mean of only 3.0 training sessions completed. In terms of effectiveness, significant reductions were reported in craving severity between baseline and session 4 ($p < .001$), and at 1-month follow-up in drinking outcomes (i.e., drinking days, heavy drinking days, and standard drinks (all $p < .001$) were observed, though reductions in approach bias were non-significant ($p = .276$). Qualitative data indicated it being well-tolerated, with high enjoyment, immersion, and emotional engagement.

Conclusions: Findings support VR-ApBM as a safe, acceptable, and engaging intervention. However, its feasibility in a 7-day inpatient withdrawal setting was poor. As such, exploring its suitability to longer-term rehabilitation settings is now warranted.

Nicotine Avoidance Training in Alcohol-dependent Patients: An Update

Speaker: Charlotte Wesser, Department of Clinical Psychology and Psychotherapy, Medical School Brandenburg, Neuruppin, Germany

Objective: Almost 80% of alcohol-dependent patients in treatment are smokers (PAD). This comorbidity causes severe health consequences, high mortality rates, and 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 the maintenance of both addictions. 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.

Methods: 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.

Results and Conclusions: Results from the CBM-TAT, including abstinence rates from smoking at three- and six-month post-discharge, as well as insights into the clinical process, will be presented.

Implementing Approach-Bias Modification as Add-On to Varieties of Clinical Treatment for Alcohol Use Disorders: Results of a Multicenter RCT

Speaker: Edwin Schenkel, Georg-Elias-Müller-Institute of Psychology Department of Clinical Psychology and Experimental Psychopathology, Georg-August-Universität Göttingen, Göttingen, Germany

Objective: Abstinence rates after inpatient treatment for alcohol use disorder (AUD) are modest (1-year rate around 50%). One promising approach is to re-train the automatically activated action tendency to approach alcohol-related stimuli (alcohol-approach bias) in AUD patients, as add-on to regular treatment. As efficacy has been demonstrated in well-controlled randomized controlled trials, the important next step is to add alcohol-approach-bias modification (alcohol-ApBM) to varieties of existing treatments for AUD. This prospective, multicenter implementation-RCT examined whether adding alcohol-ApBM to regular treatments (various abstinence-oriented treatments including both individual and group-based interventions) would significantly increase abstinence rates compared to receiving regular treatment only, in various naturalistic settings employing different therapeutic approaches.

Method: A total of 1,586 AUD inpatients from 9 German rehabilitation clinics were randomly assigned to receive either ApBM in addition to regular treatment or not. Patient and therapist training satisfaction was measured after training. Success rates were determined at 3-, 6-, and 12-month post-treatment.

Results: Return rates for post-treatment-assessments varied widely across clinics, often being low (18–76%). Nevertheless, ApBM significantly increased success rates after 3 months. After 6 and 12 months, the differences were not significant. ApBM was evaluated mostly positively by patients and therapists.

Conclusion: ApBM was an effective add-on to regular treatment of AUD at 3 months follow-up, across a variety of AUD treatment settings. However, low return rates for clinical outcomes reduced ApBM's effect size considerably. The application of ApBM proved feasible in varying clinical settings, offering the opportunity to modify automatic processes and to promote abstinence.

COGNITIVE BIASES – ASSESSMENT AND MODIFICATION IN CHILDREN AND YOUTH
Session type: Individual Oral Presentation
Time: 11.00-12.00, Tuesday, June 23rd
Location: Room Virgiel
Session Chair: Reut Naim, School of Psychological Sciences and Sagol School of Neuroscience, Tel-Aviv University, Israel
Daily Irritability in Youth Tracks Inhibitory Control Lapses and Conflictual Parent–Child Interactions: Targets for Cognitive Bias Modification
Speaker: Reut Naim, School of Psychological Sciences and Sagol School of Neuroscience, Tel-Aviv University, Israel
<p>Objective. Irritability, characterized by heightened anger and low frustration tolerance, is a transdiagnostic feature associated with significant impairment. Although inhibitory control (IC) and parenting are theorized to influence irritability, most evidence comes from static lab assessments that cannot capture real-time cognitive–emotional dynamics. This study used ecological momentary assessment (EMA) and a smartphone Stop-Signal Task (SST) to test when IC difficulties accompany irritability and whether they arise during more negative parent–child exchanges among youth daily life.</p> <p>Methods. Youth–caregiver dyads (N = 94; 71 after quality checks; M_age = 13.23; 56.4% girls) completed a 7-day EMA protocol with twice-daily irritability and parenting reports and a daily mobile SST task. Multilevel models examined within-person associations among irritability, parenting, and IC, with False Discovery Rate correction.</p> <p>Results. Momentary spikes in irritability (frustration, anger, reactive aggression) were linked to poorer IC ($p_s < .05$; $\beta \geq .07$). Negative parenting (criticism, inconsistent discipline) also co-occurred with lower IC and more reactive interactions ($p_s < .04$; $\beta \geq .09$). Supportive parenting showed no significant associations. Patterns were consistent across informants.</p> <p>Conclusion. Heightened irritability and conflictual parent–child exchanges mark periods of increased IC difficulty. By capturing emotion and cognition in daily life, this approach identifies real-world cognitive–affective vulnerability and highlights potential time-sensitive targets for cognitive bias modification, suggesting that mobile, real-time assessment may support just-in-time intervention strategies.</p>
Enhancing Assessment of Social Anxiety in Youth: Development of Visual Social Anxiety Scale for Youth (VSAS-Youth)
Speaker: Marissa M. Falcone, Center for Children and Families, Florida International University, USA
<p>Objective: We developed and evaluated a youth version of the Visual Social Anxiety Scale (VSAS-Youth), an image-based self-report scale assessing social anxiety symptoms across diverse reading levels and linguistic backgrounds. The VSAS-Youth presents visual depictions of social anxiety for which youth rate their fear/anxiety and avoidance. We evaluated the scale’s reliability, validity, and underlying factor structure.</p> <p>Method: 123 youth (ages 13-16 years, M = 15.01 years, SD = 1.05; 83.9% White, 75.0% Hispanic or Latino; 58.1% females) completed the VSAS at baseline and one week later. Youth also completed established self-report measures of social anxiety, depression, and irritability to examine convergent and divergent validity.</p> <p>Results: All items demonstrated adequate variability and strong item-remainder correlations ($r_s \geq .35$). Internal consistency was excellent for Fear ($\alpha = .94$) and Avoidance ($\alpha = .93$)</p>

subscales. Test–retest reliability was strong (Fear $r = .74$; Avoidance $r = .80$, $ps < .001$). Convergent validity was supported by strong associations between VSAS-Youth scores and established measures of social anxiety ($rs = .69-.76$, $ps < .001$), while associations with depression and irritability were moderate, supporting divergent validity. Exploratory factor analysis indicated a two-factor solution reflecting social interaction and performance contexts, with moderately correlated factors ($r = .60$) accounting for 44% of the total variance. Conclusion: Findings support the VSAS-Youth as a reliable and valid image-based measure of youth social anxiety. The VSAS-Youth offers an ecologically valid approach to assessing social anxiety in youth and facilitates future research into attention processes linked to social anxiety.

Connecting the Biases: Interpretation as a Link Between Attention to Threat and Social Anxiety in Adolescents

Speaker:Dorothy H. Balsler, Department of Psychology, Center for Children and Families, Florida International University, United States

Objective:

Social anxiety is prevalent and impairing in adolescence. The combined cognitive bias model proposes that different types of biases (e.g., attention, interpretation) interrelate and mutually contribute to the development and maintenance of social anxiety. Prior work supports the general premise of combined cognitive bias models, though findings are inconsistent and little work has examined these models in adolescents. The current study evaluates a combined cognitive bias model wherein attention bias to threat is linked to social anxiety via its association with social interpretation bias in an adolescent sample.

Method:

$N = 133$ community-recruited adolescents ages 13 to 16 years ($M_{age} = 15.1$; $SD_{age} = 1.08$; 56% female; 72% Hispanic) reported on their social anxiety severity and attention bias to threat. Social interpretation bias was assessed using a validated task in which adolescents read ambiguous social scenarios and selected the interpretation they believed most likely. Results: Attention bias to threat was significantly associated with social interpretation bias ($B = 0.045$, $SE = 0.018$, $p = 0.019$), and social interpretation bias was significantly associated with social anxiety severity ($B = 0.401$, $SE = .17$, $p = 0.018$). The indirect effect of attention bias to threat on social anxiety severity through social interpretation bias was statistically significant ($B = 0.018$, $SE = 0.011$, $p < 0.05$).

Conclusion:

Findings support the combined cognitive bias model in adolescence, highlighting the interrelation between attention and interpretation biases and suggesting that social interpretation bias may represent a key mechanism linking attention bias to social anxiety.

Does Gamifying Control Training Improve Engagement among Adolescents?

Speaker:Elaine Fox, Institute of Mental Health, University of Birmingham, UK

Objective:

Cognitive training interventions have been shown to improve emotion regulation and mental health across adolescence. However, adolescent adherence with cognitive training is often low. Therefore, this study aimed to gamify a standardized cognitive training protocol to investigate whether we could improve engagement with training in young people.

Method:

144 adolescents completed 12 days of cognitive training with either a gamified affective control training intervention or a non-gamified affective control training intervention. Measures of rumination, interpretation bias and general mental health were obtained before training, post-training and at one-month follow up.

Results:

Participants assigned to the gamified cognitive training did engage in more training sessions than those undertaking the control training intervention. However, the overall time spent on

both training protocols did not differ. Rumination decreased from pre-training to post-training and 1-month follow up with no difference between the groups. Interpretation bias decreased for both training groups equally from pre- to post-training.

Conclusion:

Increasing engagement with cognitive training tasks is often difficult with adolescents. This is a problem because cognitive training can lead to improvements in cognitive biases and rumination with marked benefits to mental health. While the overall time training did not differ, our finding that adolescents engaged with more training sessions with gamification is encouraging, given that use of these apps is entirely self-motivated. There may be merit in gamifying future cognitive training programs to treat and prevent mental health issues in adolescent populations.

INTERPRETATION BIAS AS A MECHANISTIC DRIVER OF EMOTIONAL AND SOMATIC FUNCTIONING: FROM COGNITIVE PROCESSING TO PAIN-RELATED MOTOR BEHAVIOUR

Session type: Symposia

Time: 12.10-13.10, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Ali Khatibi, Department of Psychology, University of Bath

Cognitive models of psychopathology increasingly emphasise the role of interpretation bias—systematic tendencies to assign threatening meaning to ambiguous information—in shaping emotional and behavioural outcomes. While much research has focused on interpretation bias in anxiety and depression, its broader role across cognitive, affective, and sensorimotor domains remains underexplored.

This symposium examines interpretation bias as a cross-domain mechanism influencing psychological resilience, attentional and memory processes, and even motor behaviour in pain-related contexts. Across three complementary presentations, we demonstrate how interpretation biases influence downstream cognitive processing and behavioural outcomes across both emotional and somatic systems.

The first presentation introduces a theoretical and methodological framework arguing that interpretation bias may act as a key upstream mechanism driving attentional and memory biases in chronic pain, with implications for improving cognitive bias modification interventions. The second presentation examines how bottom-up cognitive biases moderate the protective effects of self-compassion on anxiety and stress, illustrating how cognitive processing biases shape the impact of psychological traits. The third presentation extends this framework to the sensorimotor domain by demonstrating that interpretation bias is associated with altered recruitment of back extensor muscles during trunk movements, particularly among individuals with chronic low back pain.

Together, these presentations highlight interpretation bias as a central mechanism linking cognition, emotion, and behaviour across domains. Understanding how individuals interpret ambiguous emotional and bodily signals may provide novel targets for intervention and offer new insights into the mechanisms through which cognitive biases influence both psychological distress and physical functioning.

Interpretation Bias in Chronic Pain: A Driver of Attentional and Memory Biases and a Key Treatment Target

Speaker: Christina Lioffi, Department of Psychology, University of Southampton, UK

Objective

Attentional bias research has informed cognitive models of pain and threat, yet findings remain heterogeneous and difficult to translate into effective interventions. One explanation is that attentional processes are influenced by how individuals interpret ambiguous information. This presentation examines interpretation bias as a potential upstream mechanism shaping attentional and memory biases in chronic pain.

Method

Evidence from experimental paradigms using ambiguous words, images, scenarios, and somatosensory stimuli will be reviewed. Particular attention will be given to methodological considerations in measuring interpretation bias, including stimulus ambiguity, response format, and potential demand characteristics that may influence observed effects.

Results

Findings from pain and health contexts suggest that interpretation bias shapes downstream cognitive processes, influencing which stimuli capture attention, how long they are maintained in awareness, and how they are encoded in memory. These findings also indicate that interpretation bias may moderate when attentional biases emerge, helping explain inconsistencies in the attentional bias literature.

Conclusion

Interpretation bias may represent a key mechanism linking cognitive processing with pain perception. Interventions targeting interpretation processes—particularly the interpretation of ambiguous somatosensory sensations—may produce more robust and generalisable changes than attention-focused interventions alone.

Beyond Traits: How Bottom-Up Cognitive Biases Shape the Protective Effects of Self-Compassion

Speaker: Bahram Mahmoodi Kahriz, Henley Business School, University of Reading, UK

Objective

Self-compassion is widely considered a protective trait against anxiety and stress. However, dual-process models suggest that its effectiveness may depend on bottom-up cognitive processing biases. This study investigated whether interpretation and memory biases moderate the relationship between self-compassion and emotional distress.

Method

Forty-six adults completed measures of self-compassion and symptoms of anxiety and stress. Participants also completed computerised tasks assessing interpretation bias in responses to ambiguous emotional facial expressions and memory bias for negative emotional words. Moderation analyses were conducted using PROCESS.

Results

Higher self-compassion was associated with lower anxiety and stress. These relationships were moderated by cognitive biases. Interpretation bias significantly moderated both relationships, such that self-compassion was most strongly associated with reduced distress among individuals who interpreted ambiguous emotional cues more negatively. Memory bias indices also moderated these relationships.

Conclusion

Self-compassion does not operate as a uniform trait-level buffer against distress. Instead, its protective effects depend on underlying cognitive processing biases. These findings highlight the importance of integrating trait-based interventions with approaches targeting cognitive biases.

Interpretation Bias and Back Muscle Recruitment During Trunk Movements in Chronic Low Back Pain

Speaker: Ali Khatibi, Department of Psychology, University of Bath, UK

Objective

Altered trunk muscle recruitment is commonly observed in individuals with chronic low back pain (CLBP), often persisting even when pain is absent. This study investigated whether negative interpretation bias toward health-related ambiguity is associated with altered recruitment of back extensor muscles during trunk movements and whether these relationships differ between individuals with CLBP and healthy controls.

Method

Thirty individuals with CLBP and thirty healthy controls were assessed during trunk flexion, trunk extension, and object-lifting tasks while pain-free. Kinematic features (range of motion, velocity, and movement smoothness) and neuromuscular activity (surface electromyography of the erector spinae) were recorded. Participants also completed an interpretation bias task and measures of psychological vulnerability factors.

Results

Individuals with CLBP exhibited greater negative interpretation bias compared with healthy controls. Higher interpretation bias was associated with increased erector spinae activation and reduced movement smoothness during trunk flexion tasks, suggesting a protective or stiffening motor strategy. These associations were stronger in the CLBP group.

Conclusion

The findings suggest that interpretation bias may influence motor control by shaping how individuals interpret movement-related bodily signals. Cognitive interpretations of ambiguous somatic sensations may contribute to altered muscle recruitment patterns and maladaptive movement strategies in chronic low back pain.

EXPECTATIONS AND BELIEF UPDATING – COGNITIVE BIASES AND THEIR ASSESSMENT

Session type: Individual Oral Presentation

Time: 12.10-13.10, Tuesday, June 23rd

Location: Room Virgiel

Session Chair: Reinout Wiers, Department of Psychology, Addiction Development and Psychopathology (ADAPT) Lab, ABC and Yield Research Priority Areas. University of Amsterdam, Amsterdam, The Netherlands

From Exclusion to Overinclusion: Depression and Impaired Positive Expectation Updating

Speaker: Shimrit Daches, Psychology Department, Bar Ilan University, Israel

Objective: Depression is associated with social dysfunction and reduced cognitive, emotional, and physiological inflexibility. The present study examined whether depressive symptoms impair adaptation to a positive social transition, specifically from exclusion to overinclusion. We tested whether depressive symptoms would predict reduced updating of social expectations, blunted affective change, and attenuated physiological recovery during this transition.

Method: Sixty-two university students completed the Cyberball task, which included an exclusion phase (5% ball tosses) followed by an overinclusion phase (45% ball tosses). Expectations of inclusion, affect, and heart rate variability (HRV) were assessed at baseline and across phases. Depressive symptoms were measured using the BDI-II. Repeated-measures GLMs tested whether depressive symptoms moderated within-person changes from exclusion to overinclusion.

Results: A significant Phase × Depression interaction emerged for expectations: individuals with higher depressive symptoms showed reduced updating of social expectations following

transition from exclusion to overinclusion. Depressive symptoms were associated with lower overall affect, but did not moderate affective change across phases. HRV did not significantly change across phases, and depressive symptoms did not predict physiological recovery, though a marginal interaction suggested subtle divergence in physiological trajectories. Conclusions: Depressive symptoms selectively impair updating of social expectations following transition from exclusion to overinclusion, even when affective and physiological systems appear intact. These findings highlight cognitive inflexibility as a key mechanism in depression-related social disconnection and suggest that interventions targeting belief updating may improve social functioning.

The cognitive basis of anxiety-linked negative expectancy bias

Speaker: Ben Grafton, School of Psychological Science, University of Western Australia, Australia

In this talk, I will present the findings obtained across multiple studies that were carried out as part of a recently completed research grant. The objective of the grant was to test the empirical validity of compelling new hypotheses concerning the cognitive mechanisms that causally underpin anxiety-linked negative expectancy bias. The mechanisms under scrutiny were biased attention to negative information, biased memorial processing of negative information, and biased interrogation of negative information. To test the predictions generated by these hypotheses, new cognitive methodologies that permitted the sensitive assessment, and in some cases also the direct manipulation, of these mechanisms, were developed. As will be seen, both biased attention to, and biased interrogation of, negative information, appear to play a role in the development of anxiety-linked negative expectancy bias. These findings were replicated across several studies, employing a variety of complementary cognitive-experimental tasks, thus providing confidence in the pattern of results obtained. The theoretical and applied implications of these findings will be discussed, along with recent extensions of this work into related areas, which have included, among others, prenatal mental health, addiction, and body dissatisfaction.

The SocialMirror Paradigm: Unraveling Biased Updating of Self-Beliefs in Social Anxiety and Depression

Speaker: Eva Gilboa-Schechtman, Bar-Ilan University

Objective: Cognitive models propose that biased information processing in social anxiety (SA) and depression facilitates negative and inhibits the processing of positive self-related beliefs. These biases are postulated to reinforce persistent negative self-views. Importantly, self-beliefs are structured along two main axes/domains: agency (e.g., competence, assertiveness) and communion (e.g., warmth, connectedness). These domains distinctly influence the way information about the self is processed and integrated. Method: In three studies, we examined how individuals update their agentic and communal self-beliefs in response to positive and negative social feedback using a novel ‘SocialMirror’ paradigm. In Study 1, clinically diagnosed individuals with SAD (n = 95) and non-clinical controls (NCC, n = 87) received negative feedback; in Study 2, a subclinical sample of participants (N = 560) completed a two-phase reversal learning task, receiving negative and then positive feedback about their personality traits. In Study 3 (N=382), individuals completed a task in which feedback about them gradually shifted from negative to positive. Results: Our findings suggest domain- and valence-related patterns of self-belief updating in SA and depression, such that SA was uniquely associated with enhanced updating of agentic, but not communal, self-beliefs, whereas depression is associated with enhanced negative updating and reduced positive updating across both domains. Conclusion: These updating patterns may perpetuate intrapersonal and interpersonal cycles that maintain negative self-beliefs in these conditions. We highlight the implications of these findings for interventions aimed at updating self-belief in psychopathology.

Cognitive Flexibility Across Healthy and Subclinical Depression Groups: Exploring Associations Between Belief Updating and Reversal Learning

Speaker: Kean J. HSU, Department of Psychology, National University of Singapore, Singapore

Objective: Depression has been associated with impairments in cognitive flexibility, observed through deficits in belief updating and probabilistic reversal learning tasks. Specifically, depressed individuals update negative beliefs less than healthy controls. Moreover, depressed individuals are less adept at reversal learning for rewards than healthy controls, suggesting cognitive inflexibility for both positively valenced and negative valenced information in depression. This study sought to examine potential group differences, as well as shared mechanisms, for across these paradigms.

Method: 111 individuals who were relatively low ($n = 54$; PHQ-9 mean = 3.11, SD = 2.03) or elevated in depression symptom severity ($n = 57$; PHQ-9 mean = 9.11, SD = 3.67) completed the first block of a belief updating task regarding life events, followed by self-report questionnaires, a probabilistic reversal learning task, and finally a second block of the belief updating task.

Results: Groups did not differ on belief updating but low depression severity individuals had higher reversal learning accuracy than high depression severity individuals across both punishment and reward reversal. Self-reported reward sensitivity was positively associated with reward reversal accuracy, though similar patterns did not hold for punishment sensitivity. Finally, only belief updating for positive events was negatively associated with reward and punishment reversal accuracy.

Conclusion: These findings suggest cognitive inflexibility may not be consistent across different behavioral indices and may reflect distinct cognitive subprocesses. Individuals relatively elevated on depression severity may exhibit a more generalized cognitive deficit (i.e., in cognitive flexibility), matching broader literature on executive functioning deficits in depression.

NEW DIRECTIONS IN THE ASSESSMENT AND MODIFICATION OF ALCOHOL COGNITIVE BIAS

Session type: Symposia

Time: 14.10-15.30, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Reinout W. Wiers, Department of Psychology, Addiction Development and Psychopathology (ADAPT) Lab, ABC and Yield Research Priority Areas. University of Amsterdam, Amsterdam, The Netherlands

Automatically activated cognitive-motivational processes are believed to play important roles in the development and maintenance of alcohol use disorder (AUD). Modifying these processes, particularly approach-avoidance tendencies, as part of clinical treatment has proven effective in reducing relapse rates after treatment. Whilst these advances are significant, many unanswered questions of multi-faceted origin exist. This symposium integrates a variety of new approaches to assess, modify and psychometrically evaluate cognitive biases in AUD. First, Lana Mrkonja will present a novel approach to capture attentional biases in AUD, which proves promising regarding the reliable assessment of this important bias in AUD. Second, despite that Approach Bias Modification, when given as part of inpatient treatment for AUD proves effective in increasing abstinence, evidence for its proposed working mechanism (reduction of the alcohol approach bias) is limited. Therefore, Edwin Schenkel will present a study examining whether various aspects of learning during training predicted abstinence 1 year after treatment discharge, both separately and in interaction with potential sociodemographic and clinical moderators of Alcohol-ApBM

effectiveness Third, turning to individuals with AUD who are drinking at harmful levels, Victoria Manning will report on a clinical trial examining whether a personalised ApBM app can reduce alcohol use in non-treatment seekers. Finally, Adrian Nichci, will highlight the potential of the drinking context with regard to the effectiveness, reliability and validity of the assessment of an approach-bias for alcohol-cues.

Alcohol Attentional Bias Assessment: A Cross-Country Comparison of Two Dual-Probe Tasks

Speaker:Lana Mrkonja, Department of Psychology, Addiction Development and Psychopathology (ADAPT) Lab, University of Amsterdam, Amsterdam, The Netherlands

Attentional bias (AtB) toward alcohol-related cues has been consistently associated with problematic alcohol use and craving. However, widely used paradigms, such as the dot-probe task, often show limited reliability and heterogeneous associations with drinking outcomes. The present study directly compares two novel alcohol-related AtB paradigms and evaluates their reliability and validity across two cultural contexts: the Netherlands and Australia.

We employ the Dual Probe paradigm, a recently developed task designed to enhance ecological validity and psychometric robustness of AtB. This task adapts the classic dot-probe by simultaneously presenting two probes superimposed on two video stimuli. Due to the very brief probes presentation, only one probe can be identified per trial, allowing for a direct behavioral index of attentional allocation without reliance on eye-tracking.

Using a within-subject design, participants complete two versions of the Dual Probe task in which probes follow alcohol versus non-alcohol video streams. The first version presents alcohol and soft-drink video advertisements. The second presents short video narratives featuring AI-generated individuals describing positive and negative outcomes of drinking and abstaining across varied social contexts. These narratives were developed based on pilot data assessing students' drinking expectancies and motives, as well as established expectancy literature.

By combining cross-national sampling with a within-subject comparison of dual-probe versions, this study evaluates whether the two task variants provide reliable indices of distinct alcohol-related attentional processes and whether these processes show differential associations with alcohol use and related problems. Preliminary findings will be presented.

Long-term effects of alcohol-avoidance training: Do changes in approach bias predict who will remain abstinent?

Speaker:Edwin Schenkel, Georg-Elias-Müller-Institute of Psychology, Department of Clinical Psychology and Experimental Psychopathology, Georg-August-Universität Göttingen, Göttingen, Germany

Objective: Patients with alcohol use disorder (AUD) show a selective tendency to approach alcohol cues (alcohol-approach-bias). Alcohol-approach-bias modification (Alcohol-ApBM) effectively increases abstinence rates in patients with AUD when added to abstinence-focused treatment, but the evidence for its proposed working mechanism (reduction of the alcohol-approach-bias) is limited. Moreover, not all patients benefit from Alcohol-ApBM, and reliable pretreatment predictors of Alcohol-ApBM effectiveness have not been identified. This study focused on learning processes during the Alcohol-ApBM training and whether changes in approach-avoidance tendencies throughout Alcohol-ApBM would predict abstinence after inpatient treatment.

Methods: The training data of 543 AUD patients in Germany (70% male, M = 47.96, SD = 9.08), receiving Alcohol-ApBM training during inpatient treatment, were used to examine whether various aspects of learning during training predicted abstinence 1 year after treatment discharge, both separately and in interaction with potential sociodemographic and clinical moderators of Alcohol-ApBM effectiveness.

Results: Overall, successful learning across six Alcohol-ApBM training sessions was observed; that is, the approach tendency toward alcoholic stimuli was reduced over time. However, none of the examined learning parameters were predictive of abstinence, neither separately nor in combination with clinical or sociodemographic variables.
 Conclusions: Previous studies have shown that Alcohol-ApBM is an effective add-on to abstinence-focused treatment for AUD, and this study showed that learning took place during Alcohol-ApBM training. However, specific learning parameters during training did not predict abstinence 1 year after treatment discharge. Therefore, we cannot specify which patients are most likely to benefit from ApBM with regard to abstinence after 1 year.

Personalised smartphone-delivered ApBM targeting harmful drinking in the Australia community: a RCT

Speaker: Victoria Manning, Turning Point, Eastern Health Clinical School, Monash University, Melbourne, Australia

Objective: In multiple RCTs, Approach bias modification (ApBM) has been shown to prevent relapse following residential treatment for alcohol use disorder (AUD). However, since only a minority of people with AUD seek professional treatment, there remains a need to establish the effectiveness of smartphone-delivered ApBM capable of reaching this broader population. This RCT examined whether a personalised ApBM app could reduce alcohol use in non-treatment seekers drinking at harmful levels.

Methods: double-blind RCT with 1,735 Australian adults with likely AUD and a desire to reduce/cease. Participants were randomly assigned (2:2:1) to a personalised ApBM condition (two, ~3-minute weekly training sessions for 4 weeks; n=681), a sham-trained control (n=695), or waitlist (n=359). Primary outcome: self-reported change in heavy drinking days (HDDs; >5 standard drinks) from baseline to week 4.

Results: All three groups significantly reduced their HDDs, but ApBM participants showed significantly greater reductions than sham (between-group difference -0.38 HDDs, p=.008) and waitlist controls (-0.46, p=.007). Secondary outcomes showed that ApBM participants reported significantly greater reductions in standard drinks than sham (difference: -3.67, p=.013) and waitlist controls (-5.09, p=.005), and significantly greater increases in past-week abstinence (p<.001) relative to waitlist controls (p=.211), but not sham controls (p=.007).

Conclusions: A smartphone-delivered ApBM intervention can substantially reduce frequency of HDDs and overall alcohol consumption, highlighting its promise as a low-cost, convenient, and highly scalable digital option for individuals aiming to cut down or stop heavy drinking.

Measuring Alcohol Approach Bias in Context

Speaker: Adrian Nichici, Department of Psychology, Addiction Development and Psychopathology (ADAPT) Lab, University of Amsterdam, Amsterdam, The Netherlands

Objective. The alcohol approach-avoidance task (AAT) shows low reliability and inconsistent associations with drinking behavior, often attributed to the low signal-to-noise ratio of the task. However, contextual learning accounts of addiction suggest an alternative explanation: approach tendencies may be stored and expressed in a context-dependent manner. Consequently, the criterion validity of the AAT may be reduced when assessed outside a drinking context and the test-retest reliability may be attenuated when different contextual representations are active across experimental sessions. To investigate this view, we test whether inducing a drinking-related context increases the reliability and validity of the alcohol AAT.

Methods. 80 participants will complete two experimental sessions. In each session, they will perform a contextualized irrelevant-feature alcohol AAT in both a drinking-related and a neutral control context. Context will be induced via guided mental imagery and audio-visual cues. Within-session and test-retest reliability for each context will be estimated using hierarchical Bayesian modeling. Criterion validity will be assessed by testing whether the association between AAT approach bias and AUDIT scores differs across contexts.

Results. We hypothesize that the drinking-context AAT will yield higher reliability than the neutral-context AAT and show stronger associations with AUDIT scores.

Conclusion. These findings will clarify whether accounting for context improves the reliability and validity of the alcohol AAT. Further, they will contribute to our theoretical understanding of alcohol approach bias and the development of future assessment instruments and interventions.

UNDERSTANDING AND MODIFYING MEMORY BIASES IN DEPRESSION: FROM COGNITIVE MECHANISMS TO INNOVATIVE INTERVENTIONS

Session type: Symposia

Time: 14.10-15.30, Tuesday, June 23rd

Location: Room Virgiel

Session Chair: Iliana Liakea, Radboud University

Cognitive models of depression emphasize the role of memory biases in the onset and maintenance of depressive symptoms. This symposium brings together four complementary lines of research that advance our understanding of whether, how, and under which conditions memory biases contribute to depression, and how they may be modified. First, longitudinal Necessary Condition Analysis examines whether negative self-reference and positive self-referent memory biases are not merely risk factors but necessary conditions for the development of depressive symptoms. Second, a retrieval-practice paradigm extends memory research to inferential processes, exploring how rumination interacts with retrieval mechanisms to sustain depressogenic inferential habits over time. Third, experimental work investigates whether acute physical exercise can enhance learning during positive Cognitive Bias Modification for Memory (CBM-M), testing neuroplasticity-based augmentation of memory training. Finally, a randomized controlled trial evaluates a smartphone-based Memory Bias Modification (MBM) intervention embedded in Ecological Momentary Assessment, targeting positive memory bias and autobiographical memory specificity in individuals with sub-clinical depressive symptoms.

Together, these studies integrate longitudinal, experimental, mechanistic, and digital intervention approaches. By combining necessary condition modeling, laboratory-based augmentation strategies, cognitive mechanism research, and real-world mobile applications, the symposium provides a multi-level perspective on memory biases in depression. The findings contribute to refining theoretical models and informing more precise, mechanism-focused prevention and intervention strategies.

Are self-reference and memory biases necessary for depressive symptoms? A longitudinal Necessary Condition Analysis study

Speaker: Igor Marchetti, Department of Health Sciences, University of Florence, Florence, Italy

Objective: Self-reference and memory biases are well-established risk factors for the presence of depressive symptoms. Currently, it is unknown whether these biases also serve as necessary conditions for depressive symptoms—meaning that their absence is sufficient for the absence of symptoms. Method: A sample of 125 female emerging adults ($M = 20.95 \pm 1.76$) was followed for six months. The Self-Referent Encoding Task (SRET) was administered at baseline, while the Depression Anxiety Stress Scale-21 (DASS-21) was administered at both baseline and follow-up. Necessary Condition Analysis was applied to determine the extent to which self-reference and memory biases are necessary conditions for depression. Results: The analyses revealed that negative self-reference bias ($d = 0.20$, medium effect, $p = .003$) and positive self-referent memory bias ($d = 0.33$, large effect, $p = .003$) were necessary conditions for depressive symptoms after six months. In contrast, positive self-reference bias

and negative self-referent memory bias were not enabling factors. At baseline, 67.96% of participants met the necessary levels of the identified conditions to potentially experience subclinical depressive symptoms at subsequent follow-up, yet only 6.80% actually developed these symptoms. Conversely, a substantial minority did not meet these necessary levels and was therefore virtually immune. Conclusion: Negative self-reference and positive self-referent memory biases are necessary conditions for the potential development of depressive symptoms in female emerging adults. Recognizing necessary conditions for depressive symptoms and mental disorders in general could lead to substantial progress, given their impact on enhancing theoretical understanding and improving prevention strategies and clinical treatments.

Mechanisms of Inferential Memory: Retrieval Practice of Inferences for Negative Events in Rumination

Speaker:Gal Rabinovich, Department of Psychology, The Hebrew University of Jerusalem, Jerusalem, Israel

Ruminators often exhibit cognitive biases in both memory and inference, suggesting enhanced recall of negative events along with pessimistic attributions. These cognitive habits are considered risk factors for depressive symptoms, frequently resistant to cognitive interventions. Previous retrieval-practice studies on word pairs and autobiographical memories illustrated ruminators' enhanced short-term recall of unpracticed negative content and diminished long-term recall of practiced positive content. These memory processes may also sustain ruminators' inferential habits through altered retrieval of both the negative events and their depressogenic inferences, a mechanism that remains poorly understood. The current study extends the retrieval-practice paradigm to inferences, to uncover the persistence of inferential habits. In this ongoing study, participants' rumination-brooding levels are assessed as they study pairs of negative event-inference with either depressogenic (external, specific, unstable) or benign (internal, global, stable) inferences. Half of the pairs of each inference type are practiced through retrieval-practice, whereby participants retrieve inferences when cued with events. Following three retrieval-practice cycles, cued-recall is tested immediately and after one week. Utilizing GLMM, we hypothesize that retrieval-practice will significantly predict a higher probability of recall, and that brooding levels will interact with practice conditions, such that higher brooding scores will correlate with higher immediate recall for unpracticed depressogenic inferences, and with lower delayed recall for practiced benign inferences. Preliminary findings demonstrate a retrieval-practice effect, while forthcoming analyses will explore the retrieval mechanisms that sustain negative inferential habits to inform tailored Cognitive Bias Modification (CBM) procedures for depressive populations.

Does acute exercise enhance learning during positive CBM-Memory?

Speaker:Janna Vrijssen, Psychiatry, Radboud University Medical Center & Pro Persona, Nijmegen, The Netherlands

Objective:

Exercise has well-established benefits for mental health, learning, and affect, potentially by boosting neuroplasticity. Cognitive Bias Modification (CBM)-Memory stimulates automatic positive memory bias through repeated cued retrieval of verbal information. The mental health benefits of CBM-Memory are modest. This study tested whether acute exercise could enhance positive memory acquisition and its transfer to affective state and explored the optimal timing of exercise (before memory encoding or during consolidation) to maximize these effects.

Method: So far, 36 healthy relatively sedentary adults participated in two lab-sessions: the experimental condition involved positive CBM-Memory with adjunctive exercise (either before or after CBM-Memory) and the control condition paired CBM-Memory with a duration-and-context-matched rest period. Affect and memory for positive and negative words was tested

both directly and 24-hours after each lab-session. A Bayesian sequential design was implemented, with interim analyses conducted after each cohort of 24 participants; we continue testing and will present the full results.

Results: Based on the interim analyses, there is credible but only anecdotal ($BF_{10} = 0.63$) evidence for a small enhancing effect of exercise on positive word recall. There is no evidence for a stronger learning augmentation effect of exercise before encoding or during consolidation and the transfer to affect is inclusive at this point.

Conclusion: Exercise may augment the learning that takes place during CBM-Memory, where repeated retrieval of positive material is prompted, possibly through subtle neuroplasticity-based enhancement of both encoding and consolidation.

Targeting Biases in Sub-Clinical Depression: Effects of a Smartphone-Based Positive Memory Training

Speaker: Iliana Liakea, Behavioral Science Institute, Radboud University, Nijmegen, The Netherlands

Objective: Individuals with clinical and sub-clinical depression recall fewer positive memories and have less specific autobiographical memories compared to non-depressed individuals. Memory bias modification (MBM) interventions might be able to address those biases, but remain rather under-explored. This RCT evaluates the efficacy of a smartphone-based MBM application designed to enhance positive memory bias and autobiographical memory specificity in students with sub-clinical depressive symptoms. Methods: To date, 128 participants scoring mild or higher on the DASS-21 depression subscale have been randomly assigned to one of three conditions: (1) positive memories training, (2) active control, or (3) no-intervention. Over five consecutive days, participants in the positive memories training condition use an application that prompts them to capture a photo of a neutral object linked to a positive event, and engage in guided reflection on these experiences. The intervention is embedded within an ecological momentary assessment (EMA) framework: participants receive four daily prompts to report mood and state rumination and complete a daily autobiographical memory recall with valence rating. The active control condition includes identical EMA monitoring without the positive memory training component. Positive memory bias is assessed via daily valence ratings (near transfer) and the Self-Referent Encoding Task (SRET) at post-treatment (far transfer). Autobiographical memory specificity is measured pre- and post-intervention using the Autobiographical Memory Test (AMT). Mood, depressive symptoms, and rumination are assessed as key outcomes. Results and Conclusion: Preliminary results based on data collected until early May will be presented and discussed in light of the study’s strengths and limitations.

COGNITIVE BIASES IN ECOLOGICAL-VALID EVERYDAY SETTINGS

Session type: Individual Oral Presentation

Time: 15.45-16.45, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Janna Vrijssen, Psychiatry, Radboud University Medical Center & Pro Persona, Nijmegen, The Netherlands

Capturing interpretation biases for social media using a novel interpretation bias task

Speaker: Kean J. HSU, Department of Psychology, National University of Singapore, Singapore

Objective: Social media has been suggested to contribute to recent decreases in the mental health of young adults. Yet empirical findings are mixed, likely due to overreliance on social media usage duration (i.e., “screen time”). Cognitive models of mental health suggest that

how individuals interpret their experience of social media content may be an important individual difference relative to aggregate time spent on social media. This study evaluates a new task designed to assess how individuals interpret ambiguous social media in an Instagram-like format.

Method: 112 young adults completed a novel interpretation bias task. A mock Instagram feed was prepared based on their existing Instagram feed, including ambiguous posts and comments from close friends, acquaintances, and strangers. Proportion of negatively interpreted posts and comments were calculated for each social category for posts or comments.

Results: Ambiguous comments from close friends and strangers were interpreted negatively more often than from acquaintances. Ambiguous posts from friends did not appear to significantly differ from ambiguous posts from strangers. Content from strangers is more often interpreted positively than content from oneself.

Conclusion: Our task highlights that not all social media content is interpreted equivalently and that factors such as social media content type (e.g., post versus comment) and social relationship (e.g., close friend versus acquaintance) might all influence one's interpretation of ambiguous content. Such nuances are often overlooked in current social media research and our novel task provides a vehicle for capturing these nuances related to cognitive models of mental health.

Selective exposure in the digital age: Does content selection bias shape the emotional impacts of social media use?

Speaker: Patrick Clarke, Discipline of Psychology, Curtin University, Perth, Australia

Objective: The relationship between social media use and emotional wellbeing remains highly contested, with findings ranging from adverse to positive effects. Few studies examine how individual cognitive styles may moderate these associations. One promising candidate is content selection bias – the tendency to preferentially engage with more negatively valenced information. This study examines whether negative choice bias moderates the relationship between objectively measured social media use and emotional wellbeing.

Methods:

A sample of undergraduate students (N > 150) completed standardised measures of emotional wellbeing, including the PHQ-9 (depression), GAD-7 (anxiety), and the Dispositional Positive Emotion Scales. Objective social media use was captured via smartphone screen-time data. Choice bias was measured using an established selective information task in which participants repeatedly chose to read positive or negative statements about what university life will be like, producing a continuous index of negative choice bias.

Results:

Data analysis will explore whether total objective social media use predicts emotional wellbeing outcomes, and whether this relationship is moderated by the degree of negative choice bias. It will specifically examine the hypothesis that individuals with a stronger negative choice bias will exhibit a more pronounced negative association between social media use and wellbeing, while individuals with more positive choice tendencies may show weaker or even reversed associations.

Conclusion:

The current findings contribute to a more differentiated understanding of who may be most at risk of negative outcomes from social media use—and under what cognitive conditions such effects are amplified.

How to write a paper in a day
Speaker: Lies Notebaert, The University of Western Australia
<p>What happens when seven researchers -from a first-year PhD student to an Emeritus Professor- gather on Rottneest Island (Wadjemup) to take on the challenge of writing a full academic paper in a single day? One summer day in 2025, our team from the Centre for the Advancement of Research on Emotion (CARE) took on this challenge, beginning at 10 a.m. and submitting to a journal by 8:30 p.m. that evening. In our manuscript, we sought to test a cognitive hypothesis regarding the processes that underpin variation in emotional resilience. Specifically, we examined whether a positive appraisal style and positive expectations about the future predict subsequent resilient outcomes.</p> <p>This exercise formed part of our annual CARE Conference, designed to help early-career researchers step beyond the details of individual projects and reflect on broader research values and frameworks. Through this collective writing challenge, we put into practice questions at the heart of scientific inquiry: Why does our research matter? How do we meaningfully advance knowledge rather than simply add to it? And what makes collaboration truly work?</p> <p>In this presentation, I will discuss the rationale for undertaking this challenge (the why), the processes we used to translate reflection into action (the how), and the factors that made it a productive and memorable exercise in collaborative scholarship (the who).</p>

ASSESSING AND MODIFYING LESS COMMON COGNITIVE BIASES AND CONDITIONS
Session type: Individual Oral Presentation
Time: 15.45-16.45, Tuesday, June 23rd
Location: Room Virgiel
Session Chair: Jeremy Pettit, Center for Children and Families, Florida International University, USA
The Roles of Information-Seeking and Expectancies in Intentions to Seek an Adult Autism Diagnosis
Speaker: Amelia Reynolds, Elizabeth Rutherford Memorial Centre for the Advancement of Research on Emotion, University of Western Australia, Australia
<p>Objective: Advancements in our understanding of autism, and consequent changes to the diagnostic criteria, have created a generation of adults who were not identified in childhood but are now reconsidering their neurodevelopmental history. Research suggests adults who seek an autism diagnosis face unique barriers, but tend to experience positive mental health outcomes upon receiving a diagnosis. This research has, however, focused on adults who have received a diagnosis, and little is known about mechanisms underpinning undiagnosed adults' intentions to seek a diagnosis. Individual differences in information-seeking and expectancies have been identified as underpinning help-seeking behaviours more generally. The present study thus examined the role of individual differences in information-seeking and expectancies in intentions to seek an adult autism diagnosis.</p> <p>Method: Adults (N ≈ 100) varying in the extent to which they thought they might be autistic completed the testing session, which consisted of an information-seeking task permitting participants to seek information about the diagnostic process. Participants' expectancies about the diagnostic process, their anxiety about this process, and their intention to undergo it were also assessed.</p>

Results: If the hypothesis is supported, the results will indicate that individual differences in the types of information participants seek concerning the diagnostic process, as well as their expectancies concerning this process, will statistically predict their anxiety related to and intention to seek an adult autism diagnosis.

Conclusion: Findings will be discussed with regards to limitations and potential implications for researchers seeking to understand mechanisms facilitating and inhibiting help-seeking behaviour in undiagnosed autistic adults.

Imagery rescripting of social support and self-compassion for bullying experience: A micro-trial study

Speaker: Meng Liang, Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium

Objective

Bullying victimization is associated with persistent internalising symptoms and trauma-related cognitions. Such distressing memories are typically vivid, emotionally intense, and negatively self-referential. Imagery Rescripting (IR) aims to modify the meaning of aversive traumatic memory by introducing corrective emotional experiences. However, the comparative efficacy of different protective factors remains unclear, such as self-compassion versus social support.

Methods:

In a randomized micro-trial, 76 adults with bullying experience were assigned to a single-session imagery rescripting intervention incorporating either self-compassion or social support themes. Assessments were conducted at pre-intervention, post-intervention, and follow-up, measuring self-compassion, post-traumatic cognitions, imagery characteristics, and internalising symptoms. Repeated-measures ANOVAs were used to evaluate intervention effects and the maintenance of changes.

Results:

Significant main effects of time were observed across all primary domains. Specifically, self-compassion increased significantly ($F=59.85, p<.001$), while post-traumatic cognitions decreased ($F=9.73, p<.001$). Internalising symptoms significantly declined, including anxiety ($F=10.31, p<.001$), stress ($F=15.06, p<.001$), and depression ($F=5.88, p=.004$). Memory characteristics showed changes in vividness ($F=8.77, p<.001$) and sensory detail ($F=2.97, p=.007$). But no significant group and time interactions were found.

Conclusions:

Preliminary findings indicate that imagery rescripting with protective factors effectively modifies trauma-related cognitions and alleviates internalising symptoms in bullying victims. Effects appeared similar across self-compassion and social support elements. Data collection for a control condition is ongoing. The comparable effects of self-compassion and social support suggest flexibility in choosing protective themes for IR.

Effectiveness of Interpretation Bias Modification in Smoking Behaviour among Adults on Probation: A Randomized Controlled Trial

Speaker: Duygu ALTIN, Yalova Probation Directorate, Ministry of Justice, Turkiye

Objective: The aim of this study is to evaluate the effects of a computer-based Cognitive Bias Modification for Interpretation (CBM-I) intervention on smoking-related interpretation tendencies and substance use indicators among individuals under probation supervision in Yalova and İzmir who actively smoke. Smoking prevalence in probation populations in Turkiye is substantially higher than in the general population, highlighting the need for targeted interventions within the criminal justice system. Experimental interventions directly targeting smoking-related interpretation bias remain limited, and comparable randomized controlled studies in justice-involved samples are lacking, underscoring the novelty and significance of the present study.

Method: A two-arm parallel randomized controlled design will be used. The sample size was determined using power analysis, indicating a minimum of 78 participants per group (N=156). At baseline (T0), participants complete a sociodemographic form, ASSIST, a 14-day TLFB, and an interpretation bias assessment. At T1, the intervention group will complete a 60-scenario computer-based CBM-I task, while the control group will receive routine probation guidance. Assessments will be repeated at post-test (T2). Pre-post assessment scenarios were adapted into Turkish from an open-access set, and the intervention scenarios (n=60) were developed by the research team.

Results: Data collection is ongoing and preliminary findings will be presented at the conference. Primary outcomes include changes in smoking-related scenario completion rates and smoking use measured by TLFB, while the secondary outcome is change in alcohol use measured by TLFB.

Conclusion: This study addresses a critical gap in CBM-I smoking interventions and contributes evidence on interpretation bias modification.

Training positive attentional bias, strengthening resilience: The mediating role of affective attentional flexibility in the transfer effects of an online contingent attention training (OCAT) to promote higher stress resilience

Speaker: Patricia Mecha, Department of Personality, Evaluation and Clinical Psychology. Faculty of Psychology. Universidad Complutense de Madrid. Madrid, Spain

Objective: Online attention bias modification interventions are gaining visibility due to their easy accessibility and effectiveness. Nevertheless, it remains unclear how their benefits in improving emotional functioning might transfer to promote stress resilience. Additionally, it remains underexplored what cognitive-affective mechanisms might subservise such type of potential transfer. This study aimed to examine the mediating role of affective attentional flexibility in the effects of a novel online contingent attention training (OCAT) to facilitate resilience outcomes.

Method: Seventy-one participants were randomly assigned to either an active OCAT group or a control comparison condition. The intervention targeted attentional bias modification by reinforcing attention towards positive stimuli. Participants first completed an eye-tracking paradigm to measure pre- to post-training effects in affective attentional flexibility. Self-report measures of emotional symptoms, well-being and perceived stress were further administered at pre- and post-intervention, and at a mid-term follow-up period of marked stress. Resilience outcomes were computed by extracting the standardized residuals of the regression between psychological functioning markers and stress levels.

Results: Results indicated a direct effect of OCAT on the enhancement of positive attentional bias. Further, mediation analyses supported a mediational role of affective cognitive flexibility changes in the effects of OCAT on short-term increases in stress resilience outcomes.

Conclusions: These findings provide preliminary evidence that affective attentional flexibility represents a key mechanism underlying the effects of the OCAT training on resilience.

Therefore, targeting these cognitive processes emerge as essential for the development of future cognitive interventions aimed at promoting adaptive responses to stress.

COMPUTATIONAL METHODS TO STUDY COGNITIVE BIASES IN SOCIAL MEDIA LANGUAGE

Session type: Keynote lecture

Time: 17.00-18.00, Tuesday, June 23rd

Location: Aula P.J. Triest

Session Chair: Johan Bollen, University of Amsterdam and Indiana University

Social media platforms have amassed billions of users who leave detailed longitudinal traces of their cognitive and affective states in the content that they post and engage with. Our research leverages computational approaches—including natural language processing, machine learning, and AI—to extract signals related to mental health status from large-scale social media datasets, with a particular focus on the role of cognitive biases in the development and dynamics of internalizing disorders. We show that individuals with depression, as well as those who contact suicide helplines, exhibit significantly elevated levels of linguistic markers associated with cognitive biases. Beyond quantifying these differences, our work characterizes their nature and type, while demonstrating that these effects persist even after accounting for mood. Furthermore, we demonstrated that social media posts expressing cognitive bias are differentially engaged with by individuals with elevated depression symptoms compared to a control group. Extending this line of work, we have identified connections between cognitive biases and societal polarization, extending the concept of cognitive bias from the individual to the collective social level. Taken together, this work points towards the possibility of computational interventions that encourage forms of communication and interaction that are more conducive to individual well-being and social cohesion.

Poster presentations

(in alphabetical order of presenter name)

Assessing Attentional Biases Toward Food: A Comparison of PC- and Virtual-Reality-Based Visual Search Tasks

Presenter: Alla Machulska, University of Siegen

Objective: Although many individuals endorse healthy eating goals, aligning behavior with these intentions remains difficult. Automatic attentional biases toward highly processed food may contribute to this discrepancy. The Visual Search Task (VST) is commonly used to assess such biases. Recently, virtual reality (VR) has been implemented to enhance ecological validity and potentially capture implicit processes more closely linked to actual behavior. However, no study has directly compared attentional bias measured via PC-based vs. VR-based VST. Therefore, the aims of this study were three-fold: (1) to examine the association between attentional biases toward highly versus minimally processed food across PC and VR modalities (convergent validity); (2) to test whether these biases are associated with self-reported eating behavior and behavioral food choice (construct validity); and (3) to explore whether these associations differ by assessment modality.

Method: Healthy participants completed closely matched VSTs on a PC and in VR in counterbalanced order. Identical stimuli were presented in a 4×2 matrix in both conditions. VR version embedded the task in a virtual dining room. Eating-related measures included the Leeds-Food-Preference-Questionnaire and assessments of trait and state food craving. As a behavioral index, participants privately selected either a minimally processed (apple) or highly processed (chocolate bar) snack as compensation.

Results: Preliminary findings will be presented.

Conclusions: Findings may contribute to a better understanding of the role of attentional biases in food decisions with potential implications for maladaptive eating patterns. In addition, they may inform the use of VR in assessing attentional biases.

Predicting Future Depressive Symptoms from Daily Cognitive and Affective Dynamics: A 70-Day Diary Study

Presenter: Annabel De Clercq, Department of Experimental-Clinical and Health Psychology, Ghent University, Belgium

Objective:

Depression is a highly burdensome mental disorder, and despite the availability of effective treatments, many experience residual symptoms and remain vulnerable to relapse. Recent theoretical models propose that cognitive control deficits, cognitive biases, and emotion regulation difficulties interact dynamically to maintain depressive symptoms. However, most studies have examined these processes in isolation and using cross-sectional designs. The present study investigates whether and how daily cognitive-affective dynamics predict future depressive symptoms in individuals at risk for depression.

Method:

A longitudinal diary study is currently being conducted in 155 UK adults at risk for depression. Following a baseline assessment, participants complete brief daily assessments for 70 consecutive days. Daily measures include affect, stress, emotion regulation, coping, automatic thoughts, rumination, and subjective cognitive control, alongside cognitive tasks assessing cognitive control and cognitive biases. mIVAR models will first be used to characterize the network structure and temporal dynamics of the measured variables. Next, dynamic features derived from these repeated assessments (e.g. mean levels, variability, instability, inertia) will serve as predictors in machine learning models predicting depressive symptom severity and individual depressive symptoms at follow-up.

Results:

Data collection is ongoing. Preliminary adherence data (up to day 34) indicate good participant engagement, with an average completion rate of 73.8% so far.

Conclusion:

This study will examine whether patterns of cognitive and affective functioning in daily life contribute to future depressive symptoms and may help identify dynamic risk markers for depression.

From Social Interaction to Self-Evaluation: Attentional Mechanisms Underlying Rumination in Social Anxiety

Presenter: Binghui Li, Department of Psychology, National University of Singapore, Singapore

Following a naturalistic social interaction in a dyad, this study investigated attentional biases during a performance evaluation task, and their role in linking post-interaction state anxiety with post-event rumination (PER) in individuals with and without social anxiety. A total of 166 participants (83 dyads, final n = 161) completed a dyadic interaction, subsequent interaction recording review, and an evaluative task while eye movements were recorded. Consistent with hypotheses, socially anxious participants reported higher state anxiety before and after interaction, higher level of depressive symptoms, and elevated post-event rumination relative to controls. Eye-tracking results revealed a significant attentional bias toward negative self-relevant evaluative content among socially anxious participants, reflected in increased fixation frequency and dwell time, suggesting a self-focused attentional style that may amplify fear of negative evaluation. Both groups showed strong attentional preference to positive evaluative stimuli, though interpretation of such cues may differ between anxious and non-anxious individuals. Moderated mediation analyses indicated that post-interaction anxiety predicted rumination in both groups, with stronger effects in the social anxiety group. However, attentional bias mediated this link only among controls. Exploratory analyses further showed an exaggerated “liking gap” among socially anxious participants, who underestimated their performance significantly. Findings highlight evaluative attention and distorted self-appraisals as mechanisms in the maintenance of social anxiety.

Approach-Avoidance Bias Towards Facial Emotions in Loneliness: A Virtual Reality Study

Presenter: Ceyda Kiyak, Psychology, University of Southern Denmark, Denmark

Objective: Loneliness has been linked to approach-avoidance bias, yet its behavioural manifestations remain poorly understood. Hence, this study examined whether loneliness influences embodied approach-avoidance responses to facial emotions using immersive virtual reality (VR), moving beyond cognitive biases to real-time behaviour measurement in immersive real-world settings.

Method: A Virtual Reality experiment (N = 94) measured head-movement amplitude and velocity as indices of approach and avoidance to emotional faces (neutral, happy, angry, sad), controlling for depression, social anxiety, and alexithymia. A validation study ensured accurate emotion recognition of virtual stimuli.

Results: Approach responses were largely unaffected by loneliness. In contrast, avoidance responses showed consistent, emotion-specific modulation. Loneliness was associated with increased avoidance, particularly to neutral and negative emotional cues, though effects varied across experiments (reduced vs increased withdrawal). Effects were stronger for amplitude than velocity, suggesting loneliness influences the extent rather than speed of avoidance. No consistent effects emerged for positive (happy) faces. Loneliness primarily increases avoidance-related embodied behaviour rather than approach, indicating a context-dependent and asymmetric motivational pattern.

Conclusion: Findings support models of dysregulated threat processing and highlight that loneliness is expressed not only cognitively but also in embodied social behaviour.

Imagery-Based CBM-I Improves Autobiographical Memory Valence in Major Depressive Disorder

Presenter: Daniel Mandelbaum, the hebrew university of Jerusalem

Major Depressive Disorder (MDD) is characterized by cognitive biases such as negatively interpreting ambiguous information and recalling negative autobiographical memories. Cognitive Bias Modification for Interpretation (CBM-I) is a promising and scalable intervention that targets interpretation bias to reduce depressive symptoms, but its broader cognitive effects remain underexplored. This study examined whether a six-day imagery-based CBM-I (i-CBM-I) intervention could influence depressive symptoms and, crucially, whether its effects extend to modify autobiographical memory valence in individuals with MDD. Seventy-six participants with diagnoses of MDD were randomly assigned to either a positive i-CBM-I group or a neutral i-CBM-I control group. Using a within-subject design that included a one-week baseline stability period, we assessed interpretation bias (Ambiguous Scenarios Test for Depression), depressive symptoms, and autobiographical memory valence (Autobiographical Memory Test) at three time points: baseline (T1), pre-intervention (T2), and post-intervention (T3). During the intervention week (T2–T3), the Positive i-CBM-I group demonstrated significantly greater reductions in depressive symptoms compared to the Neutral group. Most notably, the study provided novel evidence of transfer to memory: the Positive i-CBM-I group showed a significant increase in positive autobiographical memory valence, whereas the Neutral group did not. Furthermore, within-subject analyses confirmed that improvements in the Positive group were specific to the intervention phase. These findings support the Combined Cognitive Biases Hypothesis, suggesting that modifying interpretation bias may indirectly reshape how individuals recall their personal past. Overall, the results highlight the potential of self-guided, imagery-based interventions to not only alleviate depressive symptoms but also target core cognitive vulnerabilities in MDD.

The interplay between cognitive and emotional processes in depression: a cross-sectional network approach

Presenter: Gabrielle Van Tomme, Department of Clinical Experimental and Health Psychology, Ghent University, Belgium

Depression is a highly prevalent mental disorder, and although cognitive behavioural therapy remains the treatment with the strongest empirical support, many patients remain at risk of relapse. Recent theoretical developments have expanded Beck’s classical cognitive model of depression by integrating findings on cognitive control deficits, cognitive biases, and emotion regulation difficulties. These mechanisms are thought to interact, leading to sustained negative affect and depressive symptoms. However, studies have mostly examined these factors in isolation, leaving their interrelations within an integrated cognitive model largely untested. This cross-sectional study aims to address this gap by examining the interplay between key mechanisms proposed in an integrative cognitive model of depression using online self-report questionnaires and cognitive tasks. 500 participants at risk for depression completed measures of emotion regulation, depressive symptoms, cognitive distortions, early adverse events, automatic thoughts, dysfunctional attitudes, coping and subjective cognitive control, alongside tasks assessing cognitive control, attention, interpretation, and memory bias. Data was analysed using a network approach, including Gaussian graphical models (GGM) to examine associations between variables, and Bayesian networks (Directed Acyclic Graph, DAG) to explore potential causal pathways. In the GGM, automatic thoughts emerged as a central hub, linking depressive symptoms with interpretation bias, memory bias and rumination. In the DAG, interpretation bias and rumination are suggested to be potential starting mechanisms, both linked to cognitive and emotional processes.

This study supports the notion of an integrative model of depression that connects cognitive content, cognitive biases, cognitive control and emotion regulation and helps to identify central treatment targets.

Itchy, Burning, or Prickly? A Network Approach to Describing Ambiguous Somatosensory Stimuli in Chronic Pain and Chronic Itch Populations.

Presenter: Isabelle Kaiko, Health, Medical and Neuropsychology Unit, Leiden University, Netherlands

Objective:

Individuals with chronic itch or chronic pain often show altered processing of somatosensory information, including heightened sensitivity and a tendency to interpret ambiguous sensations in line with their primary symptom (i.e., pain/itch). This study examines how chronic itch and chronic pain patients differ from healthy individuals in describing their experience of ambiguous somatosensory stimuli.

Method:

Participants completed a battery of questionnaires assessing cognitive–affective factors (e.g., attention to bodily sensations, catastrophizing, sensory processing sensitivity, emotional processing). They then receive four types of ambiguous stimuli administered by an experimenter. For each stimulus, participants first described their expected sensations and intensity, followed by their perceived sensations after presentation. Sensations were described using a standardized list of 46 somatosensory descriptors that span pain-like, itch-like, and other sensory qualities.

Results:

Preliminary analyses will be presented. We will examine the degree to which individuals with chronic itch or chronic pain “align” their descriptions with their primary symptom domain (e.g., increased use of pain-related terms in chronic pain). Differences in expectation-perception consistency across groups will be explored, as well as whether descriptor networks differ structurally between populations. Additional analyses will consider how interoceptive accuracy, emotional awareness, catastrophizing, and attentional tendencies contribute to descriptive patterns.

Conclusion:

This study aims to clarify how chronic symptom populations interpret ambiguous somatosensory input, and whether cognitive, emotional, and interoceptive factors shape these interpretations. Understanding these mechanisms may help explain why symptom-specific perceptual biases emerge and persist in this population.

Positive and negative interpretation biases assessed with naturalistic ambiguous facial stimuli and their associations with mental health

Presenter: Johanna Bück, Clinical Psychology and Psychotherapy, Department of Psychology, University of Siegen, Germany

Objective

Previous research has shown that individuals with mental disorders tend to interpret ambiguous facial expressions more negatively than healthy individuals. However, most of these studies rely on morphed faces, which may have limited ecological validity.

In addition, little is known about positively biased interpretations of ambiguous facial expressions and their potential protective role in mental wellbeing.

The present study therefore aimed to systematically examine biased interpretations of naturalistic ambiguous facial expressions and their associations with negative and positive mental health.

Method:

Participants completed an Emotional Interpretation Task in which they selected one of four emotions (happy, sad, fear, or anger) or a neutral option for each facial expression. Stimuli consisted of images extracted from video recordings of emotional expressions and were

presented at varying levels of emotional intensity. Analyses focused on responses to stimuli with low and moderate emotional intensity, as these were considered most ambiguous. In addition, participants completed a series of self-report measures assessing social anxiety, depression, aggression, and positive mental health.

Results:

Preliminary results will be presented.

Conclusion:

Findings may contribute to a better understanding of biased interpretations of ambiguous facial expressions and their associations with both negative and positive mental health, thereby providing a more differentiated view of their role in psychological functioning.

Biased belief updating across mental disorders – a transdiagnostic meta-analysis

Presenter: Mara Grigo, Dept. of Psychology, Clinical Psychology and Psychotherapy, Philipps-University of Marburg, D-35032 Marburg, Germany

Cognitive models of mental disorders conceptualize dysfunctional beliefs – such as negative assumptions about the self, the world, or the future – as central mechanisms in the development and maintenance of psychopathology. Accordingly, these beliefs are regularly targeted in cognitive interventions. Empirical findings suggest that individuals with depression in particular experience difficulties in adjusting dysfunctional beliefs, even when confronted with unexpectedly positive information. More recent evidence indicates that such biased belief updating may also contribute to the development and maintenance of other mental disorders and may therefore be of transdiagnostic relevance.

The aim of the present preregistered meta-analysis is to systematically examine the extent to which biases in belief updating are associated with psychopathological symptoms. In doing so, we differentiate between the processing of unexpectedly positive versus unexpectedly negative information. In addition, we examine whether the strength and direction of these biases differ across mental disorders and depending on methodological variations in the assessment of belief updating.

A systematic literature search was conducted in November 2025 in the electronic databases PsycINFO, Cochrane Library, EMBASE, Web of Science and PubMed to identify eligible studies. The study screening will be completed in March 2026, and data extraction is expected to be finalized by April 2026. Meta-analytic analyses will be conducted thereafter and completed by May 2026. Preliminary estimates of the mean true effects (Pearson's r) will be presented separately for the type of information to be integrated (positive vs. negative) and across different mental disorders, using random-effects and mixed-effects models.

Planned study procedure for a randomized-controlled trial comparing an imaginal retraining, an approach-avoidance intervention, and an active control group

Presenter: Mareike Röttger, Department of Psychology & Center for Cognitive Neuroscience, University of Salzburg, Austria

Objective: Since mental imagery plays a strong role in food craving processes, performing approach and avoidance movements in the imagination might enhance food-specific approach-avoidance intervention effects. While such Imaginal Retrainings have shown beneficial effects on high-caloric food craving in daily life when compared with a wait-list control group, their effectiveness in daily life has not yet been compared with a non-imaginary approach-avoidance intervention.

Methods: A randomized controlled trial (RCT) will be conducted to compare (1) an app-based Imaginal Retraining, (2) an app-based approach-avoidance intervention, and (3) an active control group. All conditions will include food stimuli that are individually selected by the participants. 165 participants will perform their respective task daily over the course of ten days in everyday life. The Imaginal Retraining will require participants to imagine food-specific approach and avoidance scenarios and will be informed by a currently ongoing pilot study.

The approach-avoidance intervention will require participants to push or pull their horizontally-held phone. The active control group will perform an imagery distraction task. Craving and consumption of the individualized foods will be assessed on three pre-intervention and three post-intervention days, while we also perform follow-up assessments after one week and one month. Further outcomes assessed at pre-intervention, post-intervention and follow-up include approach bias, perceived self-regulatory success, and craving experience questionnaire scores. We will also assess restrained eating style as a potential moderator of training efficacy.

Conclusion: The goal of this poster presentation is to receive feedback on this planned RCT before the data collection starts.

Conditioned Expectations Potentiate the Perception of Anger in Ambiguous Facial Expressions

Presenter: Roza Mejza, Department of Differential Psychology and Personality Research, Philipps-University Marburg, Marburg, Germany

Objective: Expectations are generally known to shape perception. Building on this within a social context, the current study investigated whether expecting to see an angry facial expression modulates the perception and neural responses to a mid-intensity angry face. **Method:** N=53 healthy participants underwent an initial expectation acquisition and a subsequent test phase. During the acquisition phase, a differential aversive conditioning paradigm was applied. One conditioned stimulus (CS_neutral) was paired with a range of neutral facial expressions and another (CS_angry) with a range of angry facial expressions in order to condition expectations of neutral versus angry facial expressions, respectively. In the test phase, participants were presented with a mid-intensity angry facial expression preceded by either CS_neutral or CS_angry. We assessed subjective anger intensity ratings and event-related potentials indicative of structural-perceptual processing of faces (N170) and of sustained attentional and motivational processing of emotionally salient stimuli (LPP).

Results: Subjective anger intensity ratings and the LPP amplitude in response to the mid-intensity angry face were significantly greater when the face had been preceded by CS_angry vs. CS_neutral. No such effect was found for the N170 amplitude.

Conclusion: Those findings indicate that expecting to see an angry person enhances the subjective perception of anger and enhances neural markers sensitive to emotional salience. This finding is potentially relevant for understanding how our expectations influence perception of affect in daily social interactions.