

EMOTIONS2023



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Tilburg University

Program book

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Keynotes

The Promise and Possibility of Discrete Data for Emotion-Related Research

Aaron Fisher - University of California, Berkeley

Wednesday, October 4, 8:45–9:45, DZ2

Traditionally, the field of psychology has measured emotion variables continuously and employed correlational methods derived from the general linear model to analyze them (e.g., regression, multilevel models, structural equation models). Of course, these methods have yielded decades of insights into the form and function of human emotion. However, like the proverbial fish who does not know that it is in water, the ubiquity of our contemporary methods sometimes blinds us to their limitations, and to the possibilities that lie outside of them. For instance, we rarely take full advantage of time, specifically the element of timing.

Emotion is a dynamic, time-varying phenomenon and much of our current cutting edge emotion science is conducted with repeated measures and time series designs. However, in estimating the statistical parameters associated with these methods—the slopes, autoregressions, and variability measures—we are required to aggregate across time points, losing the capacity to examine each point in time independently. Lost is information on timing, frequency, duration, and sequence. These measurements require discrete data representations.

Invoking the notion of discrete data, especially for ostensibly continuous constructs like emotion, inevitably provokes

a negative response from researchers. We are told that we “lose information” when we discretize continuous data. And, certainly, this can be the case, especially when we try to retrofit discrete data into linear models that are optimized for continuous inputs.

In the present talk I will describe two parallel areas of research in my lab that demonstrate the promise and possibilities of discrete data representations in emotion research. First, I will discuss methods for effectively and validly discretizing multivariate emotion data into discrete compound emotion states. Next, I will present recently developed information theoretic algorithms that we have created for building compound state-context sets, which can then be used to make accurate predictions about discrete behaviors and events. In all, I hope to demonstrate the promise and possibility of discrete data structures and to illuminate the new and exciting areas of description, prediction, and intervention that these approaches open to us.

Emotion Processing in Homo and Pan

Mariska Kret - Leiden University

Wednesday, October 4, 13:15–14:15, DZ2

Evolution prepared group-living species, (non)human primates included, to quickly recognize and adequately respond to conspecifics' emotional expressions. Different theories propose that mimicry of emotional expressions facilitates these swift adaptive reactions. When species unconsciously mimic their companions' expressions of emotion, they come to feel

reflections of their emotions that influence emotional and empathic behavior. The majority of emotion research has focused on full-blown facial expressions of emotion in humans. However, facial muscles can sometimes be controlled; humans know when to smile, and when not to. In this talk, I therefore argue for a broader exploration of emotion signals from sources beyond the face or face muscles that are more difficult to control. More specifically, I will argue that implicit sources including the whole body and subtle autonomic responses including pupil-dilation are picked up by observers and influence subsequent behavior. Across different primate species, seeing a conspecific being emotional and expressing that in one way or another, immediately and automatically attracts attention, yields mimicry and triggers action tendencies in observers. Taking a comparative approach, I investigate similarities and differences in the perception of emotions between humans, chimpanzees (*Pan troglodytes*) and bonobos (*Pan Paniscus*).

Between Us: How Cultures Create Emotions.

Batja Mesquita - KU Leuven
Thursday, October 5, 10:15–11:15, DZ2

I will take you on the journey that my own research has taken me to show that emotions are not universal responses coming from within, but that we craft our emotions to attune them to the values, norms, and practices of the cultural worlds outside our individual selves. Emotions are learned and co-constructed in the course of our many everyday social interactions. What makes us human is not that emotions are identical for all but that they connect us to others, in our direct environment and in our

broader cultural context. I argue that appreciating that emotions are fundamentally linked to our outside worlds – and that we have a role in creating and changing them – is a bridge to more effective relationships in all of the many multicultural spaces in our communities.

Constructing Emotion

Kristen Lindquist - University of North Carolina at Chapel Hill
Friday, October 6, 11:15–12:15, DZ2

Questions about the nature of emotion are some of the most enduring in psychology and neuroscience. We have been studying emotion scientifically for over a century, but answers to questions about the nature of these important states have remained elusive. Traditionally, attempts to weigh in on the mechanisms of emotion have used a single level of analysis and focus almost exclusively on cognitive, neurophysiological, or cultural mechanisms. In this talk, I discuss work that spans all three. I will begin by showing experimental evidence that emotions are mental states characterized by cognitive features such as valence, arousal, and situated semantic meanings. Next, I'll demonstrate that these features are the product of interactions amongst distributed brain networks that predictively regulate visceromotor outputs by making best guesses about adaptive actions. Finally, I'll close by showing that such predictions are learned via experience within particularly cultural contexts. Together, this work forms the basis of a new constructionist model in which emotions are both deeply embodied and encultured states.

Workshops

Analyzing Affective Language: Psychological, Linguistic, And Computational Approaches

*Martijn Goudbeek & Emiel Krahmer, Tilburg
University*

Friday, October 6, 14:00–17:00, Cube 213

Abstract: When humans produce language, they almost inevitably produce language that is affectively colored. For example, they include emotion terms (e.g., anger, joy, fear, guilt, or pride), use affectively laden nouns (friendship, war, torture, peace) or adjectives (beautiful, delicious, merry, depressed, aggressive, unreliable). In addition, affective language may be more subtly colored by a larger proportion of first-person pronouns (signaling negative affect) or adjust their grammar to change focus (e.g., we lost vs they won). Finally, higher levels of analysis such as abstractness and politeness have also been shown to be influenced by the affective state of the speaker. The central aim of this workshop is to present and contrast the multitude of ways that can be used to analyze affective language, focusing on psychological, linguistic, and computational approaches. Affective language has, for instance, been analyzed using manual coding schemes (e.g., the Linguistic Category Model), manual annotation by lay participants or experts, automatically counting words based on (affective) category membership or more sophisticated computational approaches ranging from still relatively straightforward bag of words approaches to sentiment analysis based on deep neural networks. The advantages and disadvantages of these methods, the specific

kind of information they provide, the extent they can complement each other, and what they can learn from each other will be a recurring theme in this workshop.

Emotions In Relationships

*Laura Sels & Martine Verhees, Ghent
University & KU Leuven*

Friday, October 6, 14:00–17:00, Cube 15

Abstract: Emotions are inherently social. They are continuously elicited, altered and regulated in the presence of (and through) others. How emotions operate in close relationships, such as those between parents and children or romantic partners is especially of interest, because these are the interactions in which emotions are elicited and shared most often and most intensely. Fortunately, research that investigates the interplay between emotions and relationships has seen a rapid increase in the past years because of a growing awareness of the importance of the interpersonal perspective on emotions and the availability of appropriate research technologies, methods, and statistical techniques. The goal of this workshop is to introduce you to this wonderful field, and/or getting to know fellow relationship researchers. We will start with the question: why would you bother with emotions in relationships? Besides reviewing its importance, we will also discuss the rise and evolution of the field. Next, several relationship researchers will shortly introduce their research, demonstrating the diversity of this domain, and providing a glance into its state-of-the art. After a break, we will continue on a methodological note,

discussing ways to measure emotions in relationships and challenges, also including data-analytical issues. We will end with a short group discussion about the field and future directions. Our aim is to have participants leave the workshop inspired to delve into this field (even more).

Psychophysiology In Emotion Research

Stefanie Duijndam & Nina Kupper, Tilburg University

Friday, October 6, 14:00–17:00, Cube 214

Abstract: This workshop is hosted by Tilburg University's behavioral physiology lab (GO-LAB) and will provide an overview of the design and data processing considerations particular to collecting peripheral psychophysiological measures. It is intended for those who are relatively new to psychophysiology but are interested in incorporating these methods into their (emotion (regulation)) research. The first part will be focused on collecting psychophysiological data in a laboratory setting. We will start with a presentation that reviews the current state of the art with respect to psychophysiology in emotion (regulation) research, and we will discuss the importance and benefit of psychophysiology. Then, after a short break, we will continue with how to measure psychophysiology in the context of emotion research. Using hands-on exercises, we will focus on what adding psychophysiology would mean for research design, what measures to use, and what to expect when analyzing the data. After the second break, we will focus on new ambulatory technologies. After the presentation, on novel technological opportunities for the study of emotions in ecological momentary assessment studies,

attendees will share their ideas on and experiences with new technologies amongst each other in smaller groups. We will end with a discussion and wrap up. The goal is for participants to leave the workshop with the knowledge and resources to design and implement a study utilizing recordings of peripheral physiological data.

Designing Your Own Experience Sampling Study To Capture Emotions In Daily Life

Eeske van Roekel, Dominique Maciejewski & Yasemin Erbas, Tilburg University

Friday, October 6, 14:00–17:00, Cube 212

Abstract: A core feature of emotions is that they change over time, requiring that methods to study emotions capture these dynamics. A prominent way for the assessment of emotions is the Experience Sampling Method (ESM). In ESM, individuals rate their emotions multiple times per day across days, weeks or months using smartphone apps. ESM has gained immense popularity to study emotions in daily life, due to recent technological advances and because it has many advantages over more traditional survey methods (e.g., high ecological validity and low recall bias). Yet, due to the many decisions that need to be made regarding the design of an ESM study (e.g., study duration, sampling scheme, assessment frequency), it can be difficult to decide on the best fitting design for your research question. Additionally, although ESM is growing in popularity, there has been little systematic evaluation of psychometric properties of self-report instruments to measure emotions in daily life. Based on state-of-the-art research, the current workshop provides an overview of the decisions that need to be made when

designing an ESM study, including a discussion on how to best measure emotions in daily life.

Analyzing Experience Sampling Data to Study Emotions In Daily Life

Joran Jongerling, Tilburg University

Friday, October 6, 14:00–17:00, Cube 17

Abstract: The Experience Sampling Method (ESM) leads to very rich data on emotions, with multiple measurements per day per person, and across days, weeks or months. This can provide unparalleled insight into emotional processes as they unfold over time, but getting this insight requires analyzing large amounts of data with less common and sometimes complex analysis techniques. This workshop will provide participants with hands-on experience, guidance, and tips & tricks for the analysis of intensive longitudinal data. We will practice with data-preparation and wrangling, analyzing data using multilevel regression and (vector) autoregressive models, and interpretation of output, using the open software R. In addition, we will practice testing for measurement invariance with ESM data, which is a crucial psychometric quality check needed for valid results and conclusions in ESM research. A computer with internet connection is required for this workshop.

Using m-Path As A Tool For Tracking Emotions In The Wild

Merijn Mestdagh & Stijn Verdonck, KU Leuven

Friday, October 6, 14:00–17:00, Cube 36

Abstract: In this workshop, we introduce m-Path (www.m-Path.io), an online platform developed at KU Leuven in which we provide practitioners and researchers with a unique insight into a client's emotional daily life through mobile technology. By focusing on the specific interpretation and contextualization of someone's emotions, m-Path aims to provide a personalized and nuanced picture of someone's mental health status. By repeatedly surveying clients via a mobile application during their daily routine, researchers and clinicians learn which triggers exacerbate or improve a person's emotions, how they are interrelated or how clients typically attempt to cope with them. Further, m-Path can be used therapeutically to alter someone's emotions via everyday interventions. Using concrete cases, we will discuss how m-Path can be used to answer different research questions in daily life, paying attention to both study design and data interpretation in our online dashboard. A smartphone + computer with internet connection is required for this workshop.

Symposia

Neuro-Psychological Vulnerability and Resilience Factors Across Development

Chair(s): Anna Tyborowska

Wednesday, October 4, 10:00–11:30, Auditorium DZ1

Abstract: The likelihood of developing stress-related disorders is increased during multiple sensitive life-periods, characterized by dynamic changes in neurobiological and social-emotional systems. This symposium explores specific factors and mechanisms that underlie and contribute to vulnerability for as well as resilience against development of stress-related symptoms, showcasing studies that span a wide developmental timespan – from prenatal until young adulthood. A multi-faceted approach is adapted that combines a variety of longitudinal measures and their associations with real-life stress. First, starting with the pre- and post-natal environment, factors promoting maternal-infant bonding are examined that may benefit social-emotional development of the offspring. Next, the impact of the infant environment (center-based childcare) is investigated with respect to long-term development of the hypothalamic-pituitary-adrenal axis across childhood and adolescence. The following talks focus on neural networks associated with threat and stress, and their potential predictive value for symptom development and real-life stress responses. First, adolescent threat-related neural responses of the amygdala are associated with both vulnerability and resilience to future stress in young adulthood. Finally, correlational evidence in young adults is presented on how real-life affective stress reactivity is driven by attentional reorientation mechanisms associated with the salience network.

Talk 1: Mindfulness During Pregnancy And Maternal-Infant Bonding: Longitudinal Associations With Infant Temperament And Development

Noor de Waal, Paul Lodder, Ivan Nyklíček, Lianne P. Hulsbosch, Marion I. van den Heuvel, Katleen van der Gucht, Elien. de Caluwé, Victor J. M. Pop, Myrthe G.B.M. Boekhorst - Tilburg University

Introduction: Maternal love and caregiving are pillars for optimal child development and may affect infant outcomes from pregnancy onwards. The present study examined whether different facets of trait mindfulness in pregnant women and pre- and postnatal maternal-infant bonding were associated with infant temperamental and social-emotional outcomes.

Methods: During their participation in a prospective perinatal cohort study, 408 Dutch women (Mage = 31.33, SD = 3.59) completed online questionnaires during each trimester of pregnancy and around 10 weeks, 6 and 12 months postpartum.

Results: Path analyses demonstrated that pre- and postnatal bonding were positively related. Additionally, the mindfulness facet non-judging was associated with higher pre- and postnatal bonding and fewer social-emotional problems at 12 months of age. Maternal trait mindfulness and bonding levels were not related to infant temperamental outcomes.

Conclusions: Adopting an accepting and non-judging attitude during pregnancy may promote positive feelings of bonding towards the infant, both prenatally as postpartum, and benefit the infant in terms of having fewer social-emotional problems in the first year of life. Our findings emphasize the importance of maternal mindfulness for bonding and child development.

Talk 2: Early Attendance To Centre-Based Childcare And Diurnal Circadian Cortisol Throughout Childhood

Nicole Rheinheimer, Larissa N.N. Rosalia, Carolina de Weerth - Radboud University Medical Center

Introduction: In many Western societies, infants start receiving centre-based childcare (CBC) early in life. This implies parental separation, less one-on-one contact and an unfamiliar environment, all of which may be stressful for infants. Accordingly, previous research found increased levels of the stress hormone cortisol on days infants attended CBC as compared to days at home. This is the first study to investigate whether young infants attending CBC show lasting alterations in cortisol production later in life. The protective role of nightly room-sharing with the parents will also be explored.

Methods: In a longitudinal prospective study (N=193), mothers reported on sleeping arrangements, and number and hours of non-parental care arrangements in the first six months of life. Circadian cortisol was measured on two consecutive days upon awakening, at 11:00h, 15:00h and 19:00h at ages 1, 2.5, 6, 10 and 14 years. Analyses are performed using multilevel mixed-model designs.

Results: Data-collection has been completed and preregistration is in preparation.

Conclusion: We expect to find a positive association between CBC attendance and cortisol production throughout childhood. Our findings will give first insights into the links between early CBC attendance and Hypothalamic-pituitary-adrenal axis development.

Talk 3: Neural Threat Responses In Adolescents: Associations With Symptom Development During Covid-19

Anna Tyborowska, Yvonne van den Berg, Mahur M. Hashemi, Hannah C.M. Niermann, Antonius H.N. Cillessen, Ivan Toni, Karin Roelofs - Radboud University

Introduction: Action-preparatory activity supporting defensive stress reactions, such as the amygdala, has been posited as a marker for stress-resilience. COVID-19 lockdowns were used as two pervasive stressors to prospectively investigate the predictive value of neural threat-responses towards symptom development.

Methods: At Baseline, 17-year-old adolescents (n=64) did the fMRI-adapted Go/Nogo Under Threat (GUNT) task, where threat-anticipatory reactions and transition to action are evoked to

avoid a shock. Follow-up assessments were conducted before COVID (age 20), during the first lockdown (LD1, age 22.5), and second lockdown (LD2, age 23).

Results: The GUNT task quantified neural (thalamic, subcortical, amygdala) and physiological (bradycardia) markers of threat-anticipatory freezing and transition to action. Threat-anticipatory amygdala responses (age 17) were linked to stressor resilience: self-reported anxiety symptoms between LD1 and LD2. However, stronger amygdala responses to low threat cues were associated with stronger anxiety symptoms. Effects occurred over and above early-life stress, COVID-19 stress burden, and symptom changes between age 17 and 20.

Conclusions: The findings suggest that amygdala responses to acute threat provide a marker for resilience against real-life stressors, with adequate threat discrimination signaling resilience and stronger amygdala responses to low threat predicting vulnerability.

Talk 4: Changes In Large-Scale Neural Networks Under Stress Are Linked To Affective Reactivity To Stress In Real Life

Rayyan Tutunji, Martin Krentz, Nikos Kogias, Lycia de Voogd, Florian Krause, Eliana Vassena, Erno J. Hermans - Radboud University Medical Center, Radboud University, Leiden University

Introduction: Young adulthood is a critical period in which the likelihood of developing stress-related disorders is increased. Being able to understand how stress sensitivity develops during this period is thus important to determine and promote mechanisms of resilience. This requires an understanding of neural underpinnings of stress reactivity, and how they relate to real-life settings.

Methods: Using a combined within-subject functional MRI laboratory stress and ecological momentary assessment stress paradigm in first-year college students (n=84), we investigated dynamic shifts in large-scale neural network configurations under stress and how these relate to affective reactivity to stress in real life.

Results: Laboratory stress induction resulted in significantly increased cortisol levels, and shifts in task-driven neural activity. Namely, increased salience network (SN) activation in an oddball task and decreased default mode network activity in a memory retrieval task. Crucially, individuals showing increased SN reactivity specifically in the early phase of the acute stress response also expressed increased affective reactivity in real life.

Conclusions: Our findings provide (correlational) evidence that real-life affective stress reactivity is driven primarily by vigilant attentional reorientation mechanisms associated with SN.

Live Your Emotions: Using Cinema in Emotion Research

Chair(s): Patrik Vuilleumier

Wednesday, October 4, 10:00–11:30, Auditorium DZ4

Abstract: There is an increasing push away from tightly controlled but artificial experiments towards the use of film for emotion research. Film has the capacity to evoke strong emotions in a more naturalistic manner compared to more traditional, static research paradigms. In this symposium, we gather three talks that highlight different lines of research illuminating aspects of emotion from a multimodal perspective. This includes behavioural measurement of the relationship between emotions, physiological recordings such as heart rate and pupillometry, as well as brain imaging data. Talk 1 will describe the role of appraisal in the neural underpinnings of emotion experience. Talk 2 will provide an overview of recent findings on the neurobiology underlying anxiety as researched using film.

Talk 3 will focus on tracking emotional arousal during movie viewing using subjective annotations and pupillometry. In conclusion, we highlight the versatility of using film in emotion research and present our latest findings on the psychological, physiological, and neural correlates of emotion experience from different angles.

Talk 1: Cognitive Appraisal Underlies The Neural Encoding Of Discrete Emotions

Elenor Morgenroth, Laura Vilaclara, Patrik Vuilleumier, Dimitri Van De Ville - Ecole Polytechnique Federale de Lausanne and University of Geneva

Film is increasingly used as a stimulus to study the neural processes underlying emotion in a more naturalistic and thus ecologically valid setting. Here we seek to understand how different appraisals underlie our experience of discrete emotions on a neuroscience level. We combine data from a behavioural study where 43 participants continuously annotated discrete emotions and appraisal for 14 short films, with a brain imaging study where 30 participants watched these films during functional magnetic resonance imaging. We used ridge regression and higher level models to compute maps for specific emotions and appraisals, and to compute contrasts between groups of emotions and appraisals. Finally, we compare if the relationships between items generalise from a behavioural onto a neural domain. We find that discrete emotions can be grouped in distinct clusters based on an appraisal of valence and a self/other distinction, and then report corresponding brain activation patterns. The relationships between different appraisals and between discrete emotions and appraisals generalizes from annotations to fMRI measurements; however, this does not hold up for discrete emotions with one another. We have conducted an investigation of film induced emotion experience with regards to different appraisals. This research supports the notion that the neural representation of emotion experience is highly linked to cognitive appraisal, rather than their being specific ‘programs’ for each emotion.

Talk 2: Using Movies To Probe The Neurobiology Of Anxiety

Peter A. Kirk - University College London

We have learnt that anxiety appears to be associated with a distributed biological network that drives anxiety-relevant processes. However, our understanding of the neurobiology of anxiety has been built on the foundation of tightly-controlled experimental paradigms. The degree to which results from the anxiety literature generalize to more naturalistic settings outside these specific laboratory conditions thus remains unresolved. Using a mix of subjective, autonomic, and neuroimaging measures, we have been extending the anxiety literature to movie watching paradigms. So far, we have been able to demonstrate that anxiety is associated with idiosyncrasies across subjective and biological measures during movie watching. Moreover, these idiosyncrasies appear to manifest themselves in a more dynamic, nuanced manner in contrast to what the task-based literature would predict. Therefore, movies have proved a useful stimuli for probing the neurobiology of anxiety. Detailing temporal dynamics and providing a more mechanistic account of these idiosyncrasies will be vital going forward.

Talk 3: Tracking Engagement And Disengagement During Movie Viewing

Agnieszka Zuberer - University Hospital Tübingen

Naturalistic viewing paradigms have been proposed to provide higher ecological validity as compared to traditional stimulus-response paradigms. Movies provide a temporally evolving narrative, wherein individuals can engage, disengage from and re-engage in their own time and pace. Even though, from a theoretical point of view, this scenario provides rich data to study engagement and disengagement, their underlying behavioural and neural response correlates are difficult to track down. We propose that the combination of retro-active continuous subjective annotations and real-time physiological markers of emotional arousal as measured with pupil size can track moments of engagement in and disengagement from the narrative throughout time. We further present preliminary findings, showing how engagement and disengagement might be underpinned by neural responses by using functional magnetic resonance imaging.

Top Down – Bottom Up: Cognitions and Emotions in Daily Life

Chair(s): Michele Schmitter

Wednesday, October 4, 10:00–11:30, Auditorium DZ2

Abstract: Depression is an impairing psychopathological disorder, characterized by a negatively biased way of information processing. Cognitive biases have been linked to the onset and maintenance of depression, hence cognitive theories posit these biases as the core feature of depression (e.g., Gotlib & Joorman, 2010). Therefore, one of the most effective interventions for depression (i.e., cognitive-behavior therapy; CBT) aims to challenge biased interpretations and memories of past events. Nevertheless, around 40% of patients do not respond to CBT. This requires research into alternative interventions that modify depressive cognition. Based on lab-research promising innovations have been developed, yet, it remains unclear how these findings translate to everyday life. In this symposium, we therefore present several interventions that target depressive cognition in daily life, to account for their dynamic nature. First, Nessa Ikani will present on the interplay between mood, context and memory, as well as findings of a daily smartphone-based intervention to modify negative memory bias. Similarly, Alvaro Sanchez-Lopez will reveal efficacy for a novel online training to reduce negative attention and interpretation biases. Then, Michele Schmitter will explain how physical activity can improve the appraisal of recent memories and finally, Vera Heininga will present findings of a mental imagery intervention as a motivational amplifier for pleasant activities in the context of depression.

Talk 1: The Dynamics Of Memory, Mood And Context In Everyday Life

Nessa Ikani, Leonore Bovy, Piere Sourren, Liva van de Kraats, Martin Dresler, Mike Rinck, Indira Tendolkar, Janna Vrijssen - Tilburg University

Introduction: Lab-based experiments consistently link enhanced recall of negative memories (memory bias) to the etiology and maintenance of depression. As such, memory bias modification is suggested to ameliorate depressive symptoms. However, given that memory bias is not static but highly context dependent, a dynamic approach to its assessment/modification is needed. We will present findings from two ecological momentary assessment (EMA) studies investigating the dynamic interplay between context, mood and memory bias (study 1) and the effects of a memory bias modification training (MBT) enhancing positive memory (study 2).

Method: Study 1 included 191 (currently-, remitted- and never-depressed) individuals. For study 2, 96 dysphoric individuals were randomized to a positive MBT, sham MBT or no training condition. The dynamic assessment and modification of memory bias were conducted using EMA over a 6-day period (8 (training) prompts/day).

Results: Context evaluation was found to be central to memory bias (study 1). Moreover, MBT resulted in a significant increase of positive memory bias, but its effect did not transfer to depressive symptoms. Yet, exploratory analyses showed a buffering effect of MBT in the context of the COVID-19 crisis (study 2).

Conclusion: Findings of both studies highlight day-to-day interactions of bias, mood and context, and also show that this dynamic interplay may serve as a predictor of the development of depressive symptoms and training effects.

Talk 2: Can We Intervene Cognitive Biases During Daily Life Functioning? Effects Of An Online Contingent Attention Training To Modify Emotion Regulation

Alvaro Sanchez-Lopez, Ivan Blanco, Oscar Martin-Garcia, Ernst Koster, Rudi De Raedt - Complutense University of Madrid

Introduction: Laboratory-based contingent attention trainings effectively target cognitive biases and emotion dysregulation. However, its implementation into daily life interventions has been limited. We present two empirical studies testing the efficacy of a novel online contingent attention training (i.e., OCAT) to improve daily-life emotion dysregulation and to buffer the emotional impact of naturalistic stressors.

Methods: Both studies used a 2x2 mixed-design where participants were randomly assigned to receive either 10 days of active or sham-control training during their daily life. Transfer effects were assessed considering day-to-day performance and changes in validated assessments of cognitive biases, emotion regulation and emotional symptoms in the face of naturalistic stress. Multilevel analyses were carried out using within-subjects differences as random effects while testing Group x Time interactions.

Results: In both studies, participants in the active OCAT (vs. control) significantly reduced negative attention and interpretation biases. Cognitive bias changes accounted for decreases in rumination after active training. Further, active OCAT facilitated a buffering effect against anxiety in the face of different types of naturalistic stressors.

Conclusions: OCAT is effective in modifying cognitive biases and promotes adaptive emotion regulation and stress resilience. This opens a promising venue for new online cognitive bias modification interventions.

Talk 3: Physical Activity, Rumination, And Emotional Memory In Daily Life: An Experience Sampling Study

Michele Schmitter, Nessa Ikani, Zhen Zhang, Janna Vrijzen - Radboud University, Pro Persona mental health care

Introduction. Although compelling evidence shows that physical activity prevents and repairs depression and anxiety symptoms, the mechanisms are not well understood. Neurobiological effects point to an improvement in cognitive processes associated with depression and anxiety. The present study extends previous lab-based research by assessing emotional memory and rumination as the working mechanisms of physical activity in daily life, using the experience sampling method (ESM).

Method. A community sample (N=112) was prompted four times a day for seven consecutive days to report on their recent physical activity, emotional memory, rumination, and positive and negative affect.

Results. Physical activity duration and intensity were both associated with emotional memory but not with rumination. Participants rated recent memories as more positive when they had been longer or more intensely physically active since the last assessment point. In line with the antidepressant effect of physical activity, both physical activity duration and intensity, were negatively associated with negative affect, and physical activity intensity was positively associated with positive affect.

Conclusion. The results emphasize the value of measuring physical activity, cognitions, and affect with an ecological valid method in daily life, and consider further research into emotional memory as psychological mechanism of physical activity.

Talk 4: Mental Imagery As A Motivational Amplifier In Daily Life

Vera Heininga, Andreas Bär, Lotte Lemmens, Fritz Renner - University of Groningen, University Medical Center Groningen

Introduction: An important treatment goal in depression therapy is to encourage participation in rewarding activities. Mental imagery, representations and the accompanying experience of sensory information without a direct external stimulus, has been shown to increase the motivation for planned behaviors. In the present study, we investigated the effect of mental imagery on motivation and reward processes in daily life.

Methods: Participants with depressive symptoms (N=59) were randomly assigned to one of the intervention groups: Mental Imagery (MI) or Relaxation (RE). We employed an experience sampling design with 10 assessments per day for 10 days: 3 days baseline; 4 days with two 2-minute exercises per day; 3 days post intervention. We hypothesized that MI 1) enhances motivation to engage in planned activities compared to RE, and that 2) MI strengthens parts of the reward cycle during (i.e., short-term effect) as well as 3) after the intervention phase (i.e., long-term effect; <https://osf.io/kyppe>).

Results: As predicted, MI exercises enhanced motivation ($t(57) = 3.2, p = .002$) and reward anticipation during the intervention phase, but, compared to RE, MI did not enhance active behavior or strengthen the relationship between reward anticipation ($t-1$) and active behavior (t) during or after the intervention phase.

Conclusions: Mental imagery likely acts as a motivational amplifier, but its effects on behavior and real-life reward processes remain unclear.

Emotion Regulation in The Interpersonal Context

Chair(s): Reuma Gadassi Polack, Tel Aviv-Yaffo Academic College

Discussant: Susan Branje

Wednesday, October 4, 14:15–15:45, Auditorium DZ2

Abstract: Emotion regulation is often situated within the interpersonal context: We need to regulate our own emotions in the presence of others (e.g., downregulate anger during conflict), or are called to regulate others' emotions (e.g., comfort a child who has been hurt). This symposium will showcase studies that use dyadic and intensive longitudinal designs to advance our understanding of the interpersonal context of emotion regulation and its implications to mental health. Our first presentation uses two Ecological Momentary Assessment (EMA) studies to examine how different interpersonal contexts moderate adults' emotion regulation strategy choice when regulating one's own emotions, as well as the long-term consequences of emotion regulation choice on one's own mental health. Our second presentation uses two EMA studies to examine adults' empathy as a predictor of individuals' choice to regulate someone else's emotions. Our third presentation utilizes behavioral observations of parent-adolescent dyads to examine behavioral dynamics and regulation during the highly emotional context of conflict. Finally, our fourth study utilizes dyadic EMA to examine whether parents' and adolescents' interpersonal emotion regulation strategies are associated with their own and the others' depressive symptoms. The current symposium will advance our understanding of how and why individuals regulate themselves and others, as well as show potential benefits and costs of interpersonal regulation.

Talk 1: Testing The Strategy-Situation Fit Of Emotion Regulation In Everyday Interpersonal Contexts

Luise Pruessner, Sandra Paul, Ana-Maria Strakosch, Annemarie Miano, Katrin Schulze, Sven Barnow - Heidelberg University, Medical School Berlin

Introduction: The strategy-situation fit hypothesis proposes that emotion regulation (ER) strategies are beneficial for mental health when they align with contextual demands. Previous studies supporting this assumption have focused on the emotional stimuli's properties, thereby neglecting the interpersonal context of ER.

Methods: To address this gap, two ecological momentary assessment studies were conducted to examine whether ER strategies depend on one's interaction partners (close others, nonclose others, being alone) and their link to mental health outcomes. Study 1 (N=424) examined links with current mental health, while study 2 (N=103) tested associations with long-term outcomes one year later.

Results: Our findings showed that reappraisal was used more when alone, suppression was used more among nonclose others, and social sharing was used more with close others. Suppression was linked to higher depressive symptoms only when used in the presence of close others, while suppression when alone was linked to lower depressive symptoms. Moreover, participants who

increased reappraisal when alone and decreased reappraisal following a higher presence of close others experienced improved mental health one year later.

Conclusions: These results suggest that using ER strategies depends on the interpersonal context, and context-specific reappraisal can be a key factor in longer-term adaptiveness. These findings highlight the importance of understanding the social factors of ER.

Talk 2: Empathy Predicts Interpersonal Emotion Regulation Goals In Everyday Life

Eva J. Geiger, Luise Pruessner, Sven Barnow, Jutta Joormann - Heidelberg University, Yale University

Introduction. Although regulating others' emotions is a phenomenon traversing human lives, research has only recently begun to explore the predictors of interpersonal emotion regulation (IER).

Methods. In two ecological momentary assessment (EMA) studies, we tested whether empathy predicts other-focused IER goals and their attainment in everyday life (Ns = 131 and 204). Study 1 explored the relationship between mentalizing and experience sharing and global hedonic and counter-hedonic IER goals (i.e., making others feel better or worse). Study 2 replicated and expanded these findings to empathic concern and personal distress and specific hedonic and counter-hedonic IER goals (e.g., increasing, decreasing, and/or maintaining others' positive and/or negative emotions).

Results. Hedonic IER goals were significantly predicted by higher mentalizing and higher experience sharing in both studies, and higher empathic concern and lower personal distress in Study 2. Counter-hedonic IER goals were predicted by higher experience sharing in both studies, and higher personal distress in Study 2. In contrast, higher empathic concern and higher mentalizing predicted less counter-hedonic IER goals. Higher empathy, except for personal distress, significantly predicted goal attainment.

Conclusions. These findings address a major gap in our scientific knowledge about the predictors of IER in daily life and offer a novel perspective on empathy in social emotion regulation processes.

Talk 3: Using Recurrence Quantification Analysis (RQA) To Characterize Parent-Adolescent Conflict Interactions

Monika H. Donker, Yi Huang, Fred Hasselman, Susan Branje - Utrecht University, Masaryk University, Radboud University

Introduction: The transition to a more equal parent-adolescent relationship during adolescence can go together with many conflicts and negative emotions. However, there are large differences between families in how such conflicts are handled. The goal of the present study is to describe interpersonal behavior of parents and adolescents during conflict interactions and to examine what behavioral patterns are most helpful to foster relationship quality and well-being.

Methods: Videos of 5-min conflict interactions between adolescents (Mage 11 years) and one of their parents were used to continuously (i.e., twice per second) code parent and adolescent behavior in terms of agency/dominance and communion/affiliation.

We will use Cross-Recurrence Quantification Analysis (CRQA) for the quantification of coupling dynamics between the parent and adolescent time series of agency and communion (i.e., how often patterns of behavior observed in one series are repeated in the other, their duration, and predictability). We will examine whether these CRQA indicators are associated with parent-adolescent relationship quality and adolescent well-being.

Results and Conclusions: First results suggest that parent-adolescent dyads differ largely in the predictability of their interpersonal behavior during conflict interactions. The association with outcomes will be presented during the conference. Also, promises and pitfalls of using CRQA in the context of dyadic behavior and emotions will be discussed.

Talk 4: Interpersonal Emotion Regulation And Depressive Symptoms In Parent-Adolescent Dyads: A Daily-Diary Investigation

Reuma Gadassi Polack, Grace J. Chen, Marcia Questel, Haran Sened, Eva J. Geiger, Tom Bar Yosef, Jutta Joormann - Tel Aviv Yaffo Academic College, Yale University, Colgate University, Heidelberg University, Princeton University

Parental depression is a robust risk factor for child depression. However, the transmission mechanism remains unclear. Recent research has focused on interpersonal emotion regulation (IER), or how people respond to others' emotions, as a possible transmission mechanism. Yet, most existing research focused on child outcomes. We address this gap by examining associations between parent and adolescent IER and depressive symptoms using the Actor Partner Interdependence Model. For 28 days, 81 parent-adolescent (age 12-18) dyads completed a dyadic diary, reporting their IER to dyad members' negative affect (NA) and their own depressive symptoms. Preliminary results show that on days in which parents regulate children's NA, parents are more depressed. This result was consistent whether parents employ adaptive (e.g., comfort) or maladaptive (e.g., minimizing) IER. For adolescents, on days in which they regulate parental NA with more maladaptive IER (e.g., co-rumination), adolescents are more depressed. However, adolescents who regulate parental NA with adaptive IER (e.g., co-reappraisal) were less depressed. Own IER was not associated with partners' depression for parents or adolescents. Our results suggest that for parents, regulating their child's NA exacerbates their own depressive symptoms, whereas when adolescents regulate parents' NA with adaptive IER, they benefit. These results highlight the emotional burden of parenting and should inform parent guidance intervention programs.

Linking Cognitive, Social, and Prefrontal Cortex Functioning in Alexithymia

Chair(s): Katharina S. Goerlich and Kristy A. Nielson, Tel Aviv-Yaffo Academic College

Discussant: Kristy A. Nielson

Wednesday, October 4, 14:15–15:45, Auditorium DZ1

Abstract: Alexithymia, a trait characterized by difficulty identifying and describing feelings (DIF, DDF) and externally oriented thinking, is linked to deficits in socio-affective processing. Recent evidence shows alexithymia impairs cognition even in non-emotive contexts, which is related to poorer frontal lobe functioning. This symposium extends recent work by examining the links amongst cognitive, social, and prefrontal cortex functioning in alexithymia. In two studies, Pollatos et al. examined alexithymia in social interactions, finding higher alexithymia associated with greater reactance, limited self-control, resistance to change, and feelings of exclusion (DDF). Goerlich et al. examined interpersonal brain synchronization in dyads during poker playing. Alexithymia was associated with Machiavellianism (DDF) and psychopathy (DIF), and reduced prefrontal synchronization during strategic deception (bluffing). In three studies, Nielson found greater prefrontal cortex dysfunction and atrophy in cognitively intact older adults with higher alexithymia (DIF) during executive functioning. The effects were greatest in women and related to poorer social functioning via measures of psychoticism. These disparate studies show a consistent pattern of difficulties in social functioning associated with poorer frontal lobe integrity in higher alexithymia. Implications for poorer mental and physical health across the lifespan, and exacerbated cognitive decline in aging will be discussed.

Talk 1: Alexithymia Is Associated With Adverse Effects In Social Interactions

Olga Pollatos, Beate M. Herbert, Eva Traut-Mattausch - Ulm University, Charlotte-Fresenius-University, Eberhard-Karls-Universität Tübingen, University of Salzburg

Introduction: Alexithymia is characterized by a difficulty in identifying and describing one's emotions. Recent research has associated differential effects of the alexithymia facets to phenomena of social interactions. Two studies aimed to analyze how alexithymia interact with social reactance and social exclusion.

Methods: In study 1, data were assessed in 61 healthy students (38 women) using a social reactance scenario (a survey on the topic introduction of tuition fees). Study 2 investigated subjective feelings in response to ostracism using a cyberball paradigm in 102 participants (69 women). Alexithymia was assessed by the TAS-20.

Results: In study 1 lower self-control ($r = -.44, p < .001$) and higher levels of reactance and resistance to change ($r = .27, p < .05$) were associated with higher extent of alexithymia (TAS-20 sum score). Study 2 revealed that the effect of ostracism on feelings of exclusion were qualified by alexithymia ($r = .35, p < .001$), mainly driven by the subscale difficulties in describing feelings ($r = .52, p < .001$).

Conclusions: Our data support the hypothesis that alexithymia has adverse effects in social interactions in a situation-specific context. Higher resistance to change (study 1) might be a risk factor for illness as many life-style factors are target areas of change. A more intensive experience of social exclusion (study 2) in everyday life also contributes to adverse effects for mental and physical health with respect to alexithymic trait.

Talk 2: Out Of Sync: Disrupted Prefrontal Brain Synchronization During Bluffing In Alexithymia

Katharina S. Goerlich, Malina Misol, Giacomo Costa, Zhihao Wang, Andre Aleman, Branislava Ćurčić-Blake - University of Groningen, Freie Universität Berlin, Shenzhen University

Introduction: Alexithymia is associated with impairments in social cognition and interaction. One component of social interaction is strategic deception, e.g., bluffing in negotiations or poker games. Here, we hypothesized that prefrontal interpersonal brain synchronization (IBS) would be disrupted in pairs of alexithymic (TAS-20 score ≥ 61) and lexithymic individuals (AL pairs) compared to pairs of two lexithymic players (LL pairs).

Methods: Functional near-infrared spectroscopy (fNIRS) hyperscanning was used to simultaneously measure medial prefrontal IBS in 30 LL and 30 AL pairs during rest, and during bluffing versus honest decisions in a poker game. Additionally, personality assessments were conducted between alexithymia facets, anxiety, depression, and 'dark triad' personality traits.

Results: Initial results from 39 pairs (23 AL) revealed higher-resting state IBS in LL versus AL pairs. AL pairs exhibited significantly reduced task IBS during bluffing than LL pairs. Moreover, alexithymic individuals scored higher on psychopathy, Machiavellianism, depression, and anxiety than lexithymic individuals. Partial correlations controlling for depression and anxiety identified specific correlations between DDF and Machiavellianism, and DIF and psychopathy.

Conclusions: Alexithymia is associated with disrupted prefrontal brain synchronization during strategic deception, providing new insights into the neural mechanisms underlying impairments in social cognition and interaction.

Talk 3: Alexithymia Contributes To Executive And Social Dysfunction And Poorer Neural Integrity In Older Age, Particularly In Women

Kristy A. Nielson - Marquette University, The Medical College of Wisconsin

Introduction: The difficulty identifying feelings (DIF) alexithymia facet is linked to poorer social and executive functioning (EF). Alexithymia increases with age while EF decreases, suggesting alexithymia may worsen age-related cognitive decline. Yet, the links amongst DIF, EF, and neural function are unknown. We used electroencephalography (EEG) and MRI to test the hypothesis that DIF moderates the relationship between EF and frontal lobe integrity in cognitively intact older adults.

Methods: Alexithymia (Toronto Alexithymia Scale-20) and successful stop-signal task (SST) trials were examined with frontal EEG theta power (Exp. 1, 42 young, 45 elders), MRI frontal volumes (Exp. 2, 72 elders), and frontal N2-P3 EEG connectivity (Exp. 3, 46 elders).

Results: Exp. 1: SST frontal theta was lower with age but elevated in higher DIF elders, which is linked to cognitive decline. Exp. 2: Stopping was slower in those with smaller superior frontal (SFG), insula, and rostral middle/inferior frontal (RM-IFG) gyri, and even with larger volumes in higher DIF (esp. women). Exp. 3: In higher DIF, connectivity was lower in anterior cingulate (ACC)-SFG (i.e., response conflict), and in women, higher in ACC-right RM-IFG (i.e., stopping). Each effect was also related to social dysfunction (psychoticism).

Conclusions: In healthy elders, especially women, higher alexithymia (DIF) is linked to poorer EF, social function, and frontal integrity, which may exacerbate age-related cognitive decline.

Emotions in the Perinatal Period: A Multimethod Approach

Chair(s): Myrthe Boekhorst

Wednesday, October 4, 14:15–15:45, Auditorium DZ3

Abstract: The perinatal period is characterized by considerable physiological, emotional, and psychological changes in a parent's life. It is not surprising that up to 20% of women experience psychological distress during the perinatal period, which can lead to adverse outcomes for both the mother and the infant. We present the findings of four studies examining perinatal mental health of parents using multiple methods: quantitative, qualitative, and experimental. First, we will present results on the use of social media as a potential risk factor for depressive symptoms during pregnancy, as well as the use of social media over the course of pregnancy and what motivates women to use social media during pregnancy. Second, machine learning was used to examine potential risk factors for postpartum maternal depression, for which preliminary findings will be presented. Third, maternal postpartum mental health may be improved with the mindfulness-based intervention "Mindful with your Baby", of which the effectiveness is examined in a RCT. The outcome measures of this RCT are postpartum depression, anxiety and parental stress, mother-infant behavioral interaction, and neural synchrony between mother and infant brains. Finally, as an addition to research in mothers, a qualitative study explored views and experiences of first-time fathers on the origins and development of paternal-infant bonding during pregnancy and early childhood.

Talk 1: Social Media Use During Pregnancy: Associations With Maternal Psychological Wellbeing

Lotte Muskens, Lianne Hulsbosch, Marion van den Heuvel, Emmelyn Croes, Willem Kop, Victor Pop, Myrthe Boekhorst - Tilburg University

Introduction. Almost all pregnant women in the Netherlands use social media (SM). Therefore, it is important to understand the possible negative consequences for maternal mental health, the use of SM over the course of pregnancy and the motives to use SM.

Methods. Three separate studies were conducted regarding the use of SM. The first study used multinomial logistic regression analyses to examine the association between SM use and prenatal depressive symptom trajectories. The second study investigated the longitudinal course of SM using ANOVAs. In a qualitative study, individual interviews were conducted on possible negative consequences of SM, as well as motivations to use SM during pregnancy. All participants were recruited as part of a large longitudinal prospective cohort study.

Results. There was an association between SM use and prenatal depressive symptoms. Results also showed a significant increase in SM scores over time, from 12 to 20 and 12 to 28 weeks of pregnancy. The interviews revealed that women mainly use SM during pregnancy to gather information, to pass the time and to observe other women's experiences. Women also indicated that they can sometimes feel insecure due to the use of SM.

Conclusions. It is important for healthcare professionals to consider the risks associated with the use of SM during pregnancy and inform pregnant women accordingly. After all, optimal physical and mental health of pregnant women is of utmost importance for both mother and fetus.

Talk 2: Using Machine Learning Methods For The Identification Of Important Risk Factors Of Postpartum Depression

Lisette Sibbald, Marion van den Heuvel, Hedwig van Bakel, Joran Jongerling, Caspar van Lissa, Inga Schwabe - Tilburg University

Introduction. Around 23,000 women suffer from PPD in the Netherlands yearly, making it the most common psychiatric disorder among new mothers. Research suggests that early intervention can prevent an onset, which requires early identification of women at risk for developing PPD. Previous studies have explored the use of machine learning algorithms for this task. Even though the results are promising, these studies have limitations. Often exclusively psychological variables are considered, while ignoring social and biological risk factors. Therefore, the current study utilizes machine learning models that include biopsychosocial risk factors of PPD. We aim to investigate whether these models are accurate at predicting PPD, which risk factors these models include in their predictions, and from what timepoint during pregnancy we can predict PPD.

Methods. Data from the Brabant Study – a prospective cohort study in the Netherlands – will be used that followed (expectant) mothers (N=2800) at 12, 20 and 28 week gestation and 10 weeks postpartum. Machine learning models capable of automatic variable selection will be trained that predict PPD based on antepartum biopsychosocial risk factors (all variables available in Brabant Study). The amount of training data will increase stepwise from using data from the first trimester up until all trimesters. Model performance will be assessed using multiple performance metrics. Results and conclusions. First results are expected mid-2023.

Talk 3: Mother-Infant Bonding In The Brain: Improving Mother-Infant Interactions Via A Mindfulness-Based Intervention

Lianne Hulsbosch, Eva Potharst, Myrthe Boekhorst, Marion van den Heuvel - Tilburg University, University of Amsterdam

Introduction. Poor maternal mental health can negatively affect the mother-infant interaction, which can lead to poorer infant developmental outcomes. The current study examines the effectiveness of a group-based "Mindful with your Baby" intervention. It is hypothesized that this intervention will reduce levels of postpartum depression, anxiety, and parental stress, and improve mother-infant behavioral interaction and increase neural synchrony between mother and infant brains.

Methods. We will screen mothers (N=64) for elevated postpartum depression, anxiety and/or parental stress levels at 8-10 weeks postpartum. Included mothers will be randomized into an intervention group or waitlist control group, with the intervention group receiving an 8-week group-based therapist-guided intervention via a video-conferencing tool and the control group an 8-week self-guided online intervention after a waiting period of 10 weeks. Primary outcomes are improvements in postpartum depression, anxiety and parental stress scores at post-intervention

and improvements in mother-infant bonding and neural synchrony, assessed with video coding in mother-infant interactions and dual-EEG, respectively. Secondary outcomes include change in mindfulness skills, self-compassion, self-reported bonding, infant temperament, mindful parenting, parenting self-efficacy, and personal goals at post-intervention.

Results and conclusions. First results of the preregistered study are expected at the beginning of 2024.

Talk 4: Paternal-Infant Bonding In First-Time Fathers: A Qualitative Study On Pregnancy And Early Parenthood

Noor de Waal, Marion van den Heuvel, Ivan Nyklíček, Victor Pop, Myrthe Boekhorst - Tilburg University

Introduction. The birth of a baby marks a period of profound change in first-time parents. Parental love and warmth, however, already begin to develop during pregnancy, but relatively little is known about this process in fathers. The current qualitative study aimed to explore views and experiences of first-time fathers on the origins and development of paternal-infant bonding during pregnancy and early childhood.

Methods. In total, 30 in-depth semi-structured interviews were conducted with expectant fathers (second or third trimester of pregnancy; n = 10) and fathers of newborns (0-6 months postpartum; n = 11) and toddlers (2-3 years of age; n = 9).

Results. Two major themes were uncovered from inductive thematic analysis of the data: Feelings of bonding and Facilitators of bonding. The first theme was supported with two subthemes: from unreal to concrete and positive emotions. The second theme was supported by four subthemes: experiencing the fetus, birth, interaction, and communication.

Conclusions. Similar to previous studies, our results suggested that paternal-infant bonding originates in pregnancy and that it evolves over time. Seeing or feeling the child, both during pregnancy and postpartum, as well as interacting or communicating with the child, appears to facilitate fathers' feelings of bonding. Including fathers in pregnancy, childbirth, and parenting, and encourage them to actively participate in the caretaking of their child may therefore be essential.

Beyond Fear: Classical Conditioning as a Model to Understand Anhedonia, Grief, Attachment, and Genital Pain

Chair(s): Gaëtan Mertens

Wednesday, October 4, 14:15–15:45, Auditorium DZ4

Abstract: Classical conditioning refers to a broad paradigm where an individual learns that an initially neutral cue (e.g., a sound, a picture) is followed by a biologically significant stimulus (e.g., food, an electric shock), resulting in anticipatory conditioned reactions (e.g., anxiety, drooling) to the conditioned cue. This paradigm has proven valuable to understand the etiology of anxiety disorders and has inspired some of the most effective behavioral interventions for treating anxiety (e.g., exposure therapy). However, classical conditioning has only been used in a more limited sense to other domains of clinical psychology. In this symposium, four international speakers will present talks on how classical conditioning can be used to understand psychopathology in other domains than fear. Particularly, the talks will focus on understanding anhedonia, grief, attachment, and genital pain from a classical conditioning perspective. Together, these talks will illustrate how classical conditioning remains a valuable paradigm to understand the etiology and treatment of various emotional disorders.

Talk 1: No Joy - Why Bother? Higher Anhedonia Relates To Reduced Pleasure From And Motivation For Threat Avoidance

Lu Leng, Tom Beckers, Bram Vervliet - KU Leuven

Introduction: Anhedonia impairs various components of the pleasure cycle, including wanting, liking, and the learning of pleasure-related associations. While successfully controlling threats might be inherently pleasurable, it remains unclear whether anhedonia affects this form of pleasure as well.

Methods: With aversive pictures as threats, we conducted an online study (N = 200) to investigate the role of anhedonia during active avoidance learning process. Participants first learned cue-threat associations for different cues (threat vs. safety cues). In a subsequent avoidance learning phase, these cues signaled either avoidable, unavoidable, or no threat; participants could perform avoidance responses to prevent the upcoming threats during those cue presentations. Subjective relief pleasantness was measured after each threat omission.

Results: We found that higher trait anticipatory and consummatory anhedonia were both associated with lower relief pleasantness. Higher trait anticipatory anhedonia was also associated with fewer avoidance attempts.

Conclusions: Since reduced threat-controlling behavior is reminiscent of a learned-helplessness state, the current results contribute to a better understanding of the connections between anhedonia and learned helplessness that have mostly been studied separately in the context of mood disturbance.

Talk 2: Losing Love In The Laboratory: A Test Of The Link Between Grief And Appetitive Conditioning

Yannick Boddez - Ghent University

Introduction: In order to assess whether Pavlovian conditioning principles provide a valid account of responses to the loss of a loved one, we examined the functional similarity between grief and appetitive conditioning. This entails that we assessed whether variables that are known to affect the level of real-life grief influence conditioning performance in a designated laboratory model in a similar way.

Methods: To this end, we selected two variables, namely closeness to the lost loved one and abruptness of the loss. In two experiments, we assessed whether operationalizations of these variables affected conditioning performance.

Results: Closeness enhanced cue-elicited longing for loved ones, whereas abruptness of the loss led to a slower update of expectancies concerning the new reality.

Conclusions: As such, the experiments provide candidate-explanations of why it may be more complicated to suffer the loss of somebody close and to suffer an abrupt loss, respectively. More generally, the experiments may serve to illustrate that functional similarity is a powerful tool to assess the external validity of laboratory models and theories in the field of experimental psychopathology and beyond.

Talk 3: Trust As A Safety Conditioning Process: An Experimental Test Of Extinction And Contextual Renewal

Melisse Houbrechts, Guy Bosmans – KU Leuven

Introduction: According to the learning theory of attachment, attachment development can be understood as a safety conditioning process. In a learning experiment we investigated extinction and contextual renewal in trust learning.

Method: During the experiment, children opened doors to find their friend and an avatar gave advice on the door with the friend. The experiment consists of a learning phase, an extinction phase where the contingency changes and a test phase where trust is measured in the context of the learning and extinction phase. Participants (N=89; 61.8% girls; 9-12 years) were randomly assigned to two conditions in which the contingency (i.e. accuracy of the avatar's advice) during the learning and extinction phase is manipulated: the 25%75% condition and the 75%25% condition. Context was manipulated by using different playgrounds as background in the learning and extinction phases.

Results: Changes in the contingency predicted significant changes in trust (Time X Condition: $F(1,80) = 83.048$; $p < .001$). We found mixed evidence for contextual renewal (Time X Condition: $F(2,381,190.474) = 45.323$; $p < .001$).

Conclusion: Our results provide evidence for the role safety conditioning phenomena in trust learning.

Talk 4: Fear Learning In Genital Pain: Toward A Biopsychosocial, Ecologically Valid Research, And Treatment Model

Marieke Dewitte, Ann Meulders - Maastricht University

Introduction: Although fear learning mechanisms are implicated in genital pain, systematic research on how fear of genital pain emerges, spreads, persists, and reemerges after treatment is lacking. In this presentation, we integrate ideas on fear learning and sexual arousal and specify the pathways through which compromised learning may contribute to the development and persistence of genital pain. We adopt a biopsychosocial framework to explain the role of physiological processes, subjective experiences, as well as partner and relational cues in fear acquisition, overgeneralization, extinction, counterconditioning, and return of fear, and we propose several individual-level moderators. Finally, we identify directions for future research and specify the need for symptom-specific and ecologically valid experimental paradigms.

Methods: These theoretical ideas will be illustrated via a pilot study in which pain-related fear during acquisition, generalization, and extinction is measured. Participants watch a series of sexual and non-sexual video-clips with and without pain stimulus (heat stimulation on the groin, close to the genital area). Fear (CR) was measured via eyeblink startle responses and US expectancy and US unpleasantness ratings. Sexual arousal (CR) was assessed via subjective reports and vaginal pulse amplitude. The first pilot data have been collected and are currently being analyzed. Data will be presented during the conference.

Results: TBA

Conclusions: TBA

Neuromodulation as an Augmentative Treatment to Psychological Interventions: State-of-the-Art, Lessons Learned and Promising Perspectives

Chair(s): Marie-Anne Vanderhasselt

Discussant: Marie-Anne Vanderhasselt

Wednesday, October 4, 14:15–15:45, Auditorium DZ6

Abstract: Dual active treatment, namely the combination of transcranial Direct Current Stimulation (tDCS) and psychological interventions, is a promising non-pharmacological alternative to increase mental health in clinical populations. Yet, recent literature reveals great heterogeneity in the reported efficacy, and a mere combination of both interventions is not always the best solution to increase mental health. To optimize the clinical efficacy of such dual active treatment in mental health disorders, it is crucial to understand the mechanisms underlying potential synergistic neuroplastic effects. All presenters will discuss complementary research questions on such dual active treatment, as well as lessons learned, and future perspectives. The first speaker, Stefanie De Smet, will present data on tDCS versus sham combined with an affective control task and report the effects on emotion regulation. The second speaker, Emmanuelle Schoonjans will present data on the combination of tDCS with slow-paced breathing on stress regulation. The third speaker, Sara De Witte will present the data of tDCS versus sham combined with a self-reflective attention task and cognitive behavioral therapy on rumination in a clinical population. Finally, Marie-Anne Vanderhasselt, we will integrate the key messages of the three symposium talks, each focusing on complementary research questions. She will elaborate on the utility of cognitive neuroscience in mental healthcare and its importance to define neurocognitive endophenotypes to increase the efficacy of dual active treatment.

Talk 1: Boosting Affective Control With Bifrontal Transcranial Direct Current Stimulation (tDCS): A Proof-Of-Concept Study In Healthy Individuals

Stefanie De Smet, Noga Cohen, Marie-Anne Vanderhasselt - Ghent University, University of Haifa

Affective control refers to the ability to regulate emotions and is considered a marker of mental health. Transcranial direct current stimulation (tDCS), a non-invasive brain stimulation technique, holds promise to enhance affective control. In this between-subjects study in healthy individuals, we investigated the effects of bifrontal tDCS on affective control, by assessing direct effects on emotional interference during an affective control task and indirect effects on an instructed reappraisal task afterward. Results showed that the affective control task combined with active tDCS, compared to sham, resulted in enhanced cognitive emotion regulation. Specifically, participants in the active tDCS condition showed an increased propensity to use reappraisal and were more successful in doing so. Moreover, there was reduced vagally mediated heart rate variability in the sham, indicative of vagal withdrawal, but not the active condition. Surprisingly, there were no effects of tDCS on emotional interference during the affective control task, as well

as no effects on event negativity and significance, or on state rumination during the instructed reappraisal task. This was corroborated by Bayesian analyses showing extreme evidence against online tDCS effects. The study offers valuable insights to guide future work on combined tDCS with affective control tasks or training on the ability to regulate emotions.

Talk 2: The Combination Of Transcranial Direct Current Stimulation And Slow-Paced Breathing Stress: A Multimodal Investigation.

Emmanuelle Schoonjans, Jens Allaert, Stefanie De Smet, Zefeng Li, Rudi De Raedt, Marie-Anne Vanderhasselt - Ghent University

Introduction. The many challenges posed on mental health by the recent crises remind us of the importance of stress recovery. Yet, uncertainty remains regarding the ways to optimally foster it. Based on the interaction between the brain and heart, enhancing heart rate variability (HRV), through transcranial Direct Current Stimulation (tDCS) or slow-paced breathing, could improve stress recovery. In this study, we aimed at combining those complementary techniques to boost their effects.

Methods. 200 participants were randomized into 4 groups receiving either active tDCS and slow-paced breathing (i.e., at 5,5 breaths per minute), active tDCS and control breathing, sham tDCS and slow-paced breathing or sham tDCS and control breathing. The session consisted of a baseline, the intervention (i.e., tDCS and breathing simultaneously), a psychological stressor and a recovery phase. We compared the psychophysiological indices of stress (i.e., HRV, skin conductance, blood pressure, self-reported affect and Primary and Secondary Stress Appraisal [PASA]) recorded during stress and recovery.

Results. The participants that had received the combination of active tDCS and slow-paced breathing showed lower positive affect than the participants receiving only active tDCS or only slow-paced breathing. No effect of the combination on other variables was found.

Discussion. Slow-paced breathing and tDCS interact with each other. Avenues to make this interaction beneficial are discussed.

Talk 3: Combining Transcranial Direct Current Simulation With Group Cognitive Behavioral Therapy Developed To Treat Rumination

Paula Horczak, Chanyu Wang, Sara De Witte, Stefanie De Smet, Jonathan Remue, Rudi De Raedt, Marie-Anne Vanderhasselt - Ghent University, Free University Brussels, Southwest University

As part of repetitive negative thinking (RNT), rumination is a maladaptive cognitive response style to stress or negative mood which can increase the risk of depression and may prohibit complete recovery. Cognitive behavioral therapy (CBT) and transcranial direct current stimulation (tDCS) both proved to be effective in decreasing rumination. However, the combined effects of tDCS and CBT interventions on rumination have not yet been explored. The first aim of this pilot study is to investigate whether the combination of tDCS and CBT has an accumulating positive effect on modulating state rumination. The second aim is to assess the feasibility and safety profile of the proposed combined approach. Seventeen adults suffering from RNT participated in an 8-week

group intervention for RNT comprising 8 sessions of CBT. Before each CBT session, patients were primed with one double-blinded prefrontal active or sham tDCS combined with an internal cognitive attention task focused on individual RNT. During each session, the Brief State Rumination Inventory was used to assess state rumination. A mixed effects model analysis revealed no significant differences between the stimulation conditions, weekly sessions or their interaction in terms of state rumination scores. Overall, the combination of online tDCS priming followed by group CBT was found to be safe and feasible. On the other hand, no significant additional effects of this combined approach on state rumination were established.

“It depends ...”: Emotion Regulation: Dynamics and Context Matter.

Chair(s): Leentje Vervoort

Wednesday, October 4, 16:45–18:15, Auditorium DZ2

Abstract: One hallmark of a rich life, is the experience of different emotions. There is a plethora of words people use to describe how they feel. The ability to identify and label emotions is a key factor in Emotion Regulation (ER). Edmund Lo (Radboud U) talks about how one's ability to differentiate between emotion intensity is associated with ER flexibility. Selecting ER strategies also depends on the valence of an emotion. Janniek Bragt-de Jong (Tilburg U) discusses that ER depends on in-the-moment emotion, but also on the context in which the emotion takes place (e.g., who is present). David Renjaan (Radboud U) elaborates on this when discussing emotional synchrony between adolescents and parents vs. friends. As with all behavior, ER is not only influenced by contextual, but also by individual characteristics, as presented by Mégane Ackermans (U of Groningen) who will describe differences in ER between women with and without obesity. All presentations of the symposium stress the importance of a dynamic, contextual approach to ER. Studying complex processes, requires research methods allowing for online assessment and quantification of ER, like experience sampling methods and a dynamic systems approach. All speakers will incorporate methodological/statistical considerations in their talks.

Talk 1: Hold To Behold: Less Variability In Emotion Regulation Strategies Predicts Better Differentiated Negative Emotions In Adolescents

Tak Tsun Lo, Maaïke Verhagen, Loes J. Pouwels, Jacqueline Vink, Dominique F. Maciejewski - Radboud University, Tilburg University

Introduction: Is knowing what emotions one experiences important for how one regulates them? Theory suggests that distinguishing and labelling emotions (emotion differentiation; ED) facilitates subsequent emotion regulation (ER). The current pre-registered study tests this theorized directionality for ER variability, which indicates variably applying ER strategies. We hypothesized that higher ED would predict higher subsequent ER variability on a between-person and within-person level, but not vice versa.

Method: 88 adolescents (age $M = 16.4$, $SD = 0.6$) reported intensities of negative emotions and ER strategy use 10x/day for 7 days. We calculated moment-level ED and ER variability indices. We used multilevel models to examine if ED predicted ER variability at the next moment, or the other way round, differentiating between-person and within-person components.

Results: The results were not in line with our hypotheses. Between adolescents, those with better ED had lower ER variability. Within a person, ED at one moment was not related to ER variability at the next moment; in contrast, when one deviated more from their usual style of ER (higher moment-level ER variability), ED decreased at the next moment.

Conclusions: Our findings prompt theoretical reconsiderations on the temporal sequence in how ED and ER influence each other. Future research should explore how contexts may enrich the understanding of relationships between ED and ER.

Talk 2: Does Context Matter? The Dynamics Of Context, Emotion Regulation And Emotions In Youth

Henriëtte J. Bragt-de Jong, Annemiek Karreman, Eeske van Roekel, Egon Dejonckheere, Tom Smeets - Tilburg University, KU Leuven

Introduction: Previous studies have shown that the emotion regulation (ER) strategy a person generally employs does not predict wellbeing or less negative emotions in daily life per se, but that depending on the context characteristics (e.g., controllability, intensity of emotions, surroundings) specific ER strategies determine momentary wellbeing or the valence of negative emotions. Moreover, some studies found that contextual factors (i.e., the intensity and valence of emotions and type of social situation) influenced the number and type of ER strategies used. The present study aims to explore the dynamics between momentary contextual factors, emotions and ER strategies used as well as the subsequent momentary emotions.

Methods: We used experience sampling method (ESM) to ask participants 5 times a day, 7 days per week for 4 weeks about their in-the-moment emotional state, how they dealt with their emotions (i.e., several ER strategies) and in which context they were (where, what, with whom, and the pleasantness of what they did and with who they were in the moment). Participants were Dutch children and adolescents (aged 8 to 18 years) with (access to) a mobile phone (N=47).

Results: Data collection has just been completed. We will explore the dynamics in a multilevel (graphical) VAR(1) model.

Conclusions: This study aims to increase the knowledge about the dynamics of emotions, ER and the context in which it takes place, within children and adolescents.

Talk 3: Emotional Synchronization Across Socialization Contexts: Comparing Parent–Child And Peer Interactions In Adolescence

David Renjaän, Leentje Vervoort, Thao Ha, Fred Hasselman, Roy Otten - Radboud University, Arizona State University

Introduction: People spontaneously adjust their emotions with others when they interact. This temporal coupling of emotions is referred to as emotional synchrony (ES), and has been important for adaptive social development. The current study compared ES during parent–child versus peer interactions in adolescence, as this period is characterized by a shift in social relationship dynamics. We hypothesized that peer dyads would show stronger ES than parent–child dyads.

Methods: A total of 612 adolescents (age 16) took part in two video-taped interaction tasks: one with a parent and one with a peer. Each task included several topic discussions to elicit both positive and negative emotions. Affect in both partners was coded in real-time, yielding two timeseries per dyad. Timeseries were subjected to cross recurrence quantification analyses to obtain measures of ES, which were subsequently used in mixed-effects modeling to test the main hypothesis.

Results: Preliminary analyses using global measures of ES across each discussion suggest that both parent–child and peer dyads seem to show higher levels of ES of positive compared to

negative affect. Moreover, peer dyads seem to increase in ES of positive affect when discussing a negative compared to a positive topic.

Conclusion: Our initial findings might reflect the developmental transition adolescents go through where peers become an important social relationship. We are currently running our main analyses using dynamic measures of ES.

Talk 4: Emotions, Emotion Regulation, And Food Intake In Women With A Healthy Weight And Women With Obesity: A Daily Life Study

Mégane Ackermans, Vera Heininga, Peter de Jong, Nienke Jonker -

Introduction: Obesity is a worldwide public health issue and it is crucial to identify individual risk factors for excessive food intake, as these may help inform obesity prevention and treatment efforts. One potential reason for which some individuals, but not others, engage in excessive food intake and develop obesity is that they consume food in response to emotions, particularly in the absence of effective emotion regulation (ER) strategies. The current study used the Experience Sampling Method (ESM) to assess the effect of emotions and ER on food intake in daily life in women with obesity (n = 46) and women with a healthy weight (n = 54).

Method: After completing a baseline questionnaire, participants responded to an ESM survey regarding momentary emotions, ER and food intake five times per day for seven days.

Results: Women with obesity used less adaptive ER strategies than women with a healthy weight in daily life. Emotions and ER were not associated with food intake in daily life in women with a healthy weight or women with obesity.

Conclusion: A lack of adaptive ER may be associated with difficulty maintaining a healthy weight, though we did not find evidence of a link between emotions or ER in daily life and momentary food intake.

Inflexible Beliefs and Belief Updating across Internalizing Disorders: Empirical Insights from The Lab and Daily Life

Chair(s): Jonas Everaert

Discussant: Jonas Everaert

Wednesday, October 4, 16:45–18:15, Auditorium DZ1

Abstract: Inflexibility in forming and maintaining beliefs has been implicated in various mental disorders. Yet, the nature of belief inflexibility and updating in psychopathology as well as the affective consequences remain elusive. This symposium integrates a series of talks presenting cutting-edge research on internalizing disorders with the common goal of understanding the nature and mechanisms of (in)flexible beliefs and belief updating. First, Tobias Kube presents a series of studies examining the hypothesis that state negative affect hinders the update of negative beliefs by positive information in people with depressive symptoms. Second, Reuma Gadassi Polack will present findings from a daily diary study investigating whether interpretation flexibility attenuates reactions to interpersonal events in a sample of children and adolescents. Third, Lisa Vos will present an ecological momentary assessment study to capture biased and inflexible interpretations and examine socio-affective pathways to depression. In the last presentation, Michael Bronstein will focus on causal pathways between interpretation inflexibility and individual symptoms of internalizing psychopathology. The empirical research findings presented in this symposium will be integrated and contextualized by Jonas Everaert. He will speculate about further directions for research examining inflexible beliefs and belief updating in psychopathology.

Talk 1: How State Negative Affect Hinders Belief Updating In Depression

Tobias Kube - Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau

In a series of three experiments, we tested the hypothesis that state negative affect hinders the update of negative beliefs by positive information in people with depressive symptoms. In each of the three experiments, participants underwent a mood induction before working on an unknown performance test, for which they subsequently received unexpectedly positive feedback. The results from Study 1 using a nonclinical sample (N=152) showed that the level of depressive symptoms negatively predicted the degree of belief update and this effect was amplified if participants underwent the induction of current negative affect. The results from Study 2 using a subclinical sample (N=101) revealed a non-significant trend suggesting that among those individuals who met the criteria of a current major depressive episode, the induction of negative mood, relative to positive and neutral affect, hindered the update of performance beliefs in response to feedback. In Study 3 using a sample of clinically depressed people (N=81), the induction of negative affect significantly impaired the update of performance beliefs in line with the feedback received, as compared to positive affect. This series of experiments demonstrates that the presence of state negative affect can impair the use of novel positive experiences to

correct pre-existing negative beliefs. Based on these findings, a novel mechanistic model elucidating the interplay of negative beliefs and negative affect will be presented.

Talk 2: Social Interpretation Inflexibility Moderates Emotional Reactions To Social Situations In Children And Adolescents

Reuma Gadassi Polack, Michael V. Bronstein, Marcia Questel, Audrey Edelman, Sophia Vinogradov, Hedy Kober, Jutta Joormann - Yale University, University of Minnesota, Tilburg University, Tel-Aviv Yaffo Academic College, KU Leuven

Interpretation biases and inflexibility (i.e., difficulties revising interpretations) are positively associated internalizing symptoms. Although adolescence is characterized by novel social situations and increased vulnerability to internalizing disorders, no studies have examined interpretation inflexibility during this developmental period. Additionally, no studies have examined whether flexibility attenuates reactions to interpersonal events at any age group. Using a novel task and a 28-day diary we examined relations among interpretation bias and inflexibility, internalizing symptoms, and positive/negative interpersonal events in a sample of children and adolescents (N=159, ages 9-18). At baseline, negative interpretation bias positively correlated with social anxiety symptoms, and positive interpretation bias negatively correlated with social anxiety and depressive symptoms. Inflexible positive interpretations were correlated with higher social anxiety and depressive symptoms, while inflexible negative interpretations were correlated with higher social anxiety. Finally, higher interpretation inflexibility was associated with stronger associations between naturally occurring interpersonal events and subsequent depressive symptoms, potentially increasing depressive symptom instability. These results suggest that interpretation biases and inflexibility may act as both risk and protective factors for adolescent anxiety and depression.

Talk 3: Psychopathology And Interpretation Dynamics In Daily Life: Social Context, Emotions, And Motivations

Lisa M. W. Vos, Tom Smeets, Peter Kuppens, Jonas Everaert - Tilburg University, KU Leuven

Introduction: People frequently encounter ambiguous social situations in their everyday lives. How people resolve such ambiguous social situations is expected to play a crucial role in shaping their emotional experiences and mental health. Methods: This study used ecological momentary assessment (EMA) to capture biased and inflexible interpretations and their pathways to depression in life as it is lived with real social contexts and situations that matter to people. Participants from the general population completed a baseline session followed by a 14-day EMA procedure and a follow-up questionnaire. At baseline, participants completed a cognitive task assessing biased and inflexible interpretations of unfolding social situations together with measures of social relationships and mental health. During the EMA, participants reported on their social interactions, social desires and goals, emotions, emotion regulation, and social interpretations 6 times a day. At follow-up, participants again reported on their mental health. Results: Findings suggest that individuals with depressive symptoms make more biased and inflexible interpretations in their everyday life, which in turn, shape socio-affective processes in

daily life. Conclusions: Fully elucidating the relation between interpretation inflexibility and depression in real-world settings is crucial to advance our understanding of mechanisms involved in the etiology and course of depressive symptoms. This knowledge could be used to improve the limited efficacy of current psychological treatments which often require on interpretation flexibility.

Talk 4: Empirically-Plausible Causal Relations Between Symptoms Of Psychopathology And Interpretations Of Ambiguous Social Situations

Michael V. Bronstein, Jonas Everaert - University of Minnesota, Tilburg University, KU Leuven

Research using the Emotional Bias Against Disconfirmatory Evidence (BADE) task has made substantial progress in disentangling the associations of (positive or negative) interpretation bias and interpretation inflexibility (i.e., reduced responsiveness of interpretations to evidence for or against them as ambiguous situations evolve over time) to symptoms of internalizing psychopathology. However, it remains unclear whether interpretation inflexibility causes these symptoms, or is merely a reliable correlate of them. To help clarify this, we used causal discovery analyses to identify empirically-plausible causal relations between interpretation bias, interpretation inflexibility, and specific symptoms of depression and social anxiety. This presentation discusses the results of these analyses and their implications for future work examining how individuals' initial interpretations of ambiguous social situations, and their revision (or not) of these initial interpretations in response to emerging evidence, impacts and/or is impacted by internalizing psychopathology.

Interoception: Interplay with Emotion, Stress, Change Through Interventions

Chair(s): Olga Pollatos

Wednesday, October 4, 16:45–18:15, Auditorium DZ3

Abstract: Interoceptive abilities comprising different subdomains like interoceptive accuracy, interoceptive sensibility or interoceptive emotional evaluation have gained great interest with respect to interindividual differences in emotional experience and emotion regulation including stress regulation as well as mental health in general. In this symposium we present new insight in methods targeting to alter interoceptive abilities either by neurostimulation or by therapeutic approaches putting the body in the focus using healthy participants and psychosomatic patients. While new approaches using art therapy could improve interoceptive abilities and possible outcome measures in patients, no significant change was observed when using tDCS as neurostimulation method. We also present empirical data suggesting that interoceptive accuracy has potential benefits for downregulating negative mood as shown in an experimental study using healthy participants and a negative mood induction procedure. Using a mental and a physical stress paradigm in a laboratory assessment in healthy participants, we also present new data suggesting that higher cardiac indices are associated with a bigger discrepancy between subjective and physiological changes in the case of the mental stress task, but not for the physical stress task. General implications for mental health as well as for regulation of emotions and stress will be discussed in more detail.

Talk 1: Changes In Interoceptive Abilities And Emotional Processing Following hd-tDCS Stimulation

Sandra Antonia Mai-Lippold, Sara Antonia Hajian, Olga Pollatos, Jasmin Schultze - Ulm University

Introduction: Neural activity in somatosensory cortices has been found for both interoceptive and emotional processing, supporting the assumption of an overlapping neural network located there. High-definition transcranial direct current stimulation (HD-tDCS) over the primary somatosensory cortex (S1) has previously proven successful in modulating brain activity in S1. Connecting these findings, we hypothesized improved interoceptive abilities and intensified emotional perception following anodal HD-tDCS over the right S1.

Methods: In two sessions set at least one week apart, we applied a 20-minute HD-tDCS stimulation condition at 2mA, as well as a sham condition to 36 healthy adults in randomized order. Pre and post both sessions, we measured interoceptive abilities using a heartbeat perception and a respiratory load task, and emotional perception using four matched IAPS picture sets, presented in randomized order.

Results: Active HD-tDCS did not improve interoceptive abilities in comparison to sham. Results on emotion processing are pending.

Conclusions: This study provides the first attempt of modulating interoceptive and emotional processing following HD-tDCS over the primary somatosensory cortex. Preliminary results suggest that changes following single session stimulation did not exceed those following sham.

Talk 2: The Effects Of A Novel Art Therapy Intervention On Interoceptive Abilities And Emotional Experiences In Patients With Psychosoma

Thu Thuy Vu, Harald Gündel, Olga Pollatos, Karla Mönkemöller, Stephan Frisch, Alexandra Danner-Weinberger - Ulm University Medical Center, Ulm University

Introduction: Interoception is affected in several mental disorders and is connected with emotions. Therefore, training via self- and body-focus interventions is needed. Art therapy could be one possible approach. Through art and the inclusion of the body, conscious access to implicit emotions, which are manifested on a bodily level, may be created, resulting in a better understanding of psychological processes. So far, there is no research connecting art therapy and interoception. Hence, the aim of this exploratory pilot study is to investigate a new art therapy intervention and its effect on interoceptive abilities and emotional experiences.

Methods: 30 psychosomatic patients were examined before (T1) and immediately after (T2) a single-session art therapy intervention as well as one week afterward (T3) regarding their interoceptive abilities, symptoms, psychological stress, and emotional state.

Results: Results showed that the symptoms decreased whereas interoceptive accuracy increased after one session significantly. A significant improvement was observed on the interoceptive sensibility scales Noticing and Not-Worrying. Furthermore, the patients felt significantly less helpless and stressed. Lastly, they reported emotional relief after the intervention.

Conclusion: Our findings suggest that the proposed art therapy intervention seems to be a promising method to improve interoceptive abilities. Further research is needed to investigate this intervention as long-term training.

Talk 3: Interoceptive Processing And Emotion Regulation Of Induced Sadness: A Laboratory Study

Lorena Desdentado, Marta Miragall, Roberto Llorens, Olga Pollatos, Sandra A. Mai-Lippold, Tamara Escrivá-Martínez, Rosa M. Baños - University of Valencia, Instituto de Salud Carlos III, Universitat Politècnica de València, Fundación Vithas, Ulm University

Introduction: Interoception has been linked to emotion regulation (ER), mainly to the efficacy of instructed strategies such as reappraisal (Füstos et al., 2012) or self-report tendencies (Kever et al., 2015). The present study aimed to determine the role of interoception in the success of down-regulating induced negative mood regardless of the type of strategy used.

Methods: 99 non-depressed adults (72% women) performed the Heartbeat Counting Task (HBCT). Then, they received a negative mood induction procedure (Baños et al., 2006). State sadness was assessed with the Scale for Mood Assessment (Sanz, 2001) before (T1) and after (T2) the induction, as well as after the ER task (T3).

Results: A linear mixed model showed that HBTT accuracy was the only significant predictor of lower scores on sadness throughout all the time assessments. There were no significant interaction effects with time. The fit of this model was significantly better than the null model and the model including only the time effect ($G^2 = 317.17$, $p < .001$).

Conclusion This study highlights the role of interoceptive accuracy regarding cardiac signals in ER success in a non-clinical sample. Although these findings suggest the potential benefits of interoceptive accuracy training for downregulating negative mood, future studies should replicate these results in more ecologically valid settings (e.g., using ecological momentary assessment) and clinical samples (e.g., depression).

Talk 4: Investigation Of Laboratory-Induced Stress: The Moderating Role Of Cardioceptive Ability.

Eszter Ferentzi, Tamás Nagy, Ferenc Köteles - ELTE Eötvös Loránd University, Károli Gáspár University of the Reformed Church in Hungary & Ádám György Psychophysiology Lab

Introduction: The background of the discrepancy between perceived and physiological stress has not yet been fully understood. In this study, we investigated the moderating role of cardiac perceptual ability on the association between physiological and perceived aspects of stress.

Methods: We investigated stress reaction with the involvement of 64 young individuals, inducing stress both with a mental (N-back task) and a physical (handgrip exercise) stress task. The physiological aspects were measured by cardiac and electrodermal activity, while the perceived stress was assessed with the state questionnaire of the State-Trait Anxiety Inventory. Cardiac perceptual ability was measured with a mental heartbeat tracking task and with a heart rate perception task.

Results: Physiological activation pattern was not identical in the two stress tasks. Path analysis indicated that in the mental stress task, the increase of sympathetic activation was associated with lower perceived stress for those with higher perceived heart rate. On the other hand, the increase of parasympathetic activation was associated with higher perceived stress when heartbeat perception was higher. No such moderating role was revealed related to the physiological stress task.

Conclusion: These results suggest that people with higher cardiac indices had a bigger discrepancy between subjective and physiological changes in the case of the mental stress task, but not for the physical stress task.

Current Themes in Music and Emotion Research

Chair(s): David Grüning

Discussant: Olivier Luminet

Wednesday, October 4, 16:45–18:15, Auditorium DZ4

Abstract: Music is of interest to emotion researchers due to at least two features. First, music listening, through its popularity as an activity, is a ubiquitous emotional experience. Second, music is a versatile stimulus with regards to different emotional mechanisms and functions, ranging from emotion induction to emotion regulation. This symposium focuses on two topical themes in music and emotion research that have gained increasing attention in recent years: The social-relational emotion commonly labeled 'being moved,' and individual differences in emotion perception and experience in the context of music listening. Involving different listening contexts (live and livestreamed concerts, and recorded music), the symposium highlights that the emotion of 'being moved' is characterized by experiences of social connectedness also in the context of music listening. Furthermore, all three research projects presented at the symposium explore the role of individual differences in the perception and/or experience of music-evoked emotions. Similarly to social situations, we will demonstrate that emotion perception in music is moderated by the personality of the listener and factors of the environment. Still, we provide evidence that emotion experiences (i.e., being moved) also have features that are culturally generalizable. All presentations and their discussion will be enriched by a discussant who, among other goals, will aim to find interconnections between the three study projects and their findings. Through this, we aim to uncover and discuss more generalizable patterns of affective processes, transcending the research field of music-induced emotion.

Talk 1: Moving Together: Exploring The Relationship Between Emotions, Connectedness, And Motion In Concert Audiences

Jonna K. Vuoskoski, Dana Swabrick - University of Oslo

Music is able to evoke experiences of being moved and a sense of social connectedness in audiences – even in the context of streamed concerts and recorded music. The present study set out to investigate audiences' emotional experiences and amount of movement in a classical string quartet concert, which was attended by both a live (N = 91) and a livestreaming (N = 45) audience. The results revealed that both audiences felt similarly connected to the performers, while the live audience felt more connected to other audience members than the livestreaming audience. Reports of 'being moved' and awe were influenced more by the piece of music than by the listening context, and the live audience demonstrated distinct motion patterns in response to different musical pieces. The amount of audience movement was also associated with the degree of connectedness experienced towards other audience members. In a follow-up online experiment, 189 participants continuously rated their experience of being moved while watching a recording of the Beethoven string quartet performance from the main concert experiment. Cross-correlations between the continuous ratings and musical features and audience movement

patterns were analyzed. Overall, the findings demonstrate that the degree of connectedness experienced towards other audience members is modulated by shared presence as well as the amount of audience movement, while experiences of 'feeling moved' and awe are influenced by the music itself.

Talk 2: Perceiving Emotions In Music: Effects Of Sound Quality, Empathy, And Alexithymia

Naomi Marchant, David Grüning, Mareike Kaemmerer, Olivier Luminet - UCLouvain, Heidelberg University, GESIS - Leibniz Institute for the Social Sciences

Music listening as a tool of emotion regulation is increasingly focused on in affective science. However, studies have yet to, in detail, explore emotion perception and its moderators in music listening. In the present study, we identified environmental and personality effects on individuals' emotion recognition in music listening across a range of emotions. Participants (N = 503) listened to five music pieces with blurred or normal sound quality, which displayed different emotions (as categorized by experts), and indicated what emotions they perceived. Two personality traits, namely empathy and alexithymia, which are closely related to emotion processing, were then assessed. We find that sound quality is particularly detrimental to individuals' emotion perception in excerpts with the most active music, namely, energy and happiness ($p < .001$, $d \geq .35$). We, further, show that specific facets of empathy and alexithymia affect participants' emotion perception accuracy for several different music pieces. The Fantasy facet of empathy is especially impactful, promoting respondents' emotion recognition in three different music excerpts (happiness, calmness, and sadness, $r_{par} \geq .09$, $p \leq .048$, respectively). Interestingly, the influence of a music piece's sound quality on individuals' emotion perception is in no excerpt moderated by the listener's levels of empathy and alexithymia. We provide the first extensive exploration of the perception of diverse emotions in music and its malleability to environmental as well as personality effects.

Talk 3: Being Moved By Sad Music Across Countries: Characterizing The Experience In Finland, Germany, And France

David Grüning, Mareike Kaemmerer, Jonna K. Vuoskoski -

Feeling moved by music is one of the most common, yet most profound, emotional responses reported by listeners. This emotion also explains why people enjoy listening to sad-sounding music. However, cultural comparisons of this phenomenon are lacking. The present study compared the emotional experience of being moved by sad music across three countries. Participants from Finland (N = 102), Germany (N = 113), and France (N = 116) listened to a pretested sadness-inducing music piece. Afterward, they reported their perceived and felt emotional experiences which were analyzed for interconnections in a network analysis for each country. A cluster was identified if at least three measures each had more than one substantial ($r_{par} > .25$) interconnection with the others. In general, the associations between emotional experiences differ between listeners from different countries. However, we find one cluster of measures of emotional experiences that replicates across all countries and that we identify as the

experience of being moved. It consists of liking the presented music, experiencing more intense emotions while listening to it, and feeling moved and sad at the same time. Moderators of the being moved experience in sad music-listening differ between countries, for example, for gender ($.33 \geq r_s \geq .01$) and individuals' sensitivity for emotional contagion ($.46 \geq r_s \geq .13$). With this set of three studies, we present the first cultural comparison of the experience to be moved by sad-sounding music and identify a robust cluster of emotional experiences that constitutes this emotion.

Exploring the Intersection of Affective, Sexual, and Relationship Factors in Sexual Response

Chair(s): Liesse Frérart and Peter Kuppens

Discussant: Erick Janssen

Wednesday, October 4, 16:45–18:15, Auditorium DZ6

Abstract: This symposium will cover various aspects of sexual response and how they relate to affective, sexual, and relationship factors, in both an intra- and interpersonal context. First, Piet van Tuijl will talk about his work on the association between mood and sexual motivation and its moderation by individual differences in Dual Control Model traits. Based on intensive longitudinal data, he will show how intensification of mood is related to increased sexual motivation for people with a strong propensity for sexual excitation. Next, Liesse Frérart will place the association between mood and sexual response in an interpersonal context by presenting an Experience Sampling study showing bidirectional associations between mood and sexual desire in the daily lives of romantic couples, both within and between partners. Continuing this interpersonal view, Aleksandra Pawłowska will present her study on couple similarity in sexual arousal and its correlates in daily life. As long as sexual arousal was sufficiently high, both similarity and dissimilarity increased sexual and relational outcomes. Finally, Marieke Dewitte will theoretically elaborate on the clinical relevance of synchrony in genital and subjective arousal. She will focus not only on research on this association within individuals, but also on the importance of including the partner and relational context in the study of sexual synchrony, and present a roadmap for robust and clinically relevant research.

Talk 1: The Associations Between Mood And Sexual Motivation – An Experience Sampling Perspective On The Dual Control Model

Piet van Tuijl, Peter Verboon, Jacques van Lankveld - Open Universiteit

Introduction. We investigated intensive longitudinal data of 87 women and 46 men in steady relationships to find out if individual differences in Dual Control Model traits – sexual excitation and inhibition proneness – impacted short term associations between mood and sexual motivation.

Methods. Participants completed a one-off survey to measure person level traits. They also completed a maximum of 10 short questionnaires per day - 7 days in a row. Time intervals between repeated measurements were on average 90 minutes. Multilevel analyses were used to study simultaneous and lagged effects of mood on sexual motivation.

Results. Intensification of feelings, positive or negative, was associated with simultaneous increases in sexual motivation for people more prone to sexual excitation. In the lagged analysis, higher preceding negative affect forecasted increases in current sexual motivation for those more prone to sexual excitation.

Conclusion. People from the general population more prone to sexual excitation can apply sex to cope with negative feelings – a mechanism previously thought to define hypersexuality. This study

demonstrated that intensive longitudinal designs can be used to extend research on the Dual Control Model by taking into account dynamic associations between mood and sexual motivation.

Talk 2: In The Mood: How Sexual Desire Is Predicted By Romantic Partners' Emotional States

Liesse Frérart, Claudia De Roovere, Laura Sels, Eva Ceulemans, Erick Janssen, Peter Kuppens
- KU Leuven, Ghent University

Introduction: The relation between mood and sexual desire has been the object of significant scientific and public interest. How mood shapes and is shaped by sexual desire is typically studied within one and the same individual, yet sexual desire is often experienced in the context of a romantic relationship. To obtain a more complete picture of the relation between mood and sexual desire, we examined the (temporal) interplay between mood and sexual desire both within and between partners in a romantic relationship.

Methods: Using data from an experience sampling study of both partners of 94 heterosexual romantic couples (N = 188), we fitted APIM models to investigate how one partner's mood (in terms of positive and negative affect) predicts their own sexual desire as well as that of their partner, and vice versa.

Results: Both concurrent and temporal analyses confirmed that (1) both a person's own and their partner's positive mood predicted an increase in sexual desire, and a person's own and their partner's negative mood predicted a decrease in sexual desire. Inversely, (2) both a person's own and their partner's sexual desire predicted an increase in positive mood, and a person's own and their partner's sexual desire predicted a decrease in negative mood.

Conclusion: In the daily life of romantic couples, bidirectional associations were found between mood and sexual desire both within and between partners.

Talk 3: The Way You Make Me Feel: Couple Similarity In Sexual Arousal And Its Sexual, Relational, And Affective Correlates

Aleksandra Pawłowska, Erick Janssen, Marieke Dewitte - KU Leuven, Maastricht University

Introduction: Although it is often experienced in the context of a relationship, most research on sexual arousal focuses on individuals. As such, still little is known about sexual arousal and its correlates in couples' daily lives.

Methods: Ninety-four couples completed six daily assessments for ten consecutive days. Response surface analysis was used to examine the degree and direction of similarity in sexual arousal during non-genital physical intimacy (i.e., cuddling and kissing) and its affective, sexual, and relational outcomes.

Results: Unlike nonsexual affective responses, which covaried within couples in general, sexual arousal only covaried when partners were physically intimate. Similarity at high arousal levels was positively associated with women's sexual satisfaction, but unrelated to men and women's relationship satisfaction and affect. Individual- and couple-level sexual arousal was positively associated with men and women's sexual satisfaction and with women's relationship satisfaction. Men's positive affect was higher when arousal levels within the couple were high, yet women's

positive affect was higher when their own sexual arousal levels were higher than that of their partner.

Conclusion: As long as couple-level sexual arousal is sufficiently high, both similarity and dissimilarity can be beneficial to one's well-being, supporting therapeutic techniques aimed at increasing couples' arousal levels to facilitate better sexual and relational outcomes.

Talk 4: Is Sexual Arousal Synchrony Clinically Relevant?

Marieke Dewitte - Maastricht University

Much attention has been paid to the association between genital and subjective sexual arousal within individuals (intrapersonal sexual synchrony). Because awareness of growing physiological signals is a key element in sexual responding, it has been assumed that stronger feedback links between the cognitive and physical components of the sexual system would increase sexual arousability. To date, there is no clear evidence that higher synchrony is associated with greater sexual well-being. Furthermore, level of sexual synchrony seems to depend on methodological characteristics and is marked by between-person variability. Systematic research is needed on the robustness and clinical relevance of sexual (de)synchrony. Including the partner and relational context in the measurement procedure might be one way to better understand synchrony. It is also relevant to study the reciprocal interchange between partners' sexual arousal responses. Because most sexual problems occur during sex with a partner, the study of interpersonal sexual synchrony is crucial to develop more valid models of sexual arousal. I will define sexual synchrony and outline the need to study its predictive and ecological validity, biological basis, and specificity in relation to physiological, behavioral and emotional synchrony during sex. I will reflect on synchrony across stages of the sexual response, moderators and mediators, and consequences for individual and relational (sexual) health in couples.

Emotions in Family Relationships

Chair(s): Sarah Galdiolo

Discussant: Mandy Rossignol

Thursday, October 5, 8:30–10:00, Auditorium DZ2

Abstract: Family members continuously elicit, respond to, and regulate emotional experiences in each other, and these interpersonal emotion dynamics are thought to be at the core of family relationships. While the literature on emotions in an individual perspective is extensive, few studies focused on emotional experiences within the family. The objective of this symposium will be to observe emotional experiences between parents and children with different ages. The first presentation (Verhelst, UGENT) will identify associations between emotion regulation strategies and depressive and anxiety symptoms in women diagnosed with perinatal depression. The second presentation (Rattaz, UNIGE) will investigate associations between parental sensitivity and vagal tone during dyadic and triadic interactions. Next, the links between parents' empathic accuracy and parents' and child's social behaviors will be analyzed (Mauroy, UMONS). The last presentation (Galdiolo, UMONS) will examine the relationships between child's externalizing behaviors, parents' cognitive biases, and parental stress. The discussion will emphasize the challenges for the family members to deal with emotions from pregnancy to child's preschool years.

Talk 1: Emotion Regulation In Women Diagnosed With Depression Or Anxiety In The Perinatal Period: A Systematic Review

Pauline Verhelst, Laura Sels, Gilbert Lemmens, Lesley Verhofstadt - Ghent University

The identification of emotion regulation (ER) strategies has become crucial to our understanding of the development of psychopathology, with a particular focus on depression and anxiety disorders. However, the role of ER in the development of depression and anxiety disorders in women during the perinatal period remains unclear. In this systematic review, we therefore aimed to identify associations between nine common ER strategies (i.e., rumination, suppression, behavioral avoidance, experiential avoidance, acceptance, problem solving, cognitive reappraisal, distraction, and emotional expression) and depressive or anxiety symptoms in women diagnosed with perinatal depression (PD) or anxiety (PA). To this end, we searched four electronic databases to identify English, peer-reviewed, and quantitative studies published between January 1999 and March 2022. Nine articles were selected for analysis. The results highlight a positive association between avoidance (both behavioral and experiential) and symptoms of depression and anxiety in mothers diagnosed with PD and PA respectively. In addition, the use of distraction to regulate emotions is also positively correlated with depressive symptoms in women diagnosed with PD. Screening for ER strategies during the perinatal period may help clinicians to identify women at risk for or experiencing symptoms of depression and anxiety; ER strategies might also be targeted during therapeutic interventions within this population.

Talk 2: The Influence Of Early Family Interactions On Infants' Vagal Tone

Valentine Rattaz, Hervé Tissot, Nilo Puglisi, Chantal Razurel, Manuella Epiney, Nicolas Favez - University of Geneva

The quality of early parent-infant interactions can influence infants' vagal tone, an indicator of emotion regulation. Physiological studies have been mainly conducted on mother-infant interactions and rarely on father-infant or mother-father-infant interactions. This study aims to investigate the associations between parental sensitivity and vagal tone during dyadic interactions and between family alliance (FA) and vagal tone during triadic interactions. As dyadic and triadic interactive contexts are not independent from one another, we investigate the possible moderation effects (1) of FA on the association between parental sensitivity and infants' vagal tone and (2) of parental sensitivity on the association between FA and vagal tone. This study includes 82 parents and their 3-month-old infants. Parental sensitivity and FA were assessed during dyadic and triadic interactions. Infant's ECG was recorded to obtain vagal tone. Maternal sensitivity and FA predicted infants' vagal tone, whereas paternal sensitivity did not. No significant moderation effect was found, however there was a marginal moderation effect of FA on the association between paternal sensitivity and infants' vagal tone. Maternal sensitivity and FA influences on infants' vagal tone are not moderated by the quality of other contexts of interaction. The influence of paternal sensitivity on infants' vagal tone seem to be influenced by family functioning. Results and implications will be discussed.

Talk 3: Child And Parents' Social Behaviours During Triadic Interactions

Anthony Mauroy, Justine Gaugue, Sarah Galdiolo - University of Mons

Introduction: In a relationship, empathy fosters understanding and validation between partners. It also guides partners to have more accommodative behaviours when interacting. Outcomes associated with empathy have been often investigated regarding the couple relationship between partners, but less regarding their parental role. However, parents' empathy fosters the development of positive social behaviours in children. The purpose of this study was to examine links between parents' empathic accuracy (i.e., accurately understanding a person's current thoughts and feelings when interacting) and parents' and child's social behaviours (i.e., behaviours such as gaze, positive affect, object manipulation, vocalization, interactive focus) toward an interactive partner.

Methods: Triads of 15-months-old children and their parents participated in a videotaped free play interaction, using standardized material. Parents then watched the recorded interaction and proceeded individually to describe self-thoughts/feelings and to infer partner's thoughts/feelings during both interactions, following Ickes' (1990) procedure. Parents and child's social behaviours were later coded from the interaction based on Gordon & Feldman (2008) coding scheme.

Results: Parents' EA were linked to their own social behaviours during interaction. Associations between parent's EA and the child social behaviours were also observed.

Conclusion:Empathy plays a role in the interactive behaviours between parents and children.

Talk 4: Attentional And Memory Biases In Parents Of Children Displaying Externalizing Behaviors

Sarah Galdiolo, Logan Hansotte, Emilie Jacobs, Pierre Philippot, Mandy Rossignol, Isabelle Roskam - University of Mons

Externalizing behaviors (EB), defined as agitation, aggressive, or oppositional behaviors, are observed at a low level in many young children. When intensive, EB can interfere with the child's functioning for long periods. Child's EB have frequently been linked to parenting stress. One explanation for this relationship would be negative parental attributions. Moreover, during psychological consultations, parents of children displaying EB tend to recall more the child's negative behaviors than the positive ones. While promising, studies on parents' cognitive biases have been limited to this observation. The current study examined the existence of cognitive biases in parents of children presenting EB, consisting in a dysregulation in the parents' preferential allocation of attention and/or memory recall towards their child's negative behaviors or emotions. The aim of the study was to evaluate the associations between child's EB and parenting stress, with parents' cognitive biases as mediators with a dyadic perspective. Forty-three parental couples of preschool children completed the Child Behavior Checklist, the Parenting Stress Scale, the Visual Probe Task, and the Incidental Recall Task. Our results showed actor and partner associations between child's EB and parenting stress with parents' memory bias (but not attentional bias) as a mediator. Findings support the notion that the memory biases could play a role in the burden felt by parents of children displaying EB.

A Self-Determination Theory Perspective on Emotion Regulation and Emotions

Chair(s): Elena Hernandez

Discussant: Elena Hernandez

Thursday, October 5, 8:30–10:00, Auditorium DZ1

Abstract: Within Self-Determination Theory (SDT), the role of autonomy in individuals' emotion regulation is emphasized, with a high-quality emotion regulation being characterized by a sense of volition. Moreover, parenting practices that foster such autonomy (in contrast with those that thwart it) have been found to benefit adaptive emotion regulation. Across four presentations, new insights on emotion regulation and emotions from the SDT perspective will be provided. In the first talk, Deniz presents a longitudinal study within the context of parent-child reminiscing thereby examining whether parents' reminiscing style (including autonomy support) reciprocally relates to preschoolers' emotion regulation. In the second talk, Anne focuses on parental autonomy support and psychological control and their relations with adolescents' emotions from situation to situation through a 7-day experience sampling study. In the third talk, Elena presents the recently coined construct of emotion crafting, a proactive form of positive emotion regulation grounded in SDT, examining its daily relations with psychological functioning. In the final talk, Asma focuses on emotion regulation and the psychological needs as mechanisms of childhood trauma in a cross-sectional study and the moderating role of such trauma in the effects of exclusion on for instance emotion regulation in an experimental study. Altogether, these studies provide new insights on emotion regulation and emotion from a SDT perspective.

Talk 1: Reciprocal Relations Between Mother'S Reminiscing Style And Child Emotion Regulation

Deniz Çetin, Silje Steinsbekk, Jolene van der Kaap-Deeder - Norwegian University of Science and Technology

Introduction: Given the scarcity of research on child-effects within research on reminiscing, this study examined the reciprocal relations between mother's reminiscing style and child emotion regulation (ER).

Methods: Mothers (Mage = 34.67 years, SD = 3.92) and children (Mage = 4.02 years, SD = 0.85) reminisced twice seven months apart about positive and negative memories. We coded mothers' level of elaboration, positive, and negative evaluation, and provision of autonomy support. At both time points, mothers reported on their child's ER through the Emotion Regulation Checklist.

Results: For positive memories, mother's elaboration related positively to children's concurrent adaptive ER, whereas children's emotional lability related negatively to later autonomy support. Positive evaluation during negative memory conversations was associated with increased adaptive ER. Finally, mothers were found to be less elaborative and to provide less positive evaluation when reminiscing about negative (vs. positive) memories.

Discussion: Results show that parents' reminiscing style relates to children's adaptive ER both concurrently and across time. Lastly, children's high emotional lability may hinder parents' provision of autonomy support.

Talk 2: A Moment Of Autonomy Support Brightens Adolescents' Mood: Autonomy Support, Psychological Control And Adolescent Affect In Every

Anne Bülow, Jolene van der Kaap-Deeder, Joachim Waterschoot, Isabel Truyen, Loes Keijsers - Erasmus University Rotterdam, Norwegian University of Science and Technology, Ghent University, Konvert Interim Vlaanderen

Introduction: This experience sampling study examined whether autonomy-supportive and psychologically controlling interactions with parents are intertwined with adolescents' momentary affect.

Methods: For 7 days, 143 adolescents (Mage = 15.82; SDage = 1.75; 64% girls; 71 Belgian, 72 Dutch) reported 5 or 6 times a day how they felt and how interactions with parents were experienced.

Results: Preregistered dynamic structural equation models on 1,439 parent-adolescent interactions revealed significant within-family associations: Adolescents experienced more positive affect during and following autonomy-supportive interactions, and vice versa. Adolescents felt more negative affect during and 3 hours before psychologically controlling interactions. Between-family associations showed significant linkages between parenting and affect.

Conclusion: Overall, these findings show that a moment of autonomy support can alter adolescents' well-being in everyday life.

Talk 3: The Importance Of Emotion Crafting For Individuals' Daily Well-Being: A 7-Day Diary Study

María Elena Hernández Hernández, Jolene van der Kaap-Deeder - Norwegian University of Science and Technology

Introduction: Although emotion regulation is a well-researched topic, the proactive regulation of positive emotions (conceptualized as emotion crafting – EC) is still underexplored. Recent research has demonstrated that EC has significant positive impacts on life satisfaction, vitality, well-being and decreased internalizing symptoms through positive affect (Van der Kaap-Deeder et al., 2023). Building on this previous cross-sectional study, this study aimed to examine how fluctuations in (planned) emotion crafting related to fluctuations in psychological functioning.

Method: A 7-day diary study was conducted among 122 participants (61.2% female; Mage = 29.41 years, SD = 11.8; range 18-62), where they indicated their planned EC and positive emotion goals in the morning, and reported their actual EC and psychological functioning in the evening. Data were analyzed through two-level multilevel analyses.

Results: Planned EC (and, to a lesser extent, positive emotion goals) related positively to actual EC and well-being, while relating negatively to ill-being, both at the between-person and within-person level.

Conclusion: These results show that proactively engaging in behaviors aimed at maintaining or strengthening positive emotions is beneficial for individuals' daily well-being. Future research is needed to determine the causality of the effects of EC and whether the effects of EC can be generalized across diverse cultures.

Talk 4: The Role Of Childhood Trauma In Young Adults' Emotion Regulation, Psychological Needs, And Psychological Functioning

Asma Rashid, Sebastiano Costa, Jolene van der Kaap-Deeder - University of Campania, Norwegian University of Science and Technology

Introduction: Numerous studies have shown the detrimental effects of childhood trauma for individuals' psychological functioning. This research aimed to investigate the associations between childhood trauma and individuals' well-being and ill-being while focusing on emotion regulation and basic psychological needs throughout two studies.

Method: Study 1 (N = 489; Mage = 23.63; SDage = 3.53; 68.7% female) employed a cross-sectional design, whereas Study 2 (N = 162; Mage = 23.69; SDage = 2.80; 74.1% female) employed a preregistered experimental design either inducing inclusion or exclusion through the Cyberball paradigm.

Results: In Study 1, childhood trauma related indirectly to 1) higher levels of dissociation through more emotion dysregulation, suppression, and need frustration, 2) less life satisfaction through higher emotion dysregulation and need frustration and lower need satisfaction and emotion integration, 3) less positive attitude towards seeking psychological help through higher emotion suppression and less integration. Results of Study 2 revealed that childhood trauma significantly moderated the associations from social exclusion to well-being and need satisfaction, but not to emotion regulation.

Discussion: Study 1 emphasizes the importance of emotion regulation and psychological needs as mechanisms in the effects of childhood trauma and Study 2 advances our understanding of the effects of social exclusion and the role of childhood trauma herein.

Exploring Links Between Emotion and Everyday Experiences

Chair(s): Delali Konu

Discussant: Thuy-vy Nguyen

Thursday, October 5, 8:30–10:00, Auditorium DZ3

Abstract: People intuit that emotions are linked to so many daily experiences. Sometimes our emotions occur at the same time as bodily reactions, which might make it seem that emotions cause those reactions. Sometimes our emotions might trigger certain behaviors. At other times we might even be able to regulate our emotions in response to everyday events. In this symposium three Early Career Researchers will present talks on affective responses to common experiences, including piloerection (goosebumps), solitude, and self-control. Dr. Jonathan McPhetres will highlight piloerection as one possible outcome of affective experience from a laboratory study (N = 90) finding that emotions are not necessary for piloerection to occur. Dr. Delali Konu will present an Ecological Momentary Assessment study (N=392) to suggest that individuals may differ in their preference for solitude depending on the emotion experienced. Dr. Kaitlyn Werner will present an integrative affective science framework (N=9792), which highlights how people can strategically regulate emotional responses during self-control conflicts to promote behavior change. Dr Thuy-vy Nguyen will guide the discussion on the relationship between emotion and everyday phenomena.

Together, the talks raise key questions about our daily emotional responses. We discuss a range of experimental methodologies to address key questions relating to emotional responses to everyday phenomena, both from a psychological and physiological perspective.

Talk 1: Surprise! Piloerection Is Not An Indicator Of Emotional Experience

Jonathan McPhetres, Scott Bannister, Halo Gao, Ailin Han, Nicole Kemp, Bhakti Khati - Durham University, University of Leeds

Introduction. Little is known about how little changes in our body are connected to psychological and physiological processes. Piloerection—also known as goosebumps—is often interpreted as a response to emotional stimuli, but there is little evidence connecting piloerection to emotional experience. **Methods.** In this research, we exposed 90 participants to emotional piloerection-inducing videos, and recorded their heart rate, blood pressure, cardiac output, as well as piloerection on multiple body locations via high-definition cameras. Participants “self-reported” emotions after each video, and an additional cohort of online participants (N = 110) rated the videos on valence, arousal, and emotionality. **Results.** We did not find that self-reported emotional ratings predicted piloerection. However, participants experienced piloerection at the same timepoints on the videos; audio-visual qualities of the stimuli predicted piloerection in cross-lagged time series models. **Conclusions.** These findings contradict colloquial understandings of piloerection but align with a recent systematic review which identified a lack of consistency in emotional correlates with piloerection. We use these findings to discuss a model in humans which views piloerection as a direct response to changes in the environment similar to tactile and thermal

stimulation. Thus, piloerection may be an “affective” response but one that does not require emotional experience.

Talk 2: Emotional Triggers Of The Need For Solitude

Delali Konu, Sam Forbes, Thuy-vy Nguyen - Durham University

Introduction. Previous research has shown that solitude can bring down high arousal emotions, whether negative (e.g., anger) or positive (e.g., excitement). This raises key questions about the influence of solitude on emotion regulation and the mechanisms by which this may occur. In this study, we investigated whether participants were more likely to seek solitude after experiencing high arousal emotions. We hypothesised that people that vary on neuroticism and extraversion measures might seek solitude in response to different emotional triggers.

Methods. This study used Ecological Momentary Assessments design. Participants (N=392) reported their mood, situation (alone or in company) and preference for solitude every hour between 8AM and 10PM across one day.

Results. We did not find evidence that neuroticism and extraversion predicted actual behaviour of seeking solitude after experiencing high-arousal emotions. Instead, we found evidence for self-reported preference for solitude. Low-neuroticism people tended to prefer solitude after experiencing high-arousal negative emotions, while introverts showed less preference for solitude after experiencing high-arousal positive emotions.

Conclusions. These data highlight that certain individuals may crave solitude as a time to process emotions depending on the type of emotion experienced.

Talk 3: Behaviour Change In Context: An Affect Science Perspective To Promote Successful Self-Control

Kaitlyn M. Werner, Brett Q. Ford, Wilhelm Hofmann, Kate Petrova, Raymond Wu, Malte Friese, James J. Gross - University of Pennsylvania, University of Toronto, Ruhr University Bochum, Stanford University, University of British Columbia, Saarland University , Stanford University

Introduction. Behavior change is hard. Although everyone wants to change some aspects of their behavior (e.g., eat healthier), we often give in to temptations. In this research, we focus on ways that people dynamically adjust the strategies they use across situations to maintain self-control. Inspired by research on emotion regulation, we first present the extended process model of self-control. This model distinguishes three stages of regulation: identifying the need to regulate desires that conflict with long-term goals, selecting strategies to regulate conflicting desires, and implementing chosen strategies.

Method. Using cross-sectional and longitudinal methods across several important life domains, participants (N = 9792) described their responses to different self-control scenarios they recently experienced.

Results. Consistent with our theoretical model, we find that motivation (want-to vs. have-to) determines the need for self-control, having a larger strategy repertoire can be beneficial for successful regulation, people often use multiple strategies within the same regulatory episode (polyregulation), and that people can strategically incorporate temptations into the goal striving

process in such a way that minimizes negative emotional responses experienced during self-control conflict.

Conclusion. We close by highlighting directions for future research that can help us better understand how to help people achieve their goals from an affect science perspective.

Methodological and Theoretical Advances in Disgust Research

Chair(s): Antonia Ypsilanti

Thursday, October 5, 8:30–10:00, Auditorium DZ4

Abstract: Disgust is a basic emotion that has received increasing attention particularly in relation to a range of mental health disorders and related symptoms. In this symposium, we will present a series of studies exploring methodological and theoretical advances in disgust-related research including self-directed disgust and moral disgust. The symposium will begin with a presentation of a re-analysis of self-disgust and loneliness scores from four independent datasets from the general population. The second presentation will present findings from a study on facial emotion recognition in individuals with high and low levels of self-disgust. The third study will present novel stimuli (images/vignettes) to elicit moral disgust. Finally, we will discuss the process of habituation for positive and negative stimuli and its implication for disgust research. The symposium will present important research findings about the next frontiers in disgust-related research and related implications for clinical practice.

Talk 1: Is Loneliness A (Self) Disgusting Experience?

Lambros Lazuras - Sheffield Hallam University

Introduction: Previous research has recently showed that loneliness and self-disgust are positively associated. The present paper presents a re-analysis of self-disgust and loneliness scores from four independent datasets from the general population and university students in the UK. The aim of the study is to determine whether people classified into different loneliness groups systematically differ in self-reported levels of self-disgust.

Methods: Loneliness was assessed using either the 20-item (Samples 1, 2, and 4) or the 10-item (Sample 3) version of the UCLA Loneliness Scale (Russell et al., 1978; Russell, 1996). Self-disgust was assessed using the 18-item Self-Disgust Scale (SDS; Overton et al., 2008). All data were collected in four independent cross-sectional studies between 2019 and 2021 and involved 1935 adults in the UK. Loneliness groups were determined using either the Russell (2017) or the Cacioppo et al. (2000) methods.

Results: One Way ANOVAs showed that low loneliness groups tend to systematically report significantly lower levels of self-disgust compared to moderate and high loneliness groups. Differences between moderate and high loneliness groups were not consistently observed.

Conclusion: Different methods to classify individuals into loneliness groups yield different results with regards to self-disgust scores. Future research should use prospective designs and cross-lagged models to determine the temporal associations between loneliness and self-disgust. The public health and clinical implications will be discussed.

Talk 2: Facial Emotion Recognition In Individuals With Self-Disgust

Antonia Ypsilanti - Sheffield Hallam University

Introduction: Self-disgust is a negative self-conscious emotional schema that is related to various psychological disorders in clinical and non-clinical populations. Feelings of self-disgust can manifest as individuals appraise socially learned constructs of what a disgusting behaviour or an act. As such, recognizing negative facial expression in others may differ in people with high levels of self-disgust. Previous research has shown that individuals with body dysmorphia that rate highly in self-disgust tend to avoid disgusted faces.

Methods: The current study used a facial emotion recognition task (FERT) to assess facial emotion recognition in 54 individuals with high (N=26) and low (N=28) self-disgust. The FERT consisted of 108 images of faces displaying disgust, fear and sadness at varying emotional intensities (20%, 30%, 50% and 70%). Participants also completed the Self-Disgust Scale, Beck's Depression Index, and the UCLA-3 Loneliness Scale.

Results: Individuals with high self-disgust identified disgust faces more quickly than those with low self-disgust and this was more evident at the 30% intensity, suggesting heightened sensitivity to certain facial emotional expressions.

Conclusions: Individuals with high self-disgust recognize disgust facial expressions faster than those with low levels of self-disgust. The theoretical and clinical implications of these findings will be discussed.

Talk 3: Moral Disgust Elicitation Using Intentional Bodily-Moral Violations

Oliver Hawkins - Sheffield Hallam University

Introduction: Moral disgust is a term most often used to describe the feeling of outrage elicited by the perceived violation of a social norm or boundary. When examining moral emotions including moral disgust, there have been mixed findings as to whether the intention behind the moral violation contributes to the immorality and disgust reported by an individual. This presentation provides evidence to suggest intentional acts are more immoral and disgusting than unintentional acts and matched physically disgusting counterparts. Additionally, the hypothesis that visible disgusting content in accompanying images would increase perceived immorality and disgust was explored.

Methods: Participants (N = 169) randomly assigned to 6 conditions rated moral vignettes on scales of valence, arousal, emotion, and morality.

Results: Intentional moral violations were rated more unpleasant and intense and were reported significantly more morally wrong and disgusting than unintentional and physically disgusting vignettes. Accompanying images had no significant effect on reported levels of disgust or immorality.

Conclusions: Intentional moral violations elicit greater levels of moral disgust and condemnation, and should be as an effective method for targeting moral emotions. Possible avenues for future research following such methodologies are discussed,

Talk 4: Differential Habituation To Positive And Negative Stimuli: Implications For Disgust Research And Practice

Oksana Itkes - University of Haifa

Introduction: The attenuation of response to repeated stimuli is termed 'habituation', and it is considered the most primitive form of learning. The goal of the study is to examine whether habituation can generalize based on semantic knowledge, to the entire category of the object. In two experiments, we asked whether affective habituation occurs for perceptual, conceptual and/or affective properties of the stimulus.

Methods: Participants were repeatedly presented with an affective image, followed by a set of test images that shared perceptual, conceptual, or affective properties with the repeated stimulus.

Results: habituation across different components of the emotional response (self-reported feelings, facial expressions) was generalized up to the conceptual level of the repeated stimulus for pleasant, but not for unpleasant stimuli.

Conclusions: The findings of the present study are discussed in relation to disgust research by highlighting differences in habituation of pleasant and unpleasant stimuli.

Emotional and Psychological Uses of Music

Chair(s): Annemieke van den Tol and Waldie Hanser
Thursday, October 5, 8:30–10:00, Auditorium DZ6

Abstract: Musical activities appear to be present in all the world's cultures. Music is appreciated for various reasons. Engaging with it serves multiple psychological purposes in daily life, which may result in benefits to wellbeing and health. The four talks in this symposium explore diverse uses of, mainly listening to, music. First, Gunter Kreutz will discuss findings among a large group of adolescents and young adults, an age in which music plays a key role in, for example, mood regulation and the development of identity, on how leisure activities, including music, add to self-efficacy. Second, Roger Giner-Sorolla discusses listening to ironically-enjoyed music, which is sometimes referred to as a guilty pleasure. Ironic enjoyment occurs when people enjoy music despite or because of it being evaluated as bad. Specific attention is given to ironic enjoyment and mood regulation. Third, Tim Loepthien presents recent findings and the development of a scale on the subject of emotion-regulation motives in music listening. Much attention is given to the employed strategies when regulating emotion through music listening, but the reasons for doing so have received far less interest. Lastly, Waldie Hanser talks about music and lyric characteristics of often-used funeral music in the Netherlands. Despite its many important functions before, during, and after farewell rituals, few studies have specifically investigated this music.

Talk 1: Leisure Activities Are Associated With Enhanced Self-Efficacy During The First Two Decades Of Life

Gunter Kreutz, Michael Feldhaus, Suvi Saarikallio - Carl von Ossietzky Universität Oldenburg, University of Jyväskylä

Introduction: Previous work suggests that structured leisure activities during childhood and adolescence including sports, book reading, and music, all contribute to lifelong learning, development and wellbeing with self-efficacy as one key mechanism that mediates this association.

Methods: Here we test this assumption by using data from a large-scale representative cross-sectional survey of German children, adolescents, and younger adults (N = 7,158). Self-efficacy served as the main dependent measure, and sports, book reading, music, and computer gaming alongside socio-economic and demographic control variables served as independent measures in a series of regression analyses.

Results: The three former activities were found positively associated with self-efficacy, but their impact on enhancing self-efficacy ceases in late adolescence and early adulthood. By contrast, computer gaming was overall negatively associated with self-efficacy.

Conclusions: These results suggest that continued engagement in some leisure activities might contribute to higher levels of self-efficacy during the first decades of life. Further research should

investigate the role of leisure activities for self-efficacy in childhood and adolescence, and its implications for learning, wellbeing, and quality of life.

Talk 2: Who Wants To Listen To That Horrible Music?

Roger Giner-Sorolla, Annemieke van den Tol - University of Kent, University of Lincoln

Introduction: Ironic enjoyment occurs when people enjoy music despite or because of it being evaluated as bad. But why would people want to listen to such music?

Methods: This research examines adults' reported motivations for listening to music that they enjoy ironically and also looked at how these related to the subjective qualities of the music. The results of two opened ended surveys (N = 96 & 175) and four between-subjects experiments (N= 108, 109, 216, & 143) will be discussed.

Results: Ironic music listening is a positive, active experience that negatively correlates with the perceived social status of the music and the use of that music for affect regulation. Compared to naturally enjoyed music, ironically enjoyed music has less effect on personal identification and on managing positive or negative moods and is also appreciated less and judged as less novel than naturally enjoyed music. Music that is listened to "because of" its negative qualities usually serves functions such as mockery or comedy, and social functions related to this. Music that is listened to "despite" negative qualities serves as a half-way point between enjoyed and ironically enjoyed music. This music is often described as having good rhythm, melody, or lyrics, and is used more for personal mood management, dance, or exercise. Unfamiliar music mainly plays a social role, whereas familiar music is commonly related to nostalgia.

Talk 3: Motives For Emotion Regulation Through Music Listening: Results Of An Open-Ended Study And Development Of A Questionnaire

Tim Loepthien, Seong-u Bak, Waldie Hanser, Annemieke van den Tol, Bernhard Leipold - University of the Bundeswehr, Ludwig-Maximilians-University Munich, Tilburg University, University of Lincoln

Introduction: Research on emotion regulation through music listening (ERtM) so far mainly focuses on how music is applied, but largely neglects the motives underlying emotion regulation processes. Extending on research by Tamir (2016), we recently studied and found that most emotion regulation motives (used in general) are also mentioned in people's explanations for listening to music (submitted). Based on these findings a questionnaire was established to further investigate motives in ERtM. This talk will present findings aiming to integrate motives into research on ERtM.

Methods: Study 1 (N = 97 (f = 56, m = 38, d = 1, N/A = 2, MAge = 37.7, SD 16.0): Open-ended questionnaire study to investigate frequency of motives in ERtM. Study 2 (N = 224 (f = 140, m = 62, d = 5, N/A = 17, MAge = 32.8, SD 11.6): Questionnaire study to test and validate an instrument to assess motives in ERtM.

Results: Study 1: Emotion regulation motives as postulated by Tamir are relevant for music listening. Preliminary findings for study 2 are promising and indicate a 7-factor solution explaining

55% of the variance. The seven factors (representing 29 items) reflect the motives introduced by Tamir with eudaimonic motives forming two separate factors.

Conclusion: Emotion regulation motives are important for ERtM and provide significant insights in the underlying processes. Future studies shall investigate moderating effects of these motives on relationships between ERtM and wellbeing as well as psychological health.

Talk 4: Music And Lyric Characteristics Of Funeral Music

Waldie Hanser, Ruth Mark, Ad Vingerhoets - Tilburg University

Introduction: Despite its importance before, during, and after farewell rituals, funeral music has received little systematic research attention. This is surprising, given music's role during the ceremony, in the experience of consolation, and during the grieving process.

Methods: We compared the characteristics of 150 songs (Dutch lyrics, N = 47, English lyrics, N = 103) popular at Dutch funerals to an equal number of non-funeral songs. The variables explored included those linked with the music (valence, energy, danceability, acousticness, key, and tempo); and lyrics, more precisely: linguistics-related (first-person singular/plural, second-person pronouns; past, present, future tense), expressed emotion (positive, negative words; and the discrete emotional categories anger, anxiety, sadness), and category words (those relating to family, friends, death, religion).

Results: Funeral music was lower in valence, energy, and danceability and higher in acousticness than non-funeral music. Furthermore, English funeral music lyrics contained more second-person pronouns and were more future-focused than comparison songs. Funeral lyrics were not particularly negative, but English texts had more words relating to sadness.

Conclusions: Funeral music differs in severable notable respects from general popular songs that may reflect the special purpose of this music. The acoustic character of the music allows for a focus on the lyrics that express continuing social bonds.

The Many Faces of Emotion Regulation - How Should We Define and Measure Emotion Regulation?

Chair(s): Dominique Maciejewski and Marie-José van Tol
Thursday, October 5, 13:15–14:45, Auditorium DZ2

Abstract: While it is commonly recognized that emotion regulation plays a central role in our well-being, researchers rarely agree on one definition of emotion regulation. Consequently, the way we measure emotion regulation can vastly differ depending on the discipline. This symposium opens with an overview of current conceptualizations of emotion regulation. The four presentations showcase diverse ways to study emotion regulation. The first presentation (Rozemarijn van Kleef) emphasizes the neurobiological underpinnings of emotion regulation and will present data on brain activation in remitted patients with Major Depressive Disorder during regulation of positive and negative emotions. The second presentation (Dominique Maciejewski) underscores the importance of considering context in understanding emotion regulation use and presents findings from a daily diary study that assessed emotional context and emotion regulation strategies across 60 days in young adults. The third presentation (Annemiek Karreman) showcases how a person-centered approach can be useful in understanding emotion regulation and presents longitudinal data on cognitive emotion regulation profiles in children and how profile transitions are associated with parent-reported internalizing problems over time. The last presentation (Marlijn Besten) highlights how emotion regulation can be improved with targeted interventions and presents a study on the effects of mindfulness and positive fantasizing on emotion regulation.

Talk 1: Neural Basis Of Negative And Positive Emotion Regulation In Remitted Depression

Rozemarijn van Kleef, Jan-Bernard Marsman, Claudi Bockting, Evelien van Valen, André Aleman, Marie-José van Tol - University Medical Center Groningen

Introduction: Major Depressive Disorder (MDD) is characterized by high recurrence. Inadequate emotion regulation has been proposed as a vulnerability mechanism to relapse, mediated by abnormal involvement of frontal brain regions. We studied whether remitted MDD (rMDD) is characterized by aberrant frontal activation during regulation of both negative and positive emotions.

Methods: Data from 46 rMDD patients and 24 healthy controls (HC) from the NEWPRIDE study was included. An Emotion Regulation Task was used during fMRI scanning, in which emotional images had to be viewed or cognitively reappraised. Also, questionnaires on regulation strategy use in daily life were administered. We tested for group differences (rMDD vs HC) in neural activation and relation to regulatory strategies.

Results: RMDD patients showed abnormal activation in prefrontal-parietal regions during emotional viewing. During instructed positive upregulation, rMDD patients showed abnormal

insula activity. RMDD was characterized by dysfunctional regulation strategies in daily life. Within rMDD emotion regulation was related to activation within a limbic- prefrontal network.

Discussion: In rMDD regulatory abnormalities remain, especially when uninstructed and in daily life. Lower insula activation during positive upregulation suggests decreased monitoring of positive emotions. This suggests that both negative and positive emotion regulation is important in understanding the neurocognition of resilience.

Talk 2: Emotion Regulation Dynamics In Changing Emotional Contexts In Daily Life

Dominique Maciejewski, Edmund Lo, Andrea Bunge, Egon Dejonckheere, Eeske van Roekel - Tilburg University

Introduction: Contextual factors influence how individuals regulate their emotions. Earlier evidence on context-sensitivity in daily life (e.g., Blanke et al., 2022; De France & Hollenstein, 2022) seldom consider emotional contexts and are often limited in procedure (short data collection periods), measures (assess only few emotion regulation (ER) strategies), and analysis (neglect non-linear forms of covariation between context and ER strategies). The present study addresses these limitations and studies the linear and quadratic covariation between emotional context and ER strategies.

Methods: In this Experience Sampling Methods (ESM) study, we followed 83 adults (Age: M = 22.3, SD = 6.0, 87% female) across 60 days using the m-path app. Each evening, participants reported on their most intense emotion (two emotional context variables: intensity, controllability) and how they regulated this emotion (six ER strategies: expression, relaxation, reappraisal, distraction, suppression, rumination). Multilevel models will be used to test for linear and quadratic relationships between the emotional context and ER strategies.

Results: This study has been pre-registered and analyses are currently being conducted. Simulation studies have shown sufficient power to test for linear and quadratic effects.

Conclusions: This study will contribute to a better understanding of the complex relationship between emotional contexts and ER strategies.

Talk 3: Cognitive Emotion Regulation Profile Transitions And Internalizing Problems From Childhood To Adolescence

Annemiek Karreman, Lisanne de Moor, Odilia Laceulle - Tilburg University

Introduction: Youth differ in the repertoire of emotion regulation strategies they commonly use in stressful situations. Cross-sectional research shows that emotion regulation profiles can be identified, differing in amount and combination of used strategies. We identified cognitive emotion regulation profiles in youth, examined to what extent youth transition between profiles from childhood to adolescence, and studied if profile transitions relate to change in internalizing problems.

Methods: At three annual waves, youth (total N=526, Mage Wave 1 =10.1) completed the Cognitive Emotion Regulation Questionnaire (kids-short) and parents completed the Child Behavior Checklist.

Results: Latent Profile Analyses showed three profiles for all three waves: low strategy use (55.5%, 56.9%, 51.7% at Wave 1-3), high use of adaptive and lower use of maladaptive strategies (31.1%, 33.0%, 27.8% at Wave 1-3), and lower use of adaptive and high use of maladaptive strategies (13.4%, 10.1%, 20.4% at Wave 1-3). Latent Profile Transition Analyses showed that most youth remained in their profile. Most of the youth who transitioned between profiles, transitioned towards a less adaptive profile (61.4%; 12.4% of the sample). We examine whether transition probabilities are predictive of change in internalizing problems.

Conclusions: Using the person-centered approach, this study provides information about less adaptive combinations of emotion regulation strategy use over time from childhood to adolescence.

Talk 4: The Effects Of Therapeutic Intervention Techniques On Affect And Emotion Regulation In Remitted Mdd Patients

Marlijn Elisabeth Besten, Marieke Karlijn van Vugt, Harriette Riese, André Aleman, Marie-José van Tol - University Medical Center Groningen

Introduction: Major Depressive Disorder (MDD) is one of the most prevalent psychiatric disorder and is characterized by high relapse rates. Therapeutic techniques, including fantasizing and mindfulness, seem potent in reducing relapse, putatively by enhancing positive attitudes and acceptance of thoughts, respectively. Here we aimed to investigate how one-week app-based training of fantasizing vs. mindfulness affect emotion regulation.

Methods: Remitted MDD patients (rMDD; n=20) and never-depressed individuals (ND; n=20) received a fantasizing and mindfulness intervention in a cross-over design. Before and during intervention performance, participants filled out questionnaires on affect states using Experience Sampling Methods as a measure of emotion-regulation success.

Results: Preliminary results show that negative affect increased after fantasizing and decreased after mindfulness in both rMDD and ND. Positive affect did not change after fantasizing but decreased after mindfulness in rMDD group and increased in ND.

Conclusions: Results related to fantasizing are unexpected and may be explained by discomfort people with a history of depression may feel towards positive affect. Follow-up analyses will focus on the dynamics of changes in affect states and emotion-regulation success and examine changes in thought patterns and attitudes after intervention performance.

Dynamics of Individual Change: Assessment, Analysis, and Applications

Chair(s): Nessa Ikani

Thursday, October 5, 13:15–14:45, Auditorium DZ1

Abstract: Over the last decade, ecological momentary assessment (EMA) gained much popularity as a means to capture intensive longitudinal data of phenomena – emotional states, symptoms, events – in real-life. Particularly in mental health care settings, this could aid in a better understanding of the dynamics of change on the individual level (e.g., symptom development, sudden gains and losses in treatment, relapse). In this symposium, we will present findings from studies focusing on critical changes in emotions and psychopathological symptoms over time. In doing so, methodological considerations related to the collection and analysis of intensive longitudinal data will be discussed. Drawing on a complex systems perspective, Marieke Helmich will first present findings on state changes in emotions during treatment for depression based on Hidden Markov Modelling. Then, Nessa Ikani will present change profiles in social anxiety symptoms and avoidance over the course of treatment using recurrence networks. Merlijn Olthof will highlight the dynamics of personalized daily self-ratings during psychotherapy for mood and/or depressive disorders by relating the presence of discontinuous shifts and increased fluctuations to treatment outcomes. Finally, Rayyan Tutunji will discuss how the combined use of wearable biosensors and EMA can aid in the detection of prolonged stress in real life.

Talk 1: Revealing State Changes In Emotion During Treatment For Depression Using Hidden Markov Models

Marieke Helmich, Emmeke Aarts, Sverre Urnes Johnson, Evelien Snippe - University of Oslo

Introduction. For depressed individuals, the process of change in emotions during therapy has been shown to occur in heterogeneous, non-linear patterns when studied with intensive longitudinal assessments. Both sudden shifts and more gradual changes are common. This fits the conceptualization of psychopathology as a dynamical system, which further leads us to expect that the changes in emotions and symptoms that occur during therapy may constitute a transition from one state to another – e.g., from depression to remission.

Methods. This study uses a Bayesian multilevel Hidden Markov Modeling (mHMM) approach to uncover the underlying states in emotion time series (ca. 550 ecological momentary assessments per person) of 39 depressed individuals during psychological treatment. Participants were classified as treatment responders if they had a reliable symptom reduction over the 4-month observation period.

Results. First results will be presented. We will show a) what number of states best represents the emotion changes that occur during therapy in our sample, b) the differences between treatment responders and non-responders, c) how the likelihood to stay in one state or switch between states changes over the course of treatment, d) highlight between-person differences quantitatively and visually.

Conclusions. This study will provide empirical insight into the clinical observation that emotional instability is part of the process of symptom change and improvement during therapy.

Talk 2: The Dynamics Of Major State Shifts Over The Course Of Exposure Treatment

Nessa Ikani, Fabian van der Meer, Fred Hasselman - Tilburg University

Introduction. Avoidance is a central feature of social anxiety disorder and anxiety disorders in general. For this reason it is at the core of Exposure Therapy for anxiety disorders. We conducted an intensive longitudinal single-case series (N=1) design with the goal of characterizing the dynamics of avoidance, perceived control and social anxiety symptoms over the course of treatment (Hofmann & Otto, 2017, 14-week protocol).

Methods. Ecological momentary assessment (EMA) data was collected twice a day (morning/evening) with a smartphone for a total of > 100 days (before, during and after treatment). Dynamic change profiles of social anxiety symptoms, perceived control and avoidance during treatment were analyzed using a recurrence network approach.

Results. A general decreasing trend was observed for social anxiety symptoms and avoidance, whereas perceived control increased over the course of treatment – reflected by several major state shifts in these constructs.

Conclusions. Findings highlight the importance of adopting dynamic approaches to symptom development and clinical improvement and may specifically be relevant to personalized medicine efforts.

Talk 3: The Best Of Both Worlds? General Principles Of Psychopathology In Personalized Assessment

Merlijn Olthof, Fred Hasselman, Benjamin Aas, Daniela Müller, Günter Schiepek, Anna Bosman, Anna Lichtwarck-Aschoff - University of Groningen

Introduction. A complex systems approach to psychopathology proposes that general principles lie in the dynamic patterns of psychopathology, which are not restricted to specific psychological processes like symptoms or affect. Hence, it must be possible to find general change profiles in time series data of fully personalized questionnaires. In the current study, we examined general change profiles in personalized self-ratings and related these to treatment outcome.

Methods. We analyzed data of 404 patients with mood and/or anxiety disorders who completed daily self-ratings on personalized questionnaires during psychotherapy. Change profiles in the self-ratings were classified with PCA, regression and classification methods.

Results. The change profile classification yielded the following distribution of patients: no-shift (n = 55; 14%), gradual change (n = 52; 13%), one shift (n = 233; 58%), reversed shift (n = 39; 10%) and multiple shifts (n = 25; 6%). The multiple-shifts group had better treatment outcome than the no-shift group on all four outcome measures. The one shift and gradual-change group had better treatment outcomes than the no-shift group on respectively two and three outcome measures.

Conclusions. Overall, this study illustrates that person specific (idiographic) and general (nomothetic) aspects of psychopathology can be integrated in a complex systems approach to psychopathology, which may combine ‘the best of both worlds’.

Talk 4: Using Wearable Biosensors And Ecological Momentary Assessments For The Detection Of Prolonged Stress In Real Life

Rayyan Tutunji, Nikos Kogias, Bob Kapteijns, Martin Krentz, Florian Krause, Eliana Vassena, Erno Hermans - Radboud University Medical Center

Introduction. Increasing efforts toward prevention of stress-related mental disorders have created a need for unobtrusive real-life monitoring of stress-related symptoms. Wearable devices have emerged as a possible solution, but their use in real-life stress detection has not been systematically investigated.

Methods. Using ecological momentary assessments and wearables for ecological physiological assessments (EPA), we investigated the impact of an exam week on physiological arousal and affect. With this paradigm we investigated the utility of wearables to detect stress states, using both individualized machine learning models with a leave-one-beep-out approach, and group-based models using a leave-one-subject-out approach.

Results. During stressful exam weeks, participants reported increased negative and decreased positive affect, and surprisingly decreased physiological arousal. Time-resolved analyses revealed peaks in physiological arousal associated with both self-reported stress and self-reported positive affect. Decreased physiological arousal in the exam week was mediated by lower positive affect during the stress period. Machine learning showed that a combination of EMA and physiology yields optimal identification of stress states.

Conclusions. Findings highlight the potential of wearable biosensors in stress-related mental-health monitoring, but critically show that psychological context is essential for interpreting physiological arousal detected using these devices.

New Perspectives on Alexithymia Measurement

Chair(s): Olivier Luminet

Thursday, October 5, 13:15–14:45, Auditorium DZ3

Abstract: Having valid instruments for assessing emotional constructs is a key step for research and clinical goals. For several years, the alexithymia construct suffered from unreliable instruments. Since 1994, the Toronto Alexithymia Scale (TAS-20) provides a valid self-report instrument to assess three dimensions of alexithymia (difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking). There are still debates, however, regarding alexithymia measurement. The symposium will first address the difficulty to use self-reports for people with severe alexithymia who might be unaware of their emotion deficits. It will also address the potential relevance to consider difficulties in identifying and verbalizing positive emotions, which is considered in the recent Perth Alexithymia Questionnaire (PAQ). The symposium will be divided in two sections. In the first one, the leading researchers who developed and validated the TAS-20 (R. Michael Bagby) and the PAQ (David Preece) will review the theoretical and methodological underpinnings of the scales they developed. In the second part, specific validations issues will be addressed. Piero Porcelli will examine the level of overlap between the TAS-20 and an informant measure. Marta Walentynowicz will show the properties of the Dutch version of the PAQ. The symposium will present a unique view of the current developments of alexithymia measurement.

Talk 1: Issues In The Measurement Of The Alexithymia Construct, Redux

R. Michael Bagby, Sharlane C.L. Lau, Graeme J. Taylor - University of Toronto

Introduction: Despite 25 years of accumulated evidence mostly supportive of the psychometric properties of the Toronto Alexithymia Scale (TAS-20) and its factor structure (Bagby et al., 2020; Schroeders et al., 2021), some researchers (e.g., Preece et al., 2022) have recently directed several criticisms toward the scale, including poor internal reliability of its externally oriented factor scale, the failure to measure both positively- and negatively-valenced emotions, its association with measures of psychological distress, and even the original theoretical foundations of the scale. Although Preece et al. (2022) assert that the Perth Alexithymia Scale (PAQ) addresses some of these shortcomings, there is an absence of supporting evidence from independent researchers.

Methods: In this presentation, we systematically address some of these criticisms of the TAS-20 and, in turn, outline conceptual differences and some psychometric limitations of the PAQ with theoretical argument and empirical analyses using a set of data collected by researchers independent of the creators of this scale.

Results: We demonstrate empirically that although the PAQ has a factor structure consistent with the alexithymia construct, and converges with measures of related constructs, it does not add meaningful incremental validity to the TAS-20.

Conclusions: The TAS-20 therefore remains the self-report scale of choice, albeit as part of a multi-method approach to the assessment of the alexithymia construct.

Talk 2: Assessing Alexithymia Across Negative And Positive Emotions With The Perth Alexithymia Questionnaire

David A. Preece, James J. Gross - Curtin University, The University of Western Australia, Stanford University

Introduction: Five years ago the Perth Alexithymia Questionnaire (PAQ) was introduced, designed to try to enable more comprehensive facet-level and valence-specific assessments of alexithymia. It was based on the attention-appraisal model of alexithymia, conceptualising alexithymia as a construct comprised of difficulties identifying feelings (DIF), difficulties describing feelings (DDF), and externally orientated thinking (EOT). In this presentation, we review the findings to date on the psychometrics and applications of the PAQ.

Methods: Narrative review.

Results: Originally developed in English, the PAQ has since been translated into over 10 languages and downloaded >60,000 times. Factor analyses have consistently supported its intended five-factor/subscale structure across adult, adolescent, general community, student, and clinical samples. Results highlight its capacity to provide reliable scores for each facet of alexithymia, and its capacity to do so across both negative and positive emotions. PAQ scores have demonstrated high clinical relevance, relating in expected ways with a variety of other key constructs, including psychopathology and emotion regulation.

Conclusions: Overall, the PAQ appears to have good validity and reliability, and has illuminated the significant utility of assessing alexithymia across both negative and positive emotions. The PAQ therefore seems a strong option for alexithymia assessments in research and clinical settings.

Talk 3: Assessment Of Alexithymia In Patients With Chronic Illness: A Comparison Between The Self-Report 20-Item Toronto Alexithymia Scale

Luigia Zito, Martina Camelio, Roberta Lanzara, Martina Di Perna, Chiara Conti, Piero Porcelli - Sapienza University of Rome, University G. d'Annunzio of Chieti-Pescara

Introduction: The self-report Toronto Alexithymia Scale-20 (TAS-20) is considered the gold standard of the assessment of alexithymia. A recognized limitation of TAS-20 is the lack of ability of alexithymic individuals in identifying and describing their own feelings, a sort of assessment paradox. The TAS-20 Informant Form (TAS-20-IF) has been developed with the aim of addressing this issue. The aim of this pilot study is to compare the TAS-20 with TAS-20-IF in patients with chronic illness.

Methods: Sixty-four patients (n=46 with obesity and n=18 with chronic pain) completed the TAS-20 and their informants (N=64) completed the TAS-20-IF.

Results: Multiple significant correlations in the moderate-to-high range ($r > .30$) were found between the two versions, except for the EOT subscale. No statistically significant differences between the TAS-20 and the TAS-20-IF were found in total scores and their subscales. Only scores of items 13 ($t=2.23$, $p=.02$) and 19 ($t=1.98$, $p=.05$) were significantly greater in TAS-20 than

TAS-20-IF whereas the opposite results were found for items 12 ($t=3.45$, $p=.001$) and 18 ($t=2.01$, $p=.04$).

Conclusions: In this study, except for four items (two of which within the EOT factor), no significant differences were found between TAS-20 and TAS-20-IF. Further research with larger samples is needed.

Talk 4: Validation Of The Dutch Version Of The Perth Alexithymia Questionnaire

Marta Walentynowicz, Elke Vlemincx, David A. Preece, Olivier Luminet - KU Leuven, Vrije Universiteit Amsterdam, Curtin University, Université catholique de Louvain

Introduction: Alexithymia, a trait involving emotion processing deficits, is associated with negative mental health outcomes. The recently developed Perth Alexithymia Questionnaire (PAQ) allows for the assessment of alexithymia across both positive and negative emotions. The aim of this study was to introduce the first Dutch version of the PAQ and validate its psychometrics.

Methods: University students ($N = 942$, 85.6% women) completed the PAQ along with the Toronto Alexithymia Scale (TAS-20), Depression Anxiety Stress Scales (DASS), Emotion Regulation Questionnaire (ERQ), Trait Meta Mood Scale (TMMS), and Three-domain Interoceptive Sensations Questionnaire (THISQ). Factor structure, internal consistency, test-retest reliability, and concurrent and discriminant validity were investigated.

Results: Factor analysis supported the intended five-factor structure. The PAQ total score and all five subscales showed good internal consistency (.85-.94). Both 4-week and 8-week test-retests were acceptable. The PAQ showed medium to large correlations with the TAS-20, DASS, TMMS, and expressive suppression, confirming concurrent validity. Divergent validity was shown by small correlations with cognitive reappraisal and the THISQ.

Conclusions: The present results suggest strong psychometric properties for the Dutch version of the PAQ. These results reinforce the multidimensional nature of alexithymia, and should help to enable more comprehensive alexithymia assessments in Dutch-speaking populations.

Professional Emotions: How Employees Perceive and Regulate Emotions at Work

Chair(s): Juliane Völker

Discussant: Marcello Mortillaro

Thursday, October 5, 13:15–14:45, Auditorium DZ4

Abstract: For workers in industries that predominately involve human interaction, emotions are part of the job. Such work environments contain a strong emotional labour component, meaning the display of specific emotions (e.g., happiness, professional interest) and/or the suppression of others (e.g., anger, disgust) is considered an essential competence of the employees. Oftentimes, a low capacity to deal adequately with the emotional demands of jobs can lead to negative consequences, such as stress, burnout, or high turnover. In this symposium, we present studies on emotion experience, empathy, regulation and coping in three different work environments. We present emotion studies with populations of secondary school teachers, rescue workers, and hospitality professionals from Switzerland and Germany. Understanding the mechanisms that underlie emotions in work contexts are immensely important for the health and job performance of employees. We thus discuss how employees perceive and regulate their own emotions at work, and how their emotional experiences affect different outcomes.

Talk 1: Can Memory Bias Be Modified Through Attention And Interpretation Bias Training? A Proof-Of-Concept Study

Janna Vrijssen, Zhen Zhang, Alvaro Sanchez-Lopez, Ernst Koster, Eni S. Becker - Radboud University Medical Center

Introduction: Negatively biased information processing in attention, interpretation, and memory plays is related to depression. Cognitive frameworks propose that these biases are interrelated. Hence, training emotional information processing in one cognitive domain should transfer to the other cognitive domains. Therefore, we tested whether manipulating attention and interpretation bias transfers to memory bias, as well as whether memory bias training affects attention and interpretation bias.

Methods: Participants (N=99) received either a positive or a negative 4-day attention+interpretation bias training, followed by several memory bias measures. In a second study (N=80), positive and negative memory bias training conditions were compared on change in attention and interpretation bias.

Results: Compared to the positive condition, participants in the negative attention+interpretation bias training condition recalled more negative stimuli, and recognized more synonyms of negative stimuli, as well as showed more negative autobiographical recall. Results of the memory bias intervention study will also be presented.

Conclusions: The results support a possible causal relation of attention and interpretation bias with memory bias. This transfer effect was strong and far-reaching, being found not only for

trained material but also in memory of personal life events. This research line increases understanding of cognitive mechanisms underlying depression.

Talk 2: Dealing With Painful Memories: The Efficacy Of Self-Compassion And Benefit-Finding Reappraisal Mood-Repair Strategies Following Negative Mood Induction

Rosaria M. Zangri, Teodoro Pascual, Iván Blanco, Carmelo Vázquez - Universidad Complutense de Madrid, Universidad Camilo Jose Cela

Introduction: Self-compassion has been frequently used for emotional regulation of laboratory-induced emotions (Zangri et al., 2022). This study examined the differential restorative effect of two mood-repair instructions (Self-compassion vs Benefit-finding reappraisal) and a control condition with no instructions following a negative Mood Induction Procedure (MIP) derived from the guided recall of a negative autobiographical event.

Methods: 113 university students participated in the online study (81% women, Mage: 21.0 years). Following the guided recall procedure, participants were randomized to each condition [(Self-compassion: $n = 36$, Benefit-finding: $n = 38$) or a control condition ($n = 39$)].

Results: A series of repeated measures ANOVAs 3 (Repair condition) \times 3 (Time of mood assessment: pre-MIP, post-MPI, post-regulation) showed that, as expected, negative mood (sadness, shame, and guilt) worsened significantly after the MPI in all groups ($p < .001$). Participants in the self-compassion and benefit-finding conditions showed a significant reduction in negative mood after the mood-repairing intervention ($p < .005$), which was not observed in the control group.

Conclusions: Self-compassion and benefit-focused reappraisal functioned similarly as mood repair strategies after recollecting negative personal events. Implications in the context of autobiographical memory deficits in clinical populations are discussed.

Talk 3: Reminiscing About The Past: Correlational And Experimental Evidence About The Role Of Emotion Regulation

Desirée Colombo, Rosa María Baños, Maja Wrzesien, Cristina Botella - Universitat Jaume I

Introduction: When facing daily events, people use different strategies to regulate emotions. Although the literature suggests that the correlates of an event are associated with its memory, the role of emotion regulation in mnemonic processes is still largely unknown. This presentation discusses two studies investigating the impact on memory of two strategies.

Method: Study 1: Using a smartphone-based survey, we assessed the occurrence of a daily negative event and the momentary use of acceptance. The events were recalled one week and one month after. Study 2: Using a smartphone-based diary, we assessed the occurrence of daily pleasant events and provide savouring instructions. Events were recalled one week after.

Results: Study 1: The higher the arousal, the lower the recall of sensory, emotional, and cognitive details, but only in participants adopting high rates of acceptance. Study 2: Compared to the control condition, savouring manipulation led to recalling memories with greater salience and positivity.

Conclusions: Since autobiographical memories are the core of one's affective architecture, these findings indicate that certain strategies might facilitate self-referential processes by reframing life events, thus promoting the construction of more coherent life stories. While acceptance might be useful to decentring from negative experiences, savouring might increase the salience of positive memories, which are essential to boost positive affect.

Talk 4: Translating Case Formulations Into Idiographic Networks To Inform Interventions For Posttraumatic Stress Disorder

Nimrod Hertz, Anna Bevan, Tim Dalgleish - University of Cambridge

Introduction: PTSD is commonly viewed as a memory disorder, with interventions targeting distortions in autobiographical memory. Current research focuses on group-level symptomatology and neglects individual processes, while in practice individual formulations guide treatment. We propose a framework to evaluate intrapersonal therapeutic mechanisms and present preliminary results.

Method: We use network analysis and EMA to create personalized clinical networks based on Ehlers & Clark cognitive PTSD model, emphasizing trauma memories and negative appraisals. Six patients were assessed for 2-3 weeks before treatment, and a simulation study projected outcomes and determined necessary observation numbers for accurate estimation.

Results: Patient data revealed diverse network structures, highlighting different nodes and edges as hotspots for intervention. Simulations showed memory-focused interventions most effective when trauma memory and negative appraisals are central. Improvement can be achieved by reducing intensity or decoupling nodes. Reliable networks can be established with 75 observations, equivalent to 15 days of 5 daily EMA.

Conclusion: Idiographic networks enable quantifying case formulations and promote precise treatment selection. The method is applicable to various interventions targeting emotional and cognitive mechanisms. Focusing on individual differences aims to bridge research and practice, providing a personalized approach to PTSD formulation and treatment.

Innovative Memory-Based Interventions and Analytic Methods to Improve Mental Health

Chair(s): Janna Vrijzen and Carmelo Vazquez
Thursday, October 5, 13:15–14:45, Auditorium DZ6

Abstract: Memory largely determines who we are and how we behave. This also means that memory processes greatly influence our mental health. In this symposium, we present translational research endeavors on memory-based interventions increasing our understanding of mental health mechanisms and setting the foundations for mental health care innovation. The first speaker, Janna Vrijzen, will present the transfer effect of adaptive vs maladaptive emotional attention- and interpretation training on different aspects of emotional memory, as well as data from an emotional memory training to affect attention and interpretation of emotional stimuli. Secondly, Rosaria Zangri will also present an experimental study, on the efficacy of self-compassion and benefit-finding reappraisal as mood-repair strategies after recollecting negative personal events. She will touch upon the mental health relevance. Thirdly, Desirée Colombo explores the specificity of different emotion regulation strategies in response to either positive or negative events on memory. This study indicates that the use of certain strategies might help promote the construction of more coherent life stories, contributing to mental health. Finally, Nimrod Hertz will take the next translational step towards clinical implications by presenting an experience sampling project using computer simulations and patient data to look at PTSD formulation networks over time based on a memory intervention — trauma-focused CBT.

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Conclusion: Idiographic networks enable quantifying case formulations and promote precise treatment selection. The method is applicable to various interventions targeting emotional and cognitive mechanisms. Focusing on individual differences aims to bridge research and practice, providing a personalized approach to PTSD formulation and treatment.

Motivated Intrapersonal and Interpersonal Emotion Regulation across Cultures and Psychopathology

Chair(s): Belen Lopez-Perez

Thursday, October 5, 16:00–17:30, Auditorium DZ2

Abstract: Emotion goals can set the direction of emotion regulation as they determine, in large part, the actions that people undertake to attain a desired emotional state (Tamir, 2016). These actions can involve increasing, maintaining, or reducing one's own (intrapersonal) or others' (interpersonal) emotional experiences. Hence, emotion goals are critical to better understand both personal and social emotion regulation efforts. In this symposium, we will present three pieces of research looking at emotion goals across cultures (Presentation 1) and different forms of psychopathology characterized by affective dysfunctions (Presentations 2 and 3). Presentation 1 will discuss cross-cultural differences in people's motivation to reduce one's own and others' distress, evidencing differences in motivation between members of collectivist and individualist countries. Presentation 2 will examine the link between psychopathic traits and both intrapersonal and interpersonal emotion goals across diverse hypothetical interaction contexts. Finally, Presentation 3 will discuss the role of affective discrepancies (i.e., the mismatch between current emotions and emotion goals for anger and happiness) and valuing happiness to account for emotion dysregulation in people with borderline personality disorder. At the end of the symposium, the implications of investigating further emotion goals to gain a more nuanced understanding of emotion regulation across groups and contexts will be discussed.

Talk 1: The Motivation To Reduce One'S Own Distress Versus The Distress Of Another Differs Across Cultures

Shir Ginosar Yaari, Allon Vishkin, Yulia Chentsova-Dutton, Yuri Miyamoto, Maya Tamir - The Hebrew University of Jerusalem

Introduction: Stressful events can increase our distress and the distress of people around us. How do we balance the need to make ourselves feel better and the need to help others feel better?

Method: We tested for cultural differences in the motivation to reduce personal distress versus the motivation to reduce the distress of another, as people coped with the COVID-19 pandemic. In two cross-cultural studies (N=6,995), participants reported on their motivation to reduce personal distress, and motivation to reduce the distress of others.

Results: Members of more individualist cultures were equally motivated to reduce their own distress and the distress of another. In contrast, members of more collectivist cultures were more motivated to reduce their own distress than the distress of another. In more individualist cultures, people who were more motivated to reduce the distress of another were less. However, in more collectivist cultures, the motivation to reduce the distress of another was weakly or even unrelated to loneliness.

Discussion: These findings suggest that wanting to help others feel better may not be equally desirable nor equally beneficial across cultures.

Talk 2: Motivated Emotion Regulation In Psychopathy: From Intra- To Interpersonal Emotion Goals

Foteini Spantidaki Kyriazi, Carlo Garofalo - Utrecht University, University of Essex

Introduction: Recent advances in psychopathy research have investigated the role of motivation in emotional processes, focusing on the emotion goals (i.e., what individuals want to feel) of individuals with psychopathic traits. Building on first empirical evidence for motivated emotion regulation in psychopathy, we extended this line of research investigating not only what individuals want themselves to feel (intrapersonal emotion goals), but also what they want others to feel (interpersonal emotion goals).

Method: Across diverse hypothetical interactions (e.g., deception, fight, reconciliation, negotiation), we examined in a community sample self-reported emotion goals for basic emotions (anger, sadness, fear, and joy), and more nuanced emotions (guilt, shame, empathy, pride, calmness, nostalgia, boredom) that are more rarely investigated yet are crucial for an understanding of psychopathy.

Results: While data collection is ongoing, preliminary findings (N = 101) are in line with our previous research, on intra-personal emotion goals in that psychopathic individuals wanted a joyless, angry, shameful, not calm and unemphatic self, and, also, a joyless, angry, fearful, and guilty other.

Discussion: The current preliminary findings support the relevance of investigating motivational process in relation to emotion and psychopathy, suggesting that what individuals want themselves to feel and want others to feel matters.

Talk 3: The Link Between Emotion Dysregulation, Valuing Happiness, And Affective Discrepancies In Borderline Personality Disorder

Belén López-Pérez, Eduardo Estrada, Jane McCagh - University of Manchester

Introduction: Affective discrepancies (a mismatch between the current and the desired emotional experience) can signal emotion dysregulation (Larsen, 2000) and these discrepancies can be affected by how much people value experiencing an emotion (Zerwas & Ford, 2021). Given that individuals with borderline personality disorder (BPD) experience significant emotion dysregulation (e.g., Trull, 2008), we argue that both affective discrepancies and valuing of happiness can account for it.

Method: In this study, we applied Random-Intercept Cross-lagged Panel Models to evaluate whether the daily emotion dysregulation of 60 people with BPD (mean age = 30.80, 65% female) could be predicted and could predict daily affective discrepancies in anger and happiness and daily extreme valuing of happiness measured across 10 days.

Results: Results showed that emotion dysregulation, discrepancy in anger, and valuing of happiness showed inertia or carry-over effects. In addition, there were spill-over effects from emotion dysregulation at time t-1 to discrepancy in happiness at time t and cross-lagged relations between emotion dysregulation and valuing of happiness. Finally, trait-like differences between

individuals in emotion dysregulation were positively related to trait-like differences in discrepancy in happiness and valuing of happiness.

Discussion: Overall, the results highlight the need to consider affective discrepancies and extreme valuing of happiness to better understand the emotion regulation challenges experienced by individuals with BPD. Implications for interventions are discussed.

Emotions and Resilience

Chair(s): Anne Margit Reitsema

Thursday, October 5, 16:00–17:30, Auditorium DZ1

Abstract: This symposium brings together four studies that examine different aspects of emotions and resilience. The first study focuses on protective emotional and social factors for individuals with high neuroticism scores, the strongest psychological predictor of psychopathology. The authors examined factors such as self-esteem, physical activity, and social engagement and how they allow adults with high neuroticism to experience positive emotions and quality of life. The second study introduces the concept of emotion crafting, which involves actively engaging in behaviours that promote positive emotions to buffer against the negative effects of stress and adversity. The authors developed a self-report measure of emotion crafting and found that it was related positively to indicators of well-being and negatively to internalising symptoms, even after controlling for other measures of emotion regulation. The third study examined the differential impact of emotional, physical, and sexual abuse and/or neglect in childhood on emotion dynamics, finding that different types of childhood maltreatment predicted specific patterns of emotion dynamics. Finally, the fourth study examined emotional adaptation during the COVID-19 pandemic, finding that although there were mean-level differences in emotional well-being between younger and older adults, emotional recovery trajectories were similar across age groups. These studies provide valuable insights into the multifaceted nature of emotions and their dynamics, with important implications for resilience.

Talk 1: The Paradox Of Happy Neurotics

Bertus Jeronimus - University of Groningen

This study explores factors that allows adults with high neuroticism scores to experience positive emotions and quality of life over 30-days (82% women, $M_{age} = 41.4$ ($SD = 13.5$), 90 measurements pp.) studying the role of other emotions and Big Five personality traits, and the temporal dynamics of their self-esteem, worrying, loneliness, physical activity, being outside, and making a difference to others therein (using multilevel vector-autoregressive models). High neuroticism is the strongest psychological predictor of psychopathology, and a focus on happy and flourishing neurotic adults may inform us on protective emotional and social factors.

Talk 2: Emotion Crafting: Individuals As Agents Of Their Positive Emotional Experiences

Nureda Taskesen - Norwegian University of Science and Technology

This paper introduces the concept of emotion crafting, which refers to proactively seeking to enhance one's positive emotions through two components: being aware of what makes one feel good (awareness component) and actively engaging in behaviors to initiate, maintain, or increase positive emotions (action component). The authors developed a self-report measure called the

Emotion Crafting Scale (ECS) and tested its validity across two studies. Study 1 included 326 Norwegian adults (49.7% female, mean age = 42.90 years) and Study 2 included 254 adults (74.0% female, mean age = 24.19 years) from various countries. Results showed a two-factor structure of the ECS, with the awareness and action components relating positively to measures of well-being and negatively to internalizing symptoms, even after controlling for other measures of emotion regulation. Structural equation modeling indicated that the awareness component had a positive effect on well-being through higher levels of emotion crafting action and positive affect. These findings suggest that proactive regulation of positive emotions can be a predictor of mental health and that the ECS is a reliable and valid measure of emotion crafting. Further research is needed to understand the role of emotion crafting in psychological functioning.

Talk 3: Specific Types Of Childhood Abuse And Neglect And Profiles Of Adult Emotion Dynamics

Solomiia Myroniuk - University of Groningen

Childhood maltreatment (CM) is experienced by ~40% of all children at major personal and societal costs. We focus on the differential impact of emotional, physical, and sexual abuse and/or neglect in childhood on emotion dynamics by measuring the intensity, variability, instability, inertia, and diversity of daily emotions among 290 Dutch adults (aged 19-73) over 30 days. Participants described their abuse/neglect experiences retrospectively using the Childhood Trauma Questionnaire (CTQ). Structural equation models (SEM) showed that most types of CM predicted specific patterns of emotion dynamics, and only emotional abuse was unrelated to any of the emotional dynamic indices. Emotional neglect was associated with most measures of emotion dynamics (i.e., less intense, variable, unstable and diverse emotions). Sexual abuse showed increasing and physical neglect decreasing trends in associations with negative affect variability and instability. Physical abuse was associated with inertia, but with a small effect size. Social contact frequency did not moderate much of the relationship between CM and emotion dynamics. Dissecting CM effects on adult emotion dynamics may inform theories on the ontogenesis and functioning of emotions, on abuse and neglect themselves, and on the prevention of their developmental sequelae, to better understand (dys)functional emotional development.

Talk 4: Age Differences In Hedonic Adaptation To Societal Restrictions During Covid-19

Anne Margit Reitsema - Utrecht University

The study examined age differences in the hedonic adaptation trajectories of positive and negative affect (PA/NA) at different arousal levels during the first wave of the COVID-19 pandemic. The data included 10,509 participants from 33 countries who completed 12 weekly assessments (67% women). Multilevel models were used to analyze trajectories of low and high arousal PA and NA during three different phases of societal restrictions: tightening, stable peak, and easing. During the entire study period, mean levels of PA were lower in emerging and young adults (aged 18-44) than in older adults, whereas mean NA levels were higher. During peak societal restrictions, participants reported increasingly more PA, especially high-arousal emotions ($d = .36$ per month vs. $.19$ low-arousal). NA levels decreased over time, especially high-arousal

emotions ($d = .35$ vs. $.14$ p/month). These trajectories were largely similar across age groups, although up to 30% of participants showed increases in NA and up to 6% showed decreases in PA, indicating individual differences in emotional adaptation. Furthermore, the study found that heterogeneity in the effects of time on affect was larger on the individual level than the country level. These results suggest that age advantages in emotional well-being remain restricted to mean-level differences rather than emotion dynamics.

The Role of Sensorimotor Integration in The Experience and Perception of Affect

Chair(s): Sebastian Korb and Joshua Baker

Thursday, October 5, 16:00–17:30, Auditorium DZ3

Abstract: Theories of embodied cognition and the facial feedback hypothesis have been criticised in recent years, as some prominent findings failed to replicate. This suggests that methodological advancement, and the pursuit of innovative and original avenues, will be required to critically evaluate the nature of sensorimotor simulation and the role of facial feedback in emotion experience and perception. In this symposium, we will consider whether and how changes to facial feedback influence visual emotion perception (and vice-versa) and felt emotion. Tanja Wingenbach's EMG findings show that the onset of five voluntary facial muscle contractions is sped up by the viewing of congruent vs incongruent facial actions. Michael Olszanowski will present data showing how making judgments about different social dimensions creates a context that modulates patterns of emotional mimicry, and that mimicry provides feedback that also influences judgments. Joshua Baker will introduce the innovative method of computer-controlled facial neuromuscular electric stimulation (fNMES), how it can be integrated with EEG/ERP, and how it may constitute an interesting means to test aspects of the facial feedback hypothesis. Themis Efthimiou will discuss findings suggesting that fNMES can modulate both one's own emotions, as well as the perception of others' ambiguous facial expressions.

Talk 1: Observed Facial Emotional Expressions Facilitate Congruent Explicit Facial Action Execution

Tanja S. H. Wingenbach, Silvia Missura, Peter Peyk, Monique C. Pfaltz - University of Greenwich, University Hospital Zurich, University of Zurich, Mid Sweden University

Observing facial emotional expressions has been shown to affect observer's facial muscle activations, e.g., an automatic subtle mirroring of the observed facial emotional expressions. Such mirroring could facilitate the production of matching (vs non-matching) explicit facial expressions in observers. Indeed, a facilitation effect, based on faster muscle response onsets, has been reported for smiles and frowns in response to happy and angry faces, respectively. Whether facial action execution associated with facial expressions of other basic emotions is facilitated is unknown. The current study measured five facial muscle sites associated with facial actions related to the six basic emotions. Participants (N = 80) viewed facial emotional expressions of the six basic emotions and neutral expressions. Participants underwent blocks of pre-instructed facial actions in response to the stimuli: smiling, frowning, raising eyebrows, wrinkling the nose, and pouting. It was hypothesised that facial muscle response onsets based on EMG measurements are faster when the observed facial emotional expressions include (vs not include) the facial movement carried out by participants. Results showed facilitation effects for the five facial action onsets despite the task irrelevance of the observed expressions in the stimuli. The automaticity

of facial emotional expressions processing is highlighted. Mirroring processes may facilitate explicitly passing on observed emotional signals to others.

Talk 2: How Changes In Context Affect The Tendency Toward Emotion Mimicry

Michal Olszanowski, Aleksandra Tolopilo, Ursula Hess - SWPS University of Social Sciences & Humanities, Humboldt-University of Berlin

The Contextual Model of Emotional Mimicry (Hess & Fischer, 2014) proposes that emotional mimicry functionally adapts to the social context. Here we examine how the context of different social judgment tasks modulates mimicry. In addition, we examine the relationship between the sender's facial display, the observer's mimicry, and the observer's judgments. In two studies (N = 63 and N = 66), participants observed displays of anger, sadness, and happiness, while their facial activity was recorded. They were asked to either: judge each face on one of the social dimensions, i.e., attractiveness, trustworthiness or confidence, share points in a trust-investment game or passively observe displays (control condition). Results showed that the context of the judgment task differentiated observers' displays even in the absence of facial stimuli and modulated mimicry of different emotions. This suggests that each task imposes different cognitive and affective settings and alters the meaning of senders' facial displays. Importantly, mediation analyses indicated a partial indirect effect of mimicry on judgments. The causal relationship between mimicry and judgments were confirmed in an additional Study (N = 50), in which participants were instructed to display incompatible facial displays in order to reduce facial feedback from mimicry.

Talk 3: Investigating Facial Feedback Using Facial Neuromuscular Electrical Stimulation (fNmcs) In Combination With Eeg

Joshua Baker, Themis Efthimiou, Marc Mehu, Arthur Elsenaar, Reinhold Scherer, Sebastian Korb - University of Essex, Webster Vienna Private University, The Royal Academy of Art, University of Vienna

Studies examining facial feedback effects utilize a range of methods for manipulating facial muscles (e.g. a pen in the mouth). Here I propose a novel method for precisely controlling proprioceptive feedback, facial neuromuscular electrical stimulation (fNMES). Allowing for tightly controlled activations of specific facial muscles at specific time points during a task, fNMES affords a plethora of advantages relative to other manipulation techniques in understanding how facial muscles guide our experience and perception of affect. I discuss the implementation of fNMES in the lab and detail some recent work in which we combine fNMES and EEG, which presents technical challenges given the presence of stimulation artefacts in the EEG signal. I will discuss how this interference can be managed, in order to obtain accurate measurements of cortical activations associated with face processing.

Talk 4: Re-Examining The Facial Feedback Hypothesis: Investigating Emotion Induction Through Facial Neuromuscular Electrical Stimulation

Themis Efthimiou, Joshua Baker, Arthur Elsenaar, Marc Mehu, Sebastian Korb - University of Essex, The Royal Academy of Art, Webster Vienna Private University, University of Vienna

The facial feedback hypothesis posits that making an emotional facial expression can trigger a corresponding emotional response and influence how individuals perceive emotional stimuli. Facial neuromuscular electrical stimulation (fNMES) is a potential tool for studying this hypothesis, as it can selectively activate individual facial muscles, while controlling the duration and onset of their contraction. To date, the application of fNMES to examine the influence of facial feedback on emotional processing and its underlying mechanisms has been limited. To address this gap, we conducted two pre-registered experiments. In the first experiment, we examined the effects of fNMES on emotion perception. Participants categorised, as happy or sad, ambiguous emotional facial expressions, which ranged from very weak to slightly stronger intensities of happiness and sadness. During half of the trials, fNMES was applied bilaterally to the Zygomaticus Major muscle for 500ms. The results showed that when a weak smile was induced via fNMES, participants were more likely to perceive ambiguous facial expressions as happy. In the second experiment, we investigated whether 5 seconds of fNMES applied to the Zygomaticus Major and Depressor Anguli Oris muscles could alter self-reported happiness and sadness. Results showed changes in self-reported emotion in the expected direction. Overall, our findings shed new light on the effects of facial feedback on felt and perceived emotions, and they emphasise the potential of fNMES as a valuable tool for research in affective psychology.

Feeling and Dealing with Social Evaluation

Chair(s): Frederik M. van der Veen

Thursday, October 5, 16:00–17:30, Auditorium DZ

Abstract: Humans are social beings that need meaningful social connections. Social acceptance is a core human need. The opposite of social acceptance, social rejection, has been associated with negative emotions and an array of negative effects on mental health. At the same time, an increasing number of users of social media platforms are exposed to social evaluation on an unprecedented scale. In this symposium we will explore the effects that social evaluation has on brain and bodily responses, subjective experience and behavior. Moreover, we will explore how behavior following social evaluation can be modeled and examine how different types of somatic treatment can reduce the negative effects of social evaluation. Finally, reactivity to social feedback stimuli will be associated with individual differences in terms of personality characteristics, psychopathology and age. The first talk will discuss a study in which subjective and physiological responses to social evaluation were measured and related to individual differences. The second talk will discuss a modeling study in which the adaptive behavior following social feedback were associated with the effects of a common painkiller. The third talk will discuss data from a study in which the effects of brain stimulation on gaze behavior and skin conductance following social feedback were examined. The fourth talk will explore the effects of aging on how we deal with the psycho-social stress caused by social evaluation.

Talk 1: Do They Like Me? The Influences Of Social Anxiety Symptoms, Depression Symptomatology, And Gender On Psychophysiological Measures

Adrian Fleckenstein, Frederik M. van der Veen - Erasmus University Rotterdam

Introduction: The presented study examined whether social anxiety and depression symptoms, as well as gender influence psychophysiological responses to different types of social feedback in a sample of 103 healthy students.

Method: The participants took part in a social judgment task, during which they were presented pictures of faces of ostensible judges, and were asked for each picture, whether they thought that the person depicted in them liked them or not. After indicating their prediction, the actual feedback was provided.

Results: Results indicated that higher levels of social anxiety were associated with faster predictions. The level of body-focused attention during the task did not influence this relationship. No influence of social anxiety and depression symptoms on the proportion of trials in which participants expected positive feedback was found. Differences in P3 responses associated with different types of social-evaluative feedback were only found for females.

Discussion: Overall, the results suggest that subclinical levels of social anxiety and depression are not linked to marked biases in the processing of social feedback. However, higher levels of social anxiety appear to influence cognitive processes during the formation of feedback-expectations. Moreover, females appear to be more sensitive to the nature of social evaluative

feedback. Coherences and incoherencies with previous studies in the domain, as well suggestions for future research are discussed.

Talk 2: Acetaminophen Reduces Behavioral Adaptation After Social Rejection

Frederik M. van der Veen, Peter J. Castagna, Selin Topel, Michael J. Crowley - Erasmus University Rotterdam

Introduction: The present study examined the effect of Acetaminophen on the painful experience of social rejection by examining brain, cardiac and behavioral measures reflecting different aspects of social feedback processing.

Method: Healthy students (N = 72), after ingesting either Acetaminophen or a placebo, performed a social judgment paradigm (SJP), in which they could be expectedly or unexpectedly rejected or accepted. During the task, cardiac and brain responses to different types of feedback were measured, as well as expectancies relating to the given feedback.

Results: While cardiac deceleration and P3 were not affected by Acetaminophen, behavioral responses were. While in the control group the percentage of acceptance predictions decreased over the experiment (learning from negative feedback), the Acetaminophen group did not adjust their positive prediction bias over time. Moreover, using a modeling approach we found a longer non-decisional time after rejection relative to acceptance, but this effect was only present in the placebo group.

Discussion: The unexpected effect of Acetaminophen on performance suggests that Acetaminophen might indeed play a role in social pain perception. The normally observed social pain-based adaptation effect seems to disappear when participants ingest Acetaminophen, which can be interpreted as a reduced pain perception after Acetaminophen.

Talk 3: Prefrontal tDCS Attenuates Self-Referential Attentional Deployment: A Mechanism Underlying Adaptive Emotional Reactivity To Social-Evaluative Threat

Jens Allaert, Maide Erdogan, Alvaro Sanchez-Lopez, Chris Baeken, Rudi De Raedt, Marie-Anne Vanderhasselt - Ghent University, University Hospital Ghent

Introduction: Exposure to social-evaluative threat (SET) can have deleterious effects on health. Decreased self-awareness and increased other-awareness are thought to be adaptive responses to SET, and the regulation of attention is supported by fronto-parietal and fronto-limbic networks. The aim of this study was to investigate the effects of prefrontal transcranial direct current stimulation (tDCS) on self and other-attentional deployment during exposure to a SET context.

Methods: Seventy-four females received active or sham tDCS and were exposed to a rigged social feedback paradigm. A series of evaluations was presented together with a photo of the evaluator and a self-photo of the subject, while gaze behavior and skin conductance responses (SCRs; a marker of emotional reactivity) were measured. For half of the evaluations, subjects could anticipate the valence (negative or positive) of the evaluation.

Results: Subjects receiving active tDCS were (a) slower to fixate on their self-photo, (b) spent less time fixating on their self-photo, and (c) spent more time fixating on the evaluator photo.

Furthermore, among those receiving active tDCS, SCRs were attenuated as a function of slower times to fixate on the self-photo.

Conclusions: The results suggest that in a context of SET, prefrontal tDCS decreases self-attention while increasing other-attention, and that reduced self-referential attention may be a neurocognitive mechanism through which tDCS reduces emotional reactivity.

Talk 4: Effects of Theta Burst Stimulation on Psychosocial Stress in Healthy Individuals

Stefanie De Smet, Isabell Int-Veen, Gert Vanhollebeke, Matias M. Pulópolos, Beatrix Barth, Sarah Pasche, Chris Baeken, Hans-Christoph Nuerk, Christian Plewnia, Vanessa Nieratschker, Andreas Jochen Fallgatter, Ann-Christine Ehlis, Marie-Anne Vanderhasselt, David Rosenbaum - Ghent University

Previous studies suggest that theta burst stimulation (TBS), a form of repetitive transcranial magnetic stimulation (rTMS), applied to the left dorsolateral prefrontal cortex (DLPC) might be a promising approach to modulate stress-reactive rumination and the associated psychophysiological stress response. Crucially, individuals showing higher levels of trait rumination might benefit more from prefrontal stimulation. In this sham-controlled study, 127 healthy individuals, with varying ruminative tendencies, received a single-session of intermittent TBS (iTBS), continuous TBS (cTBS) or sham TBS (sTBS) over the left DLPFC before being confronted with a Trier Social Stress Test. Results showed significant TBS effects on salivary cortisol as a function of trait rumination. cTBS, as compared to sTBS and iTBS, resulted in an attenuated stress-induced cortisol response in high compared to low trait ruminators. Although independent of trait rumination levels, cTBS showed positive effects on stress-related changes in mood and, both cTBS and iTBS (versus sham) presented an enhanced heart rate recovery following the stressor. We found no evidence for (trait rumination-dependent) TBS effects on stress-reactive rumination, negative affect, subjective stress or heart rate variability. cTBS shows beneficial effects on certain measures of stress, especially in high trait ruminators. These findings highlight the importance of accounting for individual differences when examining TBS effects.

The Combination of Physical Exercise and Slow-Paced Breathing on Stress: A Multimodal Investigation

Chair(s): Marie-Anne Vanderhasselt

Thursday, October 5, 16:00–17:30, Auditorium DZ6

Abstract: Lifestyle interventions may serve as a transdiagnostic tool to increase resilience to stress-related disorders, such as depression and anxiety. Yet, more research is necessary to understand the working mechanisms of how these lifestyle interventions, which are based on bodily relaxation, influence mental health and stress management. First, Elke Vlemickx (VU) will compare the effects of slow-paced breathing and mindfull breathing on stress regulation, using self-report and physiological indices. The second speaker, Emmanuelle Schoonjans (UGent) will present the effects of physical exercise combined with slow-paced breathing on stress reactivity and stress recovery following psychosocial stress in the lab. Thirdly, Janna Vrijsen (Radboud University Medical Center) will present an experimental study examining the acute effect of exercise on mood, depressotypic memory bias, and rumination. She will also touch upon the potential of exercise as a cognitive behavioral therapy augmentation strategy, based on its mechanistic benefits. Finally, Rayyan Tutunji (Radboud University) will present data from an analysis of activity levels in daily life from the Healthy Brain Study, a large cohort data set following healthy agers. He will present results investigating the role of exercise on mood in daily life through ecological momentary assessments.

Talk 1: The Combination Of Physical Exercise And Slow Paced Breathing On Stress: A Multimodal Investigation

Emmanuelle Schoonjans, Zefeng Li, Evi Wezembeek, Jens Allaert, Simon Helleputte, Pieter Van den Berghe, Gert Vanhollebeke - Ghent University

Introduction. Stress causes major and growing public health problems calling for scalable interventions. Life-style interventions, in particular physical exercise and slow-paced breathing, are ideal candidates that should be optimized. Both can reduce stress, possibly by acting on the imbalance brain-heart nexus that the latter causes and which translates into reduced parasympathetic and prefrontal activities. After physical exercise, an increase in parasympathetic activity occurs, which we tried to boost in this study by using slow-paced breathing.

Methods. 70 healthy participants completed three sessions. The two last sessions comprised: a baseline, a bout of physical exercise (at an intensity personalized thanks to a test during the first session), 3 x 5' of breathing (slow-paced breathing at 5,5 breaths per minute or active control breathing at 15 breaths per minute), two psychological stressors and a recovery phase. Throughout the test, we measured psychophysiological indices of stress (i.e., heart rate, heart rate variability, skin conductance, respiration, blood pressure, as well as self-report stress, coping strategy and perseverative cognition).

Results. We are collecting the data of the last participants. The data will be soon analyzed.

Implications. Combining techniques with complementary mechanisms could enable to push the boundaries of the efficiency of life-style interventions.

Talk 2: Breathing-Induced Relaxation: A Direct Comparison Between Slow Breathing And Mindful Breathing

Elke Vlemincx - Vrije Universiteit Amsterdam

Introduction: Both slow and mindful breathing are generally assumed to increase relaxation, a.o. because they increase cardiac vagal tone. Yet, empirical research studying the effects of breathing on self-reported relaxation is scarce. Also, few studies have directly compared slow and mindful breathing. Therefore, the current study aimed to directly compare differences in relaxation between slow and mindful breathing.

Methods: Participants completed three trials consisting of three phases each: an 8-min breathing phase, 5-min stress induction and 3-min stress recovery. The breathing phase consisted of slow, mindful, and spontaneous breathing, in randomized order. In one study, slow breathing was induced by paced breathing, in another study by respiratory biofeedback. Respiration and ECG were recorded continuously. Self-reported relaxation was assessed after each breathing phase.

Results: Results showed that heart rate variability during mindful breathing was significantly higher than during spontaneous breathing, but lower than during slow breathing. No significant differences in self-reported relaxation between breathing conditions were found.

Conclusion: These findings suggest that slow breathing increases cardiac vagal tone more than mindful breathing. Breathing-induced increases in heart rate variability did not coincide with changes in self-reported relaxation, which could be possibly explained by different mechanisms underlying physiological and subjective relaxation.

Talk 3: Working It Out: Exploring Memory Bias As Mechanism Of Change Of Physical Exercise

Michèle Schmitter, Marie-Anne Vanderhasselt, Mikael Rubin, Miriam M. A. van den Berg, Sofie E. Reijnen, Elianne D. de Ruiter - Radboud University Medical Center

Introduction. Despite the large provision of evidence-based treatments for depression, many patients do not respond. Physical exercise is effective both as mono- and adjunct treatment for depression. Exercise affects biological neuroplasticity markers responsible for mood and memory benefits. However, the cognitive mechanisms of change of exercise are not well-understood, hampering targeted application as depression treatment augmentation strategy.

Methods. A sample of non-regular exercisers (N=100) was randomized to moderate-intensity exercise or rest. We examined the acute effect of exercise on mood, negative and over general memory bias, and rumination.

Results. The exercise (as compared to rest) condition reported a more positive mood. However, no differences were found in over-general memory bias, as well as depression-specific mood or state rumination measured throughout the study. Interestingly, the exercise condition showed more negative memory bias, especially at higher levels of trait rumination.

Conclusions. It is possible that long-term exercise protocols are necessary to sustainably alleviate depressotypic cognitive processes. Hence, I will also briefly present our ongoing endeavors to

examine the augmenting effect of exercise on cognitive behavioral therapy and other guideline-based depression treatments, with the neuroplasticity-based hypothesis that exercise improves mood and emotional memory.

Talk 4: Exploring The Benefits Of Exercise On Mood And Memory: New Insights From The Healthy Brain Study

Rayyan Tutunji - Radboud University Medical Center

Exercise has long been recognized as a key factor in promoting physical and mental wellbeing, making it a potentially powerful tool for increasing resilience to stress-related disorders like depression and anxiety. This places exercise as a prospective cost-effective means of preventive care. However, the extent to which exercise benefits different individuals remains unclear. In his talk, Rayyan Tutunji will present new findings from the Healthy Brain Study, a large cohort data set that tracked healthy adults over a period of one year. The study, which included data from 300 participants, utilized both ecological momentary assessments (EMA) and wearable technology to assess daily activity levels. Specifically, the presentation will focus on how exercise affects mood in daily life, as measured by EMA. Employing a within-subject approach, the potential pathways between exercise and mood, with particular emphasis on the mediating effects of emotional memory will be discussed. Additionally, possible moderating roles of between-subject factors will be explored, such as depressive and anxious symptoms. Overall, this talk hopes to shed new light on the benefits of exercise and the factors that influence its effects on mental health.

The Power of Positive Emotions for Resilience and Well-Being: A Multi-Disciplinary Perspective

Chair(s): Henk van Steenbergen

Thursday, October 5, 16:00–17:30, Auditorium DZ5

Abstract: This symposium features four talks that explore the role of positive emotions in promoting resilience and well-being in various populations. The first talk focuses on Tibetan Buddhist monks, examining the relationship between emotion regulation and their mental training in monastic debate. The second talk looks at the neurocognitive mechanisms underlying Preventive Cognitive Therapy (PCT) for preventing relapse in depression. The third talk examines the relationship between daily prosocial actions and giving behaviour in adolescents during the COVID-19 pandemic. Finally, the fourth talk provides an overview of recent research on the stress-buffering effects of positive affect and highlights the role of endogenous opioids and pleasant touch in buffering responses to micro-stressors. Together, these talks highlight the importance of positive emotions in promoting well-being and resilience, and suggest potential interventions that may be useful in promoting these outcomes in various populations.

Talk 1: The Cultivation Of Positive Emotions And Resilience In Tibetan Buddhist Monks

Marieke van Vugt, Sudhakar Mishra, Sera Jey Science Centre monks, Bryce Johnson, Matthew Boden - University of Groningen

One of the most notable things about Tibetan Buddhist monks is their infectious joy and smile. How is this related to their mental training? What is not known to many is that Tibetan Buddhist monks' main training does not consist of solitary meditation but rather vigorous monastic debate. In this practice, emotional control is being challenged by frequent teasing in an attempt to get the opponent to contradict themselves. To examine the emotion regulation of these monks, we conducted a collaborative study with the science centre of Sera Jey monastery in India in which we asked the monks to complete a PANAS every day for 7 days, accompanied on the first and last day by a number of questionnaires assessing emotion regulation. We found that more experienced monks had fewer emotion regulation difficulties and less negative affect than more beginner monks. In addition, over the course of our research we found that there were inter-cultural differences in what emotions were considered to be positive and negative.

Talk 2: Neurocognitive Mechanisms Of Change Following Preventive Cognitive Therapy For Preventing Relapse In Depression: A Randomized Co

Marie-José van Tol, RS van Kleef, RM Eike, E van Valen, JB Marsman , RJ Renken, A Aleman, CL Bockting - University of Groningen

Major Depressive Disorder (MDD) is a recurrent psychiatric disorder, with each episode increasing the risk of relapse, making prevention an important clinical goal. The neurocognitive

mechanisms of Preventive Cognitive Therapy (PCT) were studied in fifty medication-free remitted MDD-patients at high risk for recurrence, randomized to PCT (n=25) or a waiting-list (n=25). Patients were assessed at baseline and three-months follow-up. Primary outcomes were changes in prefrontal cortex activation during effortful emotion regulation and biased automatic processing. Following PCT (vs. WL), patients showed decreased dorso-medial prefrontal activation during effortful upregulation of positive affect, increased positive self-related thinking, lower increase of depressive symptomatology, lower negative affect responsivity, and increased successful application of cognitive reappraisal. Results support the compensatory skill-account of cognitive therapy, indicating that strengthening cognition and affect to more positive content may guard against the activation of negative cognitions and affect in the face of daily negative events.

Talk 3: Daily Prosocial Actions With Friends And Family During The Covid-19 Pandemic Contribute To Giving Behavior In Adolescence

Sophie W. Sweijen, Suzanne van de Groep, Kayla H. Green, Lysanne W. te Brinke, Moniek Buijzen, Rebecca N. H. de Leeuw, Eveline A. Crone - Erasmus University Rotterdam

Prosocial actions are a building block for developing mature and caring social relations. However, the global pandemic may hamper adolescents' prosocial actions. Our preregistered study examined the extent to which adolescents provided daily emotional support during the COVID-19 pandemic. In total, 10–25-year-old high school and university students participated at three timepoints (N = 888 in May 2020; 494 in Nov 2020, and 373 in May 2021). At the first and second timepoint, participants completed 2 weeks of daily diaries on providing emotional support. At all timepoints, participants performed Dictator Games to measure giving. Across all timepoints, adolescents gave more to COVID-19 targets (medical doctors, COVID-19 patients, individuals with a poor immune system) than peers and friends but giving to COVID-19 targets was highest in the beginning of the pandemic. Results from the first timepoint showed that emotional support directed to friends peaked in mid-adolescence, whereas emotional support towards family members showed a gradual increase from childhood to young adulthood. Daily emotional support to friends predicted giving behavior to all targets, whereas emotional support to family was specifically associated with giving to COVID-19 targets. These findings elucidate the relationship between daily actions and prosocial giving to societally-relevant targets in times of crisis, underlying the importance of prosocial experiences during adolescence.

Talk 4: How Positive Affect Buffers Stress Responses At Multiple Timescales

Henk van Steenbergen, Ellen RA de Bruijn, Anna CK van Duijvenvoorde, Anne-Laura van Harmelen - Leiden University

In times of hardship, positive emotions can serve as a potent tool to promote resilience and healthy functioning. In this presentation, we will provide an overview of recent research on the stress-buffering effects of positive affect. Our discussion will draw from studies that investigate the impact of trait and state positive affect on acute and chronic stress in daily life, stress manipulations in laboratory settings, and tasks involving challenging or risky situations. By examining these studies, we will demonstrate how positive feelings can mitigate the adverse

effects of stress on the mind and body, across multiple levels and timescales. In the second part of the talk, we will highlight recent findings from our lab on the role of endogenous opioids and pleasant touch in buffering the response to micro-stressors, such as conflicts and errors in cognitive-control tasks. We will conclude our talk by exploring the implications of this research for promoting well-being and stress resilience in individuals who are facing adversity.

Emotion Regulation in Adolescence: A Multi-Methodological Point of View

Chair(s): Gillian Debra

Friday, October 6, 8:30–10:00, Auditorium DZ2

Abstract: Adolescence is marked by heightened stress exposure and negative affect, conferring susceptibility to adverse outcomes including depression. Emotion regulation (ER) constitutes a major factor underlying adolescents' well-being. For example, difficulties in ER represent a trans-diagnostic marker of various psychopathology. Therefore, research investigating adolescents' use of ER and how ER relates to their well-being, is paramount. Notably, combining results obtained from diverse methods enables a more thorough examination of these effects. Collectively, the papers in this symposium offer an important extension of knowledge in these effects by investigating ER in adolescents using different methods and outcomes including behavioral reports in daily life (Paper 1 and 3), heart rate measures (Paper 2), and neural functional connectivity. Paper 1 employs experience sampling methods (ESM) to show moderation effects of stressor intensity on the relationship between ER and momentary affective experiences. Paper 2 uses electrocardiography to demonstrate the influence of ER on psychophysiological stress recovery. Paper 3 applies ESM to investigate whether experienced social status predicts ER effectiveness. Paper 4 uses fMRI to observe changes in functional connectivity between areas involved in ER after experimental exposure to criticism. Together, results from these papers elicit a fuller picture about the role of ER in shaping adolescents' well-being.

Talk 1: Exploring Within-Person Associations Between Emotion Regulation Variability And Negative Affect In Adolescents' Daily Life

Gillian Debra - Ghent University

Introduction: Effective use of emotion regulation strategies is critical to regulate adolescents' affective experiences in daily life. However, uniquely relying on one emotion regulation strategy (ERS) may not always be beneficial. Prior work suggests that prioritizing certain ERS over others (between-strategy variability) may be more effective in downregulating negative affect (NA). This study investigated how single ERS and between-strategy variability (BSV) relate to within-person changes in adolescents' momentary NA and positive affect (PA) and whether stressor intensity moderated the link between BSV and affective experiences.

Methods: Data from two experience sampling studies was used (N= 89 and 266). Adolescents reported on their momentary NA, PA, and ERS use (e.g., reappraisal, rumination). The intensity of stressful events was also reported. Univariate two-level autoregressive dynamic structural equation models were estimated with NA or PA as outcomes and a single ERS or BSV as predictors. Secondary analyses explored stressor intensity as a moderator.

Results: Distraction, self-compassion, and reappraisal had beneficial effects on affect regulation (e.g., decreased NA), while rumination predicted worse affective experiences. BSV predicted

decreased NA when stressor intensity was low but increased NA when stressor intensity was high.

Conclusions: Findings highlight the importance of considering stressor intensity as a contextual factor in the effectiveness of BSV.

Talk 2: Under Pressure: Examining The Effects Of Distraction And Reappraisal On Psychophysiological Stress Recovery In Adolescents

Jolien Braet - Ghent University

Introduction: Two commonly used adaptive strategies to deal with negative affect are cognitive reappraisal and distraction. Prior work investigating the specific effects of both strategies has been conducted in adult samples. Therefore, the goal of the present study is to investigate how these strategies influence: (1) affective, and (2) physiological responses in youth.

Methods: Adolescents were invited to conduct different tasks: (a) self-report questionnaires were completed, (b) a workshop was given to learn one specific strategy, (c) five exercises had to be made at home, and (d) during a lab visit electrocardiogram was recorded during all tasks. After resting for ten minutes, the training was refreshed and homework exercises were discussed. Afterwards, all participants were exposed to a social stress task. Next, participants were asked to use distraction or reappraisal to recover from negative affect.

Results: Distraction and cognitive reappraisal have similar effects on psychophysiological stress recovery. We did find marginally significant effects in favor for distraction (on heart rate, positive, and negative affect).

Conclusions: Distraction might be easier to use than cognitive reappraisal during adolescence. More work is needed to study the longterm effects of distraction in youth.

Talk 3: Emotion Regulation In Adolescents' Daily Life: The Influence Of Experienced Social Status

Anke H. Visscher - Tilburg University

Introduction: Adolescents who are better at regulating their emotions are likely better able to manage their behavior, impulses, and thoughts, making them more likely to achieve their goals and show positive developmental trajectories (Furlong, 2009). Nevertheless, the way adolescents regulate their emotions is likely highly influenced by their (experienced) social environment (English et al., 2017; Gross, 2013). Different social contexts are likely to elicit different expectations of behavioral and emotional responses. These different situations could potentially both hinder and foster the regulation of emotions. Therefore, this study examined whether adolescents regulate their emotions differently depending on their experienced social context.

Methods: Adolescents in pre-vocational education reported on their momentary positive affect, negative affect, and emotion regulation of both positive affect and negative affect (i.e., rumination, expression, sharing) 3 times per day for a 14-day period.

Results: The study is on-going and preliminary results of multilevel models will be presented.

Conclusions: Results may clarify to what extent experienced social status relates to different emotion regulation strategies and whether social status predicts successful and unsuccessful emotion regulation.

Talk 4: How Perceived Criticism Affects Amygdalar Functional Connectivity Changes In Healthy Adolescents After Exposure To Criticism

Sam Bonduelle - Free University of Brussels

Introduction: Exposure to criticism is a known risk factor for various psychiatric disorders in adolescents. The link between the experience of criticism and the development of psychopathological symptoms is not yet fully understood. Identifying more vulnerable adolescent subgroups could be of great clinical relevance. Perceived criticism (PC) and self-perception (SP) could well be crucial vulnerability factors.

Methods: We exposed 64 non-depressed 14-to-17-year-olds to a sequence of auditory segments with a positive, neutral, and finally negative valence, mirroring parental criticism. Mood states and left and right amygdalar functional connectivity (FC) with other brain areas were assessed beforehand and afterwards.

Results: We observed a deterioration in mood states, which was influenced by SP, but not by PC. FC changes of the left amygdala seed region with other brain areas were observed, but no right amygdalar FC changes. PC was correlated with left amygdalar FC changes with the left precuneus and left superior parietal cortex.

Conclusions: Exposure to criticism resulted in mood disturbance accompanied by an increase in FC between the left amygdala and regions involved in sustained emotional processing, but no right amygdalar FC changes. Higher PC was correlated with stronger left amygdalar FC increases with these regions, suggesting an elevated vulnerability for disturbed emotional processing, as observed in mood disorders, in healthy adolescents with higher PC.

Dealing With Feeling in Close Relationships

Chair(s): Laura Sels and Lesley Verhofstadt
Friday, October 6, 8:30–10:00, Auditorium DZ1

Abstract: It is widely recognized that emotions play a central role in people's relationships. Especially in romantic and other types of close relationships (e.g. parent-child relationships), partners continuously elicit, respond to, and regulate each other's emotions. In the current symposium, we bring together cutting-edge research on such emotional processes. Together, the speakers tackle the questions of how people deal with their own and other's emotions (speaker 1) in close relationships, and important predictors (speaker 2) and outcomes (speaker 3 and 4) of these processes. Specifically, speaker 1 shows how parents manage their own and other people's emotions during stress, and differences with non-parents. Speaker 2 explores if a romantic partner's support dampens the positive association that exists between attachment insecurity and the experience of negative emotions. Speaker 3 and 4 present work on the impact of specific emotion regulation strategies on relational well-being in romantic relationships. Focusing on intrapersonal emotion regulation, speaker 3 shows the role of context in the effects of emotional suppression on one's own and partner's relational well-being. Focusing on interpersonal emotion regulation, speaker 3 shows the association between six interpersonal emotion regulation strategies and emotional and relational wellbeing. These findings enhance our insight into how relational processes and outcomes shape emotional processes, and vice versa.

Talk 1: Self-Oriented And Other-Oriented Emotion Regulation Strategies In Parents And Non-Parents

Shir Ginosar Yaari, Maya Tamir - The Hebrew University of Jerusalem

Do parents use the same strategies to regulate emotions as people who do not have children? Parenthood has many implications, that may affect emotion regulation of one's own emotions and the emotions of others. In a cross-cultural sample (19 countries, N = 3,525), conducted during the Covid-19 pandemic, we assessed the strategies people used to regulate their own emotions and the emotions of others, and whether they differed between parents and non-parents. We found that relative to non-parents, when regulating their own emotion, parents use less acceptance, situation selection and distraction. When regulating the emotions of others, parents used more suppression and rumination, and less acceptance, than non-parents did. Furthermore, in 3 out of 6 strategies used when regulating the emotions of others, the differences between parents and non-parents were larger the more unpleasant emotions participants experienced. Taken together, these findings suggest that when parents regulate the emotion of others under stress, they might use strategies that are considered less adaptive, potentially because they are depleted.

Talk 2: Does Romantic Partner Support Buffer The Effect Of Attachment Insecurity On Negative Emotions? A Systematic Review

Farnaz Mosannenzadeh, Georgia Kouri, Johan Karremans, Maartje Luijten - Radboud University, Fribourg University

We systematically reviewed the current empirical research on the partner buffering of attachment insecurity on negative emotions (NE), investigating whether a romantic partner's support can dampen the positive association between attachment insecurity and NE. A systematic review (PRISMA guidelines) was conducted by searching PubMed, PsychInfo, and Web of Science using the keywords 'attachment' AND synonyms of 'romantic relationships' AND synonyms of 'emotion' and 'partner support'. The included articles met the following criteria: published in an English, peer-reviewed journal; published from 1969 to September 2020; included an empirical study on healthy human adults (Mage \geq 18 and min. age \geq 16) who were in a romantic relationship at the time of the study; tested the interaction between actor attachment and partner support in predicting actor NE. Our search on 23 Sep. 2020 found 9375 papers, 27 of which were included in the systematic review, including 31 studies (N = 5452) and 151 analyses. Only 9% of all analyses supported the partner buffering effect. We found two other moderation effects: (1) In 10% of analyses, partner support intensified the positive association between attachment insecurity and NE; (2) in 5% of analyses, attachment insecurity weakened the negative association between partner support and NE. The partner buffering effect is less prevalent than expected, complicated, and requires further refinement.

Talk 3: Expressive Suppression Is Associated With Worse Outcomes In Negative Than In Positive Relationship Discussions

Laura Sels, Nickola Overall, Pauline Verhelst, Lesley Verhofstadt, Tom Loeys, Elise Kalokerinos - Ghent University, Auckland University, University of Melbourne

Expressive suppression is often harmful to relationships, but are there contexts in which suppressing emotions with your intimate partner might be beneficial? To answer this question, we investigated whether conversational valence moderated the effects of suppression on personal and relational outcomes. In a dyadic interaction study with 101 couples, participants had a negative and a positive relationship discussion. We investigated effects of both the person's own suppression (actor-effects), and that of their partner's suppression (partner-effects) on relational outcomes (perceived partner responsiveness) and personal outcomes (positive and negative emotions). We found that suppression was associated with more harmful personal and relational outcomes in both contexts for suppressors (actor-effects). We also found interaction effects for both negative emotions and perceived partner responsiveness, such that suppression was less harmful in the positive context. We found no evidence for partner-effects of suppression. This study demonstrates one way in which context can amplify the costs of suppression in relationships.

Talk 4: Let Me Help You: Emotional And Relational Consequences Of Interpersonal Emotion Regulation Among Romantic Couples

Lisanne S. Pauw, Rui Sun, Giulia Zoppolat, Francesca Righetti, Anne Milek - Utrecht University, The University of Chicago, VU University, and Witten/Herdecke University

Romantic partners often regulate each other's emotions, a process termed interpersonal emotion regulation (IER). Despite the prevalence of this phenomenon, we know little about the emotional and relational consequences of IER attempts in daily life. We present one experience sampling study (N = 68 romantic couples) and one daily diary study (N = 198 romantic couples) examining the association between six key IER strategies and emotional and relational wellbeing. Study 1 showed that when people reported to have given advice or encouraged their partner to suppress their emotions, their partners experienced greater negative affect and reduced positive affect. When people reported to have distracted their partner, their partner experienced enhanced emotional and relational wellbeing. The use of interpersonal reappraisal, acceptance and ignoring was unrelated to partners' emotional and relational wellbeing. Study 2 showed that perceptions of being ignored by the partner were associated with impaired emotional and relational wellbeing on the same day. The perceived use of other IER strategies was unrelated to momentary wellbeing. Taken together, the present set of studies illuminate how interpersonal emotion regulation processes shape people's emotions and relationships in ecologically valid settings. Our findings indicate that enacted and perceived regulatory behaviors are associated with differential outcomes, highlighting the complex nature of interpersonal emotion dynamics.

Tears That Move: Investigating the Social Effects of Emotional Tearing

Chair(s): Janis Zickfeld

Friday, October 6, 8:30–10:00, Auditorium DZ3

Abstract: Emotional tears in adults have long fascinated researchers, who have proposed that they motivate approach and helping behavior in observers. In this symposium, we present novel empirical and theoretical insights into the social function of emotional tearing. The first talk investigates the effects of observing tears shed by out-group members, such as refugees, and explores whether emotional tears can translate to group-focused helping behavior. The second talk examines whether shedding tears in negotiation settings can increase one's bargaining power and favorable negotiation outcomes, with a focus on the specific type of interaction. The third talk explores when and how individuals use emotional tears as a manipulative tactic to influence observers' behavior, and what expressions contribute to perceiving tears as fake. Finally, we present a theoretical integration of factors affecting perceptions of emotional tears and a meta-analysis suggesting that emotional tears can increase helping intentions and behavior in observers because criers are perceived as warm, less agentic, and people feel compassion for them. The contributions of each talk highlight the social and communicative function of emotional tears and provide further answers to the riddle of human tears, with potential implications for both research and practical settings.

Talk 1: The Effects Of Refugees' Emotional Tears On Felt Emotions And Intergroup Helping

Magdalena Bobowik, Janis Zickfeld, Borja Martinovic, Maykel Verkuyten - University of the Basque Country

Introduction: Tearful faces are frequent in mass media portraits of refugees, yet little is known about the implications of such depictions of refugees for different kinds of intergroup helping. Further, research suggests that people are usually more willing to support those individuals who shed tears, but the effects of emotional tears on actual helping behavior have not been examined. **Methods:** Across three experiments relying on nation-wide panel data (N = 2654) and a quasi-experimental citizen science study (N = 191) conducted in the Netherlands, we tested the effects of refugees' tearful (vs. non-tearful) expressions on people's emotional reactions, intentions to offer refugees both dependency- and autonomy-oriented help, as well as actual helping behavior (i.e., money donated to an organization supporting refugees).

Results: Data from the four studies revealed positive effects of emotional tears on both dependency- and autonomy-oriented helping intentions, and on helping behavior in the three online experiments, via felt compassion. Across all studies, tearful expressions led to more helping intentions and donation indirectly via perceived sadness towards the refugee(s) and consequently felt compassion.

Conclusion: Our findings are the first to show that the visual representations of refugees with tears can influence people's willingness to provide help towards refugees through the activation of compassionate feelings.

Talk 2: Why We Cry: Factors That Influence Our Preparedness To Cry In Negotiations

Asmir Gračanin, Natalia Alaburić, Igor Kardum, Ad J. J. M. Vingerhoets - University of Rijeka

Introduction: Previous research has yielded ample evidence that tears effectively promote helping behavior and inhibit aggression in others. The current study evaluated the notion that the potential function of crying is to ensure a favorable outcome in negotiations. We expected that (a) a lower likelihood of a beneficial outcome of the negotiation for the potential crier, (b) the absence of resources that the potential crier can offer to the other negotiator, and (c) a lower potential crier's hierarchical status relative to the other negotiator, all would increase the probability of crying during negotiations.

Methods: One-hundred and seventy-eight participants rated the probability of crying of individuals in twelve vignettes describing different negotiation situations across family and work contexts.

Results: As expected, the results showed a higher rated probability of crying when the individual expects a more unfavorable outcome of negotiation. Also, crying was more likely when the potential crier had a lower hierarchical status, as well as when (s)he didn't have the resources to offer in the negotiations, with the latter two effects being only significant in the family context.

Conclusions: These findings suggest that crying has the potential function of ensuring a higher probability of a positive negotiations outcome when the crier has lower bargaining potential, in particular within family interactions.

Talk 3: Crocodile Tears: When And How People Cry To Get What They Want?

Monika Wróbel, Paweł Ciesielski, Janis H. Zickfeld - University of Lodz

Introduction: Two studies tested how often people use crying for manipulative purposes, what motivates such crying, and what expressive behaviors are typical of it.

Methods: Participants (N = 444) were asked to recall two situations in which: (1) they experienced being manipulated with crying; (2) they used crying themselves to manipulate others. In Study 1, they also described the crier's motivation and listed the crier's expressive behaviors that they considered indicative of manipulation. Based on their responses, we created several items about the crier, the specific situation, and the crier's motives and behaviors, which were completed by participants of Study 2.

Results: 59% of participants in Study 1 and 89% in Study 2 reported they had experienced being manipulated with crying. Moreover, 50% of participants in Study 1 and 33% in Study 2 used crying to manipulate others. The main motives behind manipulative crying were to evoke compassion and guilt in perceivers. Manipulative crying was associated with exaggerated facial expressions, face touching, sudden stop, acoustic signals, and an excessive flow of tears.

Conclusions: Our results support the notion that seeing crying as an emotional manipulation technique may have its roots in everyday experiences. The studies also show that intense expressive behaviors associated with crying may be treated as signals of manipulation.

Talk 4: Emotional Tears As Social Motivators: A Systematic Review Of When And How Tearing Up Increases Social Support

Janis Zickfeld, Monika Wróbel - Aarhus University

Introduction: Emotional tears represent a basic expressive response that is most likely unique to humans. Researchers have debated the specific function of this phenomenon, with recent propositions suggesting that it mainly works as an interpersonal communicative signal motivating observers to provide help and social support to the crier. Here, we review evidence when and how emotional tears can act as a social motivator.

Methods: Based on the emotions as social information model (EASI, Van Kleef, 2009), we investigate the importance of the emotional expression, the observer's inferences, the observer's affective reactions, and the situational determinants and integrate them to derive a theoretical model explaining the interpersonal functions of emotional tears. Further, we quantified the strength of evidence by conducting a systematic meta-analysis.

Results: Overall, criers are evaluated as less agentic, more communal, and elicit feelings of compassion in observers, which in turn is associated with higher support intentions and actual support behavior. These relations are likely moderated by the perceived intensity, appropriateness, and authenticity of the expression, characteristics of the observer and crier, as well as the social context.

Conclusion: Our review identifies several gaps, suggesting that the specific relations among the different variables are yet to be determined and methods should focus on more ecologically valid designs and behavioral measures.

Frequency-Tagging EEG Applications Across Various Modalities, Developmental Stages, and Clinical Populations

Chair(s): Bart Boets and Stephanie Van der Donck

Discussant:

Friday, October 6, 8:30–10:00, Auditorium DZ4

Abstract: Humans are especially sensitive for nonverbal social signals, such as the socio-communicative information conveyed by faces and voices, or the emotionally evocative information in scenes. Despite this general proficiency, large interindividual variability exists, possibly due to differences in hereditary constellation, early brain maturation or aversive environmental experiences. Here, we will explore differences in socio-communicative sensitivity across various (sub)clinical and developmental populations, including autistic children and adults (talk 1), prematurely born infants, toddlers and school-aged children (talk 2), adolescents and young adults exposed to childhood adversity (talk 3), and adults with obsessive-compulsive disorder (talk 4). Throughout all these studies, we apply frequency-tagging EEG to objectively pinpoint individual (hyper or hypo) sensitivity for specific cues. This approach is based on the principle that periodic stimulation results in a periodic EEG response, exactly at the frequency of stimulation. In particular, by applying periodic visual or auditory stimulation at distinct, predefined frequencies within oddball or multi-input paradigms, we can selectively assess and quantify the neural saliency of each stimulus type. Frequency-tagging EEG yields many advantages: it is fast, implicit, objective, directly quantifiable, robust for artifacts, and yields a high signal-to-noise ratio, making it ideal for clinical or vulnerable populations.

Talk 1: Assessing Sensitivity For Nonverbal Socio-Communicative Cues In Neurotypical And Autistic Individuals Via Frequency-Tagging Eeg

Laura Tibermont, Matthijs Moerkerke, Stephanie Van der Donck, Silke Vos, Nicky Daniels, Tiffany Tang, Jean Steyaert, Kaat Alaerts, Bart Boets - Katholieke Universiteit Leuven

Introduction: A crucial skill for successful human social interaction is the ability to quickly and accurately process emotional states, both from faces and voices. The neural mechanisms underlying these processes may be impaired in individuals with autism spectrum disorder (ASD), which in turn may be related to social difficulties.

Methods: Throughout a series of studies we applied frequency-tagging electroencephalography (FT-EEG) to pinpoint the neural sensitivity for subtle socio-communicative cues in autistic children and adults, as compared to matched neurotypical controls.

Results: Findings show a generally reduced neural tuning towards social stimuli (faces versus houses, voices versus object sounds) in autistic children and adults. Autistic children show a reduced neural sensitivity for facial identity and facial expression discrimination, and this facial expression sensitivity seems to be further attenuated throughout a long-term multiple-dose oxytocin clinical trial. Autistic adults show intact neural sensitivity for facial identity, facial expression and vocal expression discrimination, but are impaired in vocal identity discrimination.

Conclusion: Taken together, FT-EEG allows to objectively quantify individual variation in neural sensitivity to emotional and neutral (visual and auditory) stimuli in neurotypical and autistic individuals, even following pharmacological treatment. We will discuss developmental patterns, contrasting findings in children and adults.

Talk 2: Frequency-Tagging Eeg As A Tool To Investigate Socio-Emotional Processing Of Prematurely Born Children Across Different Ages

Steffie Amelynck, Rowena Van den Broeck, Tiffany Tang, Stephanie Van der Donck, Lisa Gistelinc, Matthijs Moerkerke, Nicky Daniels, Bieke Bollen, Els Ortibus, Kaat Alaerts, Jean Steyaert, Gunnar Naulaers, Bart Boets - KU Leuven

Introduction: Preterm birth is associated with a higher prevalence of atypical socio-emotional development and has been linked to an increased prevalence of psychiatric disorders such as autism. A preterm behavioral phenotype has been put forward, characterized by (subclinical) difficulties in emotion recognition, social interaction, attention, and anxiety. Previous research has suggested that preterm children show reduced social preferential gaze behavior and alterations in emotional expression processing. However, research on socio-affective development is inconsistent, and often uses behavioral measures or questionnaires. This necessitates the introduction of more sensitive and objective measures.

Methods: Here, we applied various visual and auditory frequency-tagging EEG paradigms to pinpoint subtle differences in the social and affective functioning of preterm children across different age groups. In particular, we assessed groups of prematurely born infants, toddlers and school-aged children as compared to matched full-term controls on tasks tapping social orienting towards faces and voices, vocal expression discrimination, facial expression discrimination, and identity discrimination with familiar (i.e., mother) and/or unfamiliar faces.

Results-Conclusion: We will discuss group comparisons, developmental trajectories, and associated neonatal and outcome variables.

Talk 3: Facial Expression Processing In Adolescents And Young Adults Exposed To Childhood Adversity

Celine Samaey, Zhiling Qiao, Stephanie Van der Donck, Ruud van Winkel, Bart Boets - KU Leuven

Introduction: Face perception is an innate process, but it is also guided by visual learning and social experiences. Extreme environmental factors, such as childhood adversity, can disrupt normative development and alter facial expression processing. Research has indeed provided support for hyper-reactivity to angry faces in limbic areas, as well as a selectively greater P260 response for anger in children and adults exposed to adversity. Altered facial expression processing may thus be an important mechanism through which childhood adversity is associated with psychopathology, yet there is a large degree of variability and inconsistency in reported findings.

Methods: 120 adolescents (12 – 16 years), recruited from the general population, and 98 young adults (16 – 24 years), selected specifically based on childhood adversity and the presence of

subclinical symptoms of anxiety, depression, and psychosis, completed an oddball and a multi-input frequency-tagging EEG paradigm to assess processing of neutral, happy and angry faces. Results: Across both populations, childhood adversity was associated with reduced neural differentiation between angry and neutral faces, as well as a higher salience of happy faces. These differences could not be attributed to the presence of psychopathology. Conclusion: Childhood adversity is associated with reduced threat-safety discrimination, indicative of a negative bias, in two independent populations.

Talk 4: Frequency-Tagging Electroencephalography To Pinpoint Obsessive-Compulsive Symptom Severity

Xena Serifova, Stephanie Van der Donck, Laura Luyten, Hannes Heylen, Myles Mc Laughlin, Chris Bervoets, Bart Boets - KU Leuven

Introduction: Obsessive-Compulsive Disorder (OCD) is a debilitating psychiatric condition, characterized by anxiety-provoking obsessions and time-consuming compulsions, affecting 2-3% of the population. The clinical expression and severity of OCD are highly heterogenous, and current assessment tools rely heavily on subjective patient reports, making assessment and diagnosis challenging. There is no objective biomarker to determine the severity of OCD-related symptoms, which complicates treatment choice and evaluation of its effectiveness.

Methods: To address this issue, we propose a novel approach that combines newly developed symptom provocation techniques with implicit neural, behavioural, and bodily responses to objectively quantify OCD-related symptomatology. In particular, we assess the neural saliency of symptom-provoking versus neutral visual stimuli via frequency-tagging electroencephalography (FT-EEG) and low-frequency oscillation power; attentional orienting and avoidance via eye tracking; and stress physiology via heart rate and skin conductance.

Results: We will present preliminary FT-EEG findings of adults with OCD, both before and after undergoing a conventional cognitive behavioural therapy program, compared to the responses of healthy controls.

Conclusion: Our findings may offer novel insight in the neurobiological mechanisms and aberrant emotional processing underlying OCD, and can constitute a crucial step towards developing a biomarker of OCD severity.

Music and Ill-Being: The Experience of Negative Emotions to Music

Chair(s): Geoff Luck

Friday, October 6, 8:30–10:00, Auditorium DZ6

Abstract: For many people, music is a source of pleasure and intense, positive emotions. Indeed, music is typically conceptualised in the literature as playing a favourable and supportive role in our lives. Music is considered a “language of emotions” (Cooke, 1959) that connects us in a way words cannot, a “pacifying, healing medium” (Garratt, 2019) that supports health and well-being (Ekholm, Bonde & Juel, 2015). Even adverse experiences are framed in a positive manner, such as the way negatively-valenced music is said to evoke “sweet sadness” (Taruffi & Koelsch, 2014), or how we “love to hate” (Frith, 2004) music that is not to our liking. As a result, there exists an overwhelming consensus that we engage with music to enjoy a generally positive emotional experience (Sloboda & Juslin, 2010). Music “lifts us up”, it “comforts us.” It may cause tears, but even then we apparently feel better afterwards (Van Den Tol & Edwards, 2013). As a consequence, aversive musical experiences, rumination, disliked music, and music-evoked aggression, while perhaps familiar phenomena in many people’s everyday-life contexts, remain woefully under-researched. Our goal in convening this symposium is to explore some of the darker emotions connected with the musical experience. In particular, we will challenge the concept of music as a driver of positive emotions and well-being, instead focusing on music as an agent of ill-being. Specifically, we will elucidate relationships between music and ill-being within a framework that takes into account social-, embodied-, personality-, and preference-related aspects of the musical-emotional experience.

Talk 1: Embodied Negative Musical Experiences

Geoff Luck - University of Jyväskylä

Introduction: Music is widely conceptualised in the scientific literature as providing a source of pleasure and intense, positive emotions that support our health and well-being (Sloboda & Juslin, 2010; Ekholm, Bonde & Juel, 2015). As a consequence, a range of more negative reactions to music, which recent work suggests might not be uncommon in everyday life (Peltola, 2023; Peltola & Vuoskoski, 2022), remain notably under-researched.

Methods and Results: With a focus here on the embodied aspect, specifically how negative musical experiences manifest physically, and how such experiences are mediated by specific psychological phenomena, previous work in a range of interrelated fields is reviewed. In particular, the role played by interoceptive sensitivity in self-reports of ASMR and misophonia, how involuntary musical engagement can create unpleasant physical sensations, and how man-made sounds can be a particular source of embodied negative reactions is elucidated. By mapping out the literature on physical manifestations of negative musical experiences, notable gaps in our current knowledge and understanding are identified, and future directions for research in this area are proposed.

Conclusions: Music, far from creating an overwhelmingly positive experience, is shown to have potential to cause a range of negative emotional reactions in listeners, a better understanding of which is critical to understanding of the emotional power of music.

Talk 2: Musical Dislikes: Rationales, Functions, And Physiological Reactions

Julia Merrill - Max Planck Institute for Empirical Aesthetics

Introduction: The vast majority of studies on musical taste are based on preferences of certain types of music. A series of studies will be presented, in which the complexity and diversity of musical judgments became obvious, showing that musical dislikes are important for conceptualizing musical taste.

Methods and Results: The rationales for disliked music were first investigated using interviews revealing relevant categories of social, music-related, and self-related reasons for musical dislikes. An online survey revealed a structure of the rationales, presenting two latent profiles. A 'highbrow' profile is centered around the rejection of Too Simple music related to Too Mainstream and Not Authentic, all connected to Social Incongruence. This highbrow thinking leads to a despise of music, which can result in No Impact, or even in active Displeasure. This displeasure seems to be mediated if not caused by a perceived Social Incongruence. A 'lowbrow' profile is centered around Too Niche and Too Complex music. In another study, reactions to one's disliked music were investigated with measures of psychophysiology, revealing higher arousal and facial muscle activity when listening to disliked music in comparison to neutral music.

Conclusion: Arousal is not only an indicator of pleasure evoked by preferred music but also of disliked music. Hence, focusing musical taste research exclusively on listeners' preferences cannot account for the diversity of aesthetic criteria that underlie everyday evaluations of music.

Talk 3: Who Hates (Some) Music, And Why? Explaining Individual Differences In The Intensity Of Music-Induced Aversion

Jonna Vuoskoski, Henna-Riikka Peltola - University of Oslo, University of Jyväskylä

Introduction: Aversive or disliked music has the capacity to evoke strong negative emotions and physical sensations – at least in some listeners. This study set out to explore individual differences in aversive responses to disliked music by developing the Aversive Musical Experience Scale (AMES). Furthermore, we explored potential predictors and hypothesized underlying mechanisms by measuring trait emotional contagion, misophonia, proneness to experiences of ASMR and frisson, and personality.

Methods: Based on the results of exploratory and confirmatory factor analyses, a final 18-item version of AMES was constructed, comprising three subscales: Sensations (bodily reactions and feelings associated with aversive musical experiences), Social (appraisals related to social relationships and attitudes) and Features (specific musical and acoustic features that participants find aversive).

Results: Misophonia emerged as the strongest predictor of global AMES and its three subscales, explaining 9-19 % (adj. R² change) of the inter-individual variance. Emotional contagion also emerged as a significant predictor, accounting for 2-4 % of the variance in AMES and two of its

subscales. Furthermore, the personality traits Neuroticism, Agreeableness, and Openness to experience, as well as age and musical training, emerged as significant predictors of at least one of the scales.

Conclusions: The implications and limitations of the findings are discussed with respect to sound-sensitivity, music-induced emotions, and personality theory.

Emotions of Biculturals: The Role of Language and Cross-Cultural Interactions in the Emotional Experiences of Minorities

Chair(s): Alba Jasini and Graziela Dekeyser
Friday, October 6, 8:30–10:00, Auditorium DZ5

Abstract: This symposium showcases empirical evidence highlighting the role of language and cross-cultural interactions in the everyday emotional experiences of biculturals with a migration background. The studies use diverse theoretical and methodological perspectives to understand the phenomena of emotional clarity and emotional fit. Specifically, the first talk shows how bicultural youth do not significantly differ from monoculturals in emotional clarity but among biculturals, emotional clarity does vary according to language abilities and parent-child language practices. The second talk examines biculturals' emotional fit with the heritage and majority cultures, and sheds light on whether minorities blend, or switch between the emotional patterns of both cultures depending on the language and context of social interactions. The next two talks zoom in on cross-cultural interactions to elucidate the processes through which biculturals' emotions come to fit to the majority emotion norm. The third talk shows that emotions of bicultural youths increasingly fit the majority emotion norms when they have majority friends; and that their emotional fit predicts their majority friendships over time. The fourth talk examines the micro-processes that can explain the shift in biculturals' emotional patterns in cross-cultural interactions: it shows that shifts in emotional patterns can be understood from shifts in concerns – i.e., the goals and values that are relevant in the situation.

Talk 1: How Do I Feel? Multilingualism And Emotional Clarity Among Early Adolescent Children

Graziela Dekeyser, Jean-Marc Dewaele, Jozefien De Leersnyder - KU Leuven, University of London

While previous research has highlighted the positive relationship between language and emotional competence among monolingual children, we examine whether this relationship holds for multilingual minority children, who are exposed to multiple languages and multiple emotion cultures. Specifically, we investigate 1) whether multilinguals differ from monolinguals in their emotional clarity (EC), i.e. the extent to which people can identify, discriminate between, and understand their feelings, and 2) how, among multilinguals, language abilities, exposure to the majority society, and parent-child language practices shape EC. We analyze survey data from 929 primary school children aged 10-12 in Dutch-speaking Flanders, Belgium. An independent samples t-test showed no differences in EC between multi- and monolinguals. Among multilinguals, those who believed their Dutch proficiency was moderate while being fluent in the heritage language reported lower EC scores than those who were very fluent in both languages. Indicators of exposure to the majority society were not associated with EC. Children who use a different language than their mother to communicate with them score lower on EC than children who share the use of the heritage language (e.g. Arabic or Polish). However, for fathers, dissonant

language use is associated with higher EC. Also, fathers' Dutch proficiency was negatively associated with children's EC while for mothers' proficiency in Dutch the reversed was found.

Talk 2: Biculturals' Emotional Blending And Frame Switching In Daily Life: Evidence From Survey Experiments And Experience Sampling Data

Jozefien De Leersnyder - KU Leuven

Upon engaging in a new/majority cultural context, immigrant minorities come to fit the emotional patterns that are typical for that context (Jasini et al., 2019); upon engaging with heritage culture friends, they maintain fit with their heritage cultural patterns (De Leersnyder et al., 2020). Yet, how do biculturals navigate emotionally throughout their daily lives? Do they blend the emotional patterns of both cultures or do they switch between them depending on the specific context or language of interaction? I present initial evidence on this topic from 4 studies with Turkish Belgian and Chinese British biculturals (Zhou et al., 2021; 3 unpublished). In 2 survey experiments, minorities reported on their emotional experiences while we manipulated either the entire study context or language; in 2 experience sampling studies, minorities reported on their experiences on 10 beeps per day for 7 days and afterward completed information on the context/language of interaction. In each study, we calculated minorities' emotional fit with their respective majority and heritage context's typical patterns. Across all studies, biculturals tended, on average, to fit equally well with the emotional patterns that are typical in their new/majority and heritage cultures. Yet, the context/language effects were rather mixed. This suggests that biculturals either blend both emotional patterns or that other (individual level) factors moderate biculturals' capacity for emotional frame switching.

Talk 3: Do Minorities' Friendships With Majority And Their Emotional Fit With Majority Culture Influence Each Other Over Time?

Alba Jasini, Jozefien De Leersnyder, Eva Ceulemans, Matteo Gagliolo, Batja Mesquita - KU Leuven, Université Libre de Bruxelles

Immigrant-origin minorities who have contact with the majority have emotions that fit the majority norm (De Leersnyder et al., 2011; Jasini et al., 2019). However, previous research on the link between minorities' emotional fit and their contact with majority has been cross-sectional. Hence, little is known about the directionality of the association, and whether emotional fit also benefits minority inclusion. In a longitudinal study with 3216 minority and 2283 majority youth, we tested bidirectional associations between emotional fit and majority friendships over time. Emotional fit was calculated by relating minorities' emotional patterns to the average pattern of the majority sample in comparable situations. Majority friendships were measured through friendship nominations in classrooms and self-report. Cross-lagged path models offered partial support for the hypotheses using friendship nomination data, and full support using self-reported data. The findings suggest that minorities' fit with the majority culture increases when they have majority friends, and that emotional fit is a promising route for inclusion.

Talk 4: Reaching A Common Ground In Interethnic Encounters: An Experimental Study On Emotional Acculturation

Fattana Mirzada, Jozefien De Leersnyder - KU Leuven

As global migration is on the rise our daily interactions are more likely to be intercultural ones in which people may struggle to find common emotional ground, or emotional 'fit'. Reaching an emotional fit reflects mutual understanding of situations and could result in better social relationships (De Leersnyder, et al., 2014). This study aimed to address a) how emotionally similar ethnic minorities and majority peers become while interacting and b) if these shifts in emotional patterns can be understood from changes in 'concerns' – i.e. the goals and values people consider relevant in a situation and that reflect their interpretations of the situation at hand. Building upon prior findings that suggest that people's emotional fit with one another increases upon interacting (e.g., Anderson et al., 2003; De Leersnyder et al., 2011), we conducted a 7-trial quasi experiment with 50 dyads of Turkish or Moroccan Dutch minority and Dutch majority participants. On each trial, participants had to i) read a positive or negative emotional situation; ii) individually report their emotional experiences (EPQ) and salient concerns (SVQ); and iii) discuss with each other in order to jointly complete an EPQ and SVQ once again. Preliminary results indicate that through grounding interaction partners are more likely to respond to future situations in emotionally similar ways when presented with positive vignettes, but not with negative ones.

Paper Sessions

Physical health and health behaviors I

Wednesday, October 4, 10:00–11:30, Auditorium DZ3

Talk 1: Hospital Emotional Labor At The Nexus Of Corporeal, Social And Spatial Experiences: Building A Conceptual Model

[Benjamin Apeloig](#), Rebecca Dickason

Speaker affiliation: University of Potsdam, Gustave Eiffel University Paris

Introduction: Healthcare professionals perform emotional labor every day (they modulate their emotions and those of the patients to ensure care quality). This concept has been diversely studied since Hochschild's seminal 1983 work, mainly through the prisms of sociology and organizational psychology with its effects on quality and occupational health as focal points. However, despite it being central to the practice of emotional labor, the body has remained largely unexplored in relation to how emotional labor is performed, how emotion regulation occurs and how spatially situated interactions are experienced within the body. The purpose of our work is thus to propose an alternative conceptual model of emotional labor building on corporeal, social and spatial experiences.

Methods: To this effect, we bring together several streams of academic literature: (1) on emotional labor and emotion regulation, (2) on space and emotions, (3) on neurobiology, neuroscience and embodied cognition.

Results: Our model repositions the body at the core of the performance of emotional labor. We show the multilevel interactions between the within-person states, the organizational context and adaptative parameters embedded within the bodily experience of emotional labor.

Conclusion: This nascent model has the potential to open new ways to understand emotional labor and to mitigate its potentially deleterious effects on occupational health while enhancing care quality.

Talk 2: Life After Trauma: Examining The Interconnectedness Between Physical, Psychological, And Role Functioning Among Trauma Patients

[Manon Enting](#), Mariska de Jongh, Margot Joosen, Daphne van der Kruijssen, Ruth Geuze, Marjan Bakker, Nina Kupper

Speaker affiliation: Tilburg University

Introduction: Surviving physical trauma can have a large impact on daily life functioning. Trauma patients are at increased risk for experiencing anxious/gloomy feelings and post-traumatic stress, which is often linked to poor physical health and problems in role functioning (work, daily activities). The present study examined the interconnectedness of physical, psychological, and role functioning of trauma patients longitudinally until 2 years post-injury.

Method: Data came from a prospective cohort study (N = 3785, Mage = 64.2) in which physical health, anxious/gloomy feelings, post-traumatic stress, and role functioning were assessed at 6 measurement occasions from 1 week to 2 years post-injury. Cross-sectional and longitudinal network analyses were conducted.

Results: The cross-sectional networks showed that problems in physical functioning were strongly related to anxious/gloomy feelings, but less to post-traumatic stress. The longitudinal network analyses extended these results by showing that anxious/gloomy feelings, cognitive problems, and self-care were good predictors of recovery aspects at later stages of recovery. Contrarily, several post-traumatic stress symptoms (e.g. strong feelings about event) and daily activities were more predicted by recovery aspects from earlier stages of recovery.

Conclusion: Our results suggest that certain aspects of recovery, such as anxious/gloomy feelings and daily activities play a central role in trauma recovery across time.

Talk 3: Bracing For The Worst? An Ecological Momentary Assessment Study Of Fear In Cancer Survivors Awaiting Uncertain Health News

Lauren C. Heathcote, Sarah N. Webster, Emma E. Biggs, Vivek Tanna, Elia Mattke, Sheri L. Spunt, Kate Sweeny, Claudia Mueller

Speaker affiliation: King's College London

Introduction: Stressful waiting periods are part of daily life, but when the news one awaits is life changing, waiting can be laden with negative emotions such as fear and worry. Ecological momentary assessment (EMA) study designs can capture emotion dynamics during stressful waiting periods and can help identify predictors of emotional risk, resilience, and recovery.

Methods: In this study, 55 survivors of childhood cancer (11-25 years, 54.5% male) reported their daily fear of cancer recurrence during semi-randomized time windows via a smartphone app for 11 days (33 moments), beginning 5 days before a routine cancer surveillance scan. Multilevel models estimated how expectation management strategies (bracing for the worst, hoping for the best, optimism) predicted within-person means and random slopes of fear before (reactivity), the day of (peak), and after (recovery) the surveillance scan.

Results: Before the surveillance scan, bracing for bad news predicted greater overall fear and a sharper increase in fear. Bracing also predicted a steeper decrease in fear in the days following the scan. Positive expectation management strategies did not predict fear at any phase.

Conclusions: Cancer survivors who brace for bad news may experience worse fear of cancer recurrence while awaiting surveillance scans, yet this heightened fear largely resolves following good news. Positive expectation management strategies (hope and optimism) do not appear to buffer against fear.

Talk 4: Risk Of Type D Personality And Psychosocial Factors For Mace In Patients With Non-Obstructive Coronary Artery Disease.

Paula M.C. Mommersteeg, Wilbert Aarnoudse, Michael Magro, Paul Lodder, Jos W. Widdershoven

Speaker affiliation: Tilburg University

Introduction: Patients with non-obstructive coronary arteries (NOCAD) experience psychological distress and are at risk for major adverse cardiovascular events (MACE). We examined the risk of psychosocial factors, including Type D personality, depressive symptoms, anxiety, positive mood, and hostility for MACE in patients with NOCAD.

Methods: In the Tweesteden mild stenosis (TWIST) study, in total 546 patients with NOCAD were followed for 9 years to examine MACE, a combination of cardiac mortality, a major cardiac event, or allcause mortality in the absence of a cardiac event. Cox proportional hazard models of psychosocial factors for MACE outcomes were examined adjusted for age and sex, disease severity, and lifestyle covariates.

Results: Before covariate adjustment, depressive symptoms, and positive mood, were significantly associated with a higher and lower risk for MACE respectively. No significant association was observed for Type D personality, anxiety or hostility. In the final model positive mood, female sex, and being younger were protective factors for the occurrence of MACE.

Conclusions: After about 9 years in total 19% of patients with NOCAD had MACE, for which positive mood was related to a lower occurrence, but negative mood and Type D personality were not associated with a higher risk, after adjustment. Stratification for sex and age will be examined separately.

Talk 5: The Effects Of Induced State Anxiety On The Magnitude Of Nocebo Hyperalgesia

Daryna Rubanets, Elżbieta A. Bajcar, Przemysław Bąbel

Speaker affiliation: Jagiellonian University

Introduction: Nocebo hyperalgesia manifests itself by pain increase following an inert intervention. Current nocebo research has primarily focused on cognitive processes, with much less attention drawn to emotional processes. Consequently, the knowledge of the potential mechanisms of nocebo effect development may be incomplete. The aim of the current study is to test the effects of experimentally induced pain-related anxiety on the magnitude of nocebo hyperalgesia shaped by classical conditioning.

Methods: Healthy volunteers are randomized to one of 3 groups: 1) classical conditioning of nocebo hyperalgesia; 2) hidden classical conditioning preceded by anxiety induction; 3) no-manipulation control. During conditioning, the intensity of thermal stimulation was surreptitiously increased when the placebo was used and remained moderate when the placebo was not used. Anxiety is induced by the anticipation of electric shock in the anxiety-nocebo group. Pain intensity and anxiety ratings are collected as primary outcomes. Heart rate and skin conductance are assessed as secondary outcomes.

Results: Data collection is in progress and the results will be presented at the conference.

Conclusions: Understanding the role of anxiety in nocebo hyperalgesia could be beneficial in clinical practice, for instance, to develop the methods for eliminating or minimizing the nocebo effect by reducing anxiety.

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Interpersonal emotion regulation I

Wednesday, October 4, 11:30–12:15, Auditorium DZ2

Talk 1: Parental Regulation Of Children’S Emotions: A Focus On Father-Child Interactions Within The Family Context

Vincent O Mancini

Speaker affiliation: Telethon Kids Institute, University of Western Australia

Introduction: The role that parents and primary caregivers play in facilitating their children’s emerging capacity to express and manage emotion has been well-established in a maternal context. However, Intergenerational shifts in parenting roles and responsibilities across many nations have resulted in fathers having greater involvement in early child rearing. Gender differences in the experience and expression of emotion may have implications for parenting practices that shape children’s emerging emotion.

Method: Data were collected from three cross-sectional studies spanning three samples (N = 250 – 350) via online survey. Participants completed measures spanning social and emotional wellbeing, parent-child attachment, child psychopathology, emotion regulation, regulation of children’s emotion, and family functioning.

Results: Key findings include evidence of a parent-child gender interaction whereby fathers are more likely to encourage the suppression and avoidance of emotion – particularly for young boys compared to young girls. Paternal emotion regulation difficulties were also predictive of paternal psychopathology, social-emotional problems in children, and poorer family functioning.

Conclusions: Fathers appear to make an important and unique contribution to the emotional wellbeing of their children. Despite increased patterns of paternal engagement, fathers remain underrepresented in parenting interventions – highlighting a need for novel and tailored intervention efforts.

Talk 2: It’S What I Think You Do That Matters: Comparing Self, Partner, And Shared Perspectives Of What A Romantic Partner Does To Regulate

Sarah A. Walker, Rebecca T. Pinkus, Kit S. Double, Hester Xiao, Carolyn MacCann

Speaker affiliation: University of Sydney

Introduction: Romantic partners routinely regulate each other’s emotions; this phenomenon is known as extrinsic emotion regulation. Previous research investigating emotion regulation in couples has typically examined self-report of emotion regulation from only one member of the couple. It is therefore unclear how much romantic partners agree on which emotion regulation strategies their partner uses and whether this agreement or the unique perspective of each person is the stronger predictor of relationship quality.

Method: In the current study (N=395 romantic couples), we applied a bifactor model to assess the extent to which extrinsic emotion regulation processes (expressive suppression, downward social comparison, humor, distraction, direct action, reappraisal, receptive listening, and valuing) related to relationship quality, comparing: a) the unique perspective of the regulator, b) the unique

perspective of the target, and c) the shared perspective (consensus) between the target and regulator.

Results: The results indicated that it is the target's, rather than the regulator's perspective of emotion regulation that predicts the relationship quality of both members of the romantic couple.

Conclusion: Overall, these findings suggest that it is not what the regulator thinks they do to regulate their romantic partner's emotions that relates to relationship quality, but rather the target's perceptions of the regulation attempt.

Talk 3: Emotion Regulation In Romantic Couples: What My Partner Does To Me Influences What I Do To Myself

Hester Xiao, Rebecca T. Pinkus, Carolyn MacCann

Speaker affiliation: The University of Sydney

The two main approaches to studying emotion regulation (ER) differ in their targets: intrinsic ER is about regulating one's own emotions and extrinsic ER is about regulating others' emotions. Intrinsic ER strategies are well studied, but very little research has looked concurrently at both approaches. The current study explored whether the type of regulation received from a romantic partner (extrinsic regulation) affects the way people regulate their own emotions (intrinsic regulation). We hypothesized that: 1) using receptive listening to regulate a partner's emotions will be associated with partner use of social sharing to regulate their own emotions, and 2) using expressive suppression to regulate a partner's emotions will be associated with partner use of expressive suppression to regulate their own emotions. Heterosexual couples (N =175 dyads) completed two waves of online surveys over eight weeks. Actor-partner interdependence models (APIM) were used to analyze the dyadic data, with extrinsic expressive suppression/receptive listening as the (partner) predictor, and intrinsic expressive suppression and social sharing as the (actor) outcomes. The findings contribute to our knowledge of the interplay between extrinsic and intrinsic emotion regulation in interpersonal contexts.

Emotion perception and expression I

Wednesday, October 4, 11:30–12:15, Auditorium DZ1

Talk 1: Facial Emotion Production And Recognition In Autistic And Non-Autistic Adults Within The ‘Double Empathy Problem’ Framework.

[Margaret C Jackson](#), Beth H Mitchell

Speaker affiliation: University of Aberdeen

Introduction: Prior research suggests that autistic individuals display ‘abnormal’ facial expressions and present with ‘deficits’ in recognising others’ emotions. The Double Empathy Problem (DEP) offers a different perspective, suggesting communication difficulties between autistic and non-autistic people are bidirectional.

Methods: The present study reflected key DEP principles to examine face emotion recognition among 17 autistic (AS) and 57 non-autistic (non-AS) observers, using photographed expressions of happiness, sadness, anger, and fear posed by three AS and three non-AS females in the lab. In two conditions they posed for a friend and a stranger, and could pose how they wished. Observers were shown each face photo (500ms) and labelled the emotion using a key-press (online via Testable). We hypothesised that AS observers may better recognise AS expressions and non-AS observers may better recognise non-AS expressions. Posing condition was exploratory.

Results: Emotion recognition was more accurate overall among AS vs. non-AS observers, contrary to reports of impairments in autism using non-AS expressions. However both groups showed higher accuracy for non-AS vs. AS expressions. Interestingly recognition was better for AS-posed stranger vs. friend expressions, but vice versa for non-AS-posed expressions.

Conclusion: This work advances methodological and theoretical understanding of emotion recognition and production in autism within the Double Empathy framework.

Talk 2: Labeling Biases Perceptual Memory For Ambiguous Facial Expressions Of Emotion

Kaitlyn M. McMullen, Jolie B. Wormwood

Speaker affiliation: University of New Hampshire

There is growing evidence that emotion perception is not purely objective but can be influenced by context, including the availability of conceptual knowledge about emotions. We examined whether participants would misremember ambiguous emotion expressions as looking more like stereotypical emotion expressions if they originally encountered the ambiguous expressions labeled with emotion words (e.g., anger, fear). We created images of ambiguous expressions by morphing a posed, stereotypical emotion expression (e.g., a scowl for anger) with a posed neutral expression, creating both neutral-to-fear blends and neutral-to-anger blends. Participants first learned to discriminate between two target expressions drawn from the middle of the morphed arrays (40/60% blends) labeled as either belonging or not belonging to a single emotion category (e.g., ‘angry’ v. ‘not angry’). Participants were then shown facial expressions drawn from the larger

morphed array (in 10% morph increments) and were asked to identify the target expressions they were previously trained to discriminate. We found that target expressions labeled as belonging to a specific emotion category (e.g., “angry”/ “fearful”) were misremembered as more perceptually similar to the stereotypical expression for their labeled emotion category than they were in reality, while target expressions labeled as not belonging to a specific emotion category (e.g., “not angry”/ “not fearful”) were remembered more accurately.

Mechanisms of (re)appraisal

Wednesday, October 4, 11:30–12:15, Auditorium DZ3

Talk 1: Appraisal Shifts In Reappraisal

[Andero Uusberg](#)

Speaker affiliation: University of Tartu

Reappraisal or changing how one appraises an emotional situation can improve and sustain well-being. However, harnessing the full potential of reappraisal requires a better understanding of its cognitive mechanisms. In this talk, I will present recent evidence supporting the idea that reappraisal can be modelled as a profile of shifts along appraisal dimensions such as goal relevance, goal congruence, accountability, control, and certainty. Using three datasets, I will demonstrate how appraisal shifts can statistically explain substantial portions of the changes in self-reported emotional reactions to distressing events that have been recalled ($n = 437$), imagined ($n = 494$), and recently experienced ($n = 168$). I will also show how appraisal shift profiles can be helpful for assessing reappraisal tactics and reappraisal inventiveness.

Talk 2: Dissociating The Generation Of Reappraisal From Its Implementation

[Christian E. Waugh](#), [Junyuan Luo](#), [Valeriia V. Vlasenko](#), [Kateri McRae](#)

Speaker affiliation: Wake Forest University

Introduction: Although reappraisal has been shown to be a highly successfully emotion regulation strategy, it requires several sequential steps, and it is still unclear when in the reappraisal process emotion changes. We experimentally dissociated the generation of reappraisals from their implementation.

Methods: In two behavioral studies and an fMRI study, participants saw a negative image and generated either just positive reappraisals or positive and negative reappraisals. They then saw the image again and implemented either their positive or negative reappraisals.

Results: Although there were small and significant changes in emotion when generating reappraisals, the robust changes in emotion that are typically observed during reappraisal occurred during implementation. In addition, reappraisal generation and implementation recruited overlapping and distinct neural regions. In a follow-up study, we demonstrated that participants who feel mixed emotions after reappraisal generation are more likely to choose to implement those reappraisals (vs. distraction) than those who feel either a little or a lot of positive emotion after generation.

Conclusions: We discuss the implications of these findings for understanding emotion regulation, the neural underpinnings of reappraisal, and the conditions for reappraisal success in clinical contexts.

Method development I

Wednesday, October 4, 11:30–12:15, Auditorium DZ4

Talk 1: Mapping Bodily Trajectories, Emotional Episodes And Regulation Via An Experience Sampling App And Observations

[Benjamin Apeloig](#), Rebecca Dickason

Speaker affiliation: University of Potsdam, Gustave Eiffel University Paris

Introduction: The “within-body” experience of emotional labor (i.e. managing one’s emotions and those of others according to emotional rules) is a blind spot in the academic literature on this concept. The purpose of this research is to develop an innovative methodology to join the dots between (1) the bodily experience of emotional labor, (2) the dynamic processes and spatial trajectories of the emotional labor experience during work, and (3) the individual and collective emotion regulation processes.

Methods: We propose a mixed-method approach relying on (1) an experience-sampling app which will allow us to log emotional and bodily experiences and to allocate them to specific time stamps and areas, (2) physiological data (heart rate variability, perspiration, etc.) and (3) in situ observation and interviews. This study will be conducted in several hospital services for comparison purposes.

Results: This research project is still in its early stages as we are refining our methodological approach to assess how best to conduct the research in order to avoid impeding care provision. To refine our strategy, we intend to conduct a pilot study first.

Conclusion: This methodology should allow us to map bodily trajectories, emotional episodes and emotion regulation in order to propose relevant and innovative ways of facilitating the performance of emotional labor, notably through training via an app that we intend to develop after analyzing the results of fieldwork.

Talk 2: Systematic Review On The Application Of Momentary Assessment Designs For Anhedonia

[Joanne Beames](#), Olivia Kirtley, Inez Myin-Germeys

Speaker affiliation: KU Leuven

Introduction. Anhedonia, the inability to experience pleasure or interest, is a salient feature across many psychiatric disorders that is difficult to detect in daily life using retrospective self-report questionnaires. Experience sampling methodologies (ESM) can address this gap by capturing dynamic features of anhedonia in real-time. Despite the potential of ESM in anhedonia research, it is unclear how it is being used and whether a best-practice measurement approach exists. This systematic review aims to describe how anhedonia is measured using ESM and to evaluate the consistency of findings.

Methods. PsychARTICLES, Medline, Embase, and WoS were searched using concepts related to ESM and anhedonia. Broad search terms were used to capture variation in how anhedonia is conceptualized in psychiatry (e.g., pleasure, reward). All populations were included, regardless of

mental health status and age. Studies were excluded if they did not include ESM or were not published in English in a peer reviewed journal. Preregistration is in process.

Results. A preliminary search run in February 2023 identified 671 records, of which 541 were original articles eligible for title/abstract screening. Full-text screening and data extraction will be concluded by June 2023, with synthesized results available by July 2023.

Conclusions. This review will clarify how anhedonia is being measured using ESM and inform the development of transdiagnostic items appropriate for ESM research.

Talk 3: Using Emotional Intelligence To Unlock It'S Potential: Scale Development And Applied Use In Motorsports

Sebastian R.L.H. Buurma, Keri A. Pekaar, Nico W. Van Yperen

Speaker affiliation: Rijksuniversiteit Groningen, Tilburg University

Introduction: In domains such as sports and healthcare, being emotionally intelligent (EI) positively relates to performance. However, being EI is different than actually using EI. There are no instruments yet that capture the use of EI within a specific context or situation, and thus are unaware on what EI behaviors are actually used and effective. Hence, the aim of the present research was to develop a new scale and to explore its relationship with performance.

Methods: A series of studies was conducted to develop and validate a new instrument (Using Emotional Intelligence Scale; UEIS) that specifically captures the use of EI (behaviors) during a performance episode. Participants rated to what extent they used specific EI behaviors during a most recent performance episode (e.g., sports game, consult, meeting). Next, in a single case study with 31 measurement points we explored how the UEIS relates to the performance of an elite racing driver.

Results: In two independent samples, we found the anticipated four-factorial structure of the UEIS. Results of the case study indicate that the use of EI fluctuates across different performance episodes and meaningfully relate to performance indicators. These findings provide suggestive evidence that the UEIS is a valuable tool to capture EI behavior on an episodic level.

Conclusion: We can theoretically and empirically differentiate between four dimensions of using EI that helps us to further uncover EI's role in relation to performance.

Experience of emotion III

Wednesday, October 4, 11:30–12:15, Auditorium DZ6

Talk 1: Involvement Of Physiological Reactivity And Interoception In Emotional Experience After A Traumatic Brain Injury: Preliminary Research

Alice Bodart, Laurent Lefebvre, Mandy Rossignol

Speaker affiliation: University of Mons

After a traumatic brain injury (TBI), patients often report a decrease in their ability to feel emotions, which is partially based on physiological reactivity (PR) associated with the emotion and on the ability to become aware of it, referred to as interoception. After a TBI, alterations of interoception and PR have been reported. This study aimed to explore the role of PR and interoception in emotional experience after a TBI. 17 men with moderate to severe TBI (age: $40 \pm 12,4$) and 17 healthy men (age: $37,9 \pm 15,8$), paired on age and educational level, participated in the study. We examined PR through the electrodermal activity (EDA) while participants watched positive and negative emotional films that they rated emotionally, and interoception through a heartbeat counting task (HBCT) and the MAIA questionnaire. Compared to controls, TBI patients had lower scores on the emotional awareness subscale of the MAIA; the assessment of arousal for negative films was positively correlated with HBCT scores. Furthermore, TBI patients showed lower EDA during negative films which they rated as less arousing. These results suggest a decrease in interoceptive emotional awareness, as well as in the assessment of arousal and PR for negative stimuli after TBI. The decrease in emotional experience reported by TBI patients could be explained by both reduced PR and underestimation of it due to lower interoception.

Talk 2: Terrific Spiders: Emotion Action Control In Anticipation Of Moving Spiders

Andreas B. Eder

Speaker affiliation: University of Würzburg

According to effect-based action control views, emotional action is not so much controlled by emotional stimuli but, rather, by the predicted consequences that the behaviour will have on these stimuli. An experiment ($n = 53$) tested this assumption with a virtual reality setup in which virtual spiders reacted to a forward or backward step of the participant with a biting or retreat animation. Participants' backward stepping was initiated much slower relative to a neutral baseline condition when the spider reacted with attack. Results demonstrate that predictive processes are involved in preparation of emotional action.

Talk 3: Stigmatization Of Anorexia Nervosa In Professionals: Attitudes And Emotional Reactions

Joyce Maas, Mladena Simeunovic-Ostojic, Nynke Bodde, Theodoor Veerman

Speaker affiliation: Centre for Eating Disorders (GGZ Oost Brabant), Tilburg University

Introduction: Stigmatization of Anorexia Nervosa (AN) is common in the general population, but, perhaps surprisingly, research shows that professionals, including psychiatrists, also hold stigmatizing views regarding patients with AN. A lack of knowledge contributes to stigmatizing and stigmatization has been shown to affect clinical actions. Stigmatization is related to the attribution of negative characteristics to patients and the experience of negative emotional reactions towards patients.

Methods: 61 psychiatry residents from the South Netherlands-North consortium completed a survey containing questions about knowledge, attitudes (blame, envy, fragility, general stigma, social distance, triviality, and vanity), and emotional reactions regarding AN.

Results: Stigmatizing attitudes in the blame, vanity, and distrust categories were endorsed by a large proportion of our sample. The majority of psychiatry residents associated patients with AN with the characteristics 'insecure', 'controlling', 'sad', and 'defensive'. The emotional reactions that were mentioned by at least 50% of the residents were feeling 'incompetent', 'pessimistic', 'worried', and 'anxious'. All residents failed the knowledge test.

Conclusions: Future research should shed more light on the exact knowledge gaps, so that educational programs can be designed. As educational interventions have been shown to be able to reduce levels of stigma toward AN, this seems to be an important step for the future.

Emotions and disordered eating

Wednesday, October 4, 11:30–12:15, Auditorium DZ10

Talk 1: Emotion Regulation And Disordered Eating Behavior In Youths: Two Daily-Diary Studies

Christine Dworschak, Reuma Gadassi Polack, Julia Winschel, Jutta Joormann, Hedy Kober
Speaker affiliation: University of Zurich

Introduction: Disordered eating cognitions and behaviors in childhood and adolescence have been identified as precursors for the development of eating disorders. Another important contributor to eating disorder risk is maladaptive emotion regulation. However, while the regulation of negative affect has been the focus of much research, the literature on the role of positive emotion regulation in eating pathology is extremely limited. The present study extends previous research by examining the regulation of both positive and negative affect in disordered eating using two waves of a daily diary design.

Method: Every evening for 21 days, 139 youths (8-15 years) reported their use of rumination, dampening, and disordered eating cognitions and behaviors. One year later, during the onset of the COVID-19 pandemic, 115 of these youths were followed-up.

Results: As predicted, higher levels of rumination and dampening were found to be associated with a higher frequency of weight concerns and restrictive eating on person-level (both Waves) and day-level (Wave 2). Further, a higher frequency of rumination at Wave 1 predicted increases in the frequency of restrictive eating one year later.

Conclusions: Our findings underline the importance of examining regulation of both positive and negative emotion in order to understand eating disorder risk.

Talk 2: A Multidimensional Examination Of Affective And Cognitive Empathy In Anorexia Nervosa

G. Gaggero, O. Luminet, N. Vermeulen, P. De Timary, J. L. Nandrino, S. Goffinet, J. Dereau, R. Shankland, C. Dassonneville, D. Grynberg
Speaker affiliation: Lille University

Socio-emotional features are crucial in the development and maintenance of anorexia nervosa (AN). The present study investigates the patterns of altered and preserved empathic abilities in AN. Empathy is an umbrella term that comprises the ability to recognise another's emotional state, take another's perspective, and fantasise (cognitive empathy), as well as the ability to experience vicarious emotions and signal them (affective empathy). These empathic abilities were measured in 43 AN patients and 33 healthy women through a multi-method approach comprising self-report measures, behavioural tasks and bodily correlates. Further, we assessed self-reported approach-avoidance attitudes towards suffering others. Results showed that, within the domain of cognitive empathy, AN patients reported impairment in recognising emotional expressions of anger and fantasising. Concerning affective empathy, they manifested lower sharing of others' positive emotions, higher self-reported distress, and higher facial expressiveness during a video depicting

a suffering person. Finally, AN patients reported lower motivation to approach suffering others. Our results draw a complex picture of preserved and altered empathic abilities in AN and capture which are the deficits mediated by the higher levels of anxiety and depression reported by the AN population and those that seem to persist independently from these co-morbid conditions.

Talk 3: The Role Of Personal Standard And Social Comparison In The Association Between Eating Disorder Symptoms, Envy And Schadenfreude

[Delphine Grynberg](#), Karyn Doba

Speaker affiliation: Lille University

Introduction: According to the literature, interpersonal difficulties are considered as key risk and maintenance factors of eating disorders (ED) symptomatology. In the present study, we focused on envy and Schadenfreude and tested the model according to which higher symptoms of ED would influence these social emotions through higher physical, social or performance standards leading in turn into the tendency to compare oneself to people we perceive as better than us.

Methods: To this aim, 115 participants from the French general population (Mage= 26.20, SDage=9.83) completed different questionnaires measuring ED, personal standards, upward/downward social comparison, envy and Schadenfreude.

Results: The partial least squares path modeling analysis revealed that higher symptoms of ED lead to higher benign envy, malicious envy and Schadenfreude through higher physical and social standards which in turn influence to upward social comparison.

Conclusions: the study showed that higher ED symptomatology increases the risks of experiencing social emotions that might be deleterious at an intrapersonal (low self-esteem and shame) and at an interpersonal level (negative judgment of these emotions by others). At a theoretical level, we showed that personal standards and upward social comparison are important mediators. At a clinical level, this study highlighted the importance of considering social factors in the development of more severe ED.

Interventions

Wednesday, October 4, 14:15–15:45, Auditorium DZ10

Talk 1: Does A Momentary Mindfulness Intervention Impact Rumination, Negative Affect, And Their Dynamics?

Teresa Bolzenkötter, Andreas Neubauer, Peter Koval

Speaker affiliation: University of Melbourne, Freie Universität Berlin

Negative affect and rumination are known to reciprocally influence each other over time, forming a viscous cycle. Previous studies suggest that mindfulness practice may interrupt this cycle. However, these studies have either used observational experience sampling methods (ESM) studies that do not allow for causal interpretation, or lab-based experiments that leave unclear whether effects generalize to daily life. Our study combined the benefits of ESM and experimental designs to investigate the causal effects of a mindfulness intervention on negative affect, rumination, and their dynamic interplay in daily life. Participants (n=97) completed a 10-day ESM study, with 8 daily prompts at which participants were randomized to complete either a mindfulness intervention or an active control task. Participants then rated their levels of negative affect and rumination. We use dynamic structural equation modeling (DSEM) to investigate how the mindfulness intervention causally influences levels of negative affect and rumination, and how the intervention moderates their dynamic interplay, as well as the degree to which negative affect and rumination persist over time. This study will be the first to show if an experimentally manipulated mindfulness state causally impacts negative affect, rumination, and their dynamic interplay.

Talk 2: Promoting Psychological Well-Being In Preschool Children: Randomized Control Trial Of A Social-Emotional Learning Intervention

Ophélie Courbet, Quentin Daviot, Victoire Kalamarides, Marianne Habib, Marie-Carmen Castillo, Thomas Villemonteix

Speaker affiliation: Paris VIII University

Introduction: Preliminary research suggests that mindfulness- and yoga-based socio-emotional learning (SEL) interventions can have a positive impact on preschoolers' psychological well-being (P-WB). The objective of our study is to evaluate the effect of a 24-weeks combined mindfulness- and yoga- based SEL intervention in 761 preschool children in a French socio-economically disadvantaged area.

Methods: The P-WB promotion intervention is compared to a wait-list control condition in a cluster randomized controlled trial (RCT). Core P-WB components (connection, insight, engagement and positive relationship), self-management capacity, mental health, and executive functioning are assessed through teacher questionnaires, standardized observations of children in school context and experimental tasks at baseline and at the end of intervention.

Results: As expected, our intervention has positive effects on children mental health, with a reduction of emotional, conduct and peer relationship problems, and a reduced impact of these

problems on children functioning after intervention compared to control. However, the intervention shows no effect on the other core P-WB components nor executive functioning, and discrepancies exist between teacher-report questionnaires and standardized observations.

Conclusions: This trial shows mixed but encouraging results. Implications for future P-WB promotion policies in preschool children are discussed.

Talk 3: The Effects Of A Strength-Based Intervention For Refugees On Happiness And Positive And Negative Affect.

Tommy Hendriks

Speaker affiliation: [Tilburg University]

Introduction: In recent years, a shift from trauma-focused to strengths-based interventions in the field of refugee studies can be seen. Such interventions do not focus on the treatment of trauma, but rather on developing personal qualities such as self-efficacy, hope, and resilience. An example of such an intervention is BAMBOO, a prevention program that consists of five weekly 2-hour sessions.

Method: Study 1 describes the effectiveness of the program among 233 refugees in the Netherlands, using a one-group pre-posttest design. Study 2 describes the finding from a randomized controlled pilot study. The intervention will take place at a Dutch asylum center in the time period April-June 2023, with a minimum of 68 participants.

Results: In regard to study 1, completer and intention-to-treat analyses revealed significant improvements in resilience and happiness (large effects), and significant changes in positive and negative affect (medium-small effects). In regard to study 2, we expect to report preliminary results by July 2023.

Conclusion: Findings of study 1 suggest that BAMBOO increases resilience, happiness and positive affect and decreases negative affect. It is expected that the pilot-randomized controlled trial will yield similar results. Results of the present studies may consolidate recent research findings that show that strength-based prevention programs can be effective in increasing mental well-being among refugee populations.

Talk 4: Does A Brief Mindfulness Meditation Increase Self-Enhancement And Wellbeing In A Heterogenous Sample?

Ivan Nyklíček, Myrthe Boekhorst

Speaker affiliation: Tilburg University

Introduction: It has been claimed that the beneficial effects of mindfulness meditation programs on psychological wellbeing are partly the result of a reduction in egoic functioning. However, recent studies have suggested that meditation actually increases self-enhancement. The aim was to examine the effects of a mindfulness meditation on psychological wellbeing and self-enhancement in a heterogenous sample.

Methods: Psychology students and adults practicing mindfulness at various centres (total N = 404) participated in a longitudinal study. For four weeks, each week they completed online

questionnaires on self-enhancement and hedonic and eudaimonic wellbeing after or before having practiced an online 15-min mindfulness meditation.

Results: Mindfulness meditation had no significant effects on any of the outcome variables. Being relatively experienced did not moderate the results. Only a significant main effect of experience was found: across sessions, those who practiced mindfulness at least one year scored significantly higher on wellbeing indices (small effects) as well as on self-enhancement (medium sized effect), compared to the other participants.

Conclusions: No evidence was found for either increase or decrease of self-enhancement after performing a brief mindfulness meditation, although experience with meditation was positively associated with wellbeing and self-enhancement across measurement times.

Talk 5: Omitting Continuous Memory Recall From Dual-Task Interventions Does Not Affect Reductions In Memory Aversiveness

[Kevin van Schie](#), Suzanne C. van Veen

Speaker affiliation: Tilburg University, Kenter Jeugdhulp

Introduction: In Eye Movement Desensitization and Reprocessing (EMDR) a patient recalls a traumatic memory, while simultaneously performing a dual-task (e.g., making horizontal eye movements, tapping a pattern). But is the element of active and continuous memory recall actually necessary to reduce memory aversiveness?

Method: In two online experiments participants (N = 172, N = 198) recalled a negative autobiographical memory and were randomly assigned to either (1) Memory Recall+Dual-Tasks, (2) Dual-Tasks Only, or (3) No Intervention Control. Before and after the intervention the memory was rated on vividness, unpleasantness, and accessibility.

Results: Both experiments (the original and an exact replication) show the same pattern of results: High taxing dual-tasks, regardless of whether there was continuous memory recall, resulted in the largest reductions in memory aversiveness. Unexpectedly, there was no evidence that the addition of continuous memory recall added to these reductions.

Conclusions: Continuous memory recall as an active element in the dual-task procedure in EMDR might not be beneficial per se and this (in part) aligns with EMDR therapy sessions in clinical practice, where there is a stronger focus on performing different tasks instead of recalling the memory. Our results suggest that continuous memory recall is not essential to achieve reductions in memory aversiveness, but that some form of pre-intervention memory (re)activation may still be necessary.

Talk 6: Experiential Emotion Regulation As Underlying Working Mechanism In Humanistic Client-Centered And Experiential Therapy?

[Marie Vandekerckhove](#)

Speaker affiliation: Vrije Universiteit Brussel, Ghent University

Despite the widespread implementation of- and qualitative evidence for experiential and client-centered psychotherapy and associated bottom-up experiential techniques such as 'focusing' (Gendlin, 1982; Greenberg, & Vandekerckhove, 2008; Rogers, 1957), it is only recently that

research started to experimentally validate underlying neurobehavioral working mechanisms such as by what we operationalized as 'experiential emotion regulation'. Rooted in experiential psychotherapy (Gendlin, 1982; Greenberg, & Vandekerckhove, 2008; Rogers, 1957), central to experiential emotion regulation is the here-and-now attentional focus on the somatosensorial affective experience in an unconditional and nonjudgmental stance, a rudimentary bottom-up raw affective sensory or 'interoceptive consciousness, guiding our affective feelings, or embodied 'affective awareness' as affective meaningful signaling about the current inner state. Based on affective neuroscientific research findings, we will first discuss how primary-process anoetic consciousness emerges in experiential processing and a higher form of knowing and self-aware state and symbolic expression. Second, we will discuss how we recently started to validate experiential emotion regulation by the question of whether and how experiential emotion regulation can modulate the negative impact of an emotional stress event in the short and longer-term. Different effectiveness studies will be discussed with dispositional- as well as trained experiential emotion regulation relative with cognitive approaches of emotion regulation such as cognitive analytical processing and cognitive reappraisal on sleep physiology and the brain.

Experience of emotion I

Wednesday, October 4, 16:00–16:45, Auditorium DZ2

Talk 1: Does The Procedure Matter? Applying A Multiverse Analysis Approach To Negative Emotion Differentiation

[Sabrina Ecker](#), Charlotte Ottenstein, Dominik Vollbracht, Tanja Lischetzke

Speaker affiliation: RPTU Kaiserslautern-Landau

Introduction: Negative emotion differentiation (NED) is commonly assessed using momentary emotions in ambulatory assessment studies. However, there is variation in how researchers process NED data, for example, at which level of compliance participants are excluded. The present research's objective is to use a multiverse analysis approach (i.e., conducting the analysis of interest across all reasonable combinations of decisions) to scrutinize whether such differing decisions in NED assessment and NED data processing affect the robustness of empirical findings on NED's relationships with other constructs.

Methods: We will conduct a multiverse analysis including decisions on the number of measurement occasions, the compliance threshold for exclusion, the item set, the computation of the NED index, the handling of negative indices, and the transformation of indices. The analyses of interest are twofold: First, we will examine the robustness of the bivariate correlation between NED and depressiveness on the person level. Second, we will investigate the robustness of the buffering effect of NED on stress reactivity, which corresponds to a cross-level interaction in a multilevel model. For both analyses, we will perform a separate multiverse analysis. The data will be collected from April through June.

Results and Conclusions: Results of the multiverse analyses will be presented and discussed in the light of recent calls for more research transparency.

Talk 2: The Personality Structure Of Affect: Valence Explains How And Why Positive Affects And Negative Affects Correlate

[Jason W. Payne](#), Ulrich Schimmack

Speaker affiliation: University of Toronto

Introduction: Positive affects and negative affects tend to co-occur in individuals across time. Diener and colleagues (1995) used a multi-method approach to test a hierarchical model of this trait affect. Their model suggests that specific trait affects are related to each other by two, distinct, but negatively correlated factors.

Method: We conceptually replicate and extend that multi-method study addressing several of its limitations. We include measures of valence to validate the interpretation of the higher order affect factors. Second, we did not average informant ratings to model individual rating biases. Third, we used item-level indicators rather than item-averages as indicators of basic affects. Fourth, we included middle-aged adults as targets to examine the generalizability of Diener's student sample.

Results and Conclusions: Our results confirm Diener et al.'s (1995) model and demonstrate that Positive Trait Affect and Negative Trait Affect are negatively correlated and this valence accounts

for the covariance among specific affects. We discuss the implications of these results in the context of personality theories that consider Positive Trait Affect and Negative Trait Affect as independent factors related to Extraversion and Neuroticism, respectively (Costa & McCrae, 1980). We argue that this model cannot account for the negative correlation between PA and NA and that further research is needed to locate affect within the Big Five model of personality.

Talk 3: The Role Of Response Styles In Assessing Emotional Granularity

Marcel C. Schmitt, Tanja Lischetzke

Speaker affiliation: RPTU Kaiserslautern-Landau

Introduction: Emotional granularity (EG) is an individual's ability to describe their emotional experiences in a nuanced way. To obtain an EG index for each participant, researchers often calculate the intraclass correlation coefficient (ICC) between repeated ratings of different emotions in experience sampling studies. However, individual response styles may influence emotion ratings and thus bias the validity of EG assessed via the ICC. In the present study, we examined the association of the ICC with extreme response style (ERS), the tendency to select the most extreme response categories. We further tested whether adjusting for ERS affects the buffering effect of negative EG in the association between daily stress and calmness.

Methods: We analyzed data from an experience sampling study with 5912 occasions nested in 313 participants. Participants' ERS scores were obtained by applying a multidimensional item response model to Big Five personality ratings from a pretest. Negative and positive EG indices were based on eight and six negative and positive emotion items, respectively.

Results: EG indices were not significantly associated with ERS scores. Adjustment for ERS did not alter the significant cross-level interaction between negative EG and daily stress in predicting daily calmness in multilevel analyses.

Conclusions: ERS may not significantly bias the assessment of EG via the ICC. Further research is needed to test the robustness of these findings.

Interpersonal inferences and dynamics I

Wednesday, October 4, 16:00–16:45, Auditorium DZ1

Talk 1: I Feel You Even If We Are Only Online: Synchrony Of Facial Muscle Activity In Dyadic Text-Based Chat Interactions

Till Kastendieck, Michelle Kelly, Frances Martin, Ursula Hess

Speaker affiliation: Humboldt-Universität zu Berlin

Introduction: Interpersonal physiological synchrony as measured by facial electromyography has been observed in face-to-face interactions. Yet, little is known about facial synchrony when the interaction is online and interactants do not see each other's faces.

Methods: Thus, we assessed facial synchrony in a text-based chat paradigm in which 47 dyads, of whom roughly half were strangers and half were friends, discussed positive and negative emotional episodes. Facial synchrony was operationalized via the windowed rolling cross-correlations between dyads' time series of pattern scores built from the mean of the zygomaticus major and orbicularis oculi muscles (typically involved in smiling) minus the corrugator supercilii (typically involved in frowning).

Results: We compared the complete set of real dyads (those in which partners actually interacted with one another) with a drawn set of pseudo dyads (random allocation of dyad members to form a control for mere task and situative effects) and found that synchrony was higher among the former. This finding replicates what has been found for face-to-face interactions and extends the evidence to the online domain. Notably, we did not find this difference in the positive emotional episode in the case of the stranger dyads.

Conclusions: The results suggest that not only is facial synchrony a phenomenon that goes beyond the simple sharing of a task but also that the relationship among interactants may play a role even when only communicating online and without facial cues.

Talk 2: Relationship Closeness And Affective Synchrony In Adolescent-Parent Dyads

Hannah Marshall, Kelley Gunther, Reuma Gadassi Polack, Jutta Joormann

Speaker affiliation: Yale University

Introduction: Extensive literature documents a positive association between child-parent relationship closeness and well-being; however, there is also behavioral and neurophysiological evidence that extreme closeness may be maladaptive. In the current study, we differentiate between adaptive and maladaptive closeness by testing whether the daily affective patterns of adolescent-parent dyads are associated with psychopathology.

Methods: 196 adolescents and parents independently completed baseline measures of closeness, depressive symptoms, and social anxiety symptoms. Over the following 28 days, participants reported their daily positive and negative affect. We modeled each dyad's affective states over time using coupled oscillator modeling, then conducted two latent profile analyses that grouped dyads based on patterns in their affect. Finally, we regressed profile membership on adolescent and parent closeness, depressive symptoms, and social anxiety.

Results: Dyads in separate latent profiles differed in their affective synchrony, rate of change in affect, intensity of affect, and amplification and dampening effects. We found a robust association between profile membership and social anxiety. Profile membership was not significantly related to depressive symptoms or closeness.

Conclusions: Examining the daily affective dynamics present in adolescent-parent relationships may facilitate the identification of affective patterns that are indicative of higher psychopathology risk.

Talk 3: Attachment And Perceptual Accuracy Of Hard And Flat Partner Emotions In Daily Life

Martine Verhees, Eva Ceulemans, Laura Sels, Peter Kuppens

Speaker affiliation: KU Leuven

Introduction: The ability to perceive one's partner's emotions accurately is relevant for relationship functioning and may be affected by perceivers' attachment orientations. Here we tested whether attachment anxiety and avoidance were related to whether individuals (1) over- or- underestimate their partner's emotions (directional bias), and (2) accurately track changes in their partner's emotions (tracking accuracy). We examined whether attachment-related differences in perception occur for a hard and a flat emotion which can signal a relationship-threat, i.e., irritation and indifference towards partner, as well as for affective valence.

Methods: Perception of partner emotions was assessed in daily life using experience sampling methods: both partners from 94 romantic couples reported on their perceptions of their partner's emotions as well as on their own experienced emotions multiple times per day during one week.

Results: no associations of attachment with directional bias of any of the emotions were found. Male perceivers higher in attachment avoidance less accurately tracked changes in their partner's irritation and male perceivers higher in attachment anxiety less accurately tracked changes in their partner's affective valence. There were no other associations of attachment with tracking accuracy.

Conclusion: Overall, attachment insecurity does not seem to robustly relate to perceptual accuracy of partner irritation, indifference and affective valence in daily life.

Alexithymia

Wednesday, October 4, 16:00–16:45, Auditorium DZ3

Talk 1: Child Maltreatment And Alexithymia: A Meta-Analytic Review

[Julia Ditzer](#), Eileen Y. Wong, Rhea N. Modi, Maciej Behnke, James J. Gross, Anat Talmon

Speaker affiliation: Stanford University

Introduction: Alexithymia is a personality trait that refers to difficulties identifying and describing one's emotions. Growing evidence suggests that alexithymia is a key transdiagnostic risk factor. Despite its clinical importance, the etiology of alexithymia is largely unknown. The meta-analysis summarizes findings on the role of child maltreatment in adult alexithymia.

Methods: We conducted the present meta-analytic review strictly adhering to the PRISMA guidelines. We obtained 99 effect-size estimates from 78 independent studies. The included studies involved a total of 36,141 participants.

Results: Using correlation coefficients as our effect size index, we found that child maltreatment was positively related to overall adult alexithymia ($r = .23$ [.19, .27]). Notably, emotional abuse ($r = .18$ [.13, .23]), emotional neglect ($r = .21$ [.16, .26]), and physical neglect ($r = .18$ [.15, .22]) were the strongest predictors.

Conclusions: These findings contribute to a more nuanced understanding of the complex connection between different types of child maltreatment and alexithymia, providing greater insight into the early environmental influences on alexithymia. As such, the findings highlight the importance of assessing alexithymia in individuals who have a history of maltreatment and present for psychotherapeutic treatment. These assessments can inform if an approach to treatment which targets emotion recognition and expression is needed.

Talk 2: The Place Of Cultural Capital In Measures Of Alexithymia And Empathy

[Giulia Gaggero](#), Giulia Balboni, Gianluca Esposito, Sara Dellantonio

Speaker affiliation: Trento University

Sociocultural factors play a pivotal role in several psychological phenomena, including the way we process and express emotions. Yet, in clinical and personality research, they are detected too simplistically, by collecting standard demographic information. To better understand the influence of sociocultural factors, we proposed to assess one's Cultural Capital (CC). CC is a sociological construct, which is intended to measure the set of knowledge, cultural codes, and skills embodied by the individuals and considered relevant in the community wherein they live. In this study, we explored whether CC, in addition to the educational level, is relevant for explaining part of the variance in two key emotional constructs, namely alexithymia, and empathy. To address this issue, we conducted a pre-registered survey with an Italian non-clinical sample. Alexithymia and empathy were assessed via the Toronto Alexithymia Scale (TAS-20), and the Interpersonal Reactivity Index (IRI). Results confirmed only the role of self-reported CC, while they failed to show any significant role of educational attainment. Higher CC was moderately but significantly associated with all dimensions of alexithymia and empathy. Higher CC was especially associated

with a higher ability to introspect within the own feelings (lower externally oriented thinking) and a higher perspective-taking. These results suggest caution when assessing alexithymia and empathy in different sociocultural contexts.

Talk 3: Conceptualizing Alexithymia

David A. Preece, James J. Gross

Speaker affiliation: Curtin University, The University of Western Australia, Stanford University

Introduction: Since the 1970s, commonly used psychoanalytic-based conceptualizations of alexithymia define the trait as having four core facets: difficulties identifying feelings (DIF), difficulties describing feelings (DDF), externally oriented thinking (EOT), and constricted imaginal processes. However, there is ongoing debate about whether constricted imaginal processes is a core facet of alexithymia, and which (if any) specific aspects of daydreaming/fantasizing activity might be impaired.

Methods: In this study, we address this foundational issue in the field by using factor analysis to establish the latent structure of the alexithymia construct. Participants (N = 399) completed a comprehensive battery of psychometric measures of alexithymia and imaginal processes, assessing the frequency, vividness, and content of daydreams or fantasies.

Results: None of the aspects of fantasizing loaded on the same factor (i.e., the latent alexithymia factor) as the established DIF, DDF, and EOT facets of alexithymia. Pearson correlation patterns were contrary to psychoanalytic theory, with alexithymia being associated with more (not less) frequent daydreams, more daydreams characterized by negative emotions and wish-fulfilment fantasies, and more use of daydreaming to regulate emotions.

Conclusions: Our findings are instead consistent with the cognitive-based attention-appraisal model of alexithymia, supporting that alexithymia is exclusively a set of deficits in emotion processing.

Positive emotion regulation and mental health

Wednesday, October 4, 16:00–16:45, Auditorium DZ4

Talk 1: Decreasing Anhedonia And Dampening Of Positive Emotions Via Future Event Specificity Training (Fest) In Undergraduate Students

[Liesbeth Bogaert](#), David Hallford, Arnaud D'Argembeau, Filip Raes

Speaker affiliation: KU Leuven

Depression has been associated with impaired episodic future thinking (EFT), including reduced specificity, low levels of detail and use of mental imagery. Recently, the positive effect of Future Event Specificity Training (FEST) on anhedonia and anhedonia-related outcomes has been demonstrated. Anhedonia, one of the core symptoms of depression, involves positive affect (PA) impairments (average low PA). Given this recent evidence for the effectiveness of FEST on PA in the context of depression, we explored its potential impact on dampening. Dampening is a maladaptive response style that has been linked to depressive symptoms and anhedonia, and that is characterized by reducing the intensity and/or frequency of positive emotions. Via an RCT, the effectiveness of an online FEST programme (vs. waitlist control) on anhedonia and dampening was evaluated in a sample of Dutch-speaking undergraduate students (N = 155). As predicted, FEST resulted in significant improvements in EFT features (including level of detail, mental imagery, specificity). Although likely due to ceiling effects, no significant increases were found in anticipated and anticipatory pleasure. No significant effects were found for anhedonia and dampening. In sum, this study found additional support for the positive effect of FEST for EFT repairment. The absence of significant effects for anhedonia and dampening may be related to sample characteristics, which should be closely considered in future study designs.

Talk 2: How Does Positive Emotion Regulation Buffers Against Psychopathology?:A Path Analysis Of Savoring, Well-Being And Psychopathology

[María Folgado-Alufre](#), Marta Miragall, Lorena Desdentado, Rosa M. Baños

Speaker affiliation: University of Valencia

Well-being is widely recognized as a protective factor for mental health. Savoring strategies, which involve enhancing positive emotions and dampening, that would down-regulate them, have been shown to influence different forms of well-being and psychopathology. The aim of this study was to analyse the influence of savoring and dampening on depressive and anxious symptomatology through the mediational effect of well-being. A cross-sectional design was conducted in a non-clinical sample of 638 participants (50.5% female) aged between 18 and 54. Participants filled self-report questionnaire to measure cognitive and behavioral savoring, dampening, well-being, anxiety and depression. A path analysis performed with lavaan in R showed that dampening and behavioural savoring strategies were negative and positive significant predictors of all the dimensions of well-being, while cognitive savoring only positively predicted psychological well-being. In turn, emotional and psychological well-being negatively predicted both depression and anxiety symptoms. Social well-being only predicted anxiety symptoms. Indirect effects for all

mentioned paths were significant. The fit indexes were adequate and explained around 26.7%-35.5% of the variance. These findings highlight the buffering role of well-being against the development of emotional distress, and the potential of enhancing savoring strategies to trigger this mechanism.

Talk 3: If It Ain'T Broke, Don'T Fix It: The Differential Effectiveness Of Emotion Regulation Strategies In Positive Emotional Contexts

[Ilka Mueller](#), Luise Pruessner, Verena Zimmermann, Katrin Schulze, Daniel Holt, Ana-Maria Strakosch, Sven Barnow

Speaker affiliation: Heidelberg University

Introduction: Despite the importance of positive emotions for mental health, research has mostly focused on the regulation of negative emotions. This ecological momentary assessment study therefore compared the effectiveness of a broad set of emotion regulation strategies in the context of positive versus negative emotions.

Methods: We analyzed data of 1,066 participants who were notified five times daily for seven consecutive days to complete a smartphone-survey assessing their predominant emotions, strategies used to regulate them, and subsequent emotional outcomes.

Results: The effectiveness of most regulation strategies depended on whether the emotional context was positive or negative. While acceptance and savoring predicted improved emotional outcomes regardless of emotional context, reappraisal and problem-solving were associated with deteriorated outcomes when regulating positive but not negative emotions.

Conclusion: These findings emphasize the role of emotional context for emotion regulation as strategies effective for regulating negative emotions may be less helpful in context of positive emotions.

Emotion perception and expression II

Wednesday, October 4, 16:00–16:45, Auditorium DZ6

Talk 1: Perceptual Diversity Of Real-Life Laughter And Crying Vocalizations Elucidate The Role Of Contextual Information

[Doron Atias](#), Hillel Aviezer

Speaker affiliation: Hebrew University

Classic emotion theories argue that vocal expressions are pre-wired and universal displays of felt emotion and emphasize their prototypic expression. By contrast, functional-contextual views posit that vocal emotions are tools for influencing others and highlight their diverse and context-dependent expression. Across three preregistered studies, we tested the main hypotheses of these contrasting theoretical frameworks, focusing on the perception of real-life laughter and crying vocalizations. We demonstrated that real-life laughter and crying may show both prototypicality and perceptual diversity, depending on the analytical approach selected. Furthermore, we showed that co-occurring visual context dramatically shapes the perception of real-life laughter and crying vocalizations, especially when the expressed vocal cues are ambiguous. Finally, we showed that diagnostic, ambiguous, and non-diagnostic crying vocalizations elicit similar levels of pro-social responses (e.g., real money donations) when perceived in the same situational context. Critically, only when the vocal and contextual cues were highly conflicting (i.e., simulated laughter embedded in authentic videos of people crying), pro-social responses significantly dropped and viewers were less empathic and donated less money to the person presented. These findings highlight the striking influence of context on both the perception and interpersonal effects of affective vocalizations in naturalistic social interactions.

Talk 2: Perceiving Through The Body: Contextual Body Pose Alters Perceived Face Competence

[Noga Ensenberg](#), Ran R. Hassin, Hillel Aviezer

Speaker affiliation: Hebrew University of Jerusalem

A vast body of knowledge has shown that humans systematically attribute traits such as trustworthiness, competence, dominance, and extroversion to others based on their facial appearance. However, the relation between perceived body pose and the face during trait attribution is poorly understood. In two studies we presented 299 participants with realistic face-body composites and asked participants to rate the competence of the perceived faces. Critically, each cue (face vs. body) conveyed different levels of competence. We hypothesized that although bodies are task-irrelevant, their competence levels would influence face ratings. Experiment 1 presented 104 participants with realistically-appearing combinations of faces and bodies. We asked participants to rate how competent the observed person was, based on their face. Results showed that the more competent the isolated body pose was perceived to be, the higher the attached face was rated on competence. Experiment 2 presented 195 participants with two simultaneous face-body composites and participants were asked to choose which of the two faces

was the more competent. Results showed again that participants were significantly influenced by the body poses while judging faces. Unlike face structure, body pose can be manipulated at will and can influence the attribution of traits to faces even when the bodies are task-irrelevant.

Talk 3: How Social Media Influencers' Emotional Expressions Shape Their Popularity: The Role Of Authenticity And Appropriateness

Siyi Gu, Marc W. Heerdink, Gerben A. van Kleef

Speaker affiliation: University of Amsterdam

Popularity is key to influencers' success and earnings, and the rather explicit emotion expressions in successful influencers' posts likely play a role in their popularity. Acknowledging that influencers are subject to multiple demands on their emotional behavior (strategic to promote products, and appearing authentic), we investigate how emotion expressions impact an influencer's popularity, captured as warmth/competence, and behavioral intentions. A correlational study investigated participants' actual experiences with their favorite influencer (N = 113), showing that influencers' emotional styles are best characterized by positivity and negativity, rather than an emotion-specific signature. Three follow-up experiments (total N = 883) manipulated the occurrence, relative frequency, and mode of expression (verbal vs. non-verbal) of positive and negative emotion expressions. We found that popularity indicators were shaped by the perceived authenticity and appropriateness of influencers' emotion expressions, rather than by valence per se. Whereas positive emotion expressions were generally more appropriate than negative ones, favorable consequences were sometimes counteracted by opposing effects on perceived authenticity, which were more varied and context-dependent. We conclude that influencers successfully navigating multiple demands on their emotional behavior gain popularity, thereby extending research on the interpersonal effects of emotions to the social media context.

Social emotions and behavior

Wednesday, October 4, 16:00–16:45, Auditorium DZ10

Talk 1: Emotional Privacy

[Emine Akar](#)

Speaker affiliation: King's College London

Emotion AI (EAI) involves machines extracting data about a person's emotional state by reading their facial expressions, body language, voice tone and so on. This raises ethical problems, as turning the human face into another object for measurement and categorization by powerful companies and governments touches the right to human dignity. Several legal regulations related to EAI have been introduced, including the proposal of AI Act of EU, which clearly defines and refers to the technologies' aim to detect emotions. However, there is still a lack of theoretical grounds for these provisions. The purpose of this presentation is to address the theoretical gap by conceptualizing the concept of "emotional privacy." Emotional privacy includes two ambiguous concepts: emotions and privacy. However, by focusing on the main functions of these concepts in our everyday lives, we can assess the potential risks of EAI on them. I examine the importance and values of emotions by categorizing them according to their survival, existential, and social functions. Following this logic, I theorize the concept of emotional privacy by starting at the granular level. EAI puts a significant threat to privacy, arguably more than any other technology. Since "you can uninstall apps on your phone, but you can't turn off your face," the concept of emotional privacy should be regarded as an urgent necessity.

Talk 2: The Positive Relationship Between Warm Glow And Pro-Environmental Behaviour

[Linli Zhou](#), [Disa Sauter](#), [Cameron Brick](#)

Speaker affiliation: University of Amsterdam

Acting prosocially can make us feel good, a phenomenon referred to as warm glow. Here, we investigated how anticipated warm glow influences people's pro-social behaviour and their experience of warm glow, in the context of a pro-environmental behavioural task. We hypothesised that engaging in more pro-environmental behaviour would yield more warm glow, and that pro-environmental behaviour would mediate a predicted positive relationship between anticipated and experienced warm glow. A total of 867 British participants were recruited through Prolific. Pro-environmental behaviour was assessed by a sequential task, the Work for Environmental Protection Task (Lange & Dewitte, 2022), in which participants can complete a number identification task in exchange for money being donated to environmental organisations. The results supported the main hypotheses: 1) Engaging in pro-environmental behaviour yielded more experienced warm glow; 2) The effect of anticipated warm glow on experienced warm glow was partially mediated by pro-environmental behaviour. These results demonstrate how pro-environmental behaviour can make us feel good, and point to a role of anticipated feelings of warm glow in driving behaviour.

Talk 3: No Effect Of A Moderate Dose Of Beer On An Ecologically Valid Measure Of Emotion Recognition

Isabelle Cristina Baltariu, Violeta Enea, Marije aan het Rot

Speaker affiliation: University of Groningen

Introduction: Alcohol intake can impair emotion recognition but most past studies used tasks with face images. One study in men used more ecologically valid stimuli and found that task performance was lower for positive emotions after a moderate dose of hard liquor compared to placebo, particularly in men with less hazardous drinking. The present study aimed to replicate this, using a moderate dose of beer.

Methods: Participants (38% women) completed the Alcohol Use Disorders Identification Test (AUDIT) and were randomized to either beer (6.6% alcohol, n=28) or its 0.0% equivalent (n=38). Before and after drinking, they watched 15 video clips of targets talking about emotional autobiographical events and rated how targets felt while talking.

Results: The previous finding of lower task performance for positive emotions after alcohol vs placebo was not replicated. Additional models examining, after controlling for clip valence, target gender, and task version, the interactions between group (alcohol, placebo), time point (before, after drinking) and AUDIT scores also did not reveal a significant effect of alcohol on task performance.

Conclusions: Beer, unlike hard liquor, did not significantly affect emotion recognition. Multiple differences between the present and past study can help explain this. Also, the moderating role of interpersonal traits remains to be determined.

Cross-cultural and intergroup

Wednesday, October 4, 16:45–18:15, Auditorium DZ10

Talk 1: Association Between Emotional Competencies And Student Engagement In Youth: A Cross-Cultural Multilevel Study

Anabela C. Santos, Patrícia Arriaga, João R. Daniel, Celeste Simões
Speaker affiliation: University of Lisbon, University Institute of Lisbon

Introduction: Emotional competence includes identifying emotions and feelings in ourselves and others, adequate emotional expression and emotional regulation when dealing with challenging situations. Emotional competence in youth across different cultures and in association with student engagement (SE) is scarcely studied.

SE research in university students has also been scarce, despite its major positive role on performance, degree completion and mental health. Since engagement is cultural-sensitive, individual (emotional competencies) and cross-cultural (human developmental index and unemployment rate) characteristics were examined in association with student engagement in youth.

Methods: This study included 2,092 participants from nine countries/regions, aged between 17 and 27 years. Data were collected using a cross-sectional online survey that included the Emotional Skills and Competence Questionnaire, and the Student Engagement Scale. Multilevel regression models were used.

Results: Results showed that emotional competencies were associated with SE, with this association being independent of the country-level variables. Moreover, SE varied with country/region human development and unemployment rate, with students from higher developed countries/regions and lowered unemployment reporting lower SE.

Conclusions: This study reinforces the need to implement evidence-based programmes to enhance emotional competencies in universities worldwide

Talk 2: Assessing Beliefs About Emotions Using The Implicit Theories Of Emotion Scale And Emotion Beliefs Questionnaire Across Cultures

Joan X. M. Chan, David A. Preece, Michael Weinborn, James J. Gross, Brett Q. Ford, Rodrigo Becerra
Speaker affiliation: University of Western Australia

Introduction: An important determinant of our beliefs about emotions is our cultural background. However, few measures assessing our beliefs about emotions have been validated across Asian and Western cultures. The present study aimed to examine the psychometric properties of the Implicit Theories of Emotion Scale (ITES) and the Emotion Beliefs Questionnaire (EBQ) across a Singaporean and Australian sample.

Method: We assessed the factor structure, internal consistency, concurrent validity and measurement invariance of the ITES and EBQ in a Singaporean sample (n = 434), representing Asian culture, and in a Western sample (n = 489), representing Western culture.

Results: Results showed that both measures could be used to measure beliefs about emotions in Singapore and Australia, as they had stable and theoretically congruent factor structures (a one-factor model for the ITES and a four-factor model for the EBQ), adequate internal consistency, and good concurrent validity across samples.

Conclusion: Overall, these results support the use of these questionnaires, and suggest that, cross-culturally, controllability and usefulness beliefs may be key dimensions of the beliefs about emotions construct.

Talk 3: Recognition Of Emotions Differs Between Posed And Spontaneous Facial Expressions

Yong-Qi Cong, Lidya Yurdum, Agneta Fischer, Disa Sauter

Speaker affiliation: University of Amsterdam

A large body of existing research on emotion recognition relies on posed prototypical facial expressions. However, it is unclear to what extent posed expressions are comparable to emotion expressions occurring in real life. The goal of the current study was to investigate recognition of spontaneous compared to posed emotional facial expressions. In two pre-registered studies, we investigated Dutch and Chinese perceivers' ability to recognize 8 emotions within and across cultures. In Study 1, Dutch (N=470) and Chinese (N=438) perceivers judged the emotions displayed in dynamic facial expressions from their own culture in a forced choice emotion recognition task. We found that posed expressions were better recognized than spontaneous expressions in both samples. Additionally, we found that negative emotions were better recognized than positive emotions in posed expressions, but positive emotions were better recognized in spontaneous expressions. In Study 2, Dutch (N= 877) and Chinese (N= 825) perceivers judged emotional facial expressions from their own as well as from the other culture. We found again that posed expressions were better recognized than spontaneous expressions and we replicated the valence and expression type interaction from study 1. Additionally, we found that cultural differences in emotion recognition were more pronounced for posed expressions. Our findings have important implications for future research on emotion recognition.

Talk 4: Income, Boredom, And Mental Health

Sergio Pirla, Daniel Navarro-Martinez, Stefan Pfattheicher, Jordi Quoidbach

Speaker affiliation: Aarhus University

Introduction: For decades, researchers, governments, and policymakers have sought to understand how financial scarcity affects people's well-being and quality of life. In this paper, we show that past studies have overlooked a fundamental psychological consequence of being poor: an impoverished life can be distressfully boring.

Methods: Using data from 25 European countries (N > 43,000), and a sample of individuals from 6 developing countries (N > 28,000), we perform the first large scale investigation of the relationship between income and boredom.

Results: We find a robust negative association between income and daily experiences of boredom, particularly for people at the lower end of the income distribution. In fact, compared with

high-income earners, low-income individuals not only feel bored more often, but their experience of boredom is more closely linked to other negative states such as loneliness, anxiety, and even clinical depression. Testing different mechanisms, we find that the relationship between income and boredom is more directly explained by work-related rather than leisure- and housework-related aspects of people's lives.

Conclusions: Our results portray boredom as a poverty self-reinforcing mechanism and pave the way for future research and policies that address the full extent of the psychological tax exerted by financial hardship.

Talk 5: Emotional Experiences And Psychological Wellbeing In 51 Countries During The Covid-19 Pandemic

[Disa Sauter](#)

Speaker affiliation: University of Amsterdam

The COVID-19 pandemic presents challenges to psychological wellbeing, but how can we predict when people suffer or cope during sustained stress? Here, we test the prediction that specific types of momentary emotional experiences are differently linked to psychological wellbeing during the pandemic. Study 1 used survey data collected from 24,221 participants in 51 countries during the COVID-19 outbreak. We show that, across countries, wellbeing is linked to individuals' recent emotional experiences, including calm, hope, anxiety, loneliness, and sadness. Consistent results are found in two age, sex, and ethnicity-representative samples in the United Kingdom (N = 971) and the United States (N=961) with pre-registered analyses (Study 2). A prospective 30-day daily diary study conducted in the United Kingdom (N = 110) confirms the key role of these five emotions, and demonstrates that emotional experiences precede changes in wellbeing (Study 3). Our findings highlight differential relationships between specific types of momentary emotional experiences and wellbeing, and point to the cultivation of calm and hope as candidate routes for wellbeing interventions during periods of sustained stress.

Talk 6: Life Satisfaction & Emotional Happiness In The 2023 World Happiness Report (WHR)

[Robert Schwartz](#)

Speaker affiliation: University of Pittsburgh

Introduction: The WHR surprisingly ranked Israel as the 4th "happiest" nation out of 137, after the usual Nordic winners. Ranking was done with a life satisfaction (LS) rating of 0=worst life to 10=best life. Positive (PA) and negative affect (NA), & 6 quality of life (QOL) indices were reported. This raises the general question about whether LS adequately captures emotional happiness (EH).

Method: A single EH ratio was computed as $PA/(PA + NA)$. Regression analyses addressed these issues: 1. The relationship between (a) LS and EH (b) QOL & LS (c) QOL & EH, 2. Does EH add value relative to PA & NA alone?, 3. Do LS & EH generate different rankings?

Results: 1. LS & EH are strongly correlated, 2. QOL & LS are very strongly correlated, 3. QOL & EH are strongly correlated, 4. EH-QOL correlation is stronger than PA-QOL & slightly stronger

than NA-QOL., 5. EH & LS evinced different rankings. Israel ranked 4th in LS, but 52nd in EH, 117th (low) in PA; 119th in NA (low). It's EH was normal (.725), not because of high positivity, but low negativity. Taiwan was 1st in EH, but 27th in LS. Zimbabwe was 134th in LS, but 63rd in EH (.71), close to Israel.

Conclusions:, EH precisely identifies aspects of happiness needing improvement to boost wellbeing, EH allows rankings that can't be done with PA or NA, World happiness reports should differentiate the components of "happiness": LS, EH, & QOL.

Expression and signalling

Thursday, October 5, 8:30–10:00, Auditorium DZ10

Talk 1: Beyond Co-Occurrence: A 360-Degree Report On Facial Behavior And Emotion

José-Miguel Fernández-Dols, Roberto García-González

Speaker affiliation: Universidad Autonoma de Madrid

Typical studies on the co-occurrence of emotion and expression do not report what happens beyond the observed co-occurrence itself. Which other expressions are observed? Does facial behavior predict choices or courses of action? Are the participants aware of their actual facial behavior? Is the expression that they believe themselves to have displayed more predictive of the reported emotion or their consequent behavior? Which is the role of contextual factors in the observed facial behavior? In two experimental studies, we measured participants' actual and believed facial expressions, their reports of emotion and their immediate behavioral decisions, as well as other related variables. We report the levels of co-occurrence between contextual variables, reported emotion, believed and actual facial expression, and participants' behavioral decisions, as well as other interesting aspects of participants' nonverbal behavior.

Talk 2: Does Emotional Intelligence Modulate Emotional Contagion?

Christelle Gillioz, Maroussia Nicolet-dit-Félix, Marina Fiori

Speaker affiliation: Swiss Federal University for Vocational Education and Training

We investigated whether and how emotional intelligence (EI) influences emotional contagion. Participants (144 females) watched positive and negative videos in three different conditions: with no specific instructions (natural condition), with the instructions to put themselves in the character's shoes (perspective-taking condition) and with the instructions to distinguish themselves from the character (differentiating condition). Each participant took part in all conditions and emotional contagion was operationalized as mimicry, measured through facial electromyography on the corrugator supercillii and zygomaticus major muscles. Emotion perception (EP), emotion understanding (EU), and emotion management (EM) were measured. In the natural and perspective-taking conditions, EU predicted more zygomaticus activation when watching positive videos. EU also predicted a greater difference in corrugator activation when watching negative videos between the natural and perspective-taking conditions. This suggests that individuals high on EU may experience more emotional contagion than individuals lower on this EI facet. The level of EM was associated with less corrugator activation when watching negative videos, suggesting that individuals high on this EI facet may spontaneously regulate their negative emotions. Emotional contagion was not associated with EP. Results will be discussed according to the hypersensitivity hypothesis, which states that EI enhances emotional experience.

Talk 3: Individual Differences In Asymmetry In Updating Of Emotion Inferences From Faces And Situations

Srishti Goel, Jennifer Guadalupe Dueñas, Maria Gendron

Speaker affiliation: Yale University

Inferences about what other people feel likely unfold across time as the cues and contextual information accessible to perceivers changes. Here, we examine how flexible emotion inferences are with different types of new information and whether flexibility is variable across perceivers. We examined whether emotion inferences are differentially updated when we manipulate the order of sequential presentations of cues (facial portrayals and situational descriptions) ($n = 24$). Across two samples ($N = 92$, $N = 47$), we find that people update the perceived intensity of emotions more when they first view faces compared to when they first view situations ($\beta = -0.47$, $\chi^2(1) = 75.49$, $p < 0.0001$; $\beta = -0.96$, $\chi^2(1) = 138.82$, $p < 0.0001$). We further examined whether this asymmetry in updating relates to people's lay beliefs about how diagnostic faces are of underlying emotional states. People with stronger beliefs that faces are diagnostic were less likely to update the perceived intensity of emotions inferred from first viewing faces compared to first viewing situations ($\beta = 0.22$, $\chi^2(1) = 7.38$, $p = 0.007$). These findings suggest that emotion inferences drawn from faces are more flexible compared to those drawn from situations and that flexibility tracks with individuals' lay beliefs about the unique value of faces in inferring emotions. This research points to the need for more work examining flexibility in emotion inferences and the role of perceiver beliefs.

Talk 4: It'S Nice Here, I Like You: Emotional Mimicry Is Affected By Environmental Cues

Till Kastendieck, Daniel Huppertz, Heidi Mauersberger, Ursula Hess

Speaker affiliation: Humboldt-Universität zu Berlin

Introduction: Emotional mimicry is the spontaneous imitation of the interaction partners' emotional display. Classically, it is often studied with disembodied and disembedded faces. However, faces are not perceived in a vacuum but in real life interactions and more and more in virtual interactions (e.g., metaverse).

Methods: Therefore, we presented embodied humanlike avatar faces that showed joyful and distressed expressions in scenes that varied in positive and negative valence as well. For that, we created a virtual walk in the park scenario paradigm where, in two studies, 2*236 human perceivers met avatars online, while facial mimicry was assessed via facial activity recognition technology (OpenFace).

Results: We found that in pleasant ambient contexts (birdsong, green spaces, cherry trees, pond), facial mimicry of joyful expressions was intact, independent of the social group status of the avatar (age, ethnicity). In unpleasant ambient contexts (deforestation, construction site, noise), however, joy mimicry was reduced for older targets. Distress mimicry was less pronounced overall but slightly intensified by the unpleasant context. Moreover, interpersonal closeness (self-other merging as an index of affiliation) mediated the relationship between place and joy mimicry such that perceivers felt closer to avatars in the pleasant context and mimicked more.

Conclusions: The findings support the perspective that facial mimicry is context-dependent, even when the modulating information just stems from environmental cues.

Talk 5: How Many Emotions Can Be Communicated Nonverbally? Recognition Of 44 Emotions From Dynamic Multimodal Expressions

[Petri Laukka](#), Alexandra Israelsson, Christina Tornberg, Tim Lachmann, Magnus Boman, Håkan Fischer

Speaker affiliation: Stockholm University, Uppsala University

Introduction: Research on emotion expression is moving away from the study of a limited number of unimodal expressions toward a wide variety of emotions expressed dynamically through several channels.

Methods: We present initial results from the validation of a newly developed database of dynamic multimodal expressions, wherein actors convey a large number of emotions through facial, vocal and bodily expressions. A subset of 5,000 recordings will be evaluated by approx. 250 participants using a forced-choice emotion recognition task. The subset contains recordings from 28 actors (14 F, 14 M) who express 44 emotions, each with two levels of emotion intensity (medium, high). In order to keep the task manageable, each participant only judges 11 emotions in a within-valence task (i.e., only positive or only negative emotions). The selection of emotions is randomized for each participant and the response options are the same as the included emotions.

Results: Data collection is ongoing, but we will present recognition rates for all 44 emotions and both levels of emotion intensity. We will also present data on which emotions were confused with each other (i.e. confusion matrices). In addition, the human judgments will be compared to machine learning classification (support vector machines) based on facial action units, head movements and vocal features.

Conclusions: Results will provide new details on the nuances and flexibility of nonverbal emotional communication.

Talk 6: Scared Out Of Their Wits: Emotions In Real-Life Fear-Inducing Situations Are Communicated Through Context, Not Facial Expression

[Maya Lecker](#), Hillel Aviezer

Speaker affiliation: Hebrew University of Jerusalem

Basic emotion accounts posit that during threatening and dangerous events the face expresses prototypical, clear, universal, and context-invariant signals of fear. However, while such expressions are readily posed by actors, the role of context in the perception of dynamic faces during highly provoking fear situations was rarely explored in real-life. Motivated by context-dependent views (Barrett, 2017) we hypothesized that context (situational information or body posture) will strongly affect fear perception, compared to isolated faces. Authentic videos of non-actors in various extreme fear inducing situations (e.g. fear of heights, fear of physical attacks, exposure to phobia inducing stimuli) were edited, portraying either the face alone, the context alone with no face, or the full video. In a series of 12 studies (N = 4653), and in various response methods of emotion perception (Forced choice, open-ended, multiple emotion scales, valence-

arousal ratings), a robust contextual influence with medium to large effect size was found. When presented in isolation, faces did not uniquely convey fear and were even rated as positive. By contrast, faces in context were clearly interpreted as fearful and as highly negative. Our findings suggest that despite the importance of recognizing fear signals in real life, facial expressions alone bear minimal diagnostic value when isolated, highlighting the critical role of context in their interpretation.

Emotion regulation in the wild

Thursday, October 5, 11:15–12:00, Auditorium DZ2

Talk 1: Not Just Emotion Regulation, But Cognition. An Experience Sampling Study Testing Ecological Interpretation Biases And Emotion Regulation

[Teresa Boemo](#), Oscar Martin-Garcia, Ana Mar Pacheco-Romero, Ivan Blanco, Ginette Lafit, Inez Myin-Germeys, Alvaro Sanchez-Lopez

Speaker affiliation: Complutense University of Madrid

Introduction: Research has moved from considering emotion regulation (ER) and affective experiences as relatively stable phenomena, to adopt a more dynamic perspective through the use of Experience Sampling Methods (ESM). However, no previous ESM research has yet considered the interaction between ER strategies and contextual stress, together with ongoing cognitive mechanisms (i.e., interpretation biases), to test how they uniquely contribute to momentary affect. Thus, our aim was to disentangle the contextual, regulatory and cognitive processes implicated in affective experiences in daily life.

Methods: A sample of 103 participants completed an ESM study (3 times per day for 10 days) that included self-report measures of affect, stress intensity, ER strategies' use and a novel computerized cognitive task measuring momentary negative interpretation biases.

Results: Multilevel analyses showed that higher momentary use of rumination and worry in situations of high stress predicted higher levels of negative and lower levels of positive affect. Reappraisal did not have significant effects on momentary affect at different levels of stress. Momentary negative interpretation biases uniquely predicted both higher negative and lower positive momentary affect levels.

Conclusions: Our study has an added value by implementing a cognitive task within ESM, which allowed to show how momentary ER strategies and cognitive biases are both uniquely related to daily affective experiences.

Talk 2: In Control? Daily Dynamics Of Self-Control And Emotion Regulation

[Catharine Evers](#), Loes van den Bekerom, Monika Donker, Tim Mainhard

Speaker affiliation: Utrecht University

Introduction: Research on the reciprocal relationship between self-control and emotion regulation in daily life is scarce. The present study investigated the reciprocal relationships between momentary self-control and emotion regulation (i.e., reappraisal and suppression) by means of experience sampling.

Methods: Emotions, self-control, and emotion regulation were assessed 5 times per day during 4 days. The context focused on students in an academic setting, and related to emotions that hinder students' goal progress. Each measurement moment tackled momentary self-control, the intensity of emotions, and the extent to which these interfered with goal progress. If participants indicated that emotions hindered their goal progress, momentary emotion regulation (suppression and reappraisal) was assessed. The final dataset included 1874 reports of 111 participants.

Results: Dynamic structural equation modelling revealed that, at within-participants level, suppression at one timepoint was related to depleted self-control thereafter, while such disadvantageous effect was absent for reappraisal. Momentary self-control, then, predicted the employment of subsequent reappraisal, but also future self-control. At between-participants level these results were not found.

Conclusion: Findings highlight the importance of experience sampling in gaining more insight into how self-control and emotion regulation interact and are discussed in light of the importance of situational influences.

Talk 3: Two Separate Roles In Emotion Regulation Of Negative And Positive Affect: Examining The Effect Of Emotional Clarity And Emotion

Nicola Hohensee, Jutta Joormann, Hedy Kober, Reuma Gadassi Polack

Speaker affiliation: Westfälische Wilhelms-University Münster

Emotional clarity (EC) and emotion differentiation (ED) are two constructs tapping into the understanding and discrimination of emotional experiences. In youth, higher EC and ED were found to be associated with lower use of maladaptive emotion regulation (ER) strategies. However, most studies were cross-sectional or focused on long-term outcomes, so that daily associations remain largely understudied. In addition, ER research has often focused exclusively on negative affect and neglected ED and ER strategies in response to positive affect. In the current study, 172 children and adolescents ($M = 12.99$ years, $SD = 2.58$ years, age range = 9-18 years) completed a 28-day diary reporting daily affect, EC, and use of five maladaptive ER strategies in response to negative and positive affect (i.e., rumination, dampening, behavioral avoidance, negative and positive suppression). Results showed that higher EC was consistently associated with decreased use of all maladaptive ER strategies. Results for ED were less consistent: While higher positive ED was associated with decreased daily rumination, avoidance, and dampening, higher negative ED was only related to decreased behavioral avoidance and increased positive suppression. In sum, EC might play a more crucial role in the ER of children and adolescents than ED. More consistent results regarding positive (vs. negative) ED highlight that ER in the context of positive affect should receive more attention in future research.

Emotion regulation variability and flexibility

Thursday, October 5, 11:15–12:00, Auditorium DZ1

Talk 1: Contextual Variations In Emotion Polyregulation: How Do Regulatory Goals Shape The Use And Success Of Emotion Regulation?

[Steffen Hartmann](#), Luise Pruessner, Sven Barnow

Speaker affiliation: Heidelberg University

Introduction: Despite the frequent occurrence of emotion polyregulation in everyday life, e.g., the combination of different emotion regulation approaches within one regulatory episode, it is unclear which regulatory strategies individuals tend to use together in different contexts and how effective these combinations are. This ecological momentary assessment study examines emotion polyregulation and its success in contexts of (1) downregulation, (2) upregulation, and (3) maintenance goals.

Method: 321 adults (76.95% female; mean age: $M = 30.79$, $SD = 8.97$) reported on the endorsement and success of 15 different emotion regulation strategies five times a day for seven days. Multi-level structural equation modeling was used to model dimensions of emotion polyregulation and their success.

Results: For downregulation contexts four emotion polyregulation dimensions were found: Situation Modification, Repetitive Processing, Emotional Avoidance and Interpersonal Regulation. In contrast, three-factor models characterized emotion polyregulation for upregulation (Emotional Acceptance, Repetitive Processing and Interpersonal Regulation), and maintenance goals (Unspecific Regulation, Emotional Acceptance and Interpersonal Regulation). Moreover, the success of emotion polyregulation was goal-dependent.

Conclusion: These findings enhance our understanding of everyday life emotion regulation and emphasize the need for more research on emotion polyregulation and its contextual variations.

Talk 2: Is Awareness Of Affective Information Required For Flexible Emotion Regulatory Decision-Making?

[Maya Israel](#), Lilah Lebowitz, Leemor Zucker, Dominique Lamy, Gal Sheppes

Speaker affiliation: Tel Aviv University

Introduction: Can unconscious affective information influence decision-making? Existing scientific evidence is divided into two camps: the “no-need-for-awareness” camp claims that unconscious affective information influences subsequent decision-making, while the “need-for-awareness” camp argues that awareness is necessary for such influence. This two-study investigation sought to test these competing hypotheses in a novel context, where affective information is the target of the decision – emotion regulatory selection.

Methods: The influence of awareness of negative-threatening (Study 1) and positive-rewarding (Study 2) emotional information on adaptive selection between regulatory strategies was examined. High and low intensity images were masked via continuous flash suppression, followed

by participants' validated subjective awareness rating, followed by selecting between distraction and reappraisal strategies.

Results: Strongly supporting the need-for-awareness hypothesis, both studies showed that substantial level of awareness is required for flexible and adaptive regulatory selection (i.e., selecting distraction for high-intensity and reappraisal for low-intensity).

Conclusions: This investigation provides a novel emotion regulation context for examining whether unconscious affective information influences decision-making. The findings indicate that awareness is needed for adaptive regulatory selection functioning.

Talk 3: A Theory-Informed Emotion Regulation Variability Index: Bray-Curtis Dissimilarity

Edmund Lo, Caspar van Lissa, Maaïke Verhagen, Katie Hoemann, Yasemin Erbaş, Dominique Maciejewski

Speaker affiliation: Radboud University

Introduction: Emotion regulation (ER) variability refers to how individuals vary their use of ER strategies across time. It helps individuals to meet contextual needs, underscoring its importance in well-being. Current theories recognize two constituent processes in ER variability: strategy switching (e.g., moving from distraction to social sharing) and endorsement change (e.g., decreasing the intensity of all strategies across time-points). However, current ER variability indices using standard deviations (e.g., SD between strategies per time-point) cannot sufficiently capture strategy switching and endorsement change and may thus have poor validity. Therefore, we propose Bray-Curtis dissimilarity, a measure used in ecology to quantify biodiversity variability, as a new theory-informed ER variability index.

Methods: We conducted two simulation studies and reanalyzed three experience sampling method datasets (total N = 365) to evaluate the performance of Bray-Curtis dissimilarity and SD-based indices.

Results: Simulations show that Bray-Curtis dissimilarity is more sensitive than SD-based indices in detecting ER variability. In line with the assumption that higher ER variability is adaptive in daily life, reanalysis results showed that higher Bray-Curtis dissimilarity predicted lower negative affect more consistently than SD-based indices.

Conclusions: We recommend using Bray-Curtis dissimilarity to capture within-person variability in ER and showcase its use with an R tutorial.

Experience of emotion II

Thursday, October 5, 11:15–12:00, Auditorium DZ

Talk 1: The Effects Of Emotion Recall Instructions And Valence On Self-Perceived Emotion Intensity In An Autobiographical Recall Task

[Nadine Braun](#), Iris Schouten

Speaker affiliation: Tilburg University

Despite the prevalence of varying pleasant emotional experiences in our daily lives, there is no consensus on what emotions are, with competing views such as basic emotion or appraisal theories. Following such theories, emotion recall instructions (ERI) are used for autobiographical recall to study emotions in scientific research and psychotherapy. Yet, not only the nature but also the intensity of emotions has implications for one's wellbeing and adaptive functioning. Therefore, we investigated the effects of ERI (discrete emotion vs. appraisals) and valence (positive: happiness vs. negative: anger) on recallers' self-perceived emotion intensity (s-EI) in a preregistered 2x2 between-subjects online experiment (N=153). Trait cognitive reappraisal (TCR) was considered a possible moderator between valence and s-EI. Contrary to our expectation that appraisals foster more vivid recall, resulting in higher s-EI, we found no significant effect of ERI. As predicted, positive (M=5.99, SD=1.14) compared to negative recall (M =5.20, SD=1.10) led to higher s-EI, $F(1,149)=18.41$, $p<.001$, $\eta^2=.11$. TCR did not moderate this relationship. There was no interaction effect. While ERI may not have affected s-EI, appraisals might lead to more detailed accounts. Higher richness of detail could increase other-perceived EI, and consequently, others' empathy for the authors. In the future, we thus aim to explore the produced texts and conduct a follow-up study comparing other- to self-perception.

Talk 2: Intensity Of Emotion Experience Predicts In-The-Moment Awareness Of Bodily Sensations Throughout Daily Life

[Alexandra MacVittie](#), Kristen Petagna, Jolie B. Wormwood

Speaker affiliation: University of New Hampshire

The subjective experience of the body, or body awareness, is associated with the experience of affect and emotion. While body awareness is thought to be critical in self-monitoring and regulation of mental health, reports of greater body awareness have also been associated with negative affect and, in extremes, with clinical symptomology including anxiety and panic disorders. In the current study, we examined the relationship between body awareness and the experience of different specific emotions throughout daily life using an ecological momentary assessment (EMA) approach. Participants (N = 161) completed an initial survey followed by 7 days of an EMA protocol in which they were prompted to self-report on their momentary body awareness and their experience of 15 different emotions at random times throughout the day. Overall, greater momentary body awareness was associated with higher intensity emotion experiences across the majority of the emotion terms assessed, including both normatively positive and negative emotions and normatively low and high arousal emotions. This pattern of

results suggests that people experience heightened awareness of bodily sensations during emotional experiences more generally, regardless of the affective features of the emotion being experienced and may help explain how body awareness can be associated with both better and worse mental health.

Talk 3: Emotional Intelligence And Enhanced Sensitivity To Olfactive Stimuli.

[Maroussia Nicolet-dit-Félix](#), Christelle Gillioz, Marina Fiori

Speaker affiliation: Swiss Federal University for Vocational Education and Training

Introduction: Emotional Intelligence (EI) was recently conceptualized as a magnifier which allows to process emotion information in a more sensitive way. Emotion information can be processed in particular through olfaction. In this study we aimed to provide empirical evidence that EI functions through an enhanced sensitivity towards pleasant and unpleasant olfactive stimuli.

Method: 146 participants completed measures of Ability EI and Trait EI and were then provided with 6 odor samples (3 pleasant and 3 unpleasant) randomly presented. For each odor participants were asked to rate the intensity, the pleasantness and the familiarity using a visual analog scale and the French version of the Emotion and Odor Scales.

Results: We found that participants scoring high on Trait EI evaluated pleasant and unpleasant odors as more intense compared to participants scoring lower. Oppositely, participants scoring high on the emotion understanding facet of Ability EI evaluated both odors as less intense and negative odors as less unpleasant compared to participants scoring lower on this facet.

Conclusion: Results suggest that Trait EI may work through an increased sensitivity to pleasant and unpleasant olfactive stimuli, whereas the reverse was observed regarding the emotion understanding facet of Ability EI. Results suggest that participants scoring high on Trait EI are characterized by an enhanced sensitivity towards emotion information.

Emotions and mental health II

Thursday, October 5, 11:15–12:00, Auditorium DZ

Talk 1: The Effect Of Peripheral Information On The Intensity Of Affective Responses In Depression

[Tamar Amishay](#), Nilly Mor

Speaker affiliation: The Hebrew University

The aim of this research was to examine the effect of peripheral information on emotional responses and depression-related differences in this effect. The impact of peripheral information on emotional responses may help explain why people with depressive symptomatology experience persistent negative emotions. We predicted that depressive symptoms would be associated with increased negative responses to pictures embedded in negative peripheral information, and with diminished negative emotional responses to pictures embedded in positive peripheral information. In three experiments, participants rated their emotional responses to neutral and negative pictures (studies 1 and 2) or positive and negative pictures (study 3). The pictures were presented alone or with negative and neutral pictures (study 1), or negative and positive pictures (studies 2 and 3). Across studies, depression was associated with more negative emotional responses to neutral or positive pictures when they were presented with peripheral negative as compared to neutral or positive peripheral pictures. This finding was consistent across studies, whether depression was measured as a continuous variable (studies 1 and 2) or as groups with high and low symptom severity (study 3). Contrary to our predictions, positive peripheral pictures did not attenuate responses to negative pictures, and depression did not have any moderating effect on this outcome. These results emphasize the ill effect that negative peripheral information has on emotional responses of people with depressive symptoms, and may assist in designing interventions to modify negative affective responses.

Talk 2: Altered Betweenness Centrality In Resting-State fmri Networks In Late-Life Depression

[Chih-Hao Lien](#), Thomas Vande Castele, Maarten Laroy, Margot Van Cauwenberghe, Ron Peeters, Stefan Sunaert, Koen Van Laere, Patrick Dupont, Filip Bouckaert, Louise Emsell, Mathieu Vandenbulcke, Jan Van den Stock

Speaker affiliation: KU Leuven

Introduction: Late-Life Depression (LLD) refers to major depressive disorder that prevalently occurs in elderly populations. Researchers have applied graph theory to investigate the underlying neural mechanisms of LLD. However, previous studies paid less attention to betweenness centrality (BC), which is an important nodal topological index for hubs, often excluded the cerebellum from networks, and rarely constructed undirected and weighted (UW) networks for calculating topological properties. The study aims to investigate altered BC in LLD patients with UW networks including the cerebellum. Moreover, we also explore the relationships between altered BC and depression in LLD patients. Method: Resting-state fMRI data from 33

healthy older adults and 18 LLD patients were used to calculate functional connectivity matrices with 272 ROIs across the cerebrum and cerebellum regions. 7 sparsity levels from 0.1 to 0.4 with steps of 0.05 were used to construct UW networks. BC was calculated at each sparsity level and 3 rules were applied to filter robust results. Result: LLD patients showed decreased BC in the mPFC, which is related to emotion regulation and social cognition, and increased BC in the IPL, which is related to reasoning. Reliable negative correlations between BC in the mPFC and depression scores (GDS and MADRS) were found across almost all sparsity levels. Discussion: The altered BC may explain the behavioral pattern of LLD patients, including the deficits in social interaction and emotion regulation, and the tendency to recall and interpret past events negatively. Moreover, it implies that the mPFC may be a hub or mediator in the network of LLD patients.

Talk 3: Exploring Bipolar Disorder And Its Relationships With Interoception And Emotion Recognition

[Paul Francis Mulvenna](#), Nadzeya Sviryzdenka, Raghu Raghavan, Jess Hall, Suneeta James
Speaker affiliation: De Montfort University Leicester

Introduction: Bipolar disorder (BD) is characterised by uncontrollable moods that switch between major depression and (hypo) mania. This instability suggests an inability to achieve moods homeostasis. The physiological perspective on emotions suggest they manifest due to changes to internal systems. These physiological changes can be investigated via interoception – the perception of signals originating internally. As interoception is bi-directional, it is implicated in homeostatic functioning. The ability to perceive signals is theoretically linked to emotion and could play a role in mood stability.

Method: Participants include three groups: BD diagnosis, BD risk, and non-clinical controls. Self-report questionnaires relating to bipolar disorder (HCL-32); Alexithymia (TAS-20) were followed by interoception (Heartbeat Counting), cognitive emotional processing (Facial Emotion Recognition - FER) and a dimensional assessment of emotional experience (Self-Assessment Manikin) tasks were administered.

Expected Results: Multilevel modelling analysis is expected to show a significant relationship between bipolar disorder and interoception and worse performance on FER by BD group compared to controls.

Conclusions: In similar disorders such as depression and schizophrenia, disruption in interoception is prominent, with this being the first study to investigate BD. The ability to perceive and manage affective states in BD could be partly explained by disrupted interoception.

Interpersonal inferences and dynamics II

Thursday, October 5, 11:15–12:00, Auditorium DZ6

Talk 1: Your Emotions Are Messing With Mine: A Weekly Emotion Regulation Study

[Keri A. Pekaar](#), Sergio Mérida-López, Arnold B. Bakker, Natalio Extremera

Speaker affiliation: Tilburg University, University of Málaga

Introduction: Daily hassles may have a significant impact on study life. Whether students respond with adaptive or maladaptive emotion regulation strategies (i.e., reappraisal vs. rumination) generally determines whether their study engagement is hampered. However, we do not know whether the emotional focus that students have (on their own emotions or on the emotions of others) influences the adaptiveness of these emotion regulation strategies.

Methods: A weekly event sampling study was conducted across 4 weeks with a sample of 370 Spanish students (1115 events). Participants had to recall a negative event they had experienced in the last week and indicate how they regulated their emotions in response to this event and how engaged they were in their studies.

Results: Multilevel path analyses showed that event intensity was positively related to weekly rumination and reappraisal. Weekly reappraisal (but not rumination), in turn, related to weekly study engagement. Cross-level moderation results showed that reappraisal only led to study engagement when students were high on self-focused emotion appraisal or low on other-focused emotion appraisal.

Conclusion: Paying attention to own emotions seems a prerequisite to turn reappraisal into an adaptive emotion regulation strategy in terms of study engagement. In contrast, paying attention to other people's emotions diminishes the adaptiveness of reappraisal as an emotion regulation strategy.

Talk 2: Does Affect Worsening Take Place In Daily Life? Measurement With Ecological Momentary Assessments

[Shayne Polias](#), Belen López-Pérez, Antonio Zuffianó, Lucia Manfredi, Fulvio Gregori

Speaker affiliation: Liverpool Hope University, The University of Manchester

Introduction: Interpersonal affect worsening (AW) (i.e., increasing others' negative emotions; López-Pérez et al., 2017; Niven et al., 2009; Nozaki & Mikolajczak, 2020) has been documented in experimental and scenario-based studies. However, little is known about people's engagement in AW in daily life and whether the agent's emotions can be linked to it.

Method: One-hundred and sixty-six British adult participants ($M = 35.09$, $SD = 12.94$) with access to a smartphone took part in the study. Participants completed the extrinsic AW scale of EROS (Niven et al., 2011) as baseline measure. Participants reported their levels of anger and whether they have engaged in AW daily at four-hour intervals for 28 days.

Results: Dynamic Structural Equation Modeling analyses showed that both anger and AW had carry-over and spill-over effects at the within-person and between-person levels. A conditional

model revealed that dispositional engagement in AW prior to EMAs did not predict the within-person levels of AW and anger.

Discussion: The results suggest that agents' momentary AW fuels their anger but also feeling angry can make them engage in AW. The implications of these findings for social relationships and agent's wellbeing will be discussed.

Talk 3: Why Do People Engage With The Suffering Of Strangers? Exploring Affective, Epistemic, Eudaimonic And Social Motives

Anastassia Vivanco Carlevari, Suzanne Oosterwijk, Gerben van Kleef

Speaker affiliation: Universiteit van Amsterdam

Reading about violent stories or watching a war documentary are examples in which people voluntarily engage with suffering even knowing that it can be disturbing. Through a mix-method approach, we aim to map the motives for exploring the suffering of distant people. Firstly, in a qualitative study (n=244) participants described situations of suffering and their reasons to engage. The results characterize who was the stranger, what was situations about, how the participant accessed to it and why they decided to do it. We identified four categories of motives: affective, epistemic, social and eudaimonic. Giving an overview of the diversity of reasons people report on their perceived value of engaging with the situation. In a next step, we aimed to evaluate the relevance and generalizability of these motives depending on specific contexts of suffering and sources of information. Study 2 asked people (n=250) to recall situations in which they engaged with the suffering and then were presented with 32 items to rate how applicable these motives were to their decision. The results show that people engaged with strangers' suffering to acquire knowledge (e.g. learn something about the world), for social utility (e.g. supporting others), personal utility (e.g. to prepare for an emergency), and to feel positive (e.g. gratitude) and negative (e.g. outrage) emotions. These results are interesting to understand the deliberate exploration of human suffering as a motivated phenomenon.

Social interactions and relationships

Thursday, October 5, 11:15–12:00, Auditorium DZ

Talk 1: Physiostracism: The Influence Of Ostracism On Facial Cutaneous Temperature Changes In Relation To Coping Behaviors

[Anneloes Kip](#), Thorsten M. Erle, Ilja van Beest

Speaker affiliation: Tilburg University

Introduction: Ostracism (i.e. being ignored and excluded) is a painful experience which negatively impacts people's psycho-physiological state and wellbeing. People cope with ostracism using different strategies (i.e., prosocial, antisocial, and withdrawal behaviors). In this research, we investigate the physiological responses to ostracism to provide insight into potential antecedents of these coping behaviors. Specifically, we investigate 1) whether and how ostracism influences changes in facial cutaneous temperature (i.e. autonomic activation), and explore 2) whether observed types of coping behaviors are preceded by unique facial thermal signatures.

Methods: We conducted an experiment in which participants (N = 110) experienced inclusion and ostracism during two computerized ball-tossing games (Cyberball). Temperature data were obtained using an infrared thermal camera throughout the Cyberball games for different regions of interest in the face. Subsequently, we assessed how they coped with ostracism.

Results: Pending ongoing data analyses, we predict that the most common response to ostracism will be prosocial, that participants will show bigger changes in facial cutaneous temperature during ostracism compared to inclusion, and that this difference in temperature changes increases over time.

Conclusions: Our findings contribute to understanding how physiological responses to ostracism contribute to how people decide to cope with this experience.

Talk 2: What Type Of Physician Empathy Might Help Cancer Patients: An Experimental Video Vignette Study

[Sophie Lelorain](#), Véronique Christophe, Marion Delpuech, Amélie Anot, Caroline Ringotte, Lucie Gehenne

Speaker affiliation: University of Lausanne

Introduction: Two types of physician empathy (PE) can be distinguished in cancer care: emotional and cognitive empathy (Gehenne et al., 2020). Our aim was to explore which type of PE could reduce patient hopelessness and increase patient empowerment.

Methods: 6 videos (ie, 6 scenarios) of a doctor-patient consultation were created and acted out by actors: 2 (bad news, ie, cancer surgery was a failure vs follow-up, ie, surgery went well) * 3 (no PE vs emotional vs cognitive empathy). After randomization, digestive cancer survivors viewed a scenario and rated their perception of PE (CARE), and how they would feel if they were the patient in the video (Brief- H-Neg for hopelessness and Patient Enablement Inventory for empowerment). Linear regressions were performed adjusting for participants' age, gender, emotional skills, negative affectivity, and general health (among other covariates).

Results: 156 survivors participated in the study, 62% male, mean age: 62 years. PE was perceived higher in the follow-up videos than in the bad news videos and also higher in the cognitive empathy videos than in the emotional empathy videos. In linear regressions, perceived physician cognitive empathy, but not perceived physician emotional empathy, significantly explained feelings of hopelessness and empowerment.

Conclusions: In cancer care, cognitive empathy appears to be preferred by patients and associated with better patient outcomes than emotional empathy.

Talk 3: Energy Depletion Anxiety In Post-Human Togetherness

[Ania Malinowska](#)

Speaker affiliation: University of Silesia

This talk will overview energy depletion anxiety (EDA): an emotion that organizes posthuman togetherness. EDP will stand for the reluctance of immediate person-to-person contacts and relationships (especially romantic relationships) in fear of energetic exhaustion. The word posthuman used in this context pertains to (1) hybrid: mediated by technology, or occurring between people and technological subjects; (2) and post-covid: non-contact and isolated – both of which negotiate the immediacy of contact and physical engagement. My claim here is that with the outbreak of COVID-19 and the follow-up isolation, physical immediacy started to be revisited as energetically depleting. Nonpresence became a new relationship standard based on fear of energetic depletion. This claim results from my online study of platform relationships during the pandemic. The relationships that started there at that time continued online even after the requirement of isolation was lifted and never moved to the real-life context. The most common reason here was the fear of energetic depletion that “a traditional” face-to-face relationship started to imply. The same reason was given in my research of romantic relationships with technological subjects (digits, bots, holograms etc.) during the pandemic. What we are dealing with then is negative companionship as a response to the fear of real-life togetherness and its related social contracts symptomatized by (and symptomatic of) energy depletion anxiety.

Interpersonal emotion regulation II

Thursday, October 5, 13:15–14:45, Auditorium DZ10

Talk 1: Are People Good At Regulating Their Emotions Good At Regulating Another'S Emotions?

[Noa Boker Segal](#), Danfei Hu, Shir Ginosar Yaari, Maya Tamir

Speaker affiliation: The Hebrew University of Jerusalem

People engage in emotion regulation to influence their own emotions (i.e., personal emotion regulation) or the emotions of others (i.e., social emotion regulation). We tested whether personal emotion regulation ability is associated with social emotion regulation ability and assessed potential implications of both abilities. Participants (N=124) were paired with strangers and engaged in a personal emotion regulation task (i.e., decrease their own reactions to negative pictures) and a social emotion regulation task (i.e., decrease their partner's reactions to negative pictures). We found that greater personal emotion regulation ability was linked with improved affect in the regulator, but no affective implications for the target or the relationship. In contrast, greater social emotion regulation ability was linked with improved affect in the regulator, the target, and greater interpersonal closeness between them. Our findings show that in an interaction between strangers, the abilities to decrease unpleasant emotions in oneself and in others are distinct, and they carry distinct affective and social implications.

Talk 2: Reciprocal Emotional Interaction In University Classrooms: Socialising Emotions For Academic Coping And Success

[Kate Ippolito](#)

Speaker affiliation: Imperial College London

Introduction: By applying Eisenberg, Cumberland and Spinrad's (1998) model of socialization of emotion to a novel context, this study illustrates how university students and teachers learn together to work with emotion in challenging learning and teaching settings.

Methods: Across six departments in a research-led STEMM institution, qualitative data was collected from trios of teaching staff via group interviews. 279 of their students completed in-situ questionnaires during learning. A follow-up interview explored meaning of student data with corresponding teachers.

Results: Strategies used by staff to regulate students' emotions, including scaffolding and normalising challenge, and modelling coping, also contributed to their own emotional regulation. Students readily recognised and gave attributions for their own, peers' and teachers' emotions and reported varied ways that students regulated their own and each other's emotion. Considering student data, gave teaching staff a strong and positive insight into their students' appreciation and capacity for empathy towards peers and teaching staff, that they were not previously aware of. This can align with staff observations of student engagement but runs counter to the lack of

recognition of teacher effort and care often communicated in anonymous, written student evaluations of teaching.

Conclusion: Teachers and students both contribute as socialising agents in university classrooms in distinct and reciprocally beneficial ways to support coping and success.

Talk 3: Sex Differences In Emotional Sharing: The Mediating Role Of Gendered Self-Concept

[Sander L. Koole](#), Xihan Jia, Annet Kleiboer

Speaker affiliation: Vrije Universiteit Amsterdam

It is well-established that women tend to share their emotions more with others than men. However, the reasons for this sex difference are not understood. In the present article, we examined whether sex differences in emotional sharing might be explained by variations in traditional masculinity (i.e., agency traits) and traditional femininity (i.e., communion traits). On the basis of gender role theory, we hypothesized that sex differences in emotional sharing would be (partly) mediated by women scoring lower on traditional masculinity and higher on traditional femininity than men. This hypothesis was tested in two large samples among Dutch young adults (N= 1,140 and N= 1,502, roughly equal numbers of men and women). As expected, women reported more distress disclosure than men. Moreover, the expected sex differences in traditional masculinity/femininity emerged. Importantly, across both samples, we found that sex differences in emotional sharing were statistically mediated by sex differences in femininity but not by sex differences in masculinity. In the second sample, this mediational pattern was also observed for sex differences in seeking psychological help. Taken together, it appears that traditional femininity is more important than traditional masculinity for understanding why women share their emotions more readily than men. Efforts to encourage help-seeking among men may be advised to target traditional feminine behaviour rather than traditional masculine behaviour.

Talk 4: Who Am I To Regulate Your Emotions? A Meta-Analysis And Daily Diary Study On Personality And Extrinsic Emotion Regulation

[Hannah Kunst](#), Sarah A. Walker, Helena Nguyen, Anya Johnson, Carolyn MacCann

Speaker affiliation: The University of Sydney

Introduction. Emotion regulation refers to the processes used to influence the intensity, timing, type, and duration of our own emotions (intrinsic emotion regulation) or other people's emotions (extrinsic emotion regulation). Existing research shows that personality traits relate to the processes we use to regulate our own emotions across three stages of emotion regulation (identification, selection, and implementation). It is unclear whether this extends to the processes we use to regulate other people's emotions.

Methods. To improve our understanding of individual differences in extrinsic emotion regulation, a meta-analysis (study 1; n = 5,609, k = 15) examined which personality traits predict extrinsic affect improving and affect worsening regulation (the identification stage). A 7-day daily diary (study 2; n = 534) examined which personality traits relate to different extrinsic regulation strategies (the selection stage) using multilevel modelling.

Results. Results show that the decision to engage in affect improving and worsening extrinsic regulation is related to pro-social and anti-social traits (e.g. honesty-humility, agreeableness, and Machiavellianism; study 1), whereas the selection of extrinsic regulation strategies relates to emotion-related traits (e.g. neuroticism and extraversion; study 2).

Conclusion. Study results evidence that there are individual differences influencing the identification and strategy selection of extrinsic emotion regulation. This research helps establish a nuanced understanding of the relationship between personality traits, and why and how we regulate other people's emotions.

Talk 5: There Are Cultural Differences In The Strategies People Use To Regulate Others' Emotions

[Carolyn MacCann](#), Hongfei Yang

Speaker affiliation: The University of Sydney, Zhejiang University

Introduction: The way people regulate their own emotion differs across cultures. For example, expressive suppression is both more common and more effective in collectivist than individualistic cultures. However, little is known about cultural differences in the regulation of other people's emotions.

Methods: In this pre-registered study (https://aspredicted.org/BVX_BDH), students from Sydney (N = 166) and Zhejiang (N = 331) universities completed the Regulation of Others' Emotions Scale (ROES) which assess 8 strategies for regulating other people's emotions.

Results: The ROES showed configural, metric, and scalar invariance. Chinese students used significantly more expressive suppression, downward social comparison, distraction, and reappraisal but less receptive listening and valuing than Australia students (as hypothesized). The effect size was very large for expressive suppression ($d = 2.78$). As hypothesized, expressive suppression showed a stronger association with psychological wellbeing in China ($r = .30$) than Australia ($r = -.05$). However, all strategies had a stronger association with wellbeing in China than Australia (contradicting hypotheses).

Conclusions: Results suggest a greater role for regulating others' emotions in collectivist versus individualistic cultures. Future research directions are suggested, including using intensive longitudinal methods, examining differences in regulation goals, and including multiple countries.

Talk 6: Extrinsic Emotion Regulation Choice: The Role Of Depression Symptoms

[Atheer Massarwe](#), Noga Cohen

Speaker affiliation: University of Haifa

Extrinsic emotion regulation (EER) is the provision of emotion regulation support to another person. An important question is what factors influence peoples' choice of EER strategy. The present study examined the role of depression symptoms in EER strategy use. Fifty-one women who reported high levels of depression symptoms and 48 women who reported low levels of depression symptoms participated in the study. They were asked to read texts that described negative emotional situations ostensibly written by another participant. They were then asked to help the other participant by writing a supportive letter. They reported the degree to which they

believe the other person feels bad, how much they are similar to that person, and the degree to which they used two emotion regulation strategies: distraction and reappraisal. They rated their emotions before and after providing support. Results showed that depressed and non-depressed participants reported more positive and less negative mood after providing support. Furthermore, depressed and non-depressed participants reported higher use of reappraisal compared to distraction when providing support. The level of depression symptoms was positively correlated with the perceived negativity of the events and the perceived similarity to the other person. These findings are consistent with previous findings showing that EER benefits support providers. Together, these findings imply that EER may be a good way to improve mood and that people choose to provide support to others using reappraisal more than distraction. These findings have implications for understanding the role of EER in depression and other psychopathologies.

Emotion regulation and psychopathology

Thursday, October 5, 14:45–15:45, Auditorium DZ2

Talk 1: Subgroups Of Emotion Regulation Problems In Young People With Borderline Personality Disorder

Anouk Aleva, Jennifer Betts, Sue Cotton, Odilia Laceulle, Christel Hessels, Marcel van Aken, Katie Nicol, Andrew Chanen

Speaker affiliation: HYPE Centre of Expertise on Early Intervention for Borderline Personality Disorder, Utrecht University

Borderline personality disorder (BPD) is characterized by emotion dysregulation. This study sought to zoom in on the characteristic heterogeneity in emotion regulation abilities and define subgroups among a sample of young people with BPD. Methods: Data from the MOBY clinical trial were used, in which 137 young people (Mage = 19.1, SDage = 2.8) completed Difficulties in Emotion Regulation Scale (DERS). Latent profile analysis (LPA) was conducted to identify subgroups based upon response patterns on the DERS subscales. Analysis of variance and logistic regression models were used to characterize the subgroups in terms of demographic, psychopathology, and functioning characteristics. Results: LPA revealed three subgroups. A “low and unaware” (n = 22) subgroup, reporting the lowest level of emotion dysregulation, except high emotional unawareness. A “moderate and accepting” subgroup (n = 59), reporting high emotional acceptance within its own pattern, and moderate emotion dysregulation compared with the other subgroups. A “high and aware” subgroup (n = 56), reporting the highest level of emotion dysregulation, but with high emotional awareness. Some demographic, psychopathology, and functioning characteristics were associated with subgroup membership. Conclusions: The identification of subgroups highlights the importance of considering the different emotion regulation abilities in context of BPD and suggests that therapies should not take a one-size-fits-all approach.

Talk 2: Emotion Regulation In Obsessive-Compulsive Disorder: An Ecological Momentary Assessment Study

Claudia Dorsel, Nicola Hohensee, Fanny Alexandra Dietel, Philipp Doebler, Ulrike Buhlmann
Speaker affiliation: University of Münster

Introduction: Emotion dysregulation is a central process in the genesis and maintenance of many mental disorders, including obsessive-compulsive disorder (OCD). Past research on OCD has examined emotion regulation (ER) with a trait-level approach, thereby neglecting situational and temporal dynamics. The present study is the first micro-longitudinal study to examine ER in individuals with OCD.

Method: A six-day ecological momentary assessment was used to assess affectivity, ER strategies, perceived ER effectiveness, and acceptance of emotions in n = 72 individuals with OCD and n = 54 psychologically healthy controls.

Results: Individuals with OCD reported more negative and less positive affect, more avoidance-oriented and less engagement-oriented ER strategies, less perceived effectiveness, and less acceptance of emotions in daily life, even when controlling for current OC symptoms and negative affect. Irrespective of group, more negative affect amplified use of avoidance-oriented strategies and diminished perceived effectiveness and acceptance of emotions.

Conclusion: Reported findings support structural ER deficits rather than ER difficulties specific to symptom-eliciting situations in individuals with OCD above and beyond generally heightened negative affect. A holistic approach of ER in OCD treatment may increase perceived ER effectiveness and choice of functional ER strategies which could address non-response to or relapse after exposure and response prevention therapy.

Talk 3: Emotion Regulation In Daily Life Among Adults With Suicidal Thoughts

[Yael Millgram](#), Daniel Coppersmith, Rebecca Fortgang, Gal Sheppes, Amit Goldenberg, Matthew K.Nock

Speaker affiliation: Harvard University, Tel Aviv University

Emotion regulation deficits are highlighted as a risk factor for suicidal thoughts. However, research on this topic has relied almost exclusively on questionnaires. To our knowledge, no studies thus far have examined how people with suicidal thoughts regulate emotions in daily life using more ecologically valid methods. To address this critical gap, we conducted two Ecological Momentary Assessment studies (EMA; 7 days, 6 times per day) to assess emotion regulation attempts, strategies and effort among people with current suicidal thoughts (N1=43; N2=64), people with a history of suicidal thoughts (N1=129), or comparable levels of psychiatric symptoms (N2=64), and healthy controls (N1=224; N2=67). We found that people with suicidal thoughts did not differ from the other groups in their emotion regulation attempts, and in their use of situation modification, reappraisal and social support. People with suicidal thoughts were more likely than healthy controls to use distraction, rumination, self-injury and substances to regulate emotions, but differed from people with high psychiatric symptoms only in their use of substances. People with suicidal thoughts also exerted more effort in emotion regulation compared to the other groups. Finally, only the use of self-injury and substances predicted increases in suicidal thinking. These results underscore the use of ecologically valid methods to understand the unique emotion regulation challenges of people who contemplate suicide

Talk 4: Emotion Regulation, Non-Suicidal Self-Injury, And Internalizing And Externalizing Problems In Adjudicated Youth

[Shokoufeh Vatandoost](#), Imke Baetens, Zahra Azadfar, Martijn Van Heel

Speaker affiliation: Vrije Universiteit Brussel

Introduction: Adjudicated youth are at increased risk for emotion dysregulation, non-suicidal self-injury (NSSI), internalizing and externalizing problems. According to self-determination theory (SDT), emotion regulation difficulties are related to mental health problems in adolescents. The present study aimed to investigate applicability of the SDT conceptual framework to the role of emotion regulation styles (integrative, suppressive, and dysregulated emotion regulation) in

predicting NSSI, internalizing and externalizing symptoms after controlling for gender and posttraumatic stress symptoms (PTSS) in a sample of Belgian adjudicated youth.

Methods: The sample included 52 adolescents (M_{age}= 15.77, SD= 1.26) in a juvenile residential facility in Flanders (CIS “De Kempen”). Hierarchical regression analysis was performed to examine whether integrative, suppressive, and dysregulated emotion regulation predicted significant variance in NSSI, internalizing and externalizing problems above and beyond gender and PTSS in this population.

Results: Results showed that dysregulated emotion regulation accounted for significant variance in NSSI and externalizing symptoms after controlling for gender and PTSS. However, emotion regulation styles did not predict internalizing symptoms beyond gender and PTSS.

Conclusions: Findings provide evidence that dysregulated emotion regulation is associated with NSSI and externalizing symptoms, even when controlling for variance attributed to gender and PTSS.

Experience of social emotions I

Thursday, October 5, 14:45–15:45, Auditorium DZ1

Talk 1: Studies On The Adaptive Function Of Shame And Pride--An Examination Of Shame And Pride Through Concealment And Exposure

Yiftach Argaman, Assaf Kron

Speaker affiliation: University of Haifa

We examined whether shame and pride drive individuals to conceal negative- and expose positive-status-related information. Study 1 (N=120) examined this assumption—in an experimental paradigm, following IQ test we randomly gave participants a low or high IQ score and asked them to disclose their score and photo to others. Shame was associated with the tendency to conceal and pride with the tendency to expose ($p < 0.001$). Studies 2-4 used Study 1's paradigm. Study 2 (N=360) examined if people conceal and expose less when those who may learn about the event are less relevant to their status. We manipulated high and low relevance and found that low relevance modified concealment ($p < 0.001$). Study 3 (N=360) examined whether concealment and exposure occur even when information about the event that may change one's status (i.e., IQ score) remains undisclosed. We asked participants to reveal only themselves to others (i.e., their photo without IQ score). Even when scores remained undisclosed, shame and pride induced tendencies to concealment and exposure ($p < 0.001$) in the specific domain they were elicited. Study 4 (N=160) examined how concealment and exposure of the event affect the experience of shame (i.e., feelings). We led participants to believe their score was deleted or exposed to others. Participants felt shame even when their score was deleted, and exposure further magnified it ($p < 0.001$). The (in)congruency of the results with existing models of shame and pride is discussed.

Talk 2: The Empathy Profile Of Autism: Findings From The Perth Empathy Scale

Jack D. Brett, Rodrigo Becerra, David A. Preece, Murray T. Maybery

Speaker affiliation: University of Western Australia

Empathy, a multi-dimensional construct comprising cognitive and affective components, plays a vital role in social interactions. Cognitive empathy is the ability to infer others' emotions, while affective empathy is the ability to share others' emotions. Individuals on the autism spectrum may struggle with cognitive empathy, but the relationship with affective empathy is unclear. Furthermore, studies suggest that empathising with positive or negative emotions may reflect distinct abilities. Using the recently introduced Perth Empathy Scale (PES), which assesses cognitive and affective empathy across positive and negative emotions, we investigated the empathy profile of autism. Participants (N = 929; 239 disclosing an autistic diagnosis) completed the PES online. Moderated non-linear factor analyses revealed that the autistic sample showed greater difficulties with cognitive empathy and affective empathy for positive emotions than the non-autistic sample. Younger autistic individuals also reported difficulties with affective empathy for negative emotions. However, the autistic sample showed significantly greater variability in

affective empathy (to positive and negative emotions). This heterogeneity motivates an individualistic approach as some individuals on the spectrum show greater affective empathy than non-autistic individuals. The results provide greater nuance of the empathy profile of autistic individuals and guide theory to incorporate empathy heterogeneity in autism.

Talk 3: Chasing Dreams Or Conforming To Social Standards? How Sources Of Self-Relevance Shape Envy.

Jan Crusius, Lisa Blatz

Speaker affiliation: University of Greifswald

What do people envy? People envy what is relevant to them as self-relevance is a necessary precondition for every emotion to arise. Self-relevance can have different sources, however. It can be defined by what is important to people themselves, i.e., what is internally self-relevant, and by what is important to their social context, i.e., what is externally self-relevant. This distinction could matter for how envy evolves. Based on their appraisal patterns, we predicted that internal and external self-relevance differentially shape benign and malicious forms of envy: Internal self-relevance should promote benign envy (which entails upward motivation) and decrease malicious envy (which entails hostility). External self-relevance should decrease benign envy and increase malicious envy. Meta-analyses of 7 correlational and experimental studies (total N = 2050) support these hypotheses. In the first set of studies, we measured internal and external self-relevance of certain values within subjects. In the second set, we manipulated internal and external self-relevance between subjects. We measured participants' envious reactions towards an ideal person embodying these values. The data suggest that being outperformed in a domain that people value for its own sake fosters benign envy. In contrast, chasing success in a domain that is prescribed by their social group may set people up to experience malicious envy.

Talk 4: The Blushing Brain: Neural Substrates Of Embarrassment

Milica Nikolić, Simone di Plinio, Disa Sauter, Christian Keysers, Valeria Gazzola

Speaker affiliation: University of Amsterdam

According to Darwin, blushing—the reddening of the face due to heightened self-awareness—is universal and “the most human of all expressions”. Yet, relatively little is known about its underlying mechanisms. Does blushing result from higher-order socio-cognitive processes or is it a rapid, spontaneous emotional response that does not involve reflection upon the self? Investigating the neural substrates of blushing could not only shed light on the mental processes involved in blushing but also enhance our understanding of complex mechanisms involved in self-awareness. During fMRI, we measured participants' cheek temperature increase, an indicator of blushing, while they watched videos of themselves (vs. other people as a control) singing karaoke, which is known to induce embarrassment and blushing. Our results showed that participants blushed more while watching themselves (vs. other) sing. The cheek temperature was regulated by the mesencephalon including raphe nuclei and the cranial nerve nuclei V and VII. Strikingly, participants who blushed more while watching themselves sing had higher activation in the cerebellum (lobule V) and the left paracentral lobe and exhibited more robust processing of the

videos in early visual cortices. These findings suggest that blushing is triggered by strong emotional arousal, independently of higher-order socio-cognitive processes. Our results provide new avenues for future research on self-awareness in infants and non-human animals.

Emotion reactivity

Thursday, October 5, 14:45–15:45, Auditorium DZ3

Talk 1: Social Ball And Emotion Reactivity: Testing The Impact Of Social Exclusion On Positive And Negative Subjective Emotions

Jamie Breukel, Sanne Nijs, Hans van Dijk, Marloes van Engen, Stefanie Duijndam
Speaker affiliation: Tilburg University

Introduction. Research shows that social exclusion has widespread detrimental effects, varying from decreased positive mood to increased negative mood across a range of studies and operationalizations. The current study adds to this line of research by testing the extent to which excluded (versus included) participants experience an increase in negative emotions (H1) and a decrease in positive emotions (H2) over two waves of data collection using an exclusion paradigm called Social Ball (SB), which is a more realistic and elaborate version of Cyberball.

Method. The first wave of data collection is finalized ($n = 49$). The sample has a mean age of 20.09 ($SD = 1.91$) and is largely female (85.4%). Participants played SB in the lab and reported how strongly they experienced 17 emotions before and after it.

Results. The Mann-Whitney U test indicated that there was no significant difference between the inclusion and exclusion conditions on positive emotion reactivity following the task, $z = -1.10$, $p = .912$. There was also no significant difference between conditions on negative emotion reactivity, $z = -1.15$, $p = .249$.

Conclusions. The preliminary results do not provide support for any effects of exclusion manipulated by SB on positive (H1) and negative emotions (H2). Showing that Social Ball evokes an experience of exclusion and impacts emotion reactivity is important as this paradigm can then be used to better understand how social exclusion impacts emotional well-being.

Talk 2: Lack Of Emotional Acceptance Mediates Between Neuroticism And Trait Emotional Overproduction: A Cross-Sectional Study

G. Hervás, A. Hernández-Gómez, L. S. Vilte, Katja-Franziska Gsell, S. Da Silva, S. Pampín
Speaker affiliation: Complutense University of Madrid

Emotional overproduction is defined as the tendency to experience a high number of emotions after a negative event and appears to be one of the antecedents of rumination. Previous research has found that neuroticism is a predictor of emotional overproduction, but the nature of this relationship is not clear. The main goal of this study was to examine the potential mediating role of lack of emotional acceptance between neuroticism and trait emotional overproduction. To achieve this, a sample of university students participated in a cross-sectional study. Bootstrapped mediation analyses suggested that lack of acceptance fully mediated the relationship between neuroticism and emotional overproduction. These results remained significant even when controlling for potential confounders, such as depression and anxiety symptomatology. Although the results should be replicated using other designs (e.g., ESM, laboratory), these preliminary

findings suggest the potential role of lack of emotional acceptance in the relationship between neuroticism and emotional overproduction.

Talk 3: Lack Of Emotional Acceptance Predicts Emotional Overproduction After A Negative Mood Induction Procedure

G. Hervás, A. L. S. Vilte, Hernández-Gómez, C. Casanova, M. Juan

Speaker affiliation: Complutense University of Madrid

Emotional overproduction, which is defined as the tendency to experience a high number of emotions after a negative event, appears to be one of the antecedents of rumination. However, the factors that trigger these overproduction reactions are not clear. The main goal of this study was to examine the predictive capacity of low levels of emotional acceptance on the increase of state emotional overproduction after a mood induction in the laboratory. To achieve this, different trait measures, such as neuroticism (NEOFFI) and difficulties in emotional regulation (DERS), were evaluated in a sample of university students, who underwent an induction of a sad mood state. State emotional overproduction was assessed through an emotion checklist. Regression analyses showed that both neuroticism and lack of acceptance were associated with increases in emotional overproduction after mood induction. These results remained significant even when controlling for the other subscales of the DERS scale. Although the results are preliminary, it appears that a negative attitude towards one's own emotions may increase the number of negative emotions in response to a negative event.

Talk 4: Emotions Under Control? Better Cognitive Control Predicts Increased Negative Emotional Reactivity Within Individuals

Levente Rónai, Flóra Hann, Szabolcs Kéri, Ulrich Ettinger, Bertalan Polner

Speaker affiliation: Budapest University of Technology and Economics, University of Szeged

Introduction: Associations between impaired cognitive control and maladaptive emotion regulation have been extensively explored across individuals. However, whether this relationship holds within individuals is an open question. In this study, we tested the assumption that momentary within-person fluctuation in working memory updating and response inhibition predicts emotional reactivity in everyday life.

Methods: Participants from the general population repeatedly (8 two-hourly prompts daily) performed short 2-back and Go-Nogo tasks using their own devices in daily life. Affective states and perceived distress were assessed to capture emotional reactivity, an indicator of effective emotion regulation. We analyzed two overlapping samples by cumulative link mixed models: a Go-Nogo (N = 161, M[age] = 41.7, SD[age] = 14.5) and a 2-back dataset (N = 158, M[age] = 41.8, SD[age] = 14.5).

Results: When individuals' momentary working memory updating was better than their average, they demonstrated higher negative emotional reactivity. However, better working memory performance predicted decreased negative affect if perceived distress was controlled. Better Go/no-go performance predicted lower negative emotionality but not reactivity.

Conclusions: Our results might imply that cognitive control training alone may not necessarily contribute to adaptive emotion regulation since the relationship between cognitive control and negative emotionality is context-dependent within individuals.

Emotional attention and memory

Thursday, October 5, 14:45–15:45, Auditorium DZ4

Talk 1: Too Disgusted To Remember: The Impact Of Contextual Emotions On Advertising Recall

[Catia Alves](#), Maarten Boksem, Ale Smidts

Speaker affiliation: University of Vienna, Rotterdam School of Management

Commercials are often embedded in media contexts that elicit various types of emotions. However, it is largely unknown how discrete contextual emotions (e.g., a sad TV show or a disgusting Youtube video) impact the recall of subsequent stimuli, such as commercials. Across five studies, we consistently found that disgusting content reduces recall of subsequent commercials more than emotional contexts of happiness, sadness, and fear. We showed this effect within subjects (Study 1) and between subjects (Studies 2 and 3). Importantly, existing theories to explain the impact of emotions on memory could not account for this effect (such as arousal, valence, and context-congruency; Studies 4 and 5). Instead, we suggest an emotional regulatory explanation (Study 5): after watching disgusting content, individuals try to suppress their thoughts about the emotional content more than in other emotional contexts—reducing recall of a subsequent advertisement. This work contributes to the literature on emotion and memory by showing that disgusting contexts are detrimental to the recall of subsequent stimuli. Moreover, it suggests novel psychological insights that may help to better understand the important role of emotions in memory formation and their influence on proximal unrelated events. Specifically, it proposes that post-encoding processes (e.g., emotional regulatory mechanisms) can affect the memory of subsequent unrelated stimuli.

Talk 2: Emotional Modulation Of The Gaze Cueing Effect

[Manon Mulckhuysse](#)

Speaker affiliation: Leiden University

Research on emotional modulation of attention in gaze cueing has resulted in contradictory findings. Some studies found a larger gaze cueing effect (GCE) in response to a fearful gaze cue, whereas others did not. A recent study explained this discrepancy within a cognitive resource account, in which perceptual demands of the task promote a bias towards either a local (discrimination task) or global (localization task) processing strategy. During local processing, the integration of emotional expression with gaze direction is assumed to be impaired, whereas during global processing integration is assumed to be facilitated. In a series of online experiments, we investigated the cognitive resource account. Results showed faster orienting in response to a fearful face cue in a detection and localization task, but this effect diminished in a discrimination task. Inducing local and global processing strategies did not affect emotional modulation of attention. In contrast, Bayesian analyses provided evidence of absence of such an effect, demonstrating that local or global processing strategies cannot explain the mixed findings obtained in emotional modulation of gaze cueing.

Talk 3: The Effect Of Negative Valence On False Memory Formation In The Drm Paradigm: A Meta-Analysis And Replication

Sera Wiechert, Dora Proost, Emmelie Simoens, Gershon Ben-Shakhar, Yoni Pertzov, Bruno Verschuere

Speaker affiliation: University of Amsterdam, Hebrew University of Jerusalem

Introduction: The Deese-Roediger-McDermott (DRM) paradigm has been shown to produce false memories robustly. However, when studying emotion within the DRM task to increase ecological validity, the effect of valence on false memory is not consistent.

Methods: To examine both the validity and reliability of the effect of negative valence on false memories in the DRM, we conducted a preregistered meta-analysis ($k_{recall}=48$; $k_{recognition}=72$) and preregistered replication ($n=278$). Based on the fuzzy trace theory, we expected increased false memories for negative valence (vs neutral) in recall and recognition.

Result: Neither the meta-analysis nor the replication showed the expected valence effect ($d=0.02$, $d=-0.16$) in recall. For recognition, the meta-analysis ($d=0.22$) and replication ($d=0.31$) showed that negative valence (vs neutral) increased false memories. However, controlling for response bias nullified the valence effect in our meta-analysis ($d=0.05$), and we also found differential response bias in our replication ($d=0.40$).

Conclusion: Both approaches largely converged in showing that negative valence may only increase false memory reports in recognition (vs recall), presumably driven by differential response tendencies. Notwithstanding, in real-world cases, special care has to be taken for recognition-like memory investigation as the negativity of the addressed event may increase suggestibility and report of false information, irrespective of its underlying mechanism.

Talk 4: Resistance Of Emotional Attention To Goal Relevance

Xiaojuan Xue, Gilles Pourtois

Speaker affiliation: Ghent University

This study aimed to investigate whether the capture of attention by threat is automatic or dependent on goal relevance (i.e. emotion being directly task-relevant). To this end, we used a standard dot-probe task (DPT) with emotional faces (either fearful or happy faces) together with induction trials meant to make them task-relevant. Eye-tracking was used to ascertain that faces and targets were processed with peripheral vision. In Experiment 1 ($n=40$), the DPT was performed in the absence of induction trials, providing a baseline to study spatial orienting to fearful faces. In Experiment 2 ($n=40$), participants were asked to indicate now and then the side occupied by the emotional face at the cue level (i.e. induction trials), besides the main DPT. The results of both experiments showed that fearful faces captured attention: participants were faster to process the target if it replaced the position previously occupied by the fearful face in the pair. Moreover, they were also faster to process the target when it replaced the neutral face if it was combined with a happy face at the cue level. Importantly, this preferential spatial orienting to threat-related faces was not stronger in Experiment 2 than 1, suggesting that the goal relevance

of emotion did not influence it. Accordingly, these new results lend support to the notion that threat-related faces can capture attention automatically, in the sense that the task-relevance of emotion does not influence this effect.

Physical health and health behaviors II

Thursday, October 5, 14:45–15:45, Auditorium DZ6

Talk 1: With Mixed Emotions Through The Crisis: Utilising Emotional Ambivalence To Change Behaviour In The Covid-19 Pandemic

Felix Bieberstein, Julia Reinhard

Speaker affiliation: University of Cologne

Introduction: Given the continuing threat of pandemics, it is necessary to optimize interventions that combat them. This study introduces emotional ambivalence as an instrument for these interventions, using COVID-19 as an example. We study whether emotional ambivalence – the simultaneous experience of positive and negative emotions – can be used to enhance adaptability towards COVID-19 regulations. We thereby consider cognitive flexibility as an underlying mechanism.

Method: We conducted one experiment (N = 123), using a one-factorial between subject-design with three levels: Emotional ambivalence (hope & worry), positive emotion (hope) and negative emotion (worry). We used written recall tasks to elicit the emotions. Subsequently, we measured motivation to adapt, motivation to wear a mask and motivation to social distance, as well as cognitive flexibility.

Results: The results revealed that when individuals are treated to simultaneously feel hope and worry rather than only hope or worry, they report a significantly higher motivation to adapt and motivation to social distance. There were no significant effects for the motivation to wear a mask. The indirect effect of cognitive flexibility was directional, but failed to reach significance.

Conclusion: This research shows the potential of emotional ambivalence to causally increase adaptations to certain COVID-19 regulations. Further studies with a sufficient sample and improved measures for cognitive flexibility are planned.

Talk 2: Impact Of Breathing Exercises On Hrv: Effect Of Frequency And Pattern

Laura Caton, Yori Gidron, Delphine Grynberg

Speaker affiliation: University of Lille

Introduction: Heart rate variability (HRV) has gained interest for several years in medical and psychological studies, as elevated HRV has been associated with better health outcomes. In order to improve HRV, many studies used breathing exercises however, they show contradictory results, partly due to large methodological variabilities. Therefore, our study aimed to compare the effects of different breathing exercises on HRV by manipulating frequency and pattern in a between subject's design.

Methods: The study included 107 participants who were randomly assigned to one out of 9 breathing exercises based on 3 frequencies (0.1, 0.08 and 0.07Hz) and 3 breathing patterns (ratio, with or without a pause between inhalation and exhalation). The task lasted 15 min during which participants had to breathe normally for 5 min (pre-test), perform one breathing exercise during 5 min, and then breathe normally again for 5 min (post-test). Heart rate and breathing rate

were recorded during the whole task. Individual differences in terms of emotion regulation and coping abilities were measured by self-reported questionnaires.

Results: The main result is that every frequency increases LF-HRV during breathing exercises. However, breathing exercises at 0.08Hz was associated with a greater increase. Results also showed that LF-HRV was higher during post-test compared to baseline, independently of frequency. Finally, we found no effect of pattern or individual differences.

Conclusion: In conclusion, the most effective slow-paced breathing exercises to increase HRV during exercise are based on 0.08Hz.

Talk 3: Attention Towards Faces Of Pain In Chronic Back Pain: Do Mbsr Programs Change Attentional Biases?

[Elena Robles](#), Carmelo Vázquez, Iván Blanco, Gustavo Díez

Speaker affiliation: Complutense University of Madrid

Introduction: Attentional biases towards pain-related information play a significant role in the maintenance of pain. Meditation-based interventions have been successfully used to modify attentional and emotional variables involved in chronic pain. This study analyzed the effects of a Mindfulness-Based Stress Reduction (MBSR) program on the attentional pattern toward pain in comparison to neutral faces in participants with chronic pain.

Method: Forty-four individuals with chronic back pain were randomly allocated to an experimental or waiting-list control group. Before and after the MBSR program, both groups completed two tasks (i.e., a free-viewing task and an attentional disengagement task) while their eye movements were recorded.

Results: A 2x2 (Group x Time) repeated-measures ANOVA revealed that the MBSR program significantly improved psychopathological symptoms, it had no significant impact on attentional or disengagement indices. However, a series of t-tests showed significant attentional biases towards pain faces in early attentional processing in the entire sample.

Conclusions: Individuals with chronic pain had attentional biases towards pain stimuli. The MBSR intervention was not effective to reduce these attentional biases, although it was effective to improve symptoms of distress (e.g., depression, anxiety, stress) and well-being. Implications for basic research on attentional biases and pain are discussed.

Talk 4: Can Music Listening Reduce Food Consumption Following Negative Mood Inductions? A Series Of 3 Exploratory Studies

[Annemieke van den Tol](#), Helen Coulthard, Victoria Lang, Debbie Wallis

Speaker affiliation: University of Lincoln

Introduction: Emotions play a key role in overeating, yet there is little research into practical strategies to reduce emotional eating (EE) in response to negative moods. In three studies, we tested if music listening can reduce food consumption in a negative mood.

Method: N=120–121 adult women in each study completed measures of EE and baseline hunger. Mood ratings were taken at baseline, post-mood induction and post-eating. Participants were

given a mood induction (study 1: sadness, studies 2 and 3: stress) and allocated to one of three music conditions (study 3: self-chosen) or a silent control condition. Music was taken from three pieces reported by each participant as being listened to regularly when experiencing stress and sadness in order to provide solace, diversion, or discharge. Participants were provided with several snack foods to consume whilst completing a mock taste test. Intake (in grams) was compared between conditions.

Results: Study 1: participants in the discharge condition consumed less than those in the control condition. Participants with high levels of EE ate more crisps in the control than in the distraction condition. Study 2: participants in the solace condition consumed less than those in the control and discharge conditions. Study 3: most participants chose music for diversion. This reduced stress but not food intake.

Conclusion: Overall, the results of these studies indicate that listening to certain types of music may reduce EE.

Method development II

Thursday, October 5, 14:45–15:45, Auditorium DZ10

Talk 1: Assessment Of Cognitive Emotion Regulation In Older Adults: Validation Of The Cerq Versions

Gina Rossi, [Xenia Brancart](#), Carmen Diaz-Batanero

Speaker affiliation: Vrije Universiteit Brussel, Ghent University

Introduction: The Cognitive Emotion Regulation Questionnaire (CERQ) is a well validated self-report measure of cognitive emotion regulation. However, most studies on its psychometric properties were done in adolescents and adults. The scarce studies in older adults were mainly limited to associations of CERQ scales with internalising symptoms and wellbeing. Only one study explored the underlying factor structure in Spanish older adults and concluded that a 27 item CERQ version showed adequate fit.

Methods: The psychometric properties, gender invariance and nomological net (i.e. clinical symptoms, behavioural inhibition/activation and coping) of all three versions of the CERQ (original 36 item, short 18 item CERQ developed by the original authors and a Spanish 27 item version) were examined in 451 community-dwelling older adults.

Results: A nine-factor structure was corroborated for the original and shortened CERQ version and gender invariance was confirmed. Moreover, cognitive emotion regulation strategies correlated like hypothesized with clinical symptoms in general, behavioural inhibition and activation systems and coping styles. The nomological net was highly similar for the original CERQ and shortened versions, implying that all CERQ versions largely tap the same construct in older adults.

Conclusion: The 18 item version of the CERQ consequently can be a viable alternative in settings where short assessment instruments are needed, as in mental health care for older adults.

Talk 2: Validation Of The Edited Trømso Infant Faces Database (E-Tif): A Study On Differences In The Processing Of Children'S Emotional Facial Expressions

[Almudena Duque](#), Gloria Salgado, Gonzalo Picado, Beatriz Palacios, Alfonso Salgado, Covadonga Chaves

Speaker affiliation: Universidad Pontificia de Salamanca, Universidad Complutense de Madrid

Introduction: Images of emotional facial expressions are often used in emotion research, which has promoted the development of different databases. However, most of these standardized sets of images do not include images from infants under 2 years of age, which is relevant for psychology research, especially for perinatal psychology. The present study aims to validate the edited version of the Tromsø Infant Faces Database (E-TIF) in a large sample of participants.

Methods: The original set of 119 original pictures was edited. The pictures were cropped to remove non-relevant information, fitted in an oval window, and converted to a grey scale. Four hundred and eighty participants (72.9% women) took part in the study rating the images in five dimensions: emotion depicted, clarity, intensity, valence, and genuineness.

Results: Valence scores were useful to discriminate between positive, negative, and neutral facial edited expressions. Results revealed that women were more accurate in recognizing emotions in children. Regarding parental status, parents, in comparison with non-parents, rated as more intense and genuine neutral expressions, less negative sad, angry, disgust and fearful faces, and less positive happy expressions.

Conclusions: The edition and validation of the E-TIF database offers a useful tool for basic and experimental research in psychology.

Talk 3: The Characteristics And Production Of Moving Films Seen Through The Lens Of Kama Muta Theory

Thomas Schubert, Jasper Claus

Speaker affiliation: University of Oslo

Emotional experiences labeled as touching and moving often accompany the overcoming of crisis, dissent or strife through compassion, forgiveness, and togetherness. Kama muta theory proposes that the elicitors of these emotional experiences are intensifications of communal sharing relationships that one is part of or invested in. In the current work, we show how this theory informs both the analysis and the production of moving films. Three studies (total N = 368) tested correlates of feeling moved when watching short video clips using a new within-subject design and intra-individual cross-correlation analyses. Feeling moved co-occurred in time with positive (but not negative) affect, sensations of bodily warmth (and less with goosebumps), and increased judgments of closeness, but also with judgments of morality. Communal closeness and morality typically follow and are enhanced by previous conflict and dissent. The company 1camera.nl produces brand advertisement and communication following a methodology that is based on kama muta theory. To produce moving media, communal conflicts and their resolutions are identified and condensed in storylines, characters, and moments, creating award-winning films. We will compare the insights coming from analysis and production of moving films, how both can inform theory development, and how both can help us understand the use of moving media.

Language and emotions

Thursday, October 5, 16:00–17:30, Auditorium DZ10

Talk 1: What Makes Us Feel Good? A Data-Driven Investigation Of Positive Emotion Experience

Roza G. Kamiloğlu, İnan U. Türkmen, Taha E. Sarnıç, Dana Landman, Disa A. Sauter
Speaker affiliation: Vrije Universiteit Amsterdam

Thankfully, most people feel good most of the time, but what does it mean to feel good? Is our experience of gazing in awe at a majestic mountain fundamentally different than erupting with triumph when our favourite team wins the championship? Is feeling grateful a different kind of experience than feelings of other positive emotions like pride, awe, or love? Here, we use semantic space theory to test which positive emotional experiences are distinct from each other based on in-depth personal narratives of experiences involving 22 positive emotions (n = 165; 3,592 emotional events). A bottom-up computational analysis was applied to the transcribed text; unsupervised clustering was employed to maximise internal granular consistency (i.e., the clusters being as different as possible from each other while internally as homogenous as possible). The analysis yielded distinct positive emotion experiences, characterised by admiration, amusement, being moved, feeling respected, excitement, hope, interest, lust, positive surprise, pride, sensory pleasure, and tenderness. Applying bottom-up language analysis techniques to rich accounts of emotional experiences reveals that there are at least 12 unique dimensions of positive emotion experience in daily life. This work provides a rich map of positive emotional experience, as well as a new kind of analytical approach that can be applied to a wide range of different types of subjective experiences.

Talk 2: Knowledge About The Source Of Emotion Predicts Adaptive Emotion Regulation

Yael Millgram, Matthew K.Nock, David D. Bailey, Amit Goldenberg
Speaker affiliation: Harvard University, Tel Aviv University

People's ability to regulate emotions is crucial to healthy emotional functioning and a central focus of clinical psychology. Thus far, research has generally assumed that people know the causes of their negative feelings and therefore highlighted strategies that target these causes. However, knowledge about the source of emotions can vary across situations and individuals, which could impact one's ability for emotion regulation. Using Ecological Momentary Assessments (N=396; 7 days; 5,466 observations), we measured people's degree of knowledge about the source of their negative emotions. We used Natural Language Processing to show that higher reported knowledge led to more concrete written descriptions of the source. We found that people do not always know the source of their negative feelings. We also found that higher knowledge of the source predicted more emotion regulation attempts, the use of more putatively adaptive (cognitive reappraisal, situation modification) versus putatively maladaptive (expressive suppression, emotional eating) emotion regulation strategies, greater perceived ability to regulate emotions, and greater well-being. These patterns were evident both within-person, and between-persons.

Findings suggest that pinpointing the source of emotions may facilitate adaptive emotion regulation.

Talk 3: Prosodic Affect Recognition Among Forensic Sexual Offenders: Comparison With Forensic Non-Sexual Offenders And Community Males

[Luca A. Tiberi](#), Véronique Delvaux, Xavier Saloppé, Célia Hanquet, Audrey Vicenzutto, Thierry H. Pham

Speaker affiliation: University of Mons

Introduction: Emotion Recognition (ER) is a component of socio-affective functioning, one of the four main dynamic sexual recidivism risk domains. Despite previous research suggesting deficits from Sexual Offenders (SOs) in socio-affective functioning, the literature has scarcely studied ER, such as Prosodic Affect Recognition (PAR). Only Suchy et al. (2009) highlighted deficits in PAR accuracy from non-pedophilic SOs compared to Community Males (CM). Thus, this study assesses PAR accuracy competency among SOs.

Method: The sample is composed of 110 male participants, divided into three groups: SOs (n = 36; [Mean] _Age= 48.81, [SD] _Age= 14.03), Non-Sexual Offenders (NSOs; n = 24; [Mean] _Age= 41.47, [SD] _Age= 10.89), and CM (n = 50; [Mean] _Age= 34.37, [SD] _Age= 14.18). We presented 48 prosodic stimuli from the GEMEP. We computed raw scores on all emotions combined and sensitivity indices (d') for every six discrete emotions. Multiple One-Way ANOVAs were run, followed by post-hoc tests. Moreover, multiple paired t-tests were run between emotions in each group.

Results: Post-hoc tests revealed that CM exhibited greater scores ($p \leq .001$) than SOs and NSOs, although no difference was found between the offenders' groups. Paired t-tests indicated a similar pattern among the three groups for anger as the most recognized emotion.

Conclusion: Despite the lack of difference between the offenders, arguing for processual view rather than categorical, PAR scores are in line with previous research.

Talk 4: Emotion Words: What's Inside People's Affective Reports

[Evgeniya Vedernikova](#), Yasemin Erbas, Joran Jongerling, Seger Breugelmans

Speaker affiliation: Tilburg University

Introduction: In their lives, people face various events that might evoke a wide range of emotions. Studying these emotions and how they change when people adapt to those events lies at the heart of people's well-being. Current emotion measures are not ideal for such studies. Most measures are based on retrospective questions of how frequently people experience certain emotions. The emergence of experience sampling methods (ESM) has greatly improved our possibilities for studying emotional development and change. However, these methods often still rely on a very limited, preselected set of default emotion terms that do not necessarily capture how people describe their own emotions and what they feel in daily life. We investigate emotional adaptation by asking people to describe in their own words which emotions are experienced as well as how these emotions are related to well-being.

Methods: In a qualitative ESM study participants report their emotional experiences in a free way with open-ended questions without being limited by multiple choice items. Also, we look into their well-being via short, close-ended items.

Results: We present and discuss the first findings of this study.

Conclusions: This study would help get better understanding of people's emotional adaptation: what emotions are experienced in everyday life, in which contexts, and how those emotions are related to well-being. Emotion labels received in this study will be a useful ground for future ESM studies.

Talk 5: Words And Feelings: How Expressions Of Affect Relate To (Interpersonal) Affect Dynamics

[Otto Versyp](#), Laura Sels, Lesley Verhofstadt, Eva Ceulemans, Peter Kuppens

Speaker affiliation: KU Leuven

Most emotions we experience occur in social interactions, and how we feel within a single interaction can fluctuate strongly from one moment to the next. During a conversation where a romantic partner expresses their anger, you might initially feel angry, then sad, and finally relieved when the conflict is resolved. Yet how exactly emotions unfold and are interpersonally exchanged during interactions remains poorly understood. In this study we aimed to understand how the experience and expression of affect of interaction partners are related. More specifically, we investigated how the expression and experience of affect interrelate within and between partners during observed interactions between romantic partners, by means of 4 research questions: 1) when are partners most likely to express their affect, 2) does one's own experience of affect change after expressing affect, 3) does one's own experienced affect change after an expression of affect by a partner and 4) how does one's own experienced affect change relative to a partner's affect after a partner's expression of affect? To answer these questions, we analyzed the relations between affect expressed in time-stamped verbatim transcripts of conversations and second-to-second affect valence ratings. The results advance our understanding of how emotions are interactionally construed and the role of expressions of affect in this process.

Talk 6: Understanding Mechanisms Of Emotion Labeling: A Novel Approach Using Linguistic Stimuli And Incorporating Emoji Labeling

[Zhenyang Xi](#), David Vinson

Speaker affiliation: University College London

Emotion labeling is widely reported to down-regulate negative emotional responses to aversive stimuli. A proposed mechanism, symbolic conversion suggests that conversion from image to language creates psychological distancing and reduces emotional impact. Few such studies, however, used linguistic stimuli, thus without symbolic conversion. Additionally, typical emotion labeling studies treat individuals as homogeneous, despite systematic differences in emotion regulation. To assess mechanisms related to the role of verbalization in emotion regulation, Experiment 1 tested how emotion labeling influenced self-reported emotion intensity after reading both positive and negative sentences. Worry level was also measured. Emotion labeling

significantly increased emotion intensity vs. not labeling. For negative sentences, this effect was modulated by worry: emotion labeling only increased emotion intensity for less worried people. Experiment 2 (preregistered) was a replication of Experiment 1, plus an emoji labeling condition (converting language to image). As in Experiment 1, for positive emotions, emotion labeling (whether word or emoji) increased emotion intensity. But no effect was observed for negative emotions. The findings provide evidence against the symbolic conversion account and imply that emotion labeling may not be specific to language. Emotion labeling had robust effects only for positive materials, whereas its effect on negative materials appears unstable at best.

Emotions and Mental Health I

Friday, October 6, 8:30–10:00, Auditorium DZ10

Talk 1: Successful Mood Repair In The Laboratory Predicts Successful Mood Repair In Daily Life

[Shimrit Daches](#), Andrew J. Seidman, Lauren M. Bylsma, Charles J. George, Kiss Enikő, Kapornai Krisztina, Baji Ildikó, Maria Kovac

Speaker affiliation: Bar-Ilan University

Introduction: Successful mood repair is a necessary form of emotion regulation for healthy functioning. Lab-based studies have examined the degree to which people are successful in reducing sad mood as well as how this process is affected by depression and cognitive mechanisms. However, it is unknown whether laboratory findings capture successful mood repair in daily life.

Methods: We examined the correspondence between successful mood repair in the laboratory and in daily life among adults with current depression, remitted depression, and never depressed. Participants completed a laboratory mood repair task followed by a seven-day ecological momentary assessment during which they reported responses they implemented to regulate sadness in daily life. Depression status and attentional control were examined as moderators of the relations between the two mood repair contexts.

Results: More successful mood repair in the laboratory predicted better mood repair in daily life, supporting the ecological validity of lab-based emotion regulation. Depression status, but not attentional control, moderated this relationship: never depressed participants evinced the strongest correspondence, followed by the remitted group, while the relationship was non-significant in the currently depressed.

Conclusions: Being depressed undermines the ecological validity of lab-based mood repair. Future studies should better understand in what way lab-based protocols do not resemble real-life mood repair.

Talk 2: Subprocesses Of Emotional Instability In Borderline Personality Disorder

[Marlies Houben](#)

Speaker affiliation: Tilburg University

Introduction: Persons with a borderline personality disorder (BPD) experience strong emotional fluctuations in daily life. To understand what drives these changes, we examined different subprocesses of emotional changes: the occurrence of emotional triggers, emotional reactivity to these triggers, and subsequent emotional recovery.

Methods: Using the experience sampling method, persons with BPD, depressed participants and healthy controls reported on the occurrence of positive and negative events and rated their current emotional states ten times a day for seven consecutive days.

Results: Persons with BPD were more likely than both control groups to report negative events, but no differences were found for positive events. Next, the BPD group was more reactive to

positive events in their positive affect and to negative events in their negative affect compared to both control groups. No robust differences between groups were found for emotional recovery. Follow-up analyses next revealed that persons with BPD exhibited larger emotional changes compared to both control groups when emotional events were reported but also in the absence of reported emotional events.

Conclusions: This suggests that reactivity to not only emotionally prominent events but also to the ongoing environment consisting of seemingly emotionally insignificant events contribute to larger emotional fluctuations, observed in persons with BPD.

Talk 3: Daily Positive And Negative Affect Reactivity Patterns Predict Changes In Affective Psychopathology

[Ana Mar Pacheco-Romero](#), Óscar Martín-García, Ricardo Rey-Sáez, Teresa Boemo, Iván Blanco, Carmelo Vázquez, Álvaro Sánchez-López

Speaker affiliation: Complutense University of Madrid

Introduction. Models of affect dynamics pose that emotional dysfunctions characterizing depression and anxiety depend on how we react to daily-life events. Whether we have a sense of control over them, or how we regulate them, could define different patterns of affect dynamics that in light of a significant stressor might represent risk or protective mechanisms. Yet, these patterns remain understudied, particularly when related to positive events.

Methods. An ESM study (3 times x 10 days) evaluating changes in momentary positive affect (PA), negative affect (NA) as the result of stressful and pleasant events, use of positive and negative rumination, dampening, positive reappraisal, and perceived event controllability was conducted on 135 individuals. Emotional symptomatology was assessed at the start of the ESM, and two weeks after, before a significant stressor (final exam period).

Results. Multilevel analyses showed that daily PA and NA reactivity predicted changes in emotional symptomatology. Negative rumination increased NA reactivity. All other forms of regulation strategies did not modulate NA or PA reactivity. Higher event controllability decreased NA reactivity but did not boost PA reactivity.

Conclusions. Momentary affect reactivity patterns represent risk and protective mechanisms against emotional dysfunctions. While NA reactivity is modulated by a sense of control and rumination use, PA reactivity is linked to the experience of pleasant events.

Talk 4: Valence, And Not Emotional Arousal, Influences Wellbeing

[Jason W. Payne](#), Ulrich Schimmack

Speaker affiliation: University of Toronto

Introduction: The literature on trait affect is divided, with some researchers using emotional arousal as measured by the Positive and Negative Affect Schedule (PANAS) whereas other researchers use valence measured by the Scale of Positive and Negative Experience (SPANE). However, the relationship between these conceptions of affect and with wellbeing has not been explicitly explored.

Method: We collected two datasets (N = 500, N = 750) and used confirmatory factor analysis to model the relationship between arousal and valence conceptions of affect. We quantify the predictive relationship between these affective dimensions and wellbeing judgements. Further, we account for spurious correlations between these factors caused by personality traits as well as response bias.

Results: We find that valence, and not arousal, is important to wellbeing judgments. We find that the predictive influence of arousal is fully explained by its overlap with valence with a small unique contribution of the PANAS pride item. The low activation state of contentment also had incremental predictive power above and beyond positive valence.

Conclusions: Emotion research concerned with wellbeing should use valence rather than arousal measures. Low activation emotional states, which are underrepresented or absent from popular affect measures, should be further explored as substantive influence on the subjective experience of wellbeing.

Talk 5: The New Normal: Deriving More Or Less Personalized Norms For Repeatedly Assessed Emotions

[Marieke Schreuder](#), Peter Kuppens, Evelien Schat, Peter de Jonge, Catharina Hartman, Eva Ceulemans

Speaker affiliation: KU Leuven

Introduction. Worsening mental health may be forecasted by warning signs in daily emotions. Such warning signs occur when a person's emotions exceed a control limit (or norm), and can be detected through statistical process control (SPC). Control limits should in principle be based on the person's emotions during a healthy period. As such data are often unavailable, we performed a preregistered study to investigate whether control limits can be derived from the general population.

Methods. In the HowNutsAreTheDutch study, adults from the general population (N=746) rated their emotions three times a day for three months. Based on these data, we computed control limits according to the exponentially weighted moving average and Shewhart SPC procedures. Next, we investigated how often young adults with vs. without persistent mental health problems from the TRAILS TRANS-ID study (N=100) – who rated their emotions daily for six months – reported scores beyond these general population-based control limits.

Results. Warning signals occurred more often in young adults with persistent mental health problems compared to healthy young adults. The predictive performance of SPC varied across emotions and SPC procedures, but did not consistently improve when control limits were conditioned on individuals' age, sex, and depressive symptoms.

Conclusions. Warning signs in individual's emotions can be monitored using relatively generic norms, derived from the general population. This supports further research into the impact of less personalized control limits on the predictive utility of SPC-derived warning signs.

Talk 6: Emotional Inertia And Well-Being At Work

Helen Zhao, Deanne Den Hartog, Corine Boon, Armin Pircher Verdorfer, Joanna Ritz

Speaker affiliation: University of Amsterdam

Emotional inertia, which refers to the tendency of emotional states to persist over time, has emerged as an important aspect of emotion dynamics. However, fewer studies have examined the workplace well-being correlates of emotional inertia and the role of organizational context. In order to address this gap, we conducted a study using the experience sampling method to investigate the association between emotional inertia and employee well-being, and the moderating effect of job stress. A pilot study was first conducted with 43 UK employees using the m-Path app, where participants were prompted to report their positive and negative emotions five times a day for five workdays and then report their well-being outcomes. The results revealed that, after controlling for mean-level emotions, both positive and negative emotional inertia were associated with lower job satisfaction and lower work engagement. Furthermore, job stress moderated the association between positive emotional inertia and well-being outcomes, such that the negative effect of positive emotional inertia was attenuated and even reversed when job stress was high. The findings show that while emotional inertia is generally a sign of maladaptation, positive emotional inertia in more stressful workplace can present a beneficial resource building process. We are now conducting another round of data collection in order to increase the sample size and provide more robust support for these findings.

Cognition and mental health

Friday, October 6, 10:15–11:15, Auditorium DZ

Talk 1: Insights On Hopelessness And Meaninglessness: A Longitudinal Study On The Role Of Interpretation Biases And Emotion Regulation

[Ivan Blanco](#), Andrea Huguet, Alvaro Sanchez-Lopez

Speaker affiliation: Complutense University of Madrid

Background: Hopelessness and meaninglessness in life (MiL) are widely recognized as major risk factors for suicide. Cognitive-emotional theories propose that negative interpretation biases (NIB) and emotion regulation (ER) may contribute to their development. However, empirical evidence on these relationships is limited. The current study aims to investigate the longitudinal predictive role of NIB and ER (for both positive and negative emotions) in the development of hopelessness and MiL.

Methods: A total of 115 participants (80% female, mean age: 20.45) completed three assessments approximately 1.5 months apart. They completed an objective measure of interpretation biases (modified SST) and a set of questionnaires on their use of emotion regulation strategies (rumination, emotional suppression, reappraisal, positive rumination, and dampening) and their levels of hopelessness and MiL.

Results: Structural equation modeling analyses revealed that positive rumination, dampening, and emotional suppression fully mediated the relationship between NIB and hopelessness. However, only positive rumination mediated the relationship between NIB and MiL. The final model showed an excellent fit [$\chi^2=7.9$ (6); $p = .25$; $\chi^2/df = 1.3$; CFI = .98; TLI = .95; RMSEA (90%) = .06 (.000 - .169)].

Conclusions: This study sheds new light on the role of NIB and ER in explaining the development of hopelessness and MiL, and highlights potential new mechanisms for understanding and preventing these conditions.

Talk 2: How Do We Remember Past Psychological Symptoms And Well-Being? Recall Biases And Their Protective Role In A National Sample

[Ana Mar Pacheco-Romero](#), Theresa Mexia, Vanesa Peinado, Alba Contreras, Almudena Trucharte, Carmen Valiente, and Carmelo Vázquez

Speaker affiliation: Complutense University of Madrid

Introduction. Remembering past symptoms and well-being is prone to recall bias (RB). However, the magnitude of RBs for different types of symptoms and well-being, clinical group differences in the direction of recall, the factors associated with these biases, and their impact on future symptomatology are not well known.

Methods. We assessed self-reported psychological symptoms [depression (PHQ-9), anxiety (GAD-7), post-traumatic stress (ITPQ) and daily functioning], and well-being [resilience (BRS-6), primal positive beliefs about the world (PI-6), and happiness (PHI)] in a sample of 1330 participants at three different times (T1: April 2020, T2: November 2020, and T3: April 2021). In

T2, participants were asked to recall the severity of selected symptoms and well-being items they reported in T1. We used delta scores on the T1 and T2 as a standardized measure of RB, and linear regression analyses, to assess the association between current symptoms and well-being at T2 and RB and the predictive role of RB indices on symptoms in T3.

Results. We found significant differences in the general direction of the recall of past symptoms and well-being. RBs were associated with the level of symptomatology at the time of recall and were also predictive of future symptomatology.

Conclusions. Biases in reporting past symptoms should be considered when assessing psychopathology in the general population. The implications of this cognitive bias for research in psychopathology are discussed.

Talk 3: Assessment Of Attentional Biases In Mothers With Postpartum Depression

Gloria Salgado, Almudena Duque, Covadonga Chaves, Manuel Sánchez

Speaker affiliation: Complutense University of Madrid, Pontificia University of Salamanca

Introduction: The main objective of this study was to assess a specific attentional bias in mothers with symptoms of postpartum depression (PPD), using visual attentional processing indices provided by eye-tracking technology.

Methods: The sample consisted of a total of 34 mothers in their first year postpartum, with a mean age of 33,32 (SD= 5,67). The Edinburgh Postpartum Depression Scale (EPDS) was used to separate the mothers into two groups. All participants completed a free-viewing attentional task designed with 96 trials, 48 trials for each emotional category (happy, sad, and angry), combined with neutral expression of the same adult/child. Analyses performed were mixed ANOVAs 2 (Group: PPD, controls) x 3 (Emotional category: happy, sad, angry) x 2 (Image type: adult, child).

Results: Results indicate that mothers with PPD symptoms showed a lower preference for children's neutral stimuli than for negative emotional stimuli on the indices of total fixation time and total number of fixations, compared to control mothers. High correlations were also found between PPD symptomatology and attentional preference for neutral faces to negative emotions in infants.

Conclusions: Although the data do not agree with the scientific literature regarding attentional avoidance of negative infant stimuli by mothers with PPD, we did find a protective factor in the control group mothers when processing emotional infant stimuli.

Talk 4: Biased Facial Emotion Perception In Social Anxiety: Disentangling The Effects Of State, Trait And Social Anxiety

Gerly Tamm

Speaker affiliation: Gent University, University of Tartu

Introduction: Social anxiety is characterized by perceptual biases when processing facial emotional information, including general clarity/ambiguity of facial expressions. However, considering the variability within subjects with high social anxiety, it is unclear if these effects are triggered by social anxiety per se, or if it results from a more complex interaction between different types of anxiety. Anxiety in general is characterized by intolerance of ambiguity (e.g., Saviola et

al., 2020). This study aimed to explore the interactions between state, trait, and social anxiety in perception of emotional content and ambiguity in human faces, while controlling for some major within (e.g., face familiarity, attractiveness etc.) and between subjects confounds (sex, age, education).

Methods: Participants were recruited via Academic Prolific, and they completed a series of questionnaires (including short forms for STAIT and STAIS, and SPIN) and tasks, including a face perception task in which they had to rate multiple facial attributes.

Results: Regression models demonstrated a significant three-way interaction between state and trait anxiety, and social anxiety when predicting perceived facial ambiguity in neutral faces. This analysis was followed up by exploring the effects on valence and arousal ratings.

Conclusions: These results suggest that face perception in social anxiety depends on a complex interaction between different levels of trait and state anxiety which contribute to the face processing biases.

Emotions and emotion regulation in children and adolescents

Friday, October 6, 10:15–11:15, Auditorium DZ1

Talk 1: Family-Specific Temporal Networks Of Daily Adolescent Affect And Perceived Parenting

[Savannah Boele](#), Anne Bülow, Adriene M. Beltz, Amaranta de Haan, Jaap J. A. Denissen, Marleen H. M. de Moor, Loes Keijsers

Speaker affiliation: Erasmus University Rotterdam

Introduction. Different theories propose that parent-adolescent dynamics are either different between subgroups or unique to each family. We explored whether the daily dynamics between adolescent affective well-being and perceived parenting were shared by subgroups or idiosyncratic.

Methods. For 100 consecutive days, 129 adolescents (Mage=13.3, 64% female) reported on daily positive and negative affect, and five parenting practices. As preregistered, we conducted Subgrouping Group Iterative Multiple Model Estimation (S-GIMME), which is a data-driven method that estimates idiographic (family-specific) temporal networks, including contemporaneous and lagged associations among all variables. Additionally, S-GIMME detected whether associations were shared by the sample (group-level) or subgroups (subgroup-level) or were unique to an individual (individual-level).

Results. One group-level association was detected, such that more positive affect co-fluctuated with less negative affect in most participants. One subgroup emerged (n=45) who shared same-day associations between several parenting practices. However, subgroups did not share similar associations between adolescent affect and parenting. Instead, affect-parenting associations were found at the individual level, with families having unique patterns. That is, which parenting practices and how they were related to adolescent affect was family specific.

Conclusions. The results stress the idiosyncratic nature of how perceived parenting is linked to adolescents' affective well-being in everyday life, stressing that averaging across families leads to invalid conclusions about the dynamics within individual families

Talk 2: Emotion Regulation And Student Engagement: Age And Gender Differences In Youth

[Anabela Caetano Santos](#), Celeste Simões, Patrícia Arriaga

Speaker affiliation: University of Lisbon, University Institute of Lisbon

Introduction: Research has documented the role of emotions in learning and emotion regulation for student engagement (SE). However, knowledge regarding the predictive power of emotion regulation strategies (ERSs) on SE at different age-groups was lacking. Also, our study aimed to provide data on ERSs use based on age and gender since findings are mixed. **Methods:** This cross-sectional study included a representative sample (N = 1507) of Portuguese students between 10 and 25 years. The sample was divided into four age-groups (10-12, 13-15, 16-18, 19-25). A two-way Analysis of Variance (ANOVA) was conducted to explore the impact of gender and

age-groups on levels of SE and ERS. Multiple linear regression (MLR) analysis was used to understand the role of ERSs on SE while controlling for gender.

Results: Results indicated ERSs varied with age, with some having a linear developmental pattern (e.g., Putting into Perspective) and others a non-linear (e.g., Positive Reappraisal). SE was higher in females and the youngest and oldest age-groups. Higher SE was related to using more adaptive strategies, and the ERS Refocus on Planning best correlated with the higher SE scores for every age-group.

Conclusions: Prevention and intervention should consider ER development. ERS, included in social and emotional learning programmes, may help students navigate in difficult academic situations and enhance or maintain their SE.

Talk 3: The Role Of Anger And Sadness Dysregulation In The Relationship Between Parental Psychological Control And Depressive Symptoms

[Giulia Gliozzo](#), Laura Di Giunta, W. Andrew Rothenberg, Liliana Maria Uribe Tirado, Jennifer E. Lansford, et al.

Speaker affiliation: Sapienza University of Rome

Adolescence is a period characterized by a substantial increase in the prevalence of psychological problems, such as depressive symptoms (DS) (Ge et al., 2001), perhaps due to difficulty in regulating negative emotions (Rothenberg et al., 2019). Parental psychological control (PPC) is significantly associated with DS in adolescents (Werner et al., 2016). The main goal of this study was to examine the association between daily PPC and adolescents' daily DS through adolescents' daily sadness (SD) and anger dysregulation (AD). This study included an Italian clinical sample and a Colombian normative sample (N = 145; Mage = 16.07, SD = 1.65, 50.53% males). Multilevel models of intensive longitudinal data were examined to disaggregate the between- and within-person effect of PPC on DS, through anger and sadness dysregulation. Overall, adolescents who experienced higher levels of PPC showed higher DS, and this effect was completely mediated by AD and SD in both clinical and normative samples. These effects were significant only at the between-level, but not at the within-level in both samples, which means that PPC does not affect their children's DS, anger and sadness dysregulation on a daily level. However, those youths whose parents are more psychologically controlling than other parents, have more difficulties in their emotion regulation and this, in turn, increases their DS. In addition, both AD and SD were associated with more DS both at the between and within level.

Talk 4: Hope Or Fear? Children's Responses To Climate Change Fiction

[Martijn Goudbeek](#), Marije van Amelsvoort, Suzanne van der Beek, Rosalyn Borst, Semmy Claassen, Ruud Koolen, Phillip Looij

Speaker affiliation: Tilburg University

Introduction: The climate crisis makes the need for a change in our relation to nature more evident than ever. Children's literature can facilitate such a change, because fiction enables us to imagine alternative worlds, relations, and realities, allowing us to rethink our relation to the earth and increase our willingness to mitigate climate change. However, there is considerable debate in

communication sciences and children's literature studies on the effectiveness of narratives focusing on hope or fear (Oziewicz et al. 2022, Chapman et al, 2017).

Method: We report on a study in which young readers (aged 9-12, N = 210, divided over three schools) were exposed to climate change narratives that relied on either hope or fear. The effects of these narratives on the young readers on climate change attitude and narrative engagement are assessed via questionnaires before the reading session, directly after it, and one week later.

Results: Data collection has been completed and (preliminary) results will be presented.

Conclusion: By combining cognitive literary studies and communication sciences, this study provides insight into the effects of different affective strategies in climate change narratives on children's attitude towards climate change mitigation. The importance of narrative expectations ("all stories end well") for our willingness to act towards climate change mitigation will be discussed.

Stress and coping

Friday, October 6, 10:15–11:15, Auditorium DZ3

Talk 1: Harnessing Stress Mindsets To Impact Pain Experiences And Well-Being

Inge Timmers, Irem Duman, Ahmed Karim, Andy van Noort, Rein Notté, Demi-Jelle Posthumus, Babette Verkerke

Speaker affiliation: Tilburg University

Introduction. Stress and pain interact. How stress impacts pain is not always straightforward, as it can increase or decrease pain. An important factor herein may be our mindsets about stress: whether we believe stress is fundamentally enhancing or debilitating. Here, we aimed to examine whether altering stress mindsets by means of a short digital intervention affects how people experience pain.

Methods. 20 healthy volunteers (aged 18-26, 16 females) participated so far in this ongoing study, and were randomised into a stress-is-enhancing (SiE; n=10) or stress-is-debilitating (SiD; n=10) mindset intervention. Pain threshold and tolerance levels were assessed pre- and post-intervention using the Cold Pressor Test. Well-being after each pain induction was also assessed. Results. Stress mindsets became more positive after the SiE and more negative after the SiD intervention (time x group: $F(1,18)=13.00, p<.001$). Pain thresholds and tolerance increased over time in both groups, but slightly more in the SiE than the SiD group (M delta 14s vs 10s, M delta 41s vs 27s, resp.). The change in stress mindset and in pain thresholds furthermore correlated with changes in well-being ($r=.22, r=.35$, resp.).

Conclusions. Preliminary data suggest that the intervention successfully altered stress mindsets, and that this reduced pain sensitivity. Findings are promising and suggest that stress mindsets may induce more positive pain experiences, potentially via more positive feelings following pain.

Talk 2: Modulatory Role Of Motivational Self-Focuses On The Relation Between Perceived Stress And Momentary Affect: An Esm Study

Oscar Martin-Garcia, Ricardo Rey-Saez, Teresa Boemo, Ana Mar Pacheco-Romero, Ivan Blanco, Alvaro Sanchez-Lopez

Speaker affiliation: Complutense University of Madrid

Introduction: Perceived stress intensity is a contextual variable that affects daily-life emotions. However, the activation of motivational goals can modulate this influence through the focalization on attaining positive results (promotion self-focus (SF)) or avoiding negative results (prevention SF). In this ESM study, we modelled the role of momentary motivational SF activations in the effect of perceived stress on affect, considering individual differences in emotional symptoms (i.e., depression and anxiety).

Methods: A sample of 139 participants with varying emotional symptoms levels completed an ESM for 10 days (3 daily assessments of momentary emotions, precedent stress perception and motivational SFs).

Results: The effect of stress intensity on negative affect (NA) was lower the more a promotion SF was activated. Moreover, motivational SFs had direct effects on affect that depended on symptom levels. Higher promotion SF activation produced an improvement in affect, with this effect being larger for individuals with higher symptom levels. In contrast, higher prevention SF activation produced a differential pattern, provoking a decrease of positive affect (PA) in low symptom individuals and an increase of PA in high symptom individuals.

Conclusion: The way that individuals aim to achieve their goals in daily life can modulate the impact of stress intensity in emotions and reflect adaptive regulatory patterns that may be different at high emotional symptom levels.

Talk 3: Fighting Anxiety With Curiosity For Murder? Emotional Correlates Of True Crime Consumption

[Corinna Perchtold-Stefan](#)

Speaker affiliation: University of Graz

Introduction: Fear of crime is elevated in women compared to men. Curiously, women take greater interest in “true crime” – the often-graphic depiction of real criminal cases in the media. It is unclear whether true crime consumption has negative consequences for emotional well-being (more anxiety and stress due to an overestimated crime risk) or shows positive links to mental health (better toleration of negative affect, emotion regulation practice).

Methods: In a large-scale empirical investigation (online screening and psychometric session), we aim to collect data from $n \sim 500$ adults on true crime consumption and motivations, perceived likelihood of victimization, stress, anxiety, personality, and emotion regulation capacity.

Results: By April 23, $n = 409$ participants completed the online screening. Women reported significantly more true crime consumption than men ($d = 0.86$). Among women ($n = 242$), true crime consumption showed no significant links with perceived likelihood of victimization or resilience. However, true crime consumption was positively linked to higher preparedness to avoid victimization, and women with lower resilience scores more frequently reported to consume true crime for emotion regulation purposes. Data analysis is ongoing.

Conclusions: Linking true crime consumption to emotional well-being may reveal crucial insights into how women cope with fear of crime and may help build a gender-specific resilience framework based on specific female interests.

Talk 4: The Insightapp: A Gamified Approach To Helping People Embrace Difficult Emotions In Stressful Situations

[Victoria Amo](#), Falk Lieder

Speaker affiliation: Max Planck Institute for Intelligent Systems

The InsightApp is a gamified mobile application designed to help people learn and practice emotion regulation skills to constructively cope with stressful situations and difficult emotions in everyday life. We tested the effectiveness of the app at improving participants' emotional reactivity to stress in a randomized placebo-controlled trial lasting three weeks. The results showed that, while using the app, participants (average age=38 years, female=52%, white=91%) in the

treatment group were less reactive to daily stressors than participants in the control group. Participants in the treatment group reacted to daily stressors with 1.29 units less of emotion intensity per unit of stress ($t(200) = -1.29$, $p = 0.01$, 95% CI [-2.38 -0.21]), and 0.98 units less of emotional struggle per unit of stress ($t(200) = -0.98$, $p = 0.04$, 95% CI [-2.09 0.14]). In terms of emotional intensity and emotional struggle, participants in the experimental group were 14% and 11% less reactive to stress, respectively. These effects continued to be statistically significant in the post-intervention period in the case of emotion struggle ($t(200) = -1.16$, $p < 0.01$, 95% CI [-2.16 -0.15]), but not for emotion intensity ($t(200) = -0.63$, $p < 0.21$, 95% CI [-1.63 0.37]). The results suggest that the InsightApp is a promising tool for improving people's emotional response to stress with potential training effects.

Decision-making

Friday, October 6, 10:15–11:15, Auditorium DZ4

Talk 1: Induced And Spontaneous Mood Fluctuations Similarly Bias Economic Choices

Roeland Heerema, Mathias Pessiglione

Speaker affiliation: University College London

Introduction: Real-world mood fluctuations affect risk-taking (e.g., variations in the weather drive lottery participation). However, in-lab studies featuring emotion inductions have delivered mixed reports of effects on economic cost-benefit tradeoffs.

Methods: In 2 studies (in-lab, n=94, and online, n=119), we induced happiness and sadness with music and vignettes and assessed their effects on economic choices. Physiology (skin conductance, pupillometry, and facial muscles) was recorded in the lab study and eyetracking was done in both studies. The online study included 24 weekly follow-up sessions in which participants rated their spontaneous mood fluctuations and made short series of economic choices.

Results: Self-report and physiology confirmed the induction of happiness and sadness. Computational modelling of choices specified mood effect as an additive bias: costly but more rewarding options were chosen more when happy, and less when sad, irrespective of the cost type (risk, delay or effort). This effect was observed whether mood was indicated by self-report or recovered from physiology, and whether fluctuations were induced or spontaneous.

Conclusion: Both spontaneous and induced mood fluctuations bias the decision to face costs and get more rewards. This finding is in line with our recent theoretical proposal that a mood bias might have been adaptive in our evolutionary past, for adjusting foraging decisions to natural fluctuations of rewards and costs in the environment.

Talk 2: Resolve Conflict Or Spend Time Together? How Emotion Motives Explain Emotional Situation Choices

Jurriaan Tekoppele, Ilona de Hooge, Hans van Trijp

Speaker affiliation: Wageningen University & Research

Introduction: People daily choose situations to regulate their emotions. Yet, it remains unclear how experienced emotions influence daily-life situation selection. We present a framework of how three emotion-motives, namely pleasure, goal-achievement, and approach-avoidance, and perceived utility of situation alternatives explain emotion effects on situation choices.

Methods: In a series of experiments, we induced a variety of emotions and compared the importance of the three emotion-motives using multi-attribute utility theory. In experiment 1 (2), participants experienced guilt (gratitude) or no emotion, and indicated their preferences for 12 real-life social situations that operationalized these three motives.

Results: The findings from the experiments suggest that, when experiencing guilt (gratitude), people mostly choose negative (positive) situations and base this choice more (less) on goal-achievement and less (more) on approach-avoidance motives. These findings go against

prohedonic theories which spotlight pleasure motives. Thus, when experiencing guilt, people choose reparatory situations, whereas they choose social, fun situations when experiencing gratitude.

Conclusions: Our findings reveal how discrete emotions can influence situation choices, and how multiple emotion-motives affect perceived utility of situations. This provides new insights into how people navigate real-life social, emotional situations and into situation selection as an emotion-regulation strategy.

Talk 3: Affectddm – A Computational Perspective To Affect Generation In Perceptual Decisions

[Alan Voodla](#), [Andero Uusberg](#), [Kobe Desender](#)

Speaker affiliation: KU Leuven, University of Tartu

Decisions are often accompanied by feelings of positive or negative valence with some intensity, also called affect. It has been proposed that affect functions as a monitoring signal, recruiting subsequent regulatory control processes. However, it's unclear what are the mechanisms that generate affect in decision-making. Inspired by control process theory (Carver, 2015), we model affect as the difference between expected and actual progress in an evidence accumulation framework. Actual progress is mapped onto the drift-rate parameter and expected progress onto a novel expected drift-rate parameter during a perceptual decision. Affect is computed as the difference between the expected and actual amount of evidence in a trial. We then test predictions of this model in a perceptual decision-making experiment, where expected and actual progress are experimentally manipulated. We find that affect reflects the sum of actual and expected progress, but not their discrepancy as predicted by control process theory. Comparing the empirical data with model predictions, we find that the model is able to simultaneously account for choice, reaction times, and affect in perceptual decisions.

Talk 4: Implicit Motivational Value Of Emotional Stimuli

[Christian E Waugh](#), [Adam Porth](#), [Frank Fang](#), [Paul Sands](#), [Kenneth Kishida](#)

Speaker affiliation: Wake Forest University

Introduction: Theoretical and neuroscientific accounts of emotions acknowledge that many of their constituent processes exist outside of conscious reflection. Yet, assessing these implicit emotional processes has been elusive. We suggest that reinforcement learning (RL) paradigms and models can assess implicit emotional processes related to motivated behavior. In RL paradigms, people make choices between options that lead to pre-specified rewards and punishments, however, it is possible to also estimate the implicit motivational value (iMV) of the rewards and punishments themselves instead of pre-specifying them.

Methods: We implemented these new RL models in two tasks: one in which people made choices that predicted the likelihood of whether they would see either familiar or novel negative, neutral, or positive emotional images; and another in which they viewed faces varying in attractiveness.

Results: We estimated the iMV of these stimuli and found that, as expected, participants exhibited greater iMV to positive than to negative images and greater iMV to more attractive than to less

attractive faces. Further, there were only mild correlations between iMV and explicit ratings of these stimuli.

Conclusions: These findings demonstrate the extraordinary possibility for using RL models to estimate the iMV of a host of emotional or otherwise motivationally salient stimuli that is clearly separable from explicitly asking participants about their feelings.

Experience of social emotions II

Friday, October 6, 10:15–11:15, Auditorium DZ6

Talk 1: Plot, Pain And Pleasure? Schadenfreude, Deservingness And Social Norms In Media Enjoyment

Katrin Döveling, [Lilian Suter](#)

Speaker affiliation: University of Applied Sciences Darmstadt, Zurich University of Applied Sciences

Around the globe, people enjoy watching the misfortunes of others on diverse media channels. But: Why do we laugh when seeing others suffer? Schadenfreude, the pleasure at the misfortunes of others (van Dijk & Ouwerkerk, 2014), is a complex emotion worth studying. First, based on a thorough literature review, a model of schadenfreude in media psychology is presented that combines individual and social appraisal processes. We then provide evidence for the model in three studies using observational and survey methods (N1 = 424, N2 = 33, N3 = 276) and reveal associated intrapersonal and social components that foster the display of schadenfreude in media reception. Snippets of casting show failures and fail clips were used as stimulus material. Study 1 studied the individual appraisals of responsibility, moral deservingness and perceived harm alongside the personality trait of belief in a just world. Study 2 and 3 investigated the role of interpersonal communication and social appraisals during the reception situation. Study 3 additionally varied whether the situation involved known peers or strangers. The results support key factors in the model and the vital role of deservingness (individual appraisal) and social norms (social appraisals) for the display and enjoyment of schadenfreude in media reception. We conclude with implications for further investigation of schadenfreude in media and non-media settings, discussing emotion regulation, enjoyment and norms of shared emotions.

Talk 2: Differences Between Happy-For And Schadenfreude: A Sentiment Analysis

[RouJia Feng](#), Kaiyang Qin, Wenrui Cao

Speaker affiliation: Leiden University

Happy-for and schadenfreude are two emotions that both involve a positive feeling for the emotion expresser. While happy-for concerns feeling joy over another's good fortune, schadenfreude concerns feeling joy following another's misfortune. The present study aims to explore the differences of positive and negative sentiment distribution between the two emotions. We also explore whether the two emotions are associated with subjective well-being, and how they related to relationship type, closeness, and severity of the event. We collected data using a recall task with a within-subject factor (recall: happy-for vs. schadenfreude) and analyzed the positive and negative sentiment distribution of the recalled experience via sentiment analysis. Results show that the recall of happy-for had a higher positive sentiment distribution and a lower negative sentiment distribution as compared with the recall of schadenfreude. When recalling happy-for, participants more frequently recalled experiences involving closer others: family relationships, romantic relationships, friendship, and work relationships. In contrast, when recalling

schadenfreude, participants more frequently recalled experiences involving acquaintances, strangers, or public figures. Additionally, the severity of the event recalled for happy-for were greater than those recalled for schadenfreude. No significant association was found between subjective well-being and the valence of the recall for both emotions. Our findings suggest that the recall of happy-for and schadenfreude differ in valence and relationship factors, which provides new insights into the nature of the two emotions via sentiment analysis.

Talk 3: Psychopathy, Moral Emotions, And Aggression: The Moderating Role Of Moral Disengagement And Self-Control

Valentina Macias Vasileff, Yasemin Erbas, Carlo Garofalo, Elien De Caluwé, Jelle Sijstema, Stefan Bogaerts

Speaker affiliation: Tilburg University

Introduction: The link between psychopathic traits and aggression is well-established, yet the precise mechanisms driving this relationship remain unclear. Moral emotional (i.e., shame and guilt) deficits have been proposed as possible explanatory factors, and we argued that these relationships are contingent upon moral disengagement and self-control. The present study aimed to shed light on the (1) mediating role of shame- and guilt-related evaluative and action tendencies in the relationship between psychopathy and reactive and proactive aggression (RA and PA); and (2) the moderating influence of moral disengagement and self-control on these relationships.

Methods: A cross-sectional study was conducted and participants (N = 339) completed self-report measures. Correlation and moderated mediation analyses were tested.

Results: Preliminary correlational analyses revealed that: (a) Guilt components were associated with low RA/PA, psychopathy, and moral disengagement, as well as with high self-control, whereas shame components revealed a mixed pattern of associations; (b) psychopathy was positively associated with moral disengagement and RA/PA, and negatively with self-control; (c) moral disengagement and self-control were respectively positively and negatively associated with RA/PA.

Conclusions: The preliminary findings were in line with conceptual information and support the testing of the theoretical model proposed, whose results will be presented at the conference.

Talk 4: Trait But Not State Gratitude Predicts Harsher Moral Judgments

Xueting Zhang, Niels Van Doesum, Lotte van Dillen, Eric van Dijk

Speaker affiliation: Leiden University

In the debate on whether moral judgments are cognition-driven or emotion-driven, negative emotions were widely researched while the role of positive emotions has been neglected. Since gratitude is deemed a moral emotion and has been found to predict greater moral outrage, we conducted two preregistered studies to examine the impacts of dispositional and incidental gratitude on moral judgments. In Study 1, 394 online participants were randomly assigned to either a moral concern group or a moral judgment group. Both groups first completed a dispositional gratitude scale, then they finished a moral concern (i.e., how relevant a moral principle is) or moral judgment (i.e., how morally wrong a behavior is) scale respectively. Results

showed that dispositional gratitude significantly predicted greater moral concerns and harsher judgments in various moral domains. In Study 2, we invited 222 participants to a laboratory. Participants were randomly assigned to one of three emotion conditions (gratitude vs. happiness vs. neutral emotion). They first recalled and wrote about a time when they felt grateful or happy, or their daily routines respectively. Then, they completed the same moral judgment task as in Study 1. Surprisingly, we did not find any differences in moral judgment scores among the three emotion conditions. In sum, although literature treated dispositional and incidental gratitude similarly, we found distinct effects of dispositional and incidental gratitude on moral judgments. The findings contributed to filling the gap of positive emotion's role in moral judgments and shed light on the potential difference between dispositional and incidental gratitude.

Emotion regulation in the lab and online

Friday, October 6, 10:15–11:15, Auditorium DZ10

Talk 1: Working Through Your Emotions: Does Physical Exercise Facilitate Emotion Regulation?

[Juriena D. de Vries](#), Keri A. Pekaar

Speaker affiliation: Leiden University, Tilburg University

Introduction: Research shows that emotions become less negative from prior to after physical exercise. Based on this, it is inferred that exercise helps to regulate emotions. However, the presumed underlying emotion regulation process (starting with a relevant emotional event and comprising actions to change the experienced emotions in the desired direction) has not been demonstrated yet, which is the aim of the present study.

Methods: University students (N=66; ongoing data collection) were asked to recall a negative situation to induce negative emotions. After this, they were randomly allocated to one of the following 30-minute tasks during which they were asked to reflect on their recalled negative situation: a) moderate-intensity exercise; b) making a puzzle (attentional control condition); and c) sitting on a chair (no attention control condition). Participants' evaluation of their emotion regulation efforts was measured after, and negative emotions were measured before and after the 30-minute task.

Results: Repeated measures ANOVA show that participants in the exercise condition show a significantly larger decrease in negative emotions from prior to after exercising compared to participants in both control conditions. Emotion regulation efforts did not significantly differ between conditions in our preliminary sample yet, but means were in the expected direction.

Conclusion: Preliminary results show that physical exercise has the potential to decrease negative emotions and facilitate emotion regulation.

Talk 2: The Benefits Of Emotional Acceptance In A Double Mood Induction Design In The Laboratory Setting

[Alba Hernández-Gómez](#), Gonzalo Hervás

Speaker affiliation: Complutense University of Madrid

Introduction: Despite the proven efficacy of acceptance for the different psychopathological and health conditions; in the laboratory setting, we still do not know what it provides compared to a control condition and what its benefits are. This study aimed to analyze the benefits of emotional acceptance compared to a control condition both in the short (i.e., after a first mood induction), and in the medium-long term (i.e., after a second mood induction).

Methods: A laboratory study, in which 85 female students took part, was conducted. Participants were exposed to two mood inductions through validated film clips. Before the first mood induction, participants were randomly assigned to different experimental conditions: acceptance, or a control group. Before the second mood induction, all participants (regardless of the experimental

condition they were assigned) were instructed in cognitive reappraisal. Additionally, an evaluation 4 and 24 hours after the experimental procedure was carried out.

Results: Compared to the control condition, acceptance training showed a benefit in difficulties in the emotional regulation state. Additionally, compared to the control group, acceptance showed a lower cognitive cost after the recovery from the second mood induction, and a lower degree of discomfort in the case of having to watch the negative scenes again 4 and 24 hours after the experimental session.

Conclusions: Both in the short and medium term, emotional acceptance training could improve emotional regulation, which has important clinical implications. In addition, in the medium-long term, acceptance could have beneficial effects in cognitive cost and the degree of discomfort.

Talk 3: Can Emotional Acceptance Promote The Effectiveness Of Subsequent Cognitive Reappraisal?

Alba Hernández-Gómez, Gonzalo Hervás

Speaker affiliation: Complutense University of Madrid

Introduction: From the emotional polyregulation perspective, there is evidence that emotional acceptance might promote subsequent cognitive reappraisal, although most of it is correlational in nature. In this context, the main objective of this study was to determine if acceptance promoted cognitive reappraisal compared to a non-active and an active control group (i.e., emotional labeling).

Methods: An experimental online study, in which 153 adults from the general population took part, was conducted. Participants were exposed to two related negative mood inductions through validated film clips. Before the first mood induction, participants were randomly assigned to one of the following experimental conditions: emotional acceptance, non-active control group, or active control group (i.e., emotional labeling). Before the second mood induction, participants from all experimental conditions received training in the cognitive reappraisal strategy.

Results: After the application of cognitive reappraisal, the acceptance group showed a lower irritability score than the active control group (i.e., emotional labeling). Furthermore, compared to the non-active and active control condition (i.e., emotional labeling), acceptance promoted higher-quality cognitive reappraisal.

Conclusions: Although the results are not consistent, there is preliminary evidence showing that acceptance may have beneficial effects on cognitive reappraisal, specifically, on the reduction of irritability, and on a higher quality of the generated cognitive changes. Therefore, acceptance and cognitive reappraisal may have synergistic effects.

Talk 4: Regulating Our Contingent, Anxious Selves

[Richard Lopez](#), Olivia Cava, Emma Moughan, Brianna Romero

Speaker affiliation: Worcester Polytechnic Institute

Introduction: Many interactions now take place on social media platforms, which are designed to maximize engagement via algorithms that personalize and curate content for the user. This presents a new arena for identifying links between intrapersonal processes, emotion regulation,

and mental health indicators. These links are important to understand, especially in light of a global mental health crisis marked by increased prevalence of anxiety and depression.

Methods: In a large online sample of Prolific participants (N=443, Mean age = 30.2, SD = 9.2), we conducted preregistered analyses to investigate individual differences in use of multiple emotion regulation strategies, symptoms of depression and anxiety, and approval-related contingent self-worth—as experienced on Instagram.

Results: Consistent with our hypotheses, individuals who reported greater use of disengagement strategies exhibited more depression and anxiety symptoms. In the case of anxiety, this relationship was further qualified by an indirect effect, such that those who reported habitual use of disengagement strategies experienced more approval-related self-worth, which was associated with greater anxiety. All models controlled for participants' age and gender.

Conclusions: These findings suggest that individual differences in mental health may be accounted for employment of less adaptive emotion regulation strategies, as well as processes reflecting contingent self-worth while using social media.

Posters

Poster Session A

Thursday, October 5, 12:00–13:15, Foyer

P1: Altered rs-fMRI Topological Organization In Late-Life Depression

Chih-Hao Lien, Thomas Vande Castele, Maarten Laroy, Margot Van Cauwenberghe, Ron Peeters, Stefan Sunaert, Koen Van Laere, Patrick Dupont, Filip Bouckaert, Louise Emsell, Mathieu Vandenbulcke, Jan Van den Stock - KU Leuven

Introduction: Previous studies applying Graph Theory-based approach to investigate the neural mechanism of Late-Life Depression (LLD), a prevalent disease in elder populations, at network level. However, limitations, including rarely constructed undirected and weighted (UW) networks, focus on a few properties, and the exclusion of the cerebellum, exist in previous studies. Additionally, the relationships between altered topological organization and synaptic density are unclear in LLD patients. Thus, we aimed to investigate the altered topological organization in LLD patients with UW networks and 9 topological properties while including the cerebellum and explore the relationships between alterations in topological properties and synaptic density in LLD patients.

Method: Resting-state fMRI data from 33 healthy older adults and 18 LLD patients were used to calculate functional connectivity matrices with 272 ROIs across the cerebrum and cerebellum regions. Then, 7 levels of sparsity from 0.1 to 0.4 with steps of 0.05 were used to construct UW networks.

Finally, 3 global and 6 nodal topological properties were calculated.

Result: LLD patients showed better nodal properties in nodes related to emotion or reasoning and worse nodal properties in nodes related to emotion or social cognition after applying 3 filtering rules. But no group difference in global properties and synaptic density nor correlations between them were found.

Conclusion: The altered topological organization may explain the behavioral pattern of LLD patients and implies the mPFC may play an important role as a hub or mediator of the network of LLD patients.

P2: In And Out Of Control: The Impact Of Having And Losing Control Over Threat On The Acquisition And Extinction Of Conditioned Fear

Michalina Dudziak, Bram Vervliet, Tom Beckers - KU Leuven

Control over threat has been shown to decrease fear expression during fear extinction. An open question is whether the ambiguous experience of losing control would affect fear learning and extinction. The current study investigated whether threat controllability reduces fear expression and enhances fear extinction and if losing control impairs both processes. Participants (N = 90) were assigned to either a full-control (FC) group, a yoked lack-of-control (LA) group, or a yoked loss-of-control (LO) group. Participants underwent a fear conditioning procedure with fear acquisition and extinction phases. During acquisition, participants were repeatedly presented with

two shapes, one of which was paired with an aversive electrical stimulus (US). Depending on group allocation, participants could terminate the US with a button press (FC group) or could not control its duration (LA group). Participants in the LO group could first stop the US, and then they lost control over it. During extinction, both CSs were repeatedly presented without the US. Participants provided US-expectancy and CS-fear ratings and skin conductance responses (SCRs). Results revealed no significant group differences in extinction learning. However, we observed marginally significant group differences in SCRs during the acquisition phase, suggesting a different pattern of acquiring fear depending on the (un)controllability variant. The increased fear responding induced by losing control should be replicated.

P3: Peak Experiences And Their Varieties (Pev) In Midlife

Iva Poláčková Šolcová, Lucie Klůzová Kráčmarová, Eva Dubovská, Nikola Paillereau - Institute of Psychology of the Czech Academy of Sciences

Introduction: This study aims to better understand peak experiences and their varieties (PEV) in midlife. Peak experiences are often described as transcendent moments of pure joy and elation that stand out from everyday events, and are viewed as a key concept in understanding positive human experience and development in adulthood.

Although midlife angst and turmoil have received much attention in professional and popular culture, nearly no published research has been conducted on peak experiences during this major lifespan period. The aim of our research was to better

understand the types of experiences that are most likely to engender joy and fulfillment in the midlife age group.

Sample and settings: Interviews were conducted with 118 participants aged 40-60 during the Covid year 2021. The PEV were analyzed on three levels: the level of action, the level of feeling, and the level of reflection. Results: From the data, it was found that peak experiences in midlife are often thematized as small things that people enjoy (e.g., people being kind, the world being a nice place, or learning something new about oneself). The description of peak experiences is more plausible to descriptions of plateau experiences: states in which one can stay "turned on", serene, less intense, and calmer, as opposed to the acute emotional response to miraculous, dramatic, orgasmic, or transient moments associated with peak experience. The results have important implications for studying happiness and life satisfaction in midlife, for example in defining the ideal emotional state or redefining hedonic goals in midlife."

P4: Development Of Czech Emotional-Word List For Children (Cewl-Ch)

Nikola Paillereau, Valentýna Mikutová, Eliška Bejčková, Marie Křivánková - Institute of Psychology of the Czech Academy of Sciences

Tracing the development of emotion words' acquisition in early childhood is of importance for clinical purposes; small emotional vocabulary can signal developing disorders such as autism spectrum disorder (Lartseva, 2014). The development can be traced with questionnaires containing lists of emotional words. An emotional-word list was developed for English-learning children from 1.5 to 16 years (Ridgeway et al., 1985;

Baron-Cohen et al., 2010), and adapted to Chinese-learning children from 2 to 13 years (Li & Yu, 2015). The lists contain emotion-label words (mainly emotion-descriptive adjectives and nouns). The aim of the present study is to develop a Czech Emotional-Word List (CEWL-CH) for children from 1.5 to 4 years (in early childhood). Different steps of the questionnaire development will be presented. The CEWL-CH is based on translations of words from the above-mentioned lists. The list is complemented by items collected from mothers who recorded emotional words that their children understand and produce. The recorded words are not only emotion-label, but also emotion-laden words, eliciting emotions (e.g., puppy, darling), and words describing bodily states (e.g., hungry, tired). The complete list will be revised by a focus group, composed of paediatricians and speech therapists. The final list will be administered to Czech parents with children divided into 3 age groups: 1.5 – 2, 2 – 3, 3 – 4 years. We aim to obtain/present data from 20 completed forms per age group.

P6: Measuring Infant Temperament – Validation Of An Age Adapted Version Of The Icti

Rabea Derhardt, Melanie Wieschmann, Marcel Zentner, Silvia Schneider, Sabine Seehagen - Ruhr University Bochum

Introduction: Infant temperament is associated with later psychological difficulties, e.g. aggressive behavior or ADHD diagnoses. Therefore, valid measures of infant temperament are important for prevention of mental health across the life span.

Different approaches to conceptualize infant temperament exist in the literature. The

approaches of Chess & Thomas, Buss & Plomin, Goldsmith & Campos and Rothbart & Derryberry are the most known. Despite many English measures the German speaking area lacks validated questionnaires.

Methods: The present study aims to validate an age adapted version of the Integrative Child Temperament Inventory (ICTI; Zentner, 2011) for infants aged 6 to 16 months. The ICTI is an economic parent rating resulting from the overlap of several theories. It consists of 30 items and measures temperament on 5 dimensions: activity, behavioral inhibition, irritability/frustration, attention/persistence and sensory threshold. It is validated for children aged 16 months to 8 years. Psychometric properties of the new version are examined. Factor analyzes, analyzes of reliability and validity are planned.

Results: By April 2023 approximately 200 parents took part in the online survey. At Emotions 2023 preliminary results will be presented.

Conclusion: The new version of the ICTI is supposed to enable the description of temperament in the course of child development and to contribute to early prevention of mental health.

P7: Emotional Appeals Are Associated With Specific Mental Images

Ursula Hess, Shlomo Hareli, Andrea Scarantino - Humboldt-University of Berlin

Introduction. Emotional facial expressions have a communicative function. Besides information about the internal states (emotions) and the intentions of the expresser (action tendencies), they also communicate what the expresser wants the observer to do (appeals). Yet, there is very

little research on the association of appeals with specific emotions. The present study has the aim to study the mental association of appeals and expressions through reverse correlation.

Method. Using reverse correlation, we estimated the observer-specific internal representations of expressions associated with four different appeals. A second group of 148 participants rated the resulting expressions.

Results. As predicted, we found that the appeal to celebrate was uniquely associated with a happy expression and the appeal to empathize with a sad expression. A pleading appeal to stop was more strongly associated with sadness than with anger, whereas a command to stop was more strongly associated with anger.

Conclusion. The results show that observers internally represent appeals as specific emotional expressions.

P8: A Matter Of Method? Two Meta-Analyses On The Role Of Emotions In The Maintenance Of Binge Eating

Insa Borm, Steffen Hartmann, Sven Barnow, Luise Pruessner - Heidelberg University

Introduction: The affect regulation model of binge eating states that binge eating is preceded by deteriorations in affect and maintained by subsequent improvements in affect. Given the increase in app-based studies in the past decade, the current meta-analyses integrate findings from ecological momentary (EMA) studies. The analyses extend existing findings by considering the role of negative and positive affect, and comparing results from different statistical approaches.

Method: A systematic literature review identified 44 EMA studies (N = 1419). For the

first meta-analysis investigating mean affect levels at the last assessment before and the first assessment after binge eating, standardized mean change effect sizes were extracted, and integrated using random-effects models with robust variance estimation. The second meta-analysis integrated correlations representing the trajectories of affect around binge eating episodes.

Results: In the first meta-analysis revealed deteriorated affect levels before binge eating, and further deteriorated levels after binge eating, both with small to moderate effects. The second meta-analysis revealed deteriorations in affect before binge eating and improvements in affect after binge eating.

Conclusions: The current meta-analyses partly support the affect regulation model. However, deteriorated affect levels after binge eating raise questions regarding the assumed mechanism of negative reinforcement maintaining binge eating.

P9: How To Judge Emotions? – Investigating Legal Case Induced Emotions And Emotion Regulation Techniques Among Legal Practitioners

Éva Grünwald, Anita Deak - University of Pécs

Introduction: Contradicting views exist on how moral emotions impact moral decision, especially in the legal field. The current study aimed to assess moral emotions experienced and emotion regulation strategies applied by attorneys/legal counsels in real life situations.

Methods: Participants (42) were asked to (1) recall a law case they were involved in, (2) answer questions related to the case (complexity, case-induced emotions,

impressions regarding the parties, etc.) and (3) fill in cognitive emotion regulation and cognitive reflection questionnaires (CERQ, CRT, REI). 7 emotions (fear, pride, anger, contempt, disgust, guilt, empathy) which differed as regards their valence, approach motivation and certainty were measured.

Results: According to a repeated measures ANOVA the intensity of the reported emotions was the highest in case of anger and empathy, post hoc tests showed a significant difference between the intensity of anger and guilt, anger and pride and empathy and guilt respectively. There was also a moderate correlation between guilt and maladaptive emotion regulation strategies ($r=0,346$); contempt and blaming others ($r=0,323$); and anger and positive focus shift ($r=0,316$).

Conclusion: While emotion regulation strategies used by jurists do not differ significantly from the general population, the present study managed to shed light on specific patterns. In light of the findings it seems useful to continue the analysis with a view to adding emotion regulation into the legal curriculum.

P10: Investigating The Relationship Between Self-Reported Emotion Regulation Strategies And Emotion Regulation Network: An fmri-Study

Reka Rendes, Anita Deak - University of Pecs

Cognitive emotion regulation (CER) strategies modify affective reactions to give adaptive responses in stressful situations. The emotion regulation network (ERN) consists of brain regions responsible for stimulus processing, evaluation, reactivity, regulation and behavioral response formation. We investigate individual

differences in ERN to identify correlations between one's self-reported cognitive emotion regulation strategies and brain activation pattern in an implicit emotion regulation task. 40 young adults filled in the Cognitive Emotion Regulation Strategies Questionnaire, and evaluated socio-emotional images with negative and neutral captions on two affective dimensions (valence, arousal). Stimuli with negative interpretation were rated more unpleasant and arousing compared to neutral. In the ROI analysis, we found a positive correlation between arousal ratings of negative stimuli and ERN regions (e.g. insula, ACC, dorsomedial PFC, dorsolateral PFC, orbitofrontal cortex/OFC/), while no correlation was found between valence and ERN activation. Self-blame, catastrophizing and acceptance showed significant positive, while planning and positive reappraisal negative correlation with dIPFC, OFC, insula, ACC/dMPFC and hippocampus activation. We confirm the theory of implicit emotion regulation, and suggest that the relationship between subjective and neural levels of ER is determined by the external or internal focus of attention applied during a specific strategy.

P11: Alexithymia And Experiential Avoidance: How The Relative Discrepancy Of Implicit And Explicit Anxiety Contributes To Their Relation

Eszter Szemenyei, Gyöngyi Kökönyei - ELTE Eötvös Loránd University

Introduction: Experiential avoidance is associated with higher levels of explicit anxiety. However, based on previous findings of the discrepancy between implicit and explicit measures, we hypothesized that discrepancy between implicit and explicit

anxiety would relate to experiential avoidance, and this discrepancy would mediate the relationship between alexithymia and experiential avoidance.

Methods: We tested this mediation model on a sample of 141 undergraduate students (female: 82,3 %, mean age: 21.93 years). We measured implicit anxiety with the Implicit Association Test-Anxiety and used self-reports to assess explicit anxiety (STAI), experiential avoidance (AAQ-II) and alexithymia (TAS-20).

Results: Consistent with our hypothesis, relative discrepancy between explicit and implicit anxiety mediated the relationship between the facet of alexithymia (difficulties in identifying feelings) and experiential avoidance (standardized indirect effect=0.15 [0.08-0.23], $p < .001$). Individuals who reported more difficulties in identifying feelings had higher explicit anxiety compared to their implicit anxiety, and the greater the difference, the higher the level of experiential avoidance.

Conclusion: Our findings suggest that incongruency between representations of affective experiences relating to the self might be related to emotion dysregulation, and low implicit anxiety is associated with more adaptive strategies if explicit level of anxiety is also low.

Acknowledgement: This study was supported by the Hungarian National Research, Development and Innovation Office (Grant No. FK128614).

P12: The Interaction Of State Intrusive Thoughts And Resting Heart Rate Variability On State Negative Affectivity

Natália Kocsel, Lilla Nóra Kovács, Zsófia Tóth, Szilvia Karsai, Attila Galambos, Gyöngyi Kökönyei - ELTE Eötvös Loránd University

Introduction: Trait preservative cognitions and trait negative affectivity have been associated with decreased resting heart rate variability (HRV). However, only a few studies have investigated the effect of state intrusive thoughts during resting HRV assessment. Therefore, we aimed to investigate the associations between state intrusive thoughts and state negative affectivity during resting and to test whether the time-domain metric of heart rate variability (RMSSD), moderated this relationship.

Methods: 87 healthy participants (68 females; mean age = 21.44 ± 1.99 years) took part in our study. RMSSD was calculated from a 5-min baseline recording, and state intrusive thoughts were assessed during the measurement. State negative affectivity was measured using the PANAS. Cardiac activity was recorded as beat-to-beat intervals using the FirstBeat TeamBelt.

Results: The interaction between resting HRV and state intrusive thoughts ($\beta = -0.231$; $p < 0.05$) significantly explained state negative affectivity. For participants with high resting HRV, state negative affectivity was basically independent of the level of state intrusive thoughts. However, lower resting HRV was associated with higher state negative affectivity, especially in the presence of more intrusive thoughts.

Conclusion: Our results suggest that a lower level of parasympathetic activation, assessed with RMSSD, might be an important factor in the relationship between state intrusive thoughts and state negative affectivity.

P14: Back To The Basics Of Positive And Negative Emotion Regulation: Focusing On Emotion Regulation Goals

Viola Siegmeier, Eeske van Roekel - Tilburg University

Introduction: Emotion regulation (ER) is very prevalent in our daily lives. It is very well-known that it has many positive effects, such as increasing well-being and mental health. Going back to the basics, ER goals play a crucial role in influencing whether, when and how people regulate their emotions. Despite its importance, research is still far away from having a complete picture of ER goals in daily life. Although several contexts in which people formulate their ER goals have been examined (e.g., motives, and individual differences), other potentially relevant contextual factors have not yet been investigated. Further, most research has not differentiated between ER goals directed towards both positive and negative emotions. Hence, many open questions with respect to ER goals in daily life remain. To contribute to the literature, the aim of the present study is to investigate 1) in which emotional and social contexts people pursue their ER goals, and 2) which positive and negative ER strategies people use to fulfill their ER goals.

Method: Using Experience Sampling Method (ESM), young adults (N = 159) have filled out momentary questionnaires five times per day for 14 days in the Netherlands. The first research question will be examined by applying multi-level binary logistic regression analyses, using R. For the second research question, dynamic structural equation modeling (DSEM) will be used, in Mplus.

Results: The results will be presented at the conference.

P15: Exploring The Inverted-U Relationship Between Stress And Conflict Adaptation In A New Stroop-Like Stress Task

Jin Yan, Henk van Steenbergen - Leiden University

Introduction: The relationship between stress and cognitive functions is commonly believed to follow an inverted-U-shaped curve, although this idea has not been thoroughly examined within-subject. In this study, we developed a new Stroop-like stress task to investigate the transition from functional to dysfunctional effects of stress on adaptive cognitive control within an individual.

Method: Forty-one participants (25 female) completed our new stress task, which consisted of four blocks of increasing difficulty.

Results: Participants reported a gradual increase in subjective stress levels over the course of the four blocks. Analyses on the behavioral data showed that adaptive cognitive control as measured by the conflict adaptation effect did not reliably differ between the four blocks. However, regression analysis revealed that, across subjects, subjective stress positively predicted conflict adaptation only under the relatively mild stress condition (during the first two blocks only).

Conclusion: Consistent with the inverted-U account, our findings tentatively suggest that mild stress may facilitate conflict adaptation, although, we failed to demonstrate a robust curvilinear effect of stress on conflict adaptation directly. This study offers important insights for optimizing stress manipulation in future versions of the task. It also underscores the importance of including physiological stress measurements in follow-up studies.

P16: The Feeling Of Rejection: Effects Of Timing, Explanations, And Compensations On The Rejector And The Rejected In Chat

Sara Bögels - Tilburg University

Neither being rejected nor rejecting someone makes us feel good, but these can be unavoidable evils. Face-to-face, rejections are often accompanied by longer preceding gaps and explanations or compensations, but the present study investigates which of these strategies work best to protect the feelings of the rejector and the rejected person in rejections via chat.

In three online within-subject experiments, >300 participants read simple requests ('Could you help me move?') within videos or screenshots of short chat-conversations. In Exp1, participants were asked to type in a rejection to the request, either including an explanation or not, and to report how (un)pleasant it felt to reject this person. In Exp2&3 participants imagined having sent the request, which was rejected, and participants rated how (un)pleasant this felt. The rejection was either fast or slow, included an 'uhm' or not (Exp2), or included an explanation ('I have to work') and/or compensation ('I can help later'; Exp3). Rejecting someone without being able to give an explanation felt worse than with an explanation (Exp1), presumably because it diverts responsibility from the rejector. Results of coding the typed rejections will be discussed. For the rejected, an 'uhm' did not matter, but a longer delay led to better acceptance of the rejection (Exp2), possibly because it indicates less certainty in a way suitable for chat. Effects of explanations and compensations on the rejected (Exp3) will be discussed.

P17: Development Of A Toolkit Promoting Sustained Lifestyle Change Among Multimorbid Individuals: The LifeMeds Study.

Bo Brummel, Meeke Hoedjes, Mirela Habibovic, Eva Noorda, Yvo Sijpkens, Bart Kiemeney, Wytske Meeke, Gerda van Rooijen, Joran Jongerling, Sandra Beijer, Nicole Ezendam, Jos Widdershoven, Sabita Soedamah-Muthu - Tilburg University

Introduction: Despite the increasing prevalence of multimorbidity, there is a lack of tools to promote lifestyle changes among multimorbid individuals. Therefore, LifeMeds will develop a toolkit to promote sustained lifestyle changes in overweight or obese multimorbid individuals with type 2 diabetes mellitus (T2DM), cardiovascular disease (CVD), and/or cancer. The toolkit will be tailored based on several characteristics, including potential psychological barriers to lifestyle change (e.g., emotion regulation).

Methods: Participants are overweight or obese multimorbid individuals diagnosed with T2DM, CVD and/or cancer (n=125) and relevant stakeholders involved in their healthcare. After an extensive needs assessment using systematic literature reviews; a Delphi study; semi-structured interviews; longitudinal real-time assessment of lifestyle and parallel Ecological Momentary Assessment; focus groups; and questionnaires, tools (i.e. methods for lifestyle change) are chosen, adapted or developed and integrated into a toolkit in co-creation with end-users (patients and healthcare professionals).

Results: LifeMeds will result in a toolkit for use in multimorbid individuals in (clinical) practice; a training for healthcare professionals; a plan for adoption, implementation, sustainability, and evaluation of the toolkit.

Conclusion: The toolkit is expected to promote health outcomes in overweight/obese multimorbid individuals, ultimately reducing healthcare burden and costs.

P18: Emotional Climate Change Stories (Eccs) Database Validation

Dominika Zaremba, , Małgorzata Wierzba, Christian A. Klöckner, Jarosław Michałowski, Artur Marchewka - Nencki Institute of Experimental Biology

Meta-analyses on the determinants of pro-environmental behaviour report mixed evidence for the effect of distinct emotions on climate-change-relevant behaviours. Firstly, emotional response to climate change is rarely studied experimentally, and stimuli are often created ad-hoc for each study. Furthermore, many researchers point out that there is insufficient focus on the clarity and coherence of cognitive appraisals underlying the elicitation of distinct emotions. The Emotional Climate Change Stories (ECCS) database is a collection of 180 short stories of similar length, describing either climate change or neutral situations. Stimuli were initially selected to represent 6 distinct categories (anger, anxiety, compassion, guilt, hope, as well as neutral state). Stories in ECCS are based on real experiences of emotions related to climate change, shared by the participants from two independent samples: people particularly concerned about climate change (N=40) and the general population (N=523). The database was tested in a large opportunity sample in Poland (N=601) and validated in representative samples in Poland (N=307) and Norway (N=346). Stimuli from ECCS effectively evoke specific emotions, allowing for better experimental control in

environmental psychology research. Several other features, including the gender of characters and the presence of specific phrases, were also annotated. ECCS is available in three language versions: English, Polish and Norwegian. This database can be useful for researchers studying the impact of different emotions on attitudes towards the environment, actions taken to address climate change, as well as mental health and well-being.

P19: Incongruent Emotion Labels Increase Prediction Error Response In Pre-Attentive Facial Expression Processing: An ERP Study.

Hyeonbo Yang, Donghoon Lee - Pusan National University

Introduction: The theory of constructed emotion (Barrett, 2017) posits that emotion words, such as 'anger,' 'happiness,' and 'fear,' can serve as predictive information for constructing emotion perception. Furthermore, verbal labels have been shown to influence visual perception by providing categorical prior information during the processing of incoming sensory input (Lupyan, Rahman, Boroditsky, & Clark, 2020). In this study, we examined the effect of emotion labels on the pre-attentive processing of facial expressions, focusing on the visual mismatch negativity (vMMN) ERP component considered as visual prediction-error response.

Methods: In the passive oddball task, participants responded to target labels which were presented along with the labels ""Happiness"", ""Anger"", or ""Shape"", while task-irrelevant standard (i.e., neutral face, 80% of the trials) or deviant (i.e., happy or angry face, 10% each) stimuli were presented in the background. vMMN was

obtained by subtracting the ERP of neutral faces from that of happy or angry faces.

Results: A greater amplitude of vMMN was observed in the occipito-temporal region when emotion labels and facial expressions were incongruent, in comparison to condition where these were irrelevant.

Conclusions: This result suggests that if the prior information activated by labels is congruent with sensory input, it has no significant effect on the predictive processing, but if it is incongruent, it increases the prediction-error responses.

P20: Positive Affect In Response To A 360° Video-Based Speech Task In Individuals With High And Low Fear Of Public Speaking

Jéssica Navarro-Siurana, Marta Miragall, Lorena Desdentado, Rocío Herrero, Almudena Duque, Rosa María Baños - University of Valencia

Introduction: Social anxiety is characterized by low levels of positive affect (PA) (Kashdan, 2007), but most research has mainly employed trait self-report measures of global PA, rather than assessing specific PA emotions and state measures. This study is aimed to analyze differences in three specific types of PA (active, relaxed, and safe/content) in response to a speech task with a 360° video audience among individuals with low and high levels of public speaking anxiety (PSA).

Methods: Seventy students with low (N = 38) and high (N = 32) PSA levels were instructed to perform a 3-min speech in front of the audience. PA was assessed at baseline (T1), pre-speech (T2), speech (T3), and post-speech (T4).

Results: Mixed factorial ANOVAs showed an interaction effect between condition and time

for the three types of PA. Post hoc analyses showed that: (1) from T1 to T2, individuals with high (vs. low) PSA showed a greater decrease on the three PA; (2) from T2 to T3, only group differences on active PA were detected, with individuals with high PSA levels showing a decrease and those with low PSA levels showing a small increase; and (3) from T2 to T3, only group differences on safe/content PA were found, with individuals with low PSA (vs. high) levels showing a greater increase.

Conclusions: These findings highlight the importance of PA in public speaking situations, while also indicating that the role of various types of PA differs depending on the moment of the situation.

P21: Body Compassion And Emotional Distress In Chronic Pain: Exploring The Mediation Role Of Coping Strategies

Reneta Slavkova, Marta Miragall, Lorena Desdentado, Rocío Herrero, Rosa M. Baños - University of Valencia

Introduction: Body compassion (BC) is a concept bridging the constructs of body image and self-compassion, and has been shown to have a positive impact on reducing anxious and depressive symptomatology in chronic pain populations. However, the mechanisms driving these effects remain unclear. According to Sündermann et al.'s (2020) model, maladaptive pain coping behaviors are involved in the affective experience of chronic pain. Hence, the aim of the current study is to explore the mediational role of dysfunctional coping strategies (i.e., pain catastrophizing and kinesiophobia) in the relationship between BC and emotional distress.

Methods: 78 adults with chronic pain (84.6% women, age: 44.46 ± 9.63), completed

several self-report questionnaires to measure BC, pain catastrophizing, kinesiophobia, and anxious and depressive symptomatology.

Results: A path analysis showed that defusion (one dimension of BC) was a significant negative predictor of pain catastrophizing which, in turn, positively predicted both anxiety and depression, explaining 60% of their variances. The fit index was excellent ($\chi^2(1) = 6.53, p = .011, CFI = .98, SRMR = .04$).

Conclusions: These findings provide evidence for the mediational role of pain catastrophizing in the buffering effect of BC – and specifically, defusion (i.e., decentering from painful thoughts)– on emotional distress in chronic pain. Future longitudinal studies should investigate the effects of BC in this population.

P22: Body Functionality Appreciation Flexibility Assessment In Patients With Chronic Low Back Pain Through S Virtual Reality Environment

Ángel Zamora, Víctor Navarro, Lorena Desdentado, Marta Miragall, Rocío Herrero, Rosa M. Baños
Universitat de valència

Introduction: The appreciation of body functionality (ABF) is related to the experience of low back pain (LBP), with individuals with chronic (vs. acute) LBP showing reduced ABF levels (Levenig et al., 2018). The present study aims to determine the flexibility of this construct in chronic LBP (cLBP) through a virtual reality (VR) environment.

Methods: 22 cLBP adults (54.5% women, age: 50.95 ± 13.57) performed a VR-based task involving ABF twice, specifically, after a positive induction of ABF condition and after

a control condition. The Functionality Appreciation Scale (FAS; Alleva et al., 2017) was adapted to assess ABF as a state, with scores ranging from 1 to 5. This measure was administered before and after each condition.

Results: A repeated measures ANOVA showed no statistically significant differences in ABF scores between conditions, $F(1.28) = .31, p = .640$. The estimated mean of ABF were the following at: baseline ($4.06 \pm .79$), ABF condition ($4.1 \pm .77$), and control condition ($4.03 \pm .89$).

Conclusions: ABF seems not to be changeable in cLBP with the VR-based procedure used in this study. Possible explanations could be (1) a ceiling effect in ABF scores at baseline; (2) too short duration of the VR-based tasks or (3) underpowered positive ABF induction procedure. Future studies should improve the potential of their induction procedures and include samples with greater variability in ABF.

P23: Affective And Physiological Responses To Unconscious Awareness Of Disgust

Selen Gonul, Robert W. Booth - Sabanci University

Introduction: Evidence suggests that emotions can influence attitudes toward unrelated stimuli most often when unconscious perception of information triggers emotions. Uncertainty persists concerning the influence of conscious processing on the association between emotional reactivity and unrelated stimuli evaluations. Thus, the current study aimed to address these questions by using the continuous flash suppression (CFS) technique. It is hypothesized that CFS will suppress unpleasant information and still

transfer its effects to new stimulus evaluations and physiological responses, enabling it to reach awareness.

Methods: Fifty-two undergraduate students between the ages of 19 to 25 (M=21,77, SD=1,53) participated in the study. The participants were asked to complete a CFS task while their skin conductance responses (SCR) were measured. A 2AFC stimulus detection task was performed along with self-report measures of awareness to ensure the effectiveness of the stimulus visibility suppression.

Results: SCR amplitudes increased in response to both neutral and disgust expressions. However, when stimuli were presented unmasked and were consciously accessible, there was no correlation between the physiological response to expressions of disgust and the subsequent evaluation of novel faces.

Conclusions: Although conscious knowledge influences physiological responses to specific affective stimuli, visual awareness may prevent the spread of emotional responses to unrelated targets in the environment. Results suggest that conscious awareness inhibits physiological reactivity and evaluative emotional responses by breaking the automatic associations.

P24: Emotion Recognition And Relationship Satisfaction In Neurodiverse Romantic Partners

Claudia Preuss, Nicole Adams-Quackenbush, Fiona Gullon-Scott - Newcastle University

Introduction: Autism and ADHD are associated with differences in communication and social behaviours, including difficulties with recognising emotions. Despite this, many neurodivergent

individuals form romantic relationships, both with neurodivergent as well as with neurotypical partners. The ability to recognise emotions and respond appropriately is essential for successful relationships. This study sought to explore whether neurodivergent traits predict emotion recognition and relationship satisfaction in romantic partners.

Method: Participants completed an online survey with self-report measures for autism, ADHD, alexithymia and relationship satisfaction as well as a multimodal emotion recognition task. Mediation analysis will be used to determine if neurodivergent traits mediate the relationship between emotion recognition and relationship satisfaction for individual partners. Actor-partner interdependence modelling will be used if a sufficient number of couples participate.

Results: Findings are expected to show that neurodivergent traits mediate the relationship between emotion recognition and relationship satisfaction.

Conclusion: Findings will be used to inform the development of an intervention focusing on emotion recognition in couples, with a view to improving communication between partners. Findings are expected to be of interest to professionals working with ND adults as well as to relationship counsellors.

P25: How Do You Feel About This New Treatment? Acceptability Of Adjuvant Therapy In Patients With Respiratory Disease

Laura Caton, Christelle Duprez, Delphine Grynberg - University of Lille

Introduction : Resistance to antibiotics used to treat bacterial respiratory diseases such as pneumonia is a major cause of morbidity and mortality worldwide. It is therefore crucial

to develop new strategies to improve the treatment of these diseases by increasing the effectiveness of antibiotics. In this perspective, the European project FAIR (<https://fair-flagellin.eu/>) aims at developing an adjuvant treatment to increase the efficacy of antibiotics. In this project, our objective is to evaluate its acceptability (i.e., positive attitudes towards this new treatment) by patients.

Methods : 178 people with a lung infection or a long-term lung disease completed an online survey about factors identified in the literature as influencing the decision to accept this treatment (e.g., severity of disease, fear of side effects).

Results : Our results show a high acceptability of the new treatment in patients. Indeed, they reveal that patients' acceptability is strongly influenced by the perceived stress associated with the use of the device, its comfort, and simplicity of use. Interestingly, they perceive it as easy to use, not stressful, and they have a neutral impression of the device (not comfortable nor uncomfortable). Finally, they report a good previous experience with a similar device.

Conclusion : Our results allow us to better understand the key elements that can be taken into consideration in the development of the new treatment in order to make it more acceptable for patients.

P26: Individual Differences In Positive Emotional Expression Styles: The Role Of Concerns About Negative Outcomes

Duygu Taşfiliz - Altınbaş University

Emotional expressions are influenced by a variety of variables. The worry about experiencing pleasant feelings in reaction to a personally significant benefit will have negative effects might be one of them. The

goal of the current study is to identify this individual variation in positive emotional expression styles of individuals. In the present research, 157 participants attended the study via an online survey. The Emotional Expression Styles Inventory (EESI) and the Negative Consequences of Positive Emotions (NCoPE) Scale were given to the participants. Results indicated that self-focused expression which refers to verbal and nonverbal displays of happiness in the individual's body and behaviors found to be negatively associated with concerns about the negative consequences of positive emotions. No significant association was found between other-focused expressions, which included reciprocity behavior to someone who makes them happy, and concerns about positive emotions.

Poster Session B

Friday, October 6, 12:30–13:45, Foyer

P1: An Item Response Theory Analysis Of The Rotterdam Emotional Intelligence Scale

Bhavya Sharma, Keri A. Pekaar, Wilco Emons - Tilburg University

Introduction: There has been a burgeoning scientific interest in both the conceptualization and measurement of emotional intelligence (EI) driven by its expanding utilization for selection, training, and development purposes. A promising scale is the Rotterdam Emotional Intelligence Scale (REIS), which assesses two dimensions of EI – emotion regulation and emotional appraisal, focusing on either self or the other. Previously, classical test theory has been used to assess its psychometric properties, however, to get a more

comprehensive picture for scientific use and practical person measurement, we employ item response theory (IRT). In particular, we (1) evaluated the contribution of each item to EI assessment (construct validity), (2) assessed measurement precision at different levels of the latent trait, and (3) tested whether the items are unbiased against demographic characteristics (i.e., measurement invariance).

Methods: The psychometric properties of the REIS were studied using data collected from a sample of 2728 participants recruited online. Using IRT graded response modeling, we analyzed (a) the dimensionality using bifactor IRT models, (b) local measurement precision per subscale using test information functions, and (c) tested for differential item functioning based on gender and age group.

Results and Conclusion: Preliminary results indicate unidimensionality with four subdimensions and better measurement precision in estimating the trait at lower ability levels than the higher ability levels for the overall test.

P2: The Influence Of Emotional Context On Perceptual Decision Making Investigated Using A 3D Game

Gozde Kadioglu - University of London

Perceptual decision-making (PDM) and visual discrimination (VD) tasks are crucial cognitive processes allowing individuals to categorise visual stimuli accurately. Previous research has demonstrated that colour and texture can influence how stimuli are processed, categorised, and perceived in the environment by evoking emotions that affect our behaviour. Also, the emotional valence and arousal of the background context play a crucial role in cognitive processes.

Considering this interplay between stimuli and environment, we aimed to investigate how the combination of foreground stimuli and background stimuli influences response time and accuracy. In this study, we examined how varying emotional contexts influence VD and PDM using interactive experimental paradigms with an Oculus headset. We recruited 60 participants to categorise the foreground stimuli based on their texture-colour combination. The background stimuli were manipulated in terms of valence (low positive/high positive) and arousal (high/low). Reaction times were shorter, and accuracy was better for warm colours-simple textures in high arousal-high positive valence backgrounds. High positive valence background is associated with better performance compared to low ones. Our findings contribute to understanding how the interplay of colour, texture, and emotional valence in 360-degree videos influences PDM and VD. Findings have implications for designing and improving visual stimuli in virtual reality environments.

P3: Role Of Synchrony On Stress Within Families: What Do We Know So Far? A Systematic Review

Michel Sfeir, Federico Cassioli, Sara Scaletti, Mandy Rossignol, Sarah Galdiolo - University of Mons

Synchrony is defined as being a dyadic interaction based on reciprocity, regulation and harmony. It can encompass, vocalization, mutual gaze as well as other physiological measures. Synchrony between parents and infant allows the child to develop socio-affective competencies to be used in face of stressors. This project provides the first systematic review to understand how synchrony can interplay within the family. The database search conducted on Scopus,

Pubmed and PsycNET yielded a total of 465 studies, of which 55 were selected). All studies considered synchrony measurements, stress and were family-focused. Biobehavioral processes via synchronization in face of stress model the family dynamics. Hormonal evidence known for their capabilities to possibly predict behavioral patterns, suggest a robust link where higher levels of oxytocin were associated with higher synchrony. Moreover, infants and mother's saliva were found to hormonally synchronize, emphasizing a link on the responsiveness of saliva to environmental stimuli. Higher parent-infant synchrony was associated with lower levels of enhanced self-regulation. The present study sheds light on the implications of synchrony within the family. Parental stress can be found to be a potential intervening factor as to how low levels of synchrony may be associated with behavioral and emotional disturbances in children. Parents and children may synchronize and exhibit high level of stress if the parent was stressed.

P4: Coping Or Emotion Regulation – Which Concept For Pediatric Psychology? A Narrative Literature Review

Mareike Kaemmerer, Olivier Luminet -
Université catholique de Louvain

Introduction: Learning how to regulate emotions, and related behaviors is a crucial developmental task in childhood. The ability to efficiently regulate emotions becomes even more important when children face health conditions. In literature, two concepts are usually considered for the study of regulatory skills: coping and emotion regulation. The aim of this literature review is to investigate the use of coping and emotion

regulation concepts in pediatric psychology, to estimate their degree of overlap and complementarity in conceptualization and measurement.

Methods: Through a systematic database search, we identified relevant literature including the following search terms: emotion regulation, coping and pediatrics.

Results: Preliminary results show that health conditions are defined as major stressors and are mostly studied with coping models. A clear definition of emotion regulation is missing, and emotion regulation is often considered as being a part of coping. Its evaluation is sometimes comprised in subscales of coping questionnaires.

Conclusion: Coping is a useful concept to understand regulative processes in stressful situations. However, emotional development includes more than just the regulation of stress. Especially in pediatric psychology it is important to understand regulatory processes in a broader context (e.g., positive, negative emotional situations). More detailed results of this narrative review are expected to clarify the aforementioned aspects. Clinical implications will be discussed.

P5: Anger, Fear And Disgust In Response To Innocuous Sounds: A Qualitative Perspective On Bothersome Tinnitus, Hyperacusis And Misop

Yesim Ozuer, Rilana Cima, Ilse Van Diest -
KU Leuven

In persons suffering from bothersome tinnitus, misophonia and hyperacusis, specific and intrinsically innocuous sounds acquire the capacity to generate extreme anger, disgust, irritation and/or fear. These reactions may be driven by previously learned, specific meanings of the trigger

sounds. Literature mentions learning and conditioning playing a role in the development of these conditions. We performed a qualitative analysis of possible meanings that may underlie emotional reactions of the three conditions via explorative focus group sessions with people suffering from bothersome tinnitus (n=4), misophonia (n=8) and hyperacusis (n=3) and experts in bothersome tinnitus and hyperacusis (n=3). We conducted both content and thematic analyses. The most common codes (a small portion of textual data describing a meaning) in the misophonia group were (a) sound triggers, (b) insight on own emotional reaction exaggerated and (c) lack of respect and violation of personal borders. In the tinnitus group, the most common codes were (a) fluctuations in the experience or bothersomeness of tinnitus (b) seeking professional help (c) attempt to accept tinnitus (d) ideas on exacerbating factors (e) seeking professional help and (f) anxiety. The content analysis of the hyperacusis focus groups and the thematic analyses of bothersome tinnitus and hyperacusis groups will take place from April 10th till April 30th. The results will be presented at the conference.

P6: The Relationship Between Sensory Processing Sensitivity And Attentional Processing Of *Emotional Information*

Luchuan Xiao, Kris Baetens, Natacha Deroost - Vrije Universiteit Brussel

Introduction: Sensory processing sensitivity (SPS) refers to an individual's general responsiveness to the environment and is often associated with stress-related affective symptoms. To date, few studies have directly explored the attentional processing

regarding emotional information associated with SPS through objective behavioural measures.

Methods: Fifty-one participants completed the SPS measurement and the Emotional Attention Networks Test Integration (E-ANTI). Four within-subjects factors were manipulated: Signal (tone vs. no-tone), Validity (valid cue vs. invalid cue), Congruency between target and flankers (congruent vs. incongruent), and Emotion of target face (fearful vs. happy). Participants were instructed to identify the expression of the target face as quickly and accurately as possible.

Results: The result showed that the E-ANTI captured all three attentional networks effectively. Moreover, the main effect of Emotion showed that participants reacted significantly faster in trials with a happy target than in trials with a fearful target. A two-way interaction between SPS and Emotion revealed that the fearful-related delay tendency reduced as SPS increased. A three-way interaction further revealed the fearful-related delay tendency reduced as SPS increased was particularly shown in incongruent trials, but not in the congruent trials.

Conclusion: Our findings suggest that SPS is associated with adopting a more cautious strategy in high-conflict contexts.

P8: Executive Processing Of Emotional Stimuli In Alexithymia

Marine Mas, Elise Grimm, Olivier Luminet - Université Catholique de Louvain

Alexithymia is a multi-faceted personality construct characterized by difficulties identifying and describing feelings and an externally oriented cognitive style. As executive function (EF) is recognized as

playing a crucial role in emotion regulation, an inquiry arises as to the moderating impact of alexithymia on the executive processing of emotional stimuli. Limited research on the topic found EF deficits among alexithymic individuals using neutral stimuli. Considering that alexithymia is characterized by difficulties in processing emotions, there is a need to examine whether EF deficits extend to emotional material. Data collection from 120 participants will begin in May 2023. Participants will undergo emotional versions of a Complex Span Task (measuring working memory updating), a go/no-Go task (measuring inhibition performance) and a Wisconsin Card Sorting Test (measuring set-shifting abilities). With this study, we aim to better understand 1) the relationship between emotional difficulties and EF in alexithymia 2) the specificities of processing for stimuli differing in relevance, valence and arousal levels and 3) the cognitive (in)flexibility underlying emotion processing in alexithymia. An investigation of the impact of emotional stimuli on executive function will not only provide valuable insights into the challenges faced by individuals with alexithymia in regulating their emotions, but also advance the field by enhancing our understanding of the interplay between alexithymia facets and the cognition-emotion interface.

P9: Examining Physiological Markers Of Emotion Regulation Abilities As Predictors Of Dysregulated Behavior From An RDoC Perspective.

Markos Apostolakis, Georgia Panayiotou - Cyprus University

Introduction: Emotion Regulation (ER) is considered a transdiagnostic risk factor and deficits in ER have been linked to a wide

range of mental health difficulties and overall dysfunctional adaptation. Assessing the developmental trajectory of ER skills in a young age will allow us to identify early predictors of such risk factors.

Methods: In this project children between 8 and 12 years old completed a resting state and a passive observation task, among others, while psychophysiological (Heart Rate & Skin Conductance) activity was recorded.

Results: Preliminary results show that Heart Rate Variability (HRV), which is used as an index of regulatory processes, predict physiological reactivity to emotional stimuli and further results are expected to be in the same direction such that specific patterns of activity will be related to ER deficits and mental health vulnerabilities.

Conclusions: This project follows an RDoC approach and utilizes multiple units of analysis to assess potential markers of ER skills at an early developmental stage that can predict later mental health difficulties.

P10: New Method Of Valence And Arousal Ratings Collection

Nikola Paillereau, Johannes Gerwien, Tereza Fialová, Jiří Pešek, Torsten Wüstenberg - Charles University

Introduction: Language and emotion affect each other (Scott et al., 2009; Lindquist et al., 2012). Simple words have an emotional load which can be measured by valence (positive/negative) and arousal (relaxing/arousing). Although, commonly collected using separate Likert scales, these two dimensions form a 2-dimensional continuous space. To address this property in a more natural way, we used a new method to rate valence and arousal, within a larger

crosslinguistic study on neurophysiological correlates of the words' emotional load.

Methods: Valence and arousal ratings as a response to auditorily presented words were measured within a single task whereby participants produced a mouse-click in a square that specified valence on the x-axis (negative to positive, from left to right) and arousal on the y-axis (low to high from bottom to top). The new method was tested with 26 German participants who rated 114 words from the BAWL list (Vo et al., 2009).

Results: Ratings obtained by Vo et al., 2009 and those obtained by our method were compared using a Bayesian repeated measures two-way ANOVA (measure: valence/arousal; data set: BAWL/own) with subsequent Bayesian model comparison. The results show evidence for the absence of an interaction between the two data sets ($\log_{10}(\text{BF}_{10}) = -0.588$).

Conclusions: Our results show the feasibility of our 2-dimensional response set-up. Thus, this method serve can as an alternative approach for the collection of behavioural data in emotion experiments.

P11: Will You Prescribe This New Treatment? Acceptability Of Adjuvant Therapy By Clinicians In The Management Of Respiratory Diseases

Laura Caton, Christelle Duprez, Delphine Grynberg - University of Lille

Introduction : Resistance to antibiotics used to treat bacterial respiratory diseases such as pneumonia is a major cause of morbidity and mortality worldwide. It is therefore crucial to develop new strategies to increase the effectiveness of antibiotics. With this in mind, the European FAIR project (<https://fair-flagellin.eu/>) aims to develop an adjuvant treatment to increase the effectiveness of

antibiotics. In this project, our aim is to assess its acceptability (i.e., positive attitudes towards this treatment) by clinicians.

Methods : An online survey was completed by 111 physicians caring for patients with a lung infection or long-term lung disease. The survey investigated factors known to influence the decision to prescribe a new treatment (e.g., severity of illness, knowledge of the device).

Results: Physicians' intention to prescribe a new treatment is high, and strongly influenced by the treatment itself (e.g., side effects, efficacy), the device (e.g., organizational constraints), and their knowledge about it. Interestingly, the patients' acceptability or refusal to use the treatment do not influence physicians' decision. Finally, gender differences exist between physicians regarding most of these factors.

Conclusion: In conclusion, these results allow us to understand the elements to be considered in the development of this treatment in order to make it more acceptable for physicians. They also highlighted the good acceptability of this new treatment for physicians.

P12: Emotion Regulation In Young Children Of Mothers With Borderline Personality Disorder

Melanie Wieschmann, Rabea Derhardt, Sabine Seehagen, Silvia Schneider, the ProChild Grou - Ruhr University Bochum

Introduction: Being confronted with mental disorders as a parent is associated with a higher risk for maltreatment and insufficient care. In turn, being exposed to violence in childhood is a risk factor for developing mental disorders. Mothers with borderline

personality disorder (BPD) are in special challenge to regulate their emotions and the emotions of their children.

Our study focuses on children's emotion regulation strategies (ERS) as a mechanism of transgenerational transmission of mental disorders. We hypothesize that children of mothers with BPD will show more unfavorable ERS compared to children of mothers with anxiety and/or depressive disorder and healthy control mothers.

Methods: We investigate children between 6 months and 6 years of mothers with BPD, mothers with anxiety and/or depressive disorder and children of mothers without any mental disorder. We developed different waiting tasks, adapted from previous studies, to assess ERS.

Results: First data indicate that the waiting tasks are working. More negative than positive affect is coded while children are waiting. First emotion regulation strategies have been coded.

Conclusion: This study is the first study examining ERS longitudinal in very young children of mothers with BPD. Findings will give more insights in the mechanism of transgenerational transmission, the development of emotion regulation and implications for early diagnostic and prevention strategies.

P13: Do We Regulate Various Fears Differently? – A Comparison Of Cognitive Emotion Regulation Strategies In Different Phobias Subtype

Andras N. Zsido, Andras Lang, Beatrix Labadi, Anita Deak - University of Pécs

Introduction: Although fear plays a vital role in survival, an overly active threat detection system could be maladaptive due to its negative health consequences. Putatively

maladaptive emotion regulation (ER) strategies are a core problem in phobias. In contrast, adaptive ER strategies could help downregulate the emotion elicited by a threatening stimulus and decrease anxiety. Yet, the number of studies directly examining the pattern of ER strategies linked to various phobias is still scarce. Thus, this study sought to map the patterns of adaptive and maladaptive ER strategies linked to the three most common phobias (social, animal, and blood-injection-injury [BII]).

Methods: A total of 856 healthy participants filled out our survey including self-reported measures of social anxiety, snake-, spider-, BII phobia, and cognitive ER strategies. Structural equation modeling was used to test the effects between the variables.

Results: The results show that social anxiety and animal phobia were linked to both adaptive and maladaptive ER strategies, while BII was only associated with maladaptive ones. Further analyses showed that the most prominent ER strategies differed by subtype.

Conclusions: This is in line with previous neuroimaging studies claiming that the neurocognitive mechanisms underlying phobias are also different. Theoretical as well as practical implications are discussed.

P14: The Influence Of Physiological Arousal On Tactile Sensitivity In Healthy Young Men

Tamás Nagy, Virág T. Fodor, Márton Mezőbándi-Nemes, Csilla Ágoston - ELTE Eötvös Loránd University

Introduction: The sense of touch is a fundamental aspect of our daily experience. Previous studies suggest that emotions may influence tactile sensitivity, the ability to sense, discriminate, and interpret touch-

related sensations. As physiological arousal is an important part of the emotional experience, it would be plausible to assume that it may be related to tactile sensitivity. Methods: In a pre-registered, double-blind crossover experiment, we administered caffeine (2.5 mg/body mass kg) and placebo to participants (N = 69, all male, Mean age = 21.7 ± 1.9 years) in a counterbalanced order to manipulate physiological arousal. After 30 minutes of waiting, we measured tactile sensitivity using von Frey filaments in an alternating forced-choice test and a two-up, one-down staircase procedure.

Results: We used linear mixed-effects regression where we controlled for treatment order. We did not find any evidence indicating that the caffeine condition was linked to distinct levels of tactile sensitivity in comparison to the placebo condition (std. beta = .25, 95% CI [-0.08, 0.59]).

Conclusion: The results suggest that caffeine-induced physiological arousal may not be able to influence tactile sensitivity, or the effect might be smaller than expected.

P15: Stress Mindset Moderates The Association Between Trait Self-Critical Rumination And Interpersonal Emotion Regulation

Andrea Horváth, Gyöngyi Kökönyei - ELTE Eötvös Loránd University

Introduction: People high in self-critical rumination are sensitive to situations in which there is a risk of not meeting standards and expectations. Thus, we aimed to explore the relationship between trait self-critical rumination and intrapersonal (avoidance of emotions) and interpersonal (venting) emotion regulation strategies in a hypothetical scenario depicting time-sensitive project. We hypothesized that

stress mindset, i.e. positive (stress is enhancing) or negative (stress is debilitating) beliefs about stress, might moderate the relationship between self-critical rumination and avoidance and venting.

Methods: In our online study, we measured inter- and intrapersonal emotion regulation (Difficulties in Interpersonal Emotion), and we used the Self-Critical Rumination and the Specific Stress Mindset Measure. A total of 142 participants (69.7% female) were included in the analysis.

Results: We found that self-critical rumination was related to avoidance, but specific stress-mindset did not moderate their relationship (b=.02, SE=.05, p=.70), but specific stress-mindset moderated the relationship between self-critical rumination and venting (b=.056, SE=.025, p=.03).

Conclusions: Self-critical rumination was connected to venting only when participants exhibited a positive stress mindset. Therefore, stress mindset may impact emotion regulation in specific situations, and additional laboratory studies are required to further investigate this relationship.

Acknowledgements: This study was supported by the Hungarian National Research, Development and Innovation Office (Grant No. K143764).

P16: Prospective Association Between Emotion Regulation And Depressive Symptoms In Adolescents

Gyöngyi Kökönyei, Lilla Nóra Kovács, Judit Szabó, Róbert Urbán - ELTE Eötvös Loránd University

Introduction: Recent studies have shown that nearly one-third of youths aged between 10-19 report elevated depressive symptoms, and individual differences in emotion regulation are associated with these

symptoms. However, most studies have focused on only one specific strategy and have not assessed multiple strategies simultaneously and prospectively. Therefore, our aim was to examine the longitudinal association of putatively adaptive and maladaptive cognitive emotion regulation strategies with depressive symptoms among high school students.

Methods: We analyzed data from the Budapest Adolescent Smoking Study, including 1370 youths (mean age: 15.66 years; SD = 0.49 years; 55.1% girls). We used the Center for Epidemiologic Studies Depression Scale and the Cognitive Emotion Regulation Questionnaire to measure the key variables.

Results: After controlling for gender, age, and depressive symptoms at Time 1, both maladaptive ($\beta = 0.137$, $p = .001$) and adaptive ($\beta = -0.087$, $p = .013$) emotion regulation strategies at Time 1 predicted depressive symptoms at Time 2.

Conclusions: Our findings suggest that the strength of the prospective association between adaptive emotion regulation strategies and depressive symptoms is comparable to that of maladaptive strategies. Consequently, repairing one's mood after negative or stressful events with different strategies, such as reinterpreting the events or refocusing attention on positive things, could be a protective factor against depression.

P17: Tilt - A Study Of Emotion Regulation In Video Gaming

Sarah Cregan, Mark Campbell, Adam Toth - University of Limerick

Originating from pinball, the term 'Tilt' refers to an emotional state associated with frustration and poor emotional control,

resulting in poor performance. In video gaming, tilt is associated with poor emotional control and performance. However, research pertaining to what conceptualizes tilt in gaming, the factors that cause tilt, the impact of tilt on gamers and what strategies may prevent tilting, is lacking. The purpose of this study is to define tilt in video gaming, determine the antecedent factors, identify how it impacts gamers and report strategies used to prevent tilt. 900 gamers, completed an online survey. To determine how gamers conceptualize tilt, participants provided their interpretation of tilt. A thematic analysis was conducted on responses. Participants also reported factors that caused them to tilt. Gamers defined tilt as the experience of negative emotions, engagement in irrational behavior, and a decline in cognitive functioning, resulting in suboptimal performance. Males experienced the highest tilt severity scores. Sport and MOBA players reported the highest tilt scores, and higher tilt severity was associated with higher anxiety ($r = .22$, $p < .001$), anger ($r = .54$, $p < .001$) and dejection ($r = .30$, $p < .001$). Participants experienced tilt due to internal and external factors, reporting their own performance, injustice in the game and teammates to be the most likely factors to cause tilt. Overall, males and third person shooter and MOBA gamers reported the highest engagement in maladaptive cognitive emotion regulation strategies. This study is the first to create a framework for defining and understanding tilt in gaming.

P18: Rumination As Mediator Between Stress And Sleep Quality: A Diary Study In A Non-Clinical Sample Of Women.

Ilaria Telazzi, Semira Tagliabue, Stefania Balzarotti - Catholic University of Sacred Heart

A substantial body of literature has established that sleep quality (SQ) is significantly threatened by stress. Some evidence suggests that rumination may partially account for this association. However, very little research has examined this hypothesis longitudinally. The present study aims to investigate whether rumination functions as mediator in the stress-SQ relationship within the time interval of a week. 166 women (age range: 18-65) without any psychopathological diagnosis completed an initial questionnaire including trait-assessment measures (Ruminative Response Scale, Perceived Stress Scale, Pittsburgh Sleep Quality Index). After one week, a 6-days diary study was conducted to assess the associations between stress, pre-sleep rumination, and SQ on a daily basis. The results showed an indirect effect of stress on SQ through pre-sleep rumination in all daily assessments. In the midweek assessment, the direct effect was also significant. Concerning the trait-level assessment, stress was associated with higher rumination and lower SQ, but rumination was not a significant mediator of the stress-SQ relationship. Overall, these findings suggest that daily, but not trait rumination significantly mediates stress effects on SQ. Higher perceived stress during the day is related to higher tendency to ruminate before sleeping, leading to lower SQ. Future studies should consider daily-level fluctuations in stress and rumination as possible explanations for SQ outcomes.

P19: Robot Shedding Tears Facilitates Anthropomorphism In Multiple Aspects

Akiko Yasuhara, Takuma Takehara -
Doshisha University

Robot anthropomorphism is beneficial for social human-robot interaction. Robots expressing emotion through facial expressions and gestures have been shown to facilitate anthropomorphism. However, it is unclear whether the particular emotional expression of shedding tears facilitates robot anthropomorphism. Therefore, the present study aimed to test whether a robot shedding tears facilitates anthropomorphism using The Human-Robot Interaction Evaluation Scale (HRIES), which measures anthropomorphism from multiple aspects. Tears were digitally processed onto pictures of robots and used as visual stimuli. Participants (n = 161) were randomly assigned to one of two conditions: one rating the pictures without tears and another rating the pictures with tears. Participants were presented with a picture of the robot and a short scenario (death or farewell) describing a situation involving the robot, after which they were asked to respond to the HRIES. The results showed that adding tears to the robot pictures increased Sociability, Agency and Animacy. However, Disturbance, a measure of negative reactions to unknown or unusual objects, showed no change. The results of this study suggest that a robot shedding tears can increase anthropomorphism in multiple aspects. Furthermore, it was shown that tears did not cause negative reactions to the robot. Therefore, it is suggested that the robot's emotional expression of tears may be beneficial for facilitating social human-robot interaction.

P20: Neural Basis Of Negative And Positive Emotion Regulation In Remitted Depression

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Major Depressive Disorder (MDD) is characterized by high recurrence. Inadequate emotion regulation has been proposed as a vulnerability mechanism to relapse, mediated by abnormal involvement of frontal brain regions. We studied whether remitted MDD (rMDD) is characterized by aberrant frontal activation during regulation of both negative and positive emotions.

Data from 46 rMDD patients and 24 healthy controls (HC) from the NEWPRIDE study was included. An Emotion Regulation Task was used during fMRI scanning, in which emotional images had to be viewed or cognitively reappraised. Also, questionnaires on regulation strategy were administered. We assessed group differences (rMDD vs HC) and studied the relation between neural involvement and daily life use of regulatory strategies within rMDD. RMDD patients showed abnormal activation in prefrontal-parietal regions during emotional viewing. During instructed positive upregulation, rMDD patients showed abnormal insula activity. RMDD was characterized by dysfunctional regulation strategies in daily life. Within rMDD emotion regulation was related to activation within a limbic- prefrontal network. In rMDD regulatory abnormalities remain, especially when uninstructed and in daily life. Lower insula activation during positive upregulation suggests decreased monitoring of positive emotions. Our findings suggest that both negative and positive emotion regulation is important in

understanding neurocognitive underpinnings of resilience.

P21: Developing A Wearable Technology Prototype To Measure Stress In People With Dementia

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Introduction: The high prevalence of Behavioural and Psychological Symptoms of Dementia (BPSD) is a challenge for (in)formal caregivers. Stress is a common problem for both people with dementia and their caregivers. The development of wearable technologies to measure stress in people with dementia has the potential to help manage BPSD. Wearable technology can be used to detect physiological responses induced by stress in the sympathetic nervous system. However, current wearable systems for measuring stress are not suitable for everyday use in dementia care. The goal of the current research is to develop a prototype (an application) to measure stress using wearables, whilst taking social, technical, and legal requirements into account.

Methods: To achieve this goal, a community of stakeholders has been brought together. Including people with dementia, caregivers, legal and IT-experts. A design method was used, divided into four work packages: 1) social, technical and legal requirements; 2) design and prototype realization; 3) evaluation prototypes in practice and 4) dissemination. Different iterations take place between September 2022 and July 2024.

Results and conclusion: User stories have been developed from the perspectives of the people with dementia, the informal and

formal caregivers, The contextual requirements for nursing homes have been visualized. During consortium meetings, knowledge is shared, co-creation takes place and a prototype is currently being developed.

P22: Shared-Decision Making In Patients With Ischemia With Non-Obstructive Coronary Arteries: A Qualitative Study On Experiences And Needs

Anouk E.C. Bruijnzeels, Dinah L. van Schalkwijk, Jos W.M.G. Widdershoven, Paula M.C. Mommersteeg - Tilburg University

Introduction: Ischemia with No Obstructive Coronary Arteries (INOCA) is a heart condition that affects predominantly women and is associated with a poor prognosis and low quality of life. The current study aims to examine the needs and experiences concerning the current care trajectory and shared decision making in patients with INOCA.

Methods: In total 36 women participated in eight online focus group interviews. Focus groups consisted of 4-6 participants to optimize conversational interaction and were held according to a topic list. Patients' experiences, needs and preferences concerning shared decision making were meant to be identified. Thematic analysis was used with the aid of Atlas.ti.

Results: Most patients indicated that they want to make decisions together with their physician. A part of the patients wanted to make their own decisions, and a small part indicated that they want their physician to make decisions. Furthermore, relevant topics included the preference for focus on the patient, the need for trust, more available sources of information, enough knowledge of the physician, and enough time. Shared-

decision making was deemed most important during the diagnostic phase.

Conclusions: Most patients want to make decisions together with their physician. These results will be used for future development and implementation of a patient decision aid to further optimize the healthcare trajectory of patients with INOCA.

P23: Intrapersonal Emotion Regulation Pathways In A Social Context

Ayesha Afzal, Keri Pekaar - Tilburg University

Introduction: A lack of synchrony between one's felt and expressed emotions is a prerequisite to emotion regulation (ER). However, an often-overlooked aspect is the social context in which this regulation typically takes place. We propose that the motive of ER (for the self or the other) and the relationship with the other may create multiple regulatory pathways. These pathways are expected to trigger different ER strategies and lead to different trade-offs in outcomes for the self and the other.

Methods: A proposition-based literature review was conducted to a) synthesize the ER strategies that are central in different literatures, b) create a framework in which these pathways are differentiated in terms of motive and empathic concern, c) assess the consequential well-being and performance-related outcomes for the self and the other, and d) discuss potential conflicts and trade-offs that individuals may encounter during the ER process.

Results: Four distinct intrapersonal ER pathways were identified within a social context. Two of these pathways were found to reflect emotional discordant conflicts that evidently lead to trade-offs in their self- and

other-focused well-being and performance outcomes.

Conclusion: Regulating own emotions in the presence of others can be done in different ways. The unique underlying balance between self- and other-focused interest determines the ER strategy and effectiveness.

P24: Impact Of Prosodic Uncertainty Cues On Perception And Interpretation Of Spoken Verbal Probability Phrases

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Introduction: People often use verbal probability phrases when discussing risks (“It is likely that you will have mood-related side-effects after taking this drug”). When speakers are uncertain about risks, they can also non-verbally signal this uncertainty by using a rising, question-like intonation or a filled pause (“uh”). We examined the effects of these two prosodic cues on people’s interpretation of spoken verbal probability phrases.

Methods: 115 Dutch university students listened to verbal probability phrases that were uttered with a rising or falling intonation, and with or without a filled pause. For each phrase, they gave their numerical interpretation, and indicated how certain they thought the speaker was about the correctness of the probability phrase.

Results: High probability phrases were estimated as lower (and low probability phrases as higher) when they were uttered with a rising intonation. The effects of filled pauses and medium probabilities were less pronounced. Speakers were perceived as least confident when the probability phrases were spoken with both uncertainty cues.

Conclusion: When using non-verbal uncertainty cues (in particular rising intonation) in verbal probability phrases that reflect a low or high probability rate, speakers are perceived as less confident and numerical interpretations of phrases vary even more. These results stress the importance of non-verbal communication when verbally communicating probabilities to people.

P25: Neural Mechanisms Underlying Trust To Friends, Community Members, And Unknown Peers: An fmri Study To Trust In Adolescence

Sophie W. Sweijen, Suzanne van de Groep, Lysanne W. te Brinke, Andrew J. Fuligni, Eveline A. Crone - Erasmus University Rotterdam

Trust plays an important role during adolescence for developing social relations. While prior studies give us insight into adolescents’ development of differentiation between close (e.g., friends) and unknown (e.g., unknown peers) targets in trust choices, less is known about the development of trust to societal targets (e.g., community members). Using a modified version of the Trust Game, our preregistered fMRI study examined the underlying neural mechanisms of trust to close (friend), societal (community member), and unknown others (unknown peer) during adolescence in 106 participants (aged 12-23). Adolescents showed most trust to friends, less trust to community members, and the least trust to unknown peers. Recruitment of the medial prefrontal cortex (mPFC) and orbitofrontal cortex was higher for closer targets (friend and community member), particularly during no trust choices for the mPFC. Trust to friends was additionally associated with

increased activity in the precuneus and bilateral temporal parietal junction. In contrast, bilateral dorsolateral prefrontal cortex and anterior cingulate cortex were most active for trust to unknown peers. The mPFC showed increased activity with age and consistent relations with individual differences in feeling needed/useful. Together, our results show that target differentiation in adolescents' trust behavior is associated with activity in social brain networks implicated during mentalizing, reward processing, and cognitive control.

P26: Emotion Regulation In Alexithymia In Day-To-Day Life

Georgiana Cristian, Yasemin Erbas - Tilburg University

Introduction: Alexithymia, characterized by improper emotion regulation (ER) and difficulties in emotion processing, has been linked to certain psychopathologies. When confronted with intense negative emotions, individuals with alexithymia resort to maladaptive strategies to down-regulate their emotions. Current research in alexithymia and ER has focused thus far on between-person assessments, predominantly in a laboratory setting, thereby lacking ecological validity.

Methods: Therefore, this experience-sampling study is going to investigate how individuals with high levels of alexithymia are regulating their emotions and/ while experiencing negative emotions on a daily basis. Specifically, we are looking into how alexithymia predicts the used momentary ER strategies, how individuals are responding to these strategies, and how it predicts the amount of variability in the chosen strategies. To assess this, a secondary dataset taken from EMOTE database will be used, consisting of 202 Belgian undergraduate

students. The data has been collected for 7 days with 10 beeps a day and the first wave out of three will be analysed. Using multilevel modelling analysis, we will examine how do the high-scoring alexithymia participants experience their emotions and how do they regulate them.

Conclusion: This study contributes to the understanding of ER and affect variability in alexithymia through the use of experience sampling method, thus bringing more insight into the understanding of psychopathologies linked to the increased levels of alexithymia.

P27: Are Virtual Reality Breathing Interventions Effective In Improving Mental Health? Systematic Review And Meta-Analysis

Gabriela Cortez Vázquez, Marcel Adriaanse, George L. Burchell, Raymond Ostelo, Georgia Panayiotou, Elke Vlemincx - Vrije Universiteit Amsterdam

Introduction: Breathing interventions have been shown to reduce mental health problems (including anxiety, mood and stress). Despite the potential benefits of VR implementation of breathing interventions, it remains unclear whether VR breathing interventions are more effective at improving mental health than non-VR implementations. Methods: We conducted a systematic literature search in six electronic databases. We selected randomized controlled trials (RCTs) evaluating effects of VR (vs. non-VR) breathing interventions on mental health outcomes (anxiety, stress and mood, primary), physiological measures of stress, and evaluation outcomes (secondary) in (young) adults.

Results: A total of 2.848 records were identified, 65 full-text articles were assessed, and 6 RCTs were included, of which 5 were

suitable for meta-analyses. VR, compared to non-VR, breathing interventions did not significantly improve overall mental health, nor anxiety, mood or stress. There were no significant changes between VR and non-VR breathing interventions in heart rate and heart rate variability. Participants neither liked nor would use VR breathing interventions more than non-VR breathing interventions.

Conclusions: Results suggest that there is no evidence that VR breathing interventions are more effective in reducing anxiety and stress, or improving mood compared to non-VR breathing interventions.

P28: Depressive Symptoms And Sensitivity To Rewards And Punishments In Learning And Memory

Stefanie Türk, Yee Lee Shing, Francesco Pupillo - Tilburg University

Depression is associated with reduced response to rewards and hypersensitivity to punishments. Studies using computational models have shown that individuals with depressive symptoms presented reduced learning from positive outcomes and reduced reward-related signals in the striatum. In addition, in learning tasks depressive symptoms were associated with better memory for objects related to worse-than-expected outcomes compared to better-than-expected outcomes. Here we intend to investigate the effects of depressive symptoms on the ability to relearn established contingencies after changes from reward to punishment and from punishment to reward, respectively. Participants will perform a probabilistic task in which one of two stimuli has the highest probability of reward or punishment. In separate conditions, the type of the

outcomes will reverse, and participants have to relearn the contingencies from punishments (reward-to-punishment condition) or from rewards (punishment-to-reward condition). On each trial, participants will make a prediction on the amount of reward or punishment they will receive, and feedback will be provided to them afterwards. In addition, trial-unique images will be presented together with the feedback, to be tested later in a surprise recognition test. The use of reinforcement learning models will allow us to estimate learning rates for rewards and punishments separately. We hypothesize that individuals with higher depressive symptoms will show higher learning rates for the reward-to-punishment condition and reduced learning rates for the punishment-to-reward condition, compared to individuals with lower depressive symptoms.

P29: Enhancing Context-Dependent Emotion Regulation In Adolescents: Study Protocol For An Ecological Momentary Intervention

Carmen Nimtz, Annemiek Karreman, Egon Dejonckheere, Nina Kupper - Tilburg University

Introduction: Emotion regulation (ER) is associated with various behaviors crucial to adolescents' physical and mental wellbeing. Successful ER is linked to the concept of ER flexibility, proposing that a person benefits most from flexibly matching ER strategies to the current situational context. However, there is a lack of research incorporating multiple contextual factors and providing just-in-time interventions focused on improving ER. Therefore, this ecological momentary intervention (EMI) aims to explore the effect and feasibility of a mobile application

providing context-dependent ER strategy recommendations.

Method: Adolescents will be randomly assigned to the intervention or control group. For 14 days, the control group will receive daily prompts to report their current emotions. In addition to that, the intervention group receives access to a mobile application providing educational content on ER and context-dependent recommendations for ER strategies. After reporting negative emotions, both groups will be asked to indicate their current emotions and the ER strategies they applied. Additionally, participants will fill out questionnaires measuring ER and mental health factors pre- and post-intervention.

Conclusion: This EMI will be among the first to test the effectiveness of context-dependent just-in-time recommendations for ER strategy use in adolescents. The study's results and limitations could provide future directions for tailored ER interventions.

P30: The Power Of Imagination To Teach Emotional Vocabulary In The Efl Classroom

Elisa Pérez-García, María Jesús Sánchez, María Fernández - Universidad de Salamanca

The aim of this intervention study was to examine the best method to teach and learn emotional vocabulary in the English as a foreign language (EFL) classroom. For this purpose, the effectiveness of two types of instruction (context provision and imagination elicitation) were tested in a Pre-test / Post-test design. A total of 60 EFL students at a B2 level participated in the research. They were assigned to one of the three conditions (experimental groups: context provision and imagination elicitation

and control group: traditional approach). A set of 40 emotional words was selected according to the following criteria: to be emotional and mid-frequency vocabulary in English, and rather unknown words by B2-level students in order to allow room for learning. Results showed that the context provision and imagination elicitation methods proved more useful in achieving progress in emotional vocabulary learning than traditional practices. In addition, the analyses revealed the superiority of the imagination elicitation instruction over the context provision approach. It seems advisable to further exploit the imagination elicitation method in which students employ personal and autobiographical information, as it makes a noticeable difference in terms of overall performance.

P31: Being An Involved Parent Provides Superpowers: The Effect Of Fatherhood On Recognizing Emotional Expressions

Bediz Sena Eke - Altınbaş University

According to Fitness Threat Hypothesis, women are superior in decoding negative emotions since they are primary caregivers. However, nowadays involvement of men in childcare has increased. Based on the Fitness Threat Hypothesis and the changes in caregiving roles, the research aims to investigate how parental involvement impacts emotion recognition in men. Participants were fathers of children aged 3-6. The research employs an experimental research design. The procedure for the experimental group includes three steps. First, semi-structured interviews were conducted to prime fatherhood and participants were asked to talk about a memory with their children. After this, the experiment proceeded with a computerized

emotion recognition task. The last part included a survey including Fatherhood Involvement Scale and Demographics Questionnaire. For the control group, only emotion recognition and survey filling parts were administered. The study is currently in the data-gathering process, data collection process will end at the end of May 2023. It is expected that fathers who involve childcare more will be better at recognizing emotions from faces, and they will especially outperform decoding negative emotional expressions.

P32: The Role Of Emotions In Upholding Group Norms: An Examination On The Violations Of Academic Integrity

Erkin Sarı, Emine Yücel, Fatih Bükün - Middle East Technical University, Selçuk University, Bingöl University

The violations of group norms might raise negative feelings toward norm violators and lead to efforts to re-invigorate group norms. The current study aimed to test the mediating roles of norm violation-related emotions (i.e., anger, disgust, guilt, & pride) in the link between perceived norm violation and intentions to restore group norms. We experimented with 205 undergraduate students at Middle East Technical University (METU), one of the most respected universities in Turkey. Participants were first reminded about METU's core values regarding academic integrity and excellence, increasing the salience of institutional academic integrity norms. Then, with random assignment, one-half of the participants read a bogus article indicating that METU students did not view plagiarism as a serious crime (i.e., the norm violation group), while the other half informed about the vice versa (i.e., the control group). We addressed

participants' emotions about METU students' plagiarism-related attitudes and collective action intentions to prevent the spread of plagiarism. The experimental group considered METU students' plagiarism-related attitudes less compatible with METU's core academic values than the control group, indicating the norm violation manipulation was successful. The path analytical results showed that the association between the presence (vs. absence) of norm violation and intentions was mediated by decreased pride. The findings were discussed in light of the literature.

P33: Sharing Daily Positive Emotions Promotes Eudamonia: The Moderating Role Of Perceived Partner Responsiveness

Duygu Taşfiliz - Altınbaş University

Sharing emotions is associated with many positive outcomes. Specific interpersonal processes such as perceived partner responsiveness (PPR) are important mechanisms driving emotional disclosure. The present study aimed to explore the association of emotional disclosure to romantic partners and PPR, as well as their predictive role in psychological well-being (PWB) in day-to-day living. The study sample consisted of young adults currently in a romantic relationship (N = 215, Mean age = 22.63). Participants completed a series of short online surveys focusing on their daily experiences and feelings for nine days. In the findings of the study, it was observed that people who shared more positive emotions with their partners had higher daily psychological well-being. The findings also showed that people who perceive their partners as responsive experience greater

well-being if they share positive emotions more than those who perceive their partners as less responsive. Sharing negative emotions was also positively associated with well-being, but the perceived partner responsiveness interaction was not significant for negative emotions.

P34: Using Predictions To Resolve Emotional Ambiguity: Facial Expression Intensity Influences The Reliance On Prior Expectations

Vilma Pullinen, Aimee Newlands, Patric Bach, Louise H. Phillips, Margaret C. Jackson - University of Aberdeen

The ability to use prior information to accurately predict others' future emotional states can facilitate emotion perception. Prior expectations are also proposed to play a key role in resolving ambiguity and uncertainty. We aimed to investigate whether the facial expression intensity influences the degree of reliance on prior expectations (i.e., precision-weighting) to categorise faces as angry and happy. Two studies were conducted employing two variations of the cue-target paradigm with two different age groups (young adults in Study 1 and 2a; older adults in Study 2b). Participants saw an emotion likelihood cue (Study 1) or a sentence cue (Study 2) followed by either a congruent or incongruent emotional expression. Facial expression intensity was manipulated (low versus high). Emotion categorisation responses were consistently faster when the expression was congruent versus incongruent. Critically, this congruency benefit was significantly larger in magnitude when expression intensity was low versus high in both studies. This suggests a greater reliance on prior expectations when we need to infer the affective state of another from a

subtle facial expression. However, contrary to suggestions that reliance on predictions increases as we age, both age groups showed a similar congruency effect magnitude. The relationship between the strength of prior expectations and sensory signal in emotion perception is discussed.

P35: The Relationships Between Natural Emotion Vocabularies, Emotion Differentiation And Depressive Symptoms In An Adolescent Sample

Gwyneth DeLap, Vera Vine, Lisa Starr - University of Rochester, Queen's University

Emotion vocabulary (EV) captures the rate of unique emotion words in a text [1]. This study (<https://osf.io/ndkzv>) is the first to derive EV from spoken language and examine its link with emotion differentiation (ED: the ability to recognize and label discrete internal emotion states). EV and ED could be linked, but show opposite relationships with depression [1, 2]. We tested competing predictions about the EV-ED link: the emotion lexicon hypothesis (positive association) vs. the emotion complexity hypothesis (inverse association). We also replicated prior depression findings using latent modeling. 241 adolescents completed interviews, self-report measures, and a 7-day ecological momentary assessment (EMA). ED was derived using the ICC method from EMA ratings of momentary emotions. EV was derived in Vocabulate [1] from transcribed UCLA Life Stress Interviews [3]. Latent depression was modeled using interview and self-report measures. In line with the emotion complexity hypothesis, larger EV and ED were inversely related for negative emotions ($r = -.18, p = .008$). Our SEM found larger negative EV ($\beta = .22, SE = .07, p = .002$) was associated with higher latent depression

($\chi^2(8) = 10.22$, $p = .25$; RMSEA = .04; CFI = .99). Despite speculation language may inform ED, larger NEV did not support differentiation. ED and EV were inversely related, suggesting large EV may indicate emotional complexity that is hard to differentiate.

[1] Vine, 2020 [2] Tong, 2017 [3] Hammen, 2000"