

BAPS Annual Meeting 2023 - May 26th - University of MONS – Campus Plaine de Nimy

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Keynotes

The impact of social isolation on health and well-being

Dr. Claus Vögele, University of Luxembourg

In times of crisis, the support of other human beings is an important factor for our well-being. Yet, the Coronavirus crisis requires exactly the opposite, namely social isolation. In this presentation, I will summarise the extant research on the effects of social isolation on psychological health, including possible risk factors and mechanisms contributing to psychological distress in times of social isolation. Results from an ongoing longitudinal survey involving 6 EU countries on psychological health will be presented, as will be findings from an experimental investigation involving survey participants reporting high scores on loneliness and stress.

Emotion preparedness: The foundation of emotional expressions

Dr. DISA SAUTER University of Amsterdam - Faculty of Social and Behavioural Sciences

We all have emotions, but where do they come from? In this talk, I will present evidence that some emotional states are associated with discrete, innate expressions. I will draw on investigations of vocal expressions of emotions in non-human primates and congenitally deaf individuals, as well as across different cultures. Emotional vocalisations, like other aspects of emotions, are adaptations that have evolved to help us deal with recurring challenges and opportunities, and are modulated by learning. I will argue that our understanding of what emotions are should include a functional perspective centred around emotion preparedness.

Invited Symposia

Invited Symposium 1: Stress in social situations from childhood to old age: From fundamental research on physiological mechanisms towards new avenues for prevention and intervention.

Chair: Rudi De Raedt (Department of Experimental Clinical and Health Psychology, Ghent University, Belgium)

Discussant: Marie-Anne Vanderhasselt (Department of Head and Skin, Psychiatry and Medical Psychology, Ghent University Hospital, Ghent University, Belgium)

General Introduction.

Exposure to social evaluative situations is part of everyday life over the lifespan, from early childhood to old age. Social interactions may create stressors known to have major influence on physiological systems, and chronic stress exposure is a *well-established risk factor for the development and recurrence of mental problems*. Since vulnerability to stress may origin during childhood and adolescence, it is important to study how the interaction of stress and biological factors impacts the likelihood of developing psychopathology. In this symposium, we will present a showcase of research on physiological mechanisms related to social stress that may support new avenues for prevention and intervention. Our symposium integrates different complementary approaches to investigate neurocognitive and physiological mechanisms of social stress. In the first presentation, Guy Bosmans starts from attachment development during childhood, which is linked to hormonal processes related to stress regulation. Parental support decreases cortisol during distress, suggesting that cortisol levels may be related to sensitive and responsive parenting. Levels of hair cortisol during the first COVID-lockdown was used as a biological marker for chronic stress, and it could be shown that this impacted the development of attachment. In the second presentation, Sam Bonduelle reports a study using exposure to criticism in adolescents in the fMRI scanner to investigate mechanisms underlying the link between the experience of criticism and the development of psychopathological symptoms. Mood states and functional connectivity (FC) of the amygdala with other brain areas were assessed before and after (mock) parental criticism versus positive and neutral comments. It could be demonstrated that criticism created mood disturbance and an increase in FC between the left amygdala, which is a key region contributing to brain circuits involved in threat detection and physiological responding, and regions involved in sustained emotional processing. Higher perceived criticism was related to increased FC with the left amygdala, which is indicative of vulnerability for disturbed emotional processing as observed in mood disorders. In the third presentation, Jens Allaert starts from the assumption that decreased self-awareness and increased other-awareness may be adaptive responses to social-evaluative threat (SET), and from research showing that attention regulation is supported by fronto-parietal and fronto-limbic networks. In this study in adults, the effects of brain modulation by prefrontal transcranial direct current stimulation (tDCS) on self and other-attentional deployment during exposure to SET were tested. The results show that prefrontal tDCS decreases self-attention and increases other-attention, suggesting that attenuated self-referential attention may be a mechanism through which tDCS reduces emotional reactivity. In the fourth presentation, Greta Miknevičiute uses an integrated approach to examine age differences in physiological (cortisol, heart rate), psychological (stress experience), and cognitive (inhibition) effects of experimental acute stress induction in older versus young adults. The results suggest that older adults are more resilient to acute psychosocial stress and that their cognitive performance might even benefit from stress under these circumstances. Finally, Marie-Anne Vanderhasselt will integrate all these findings, discussing how this fundamental research on physiological mechanisms may hold promise for new avenues to prevention and intervention.

Speaker 1: Guy Bosmans

The impact of the COVID-19 lockdown on children's attachment development: A hair cortisol study.

Marlies Wintmolders¹, Bien Cuyvers¹, Marian Bakermans-Kranenburg², Marinus van Ijzendoorn³, & Guy Bosmans¹

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Introduction: Attachment development is linked to hormonal processes, amongst others, relevant for stress regulation, such as cortisol. Parental support decreases the level of cortisol in children during distress. This suggests that high cortisol levels could indicate insufficient or a lack of sensitive and responsive parenting. We tested whether higher levels of cortisol, indicating less parental support, during the first COVID-related lockdown, impacted attachment development in the same period. **Methods:** Hair cortisol was used as a biological marker for chronic stress during the lockdown. Fifty-eight children (aged 8-12) donated a hair sample of three centimeters (one centimeter for each month of the lockdown) to determine the cortisol levels during the lockdown. Secure base script knowledge (SBSK; Middle Childhood attachment Script Assessment) and trust (People In My Life Questionnaire) were measured before and after the lockdown. **Results:** Repeated measures ANOVA revealed an interaction effect between time and hair cortisol for both secure base script knowledge ($F(1, 56) = 8.852, p = .004$) and trust ($F(1, 56) = 9.670, p = .003$). Lower hair cortisol levels were linked to increased SBSK over time ($t(28) = -2.435, p = .011$; Fig. 1). Higher hair cortisol levels were linked to a decrease in self-reported trust ($t(28) = 4.649, p < .001$; Fig. 2). **Conclusions:** this study provided further evidence for the role of cortisol in the development of attachment.

Speaker 2: Sam Bonduelle

How adolescents' perceived criticism and self-criticism affect amygdalar functional connectivity in response to parental criticism.

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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 may 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.

Speaker 3: Jens Allaert

Prefrontal tDCS attenuates self-referential attentional deployment: a mechanism underlying adaptive emotional reactivity to social-evaluative threat.

Jens Allaert^{1, 2}, Maide Erdogan³, Alvaro Sanchez-Lopez⁴, Chris Baeken^{1, 5, 6}, Rudi De Raedt², & Marie-Anne Vanderhasselt^{1, 2}

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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, the participants 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 attenuated self-referential attention may be a neurocognitive mechanism through which tDCS reduces emotional reactivity.

Speaker 4: Greta Mikneviute

Psychophysiological and cognitive effects of acute stress in young and older adults.

Greta Mikneviute^{1,2}, Matias Pulopulos³, Jens Allaert^{3,4}, Alexis Armellini¹, Ulrike Rimmelme^{2,5,6}, Rudi De Raedt³, Matthias Kliegel^{1,2,5}, & Nicola Ballhausen^{2,7}

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Introduction: Many studies focus on the effects of aging or acute stress, but less is known about the *combined* effects of aging and acute stress. This study provides an integrated perspective by examining age differences in physiological, psychological, and cognitive effects of acute stress in a sample of healthy young ($N = 50$; $M_{\text{age}} = 23.06$; 18-30; $SD = 2.90$) and older adults ($N = 50$; $M_{\text{age}} = 71.12$; 65-84; $SD = 5.02$). **Methods:** The Trier Social Stress Test was used to investigate the effects of acute psychosocial stress on physiological (salivary cortisol, heart rate) and psychological (subjective stress, stress appraisal) reactivity, as well as on cognitive inhibition performance (Flanker task), in a crossover design including two laboratory visits (stress and control conditions). **Results:** Stress effects differed in young and older adults on both psychophysiological reactivity and cognitive performance. Older (vs. young) adults had lower cortisol and HR reactivity and anticipated the stressor more positively. While acute stress had no effect on young adults' cognitive performance, the effects of stress on older adults' performance were moderated by the laboratory session. Stress (vs. control) improved older adults' performance in session 1 (smaller accuracy inhibition cost and faster reaction times on correct responses) but impaired performance in session 2 (larger accuracy inhibition cost and slower reaction times on correct responses), likely because confounded with practice effects. **Conclusions:** Older (versus young) adults appear more resilient to acute psychosocial stress and their cognitive performance might even benefit from stress under certain circumstances.

Invited Symposium 2: 'Sharing is caring': Parenting children with severe disabilities in close collaboration with professionals.

Chair: Dr. Sien Vandesande (KU Leuven, Belgium)

Caring for a child with severe to profound intellectual disabilities (SPID) places significant demands on parents' time and resources and is accompanied by numerous stressors and insecurities. As a result, many parents of children with SPID choose to share the responsibility of their child's care with professional caretakers. Sharing is, in that sense, caring for the wellbeing of their child, themselves, and their families. In this symposium, we will begin by providing a concise overview of the target group. Subsequently, we will delve into the topic of parenting these children in close collaboration with professionals. Firstly, Ines Van keer will present her insights on the family patterns of interaction observed in these families. Secondly, Sien Vandesande will explore the delicate balance involved in sharing the care with residential care facilities. Thirdly, Jorien Luijkx will shed light on the support needs of families with adolescents having SPID. Finally, Jacqueline Van Tuyl-Van Serooskerken will discuss the exploration of the basic psychological needs of children with SPID and how to effectively communicate these needs with professional caretakers.

You, Me, Our Family: Exploring family patterns of interaction in young children with a significant cognitive and motor developmental delay

Ines Van keer, Karla Van Leeuwen, Bea Maes

Due to the complex interplay of their limitations, young children with a significant cognitive and motor developmental delay are highly dependent on their parents for almost all activities in their daily life. In

this presentation, we summarize the results of a PhD project that aimed to characterize parent-child interactions and family-orchestrated child experiences within this specific target group. Also, the interrelationships between these family factors and the child's developmental characteristics were examined, cross-sectionally and over time. Within the PhD project, a multimethod approach was taken, using video-observations, questionnaire and/or interviews. Generally, the different studies show that parents of young children with a significant cognitive and motor developmental delay are warm, affective and responsive to their children; and even though they are constantly confronted with a lot of practical and emotional challenges, they invest a lot of effort in adapting their daily family life to create an optimal environment for their child(ren) and themselves. More specific results regarding (the interrelations between) parental and child behavior as well as the organisation of family activities and daily life routines will be presented.

The art of balancing: Exploring the emotional experience of parents considering a transition to residential care for their child with severe disabilities

Sien Vandesande, Laura Fluyt, Bea Maes

Caring for children with severe to profound intellectual disabilities (SPID) can be an overwhelming burden for parents, leading them to consider outsourcing some of the care to residential care facilities. However, this decision is complex and emotionally challenging for both the parents and the child. This Interpretative Phenomenological Study aimed to explore the emotional experiences of parents when making the decision to outsource care for their children with SPID to residential care facilities. In-depth interviews were conducted with seven mothers of boys aged between 8 and 18 who were actively considering a transition to residential care. The study revealed that this decision is a complex and ambiguous process, accompanied by layers of insecurities and fields of tension, against a backdrop of high care burden and (fragile) resilience. It requires parents to balance their child's and their own needs, rational and emotional arguments, and complex emotions, with the ultimate goal of finding a sustainable care solution in the long term while still fulfilling their role as attachment figures. The findings of this study are critical in supporting families who are facing such an important and emotional transition in their lives.

Support needs and experiences of families in the transition to adulthood

Jorien Luijkx

The current knowledge of support needs from families during the transition from adolescence to adulthood for children with PIMD is limited and fragmented. Therefore, it is important to gain more insight in how families with a child with PIMD experience the transition from adolescence to adulthood and what their support needs are.

Ten mothers aged 39 to 58 years of children with PIMD (between 10 and 24 years) were interviewed. Participants were asked to share their experiences (positive and negative) from a family perspective. Families were asked to reflect on previous and current experiences and support needs, and their expectations for the future concerning their child with PIMD.

Families experienced support needs in all domains of family quality of life. Experiences within the system such as the contact with public authorities were mainly negative. Families described to experience stress during adolescence of their child with PIMD with a peak around the transfer to adult care. Positive experiences were described concerning the support they received from peer relatives; also they appreciated professionals who paid attention to the whole family. Knowledge concerning the experiences and support needs of families, should be used to improve the support of these families during adolescence.

Satisfying Basic Psychological Needs among People with Complex Support Needs: A Self-Determination Theory-Guided Analysis of Primary Relatives' Perspectives

J.M. van Tuyl van Serooskerken

Fulfilment of the three basic psychological needs (BPNs) autonomy, competence, and relatedness is seen as an integral part of human self-determination, subjective well-being, and overall quality-of-life. However, the meaning of these psychological constructs for individuals with the most extensive support needs remains elusive. In this study, primary relatives of nine persons diagnosed with severe or profound intellectual and multiple disabilities (SPIMD) were interviewed about their perceptions of the BPNs regarding their family member. They explained how they see their meaning and how the environment can be supportive in fulfilling specific needs. The interview analysis followed a grounded theory with sensitizing concepts approach. Relatives indicated that BPNs are often very subtle, have their own meaning, and are mainly driven by instinct or primary drives. BPNs are also not always consciously expressed. It requires a sensitive and familiar attunement to recognize the needs. For persons with SPIMD, it is not just about being able to choose for themselves. Enjoying and being able to experience the things that someone likes, in particular, are important too. This includes having meaningful interactions with others. The themes in the relatives' perspectives can be summarized into a conceptual framework that shows how complex and challenging the support process can be. BPNs often remain unclear, because signals must first be elicited, noticed and correctly interpreted. Even if BPNs are clear, they cannot always be supported. The model can contribute to a better mutual understanding between persons with SPIMD, their parents, and healthcare professionals.

Invited Symposium 3: Perceptions of justice and legitimacy in relations

CHAIR: Olivier Klein (ULB & UMONS)

Pascaline Van Oost (UCLouvain), Olivier Klein (ULB), & Vincent Yzerbyt (UCLouvain): Legitimizing the expression of prejudice: gender equality as a tool against Islam (Van Oost, Klein, Yzerbyt)

Camila Arnal (ULB), Myrto Pantazi (ULB-Universiteit Amsterdam), Régine Kolinsky (ULB) Rodolfo Mendoza (University of California, Berkeley), Olivier Klein (ULB). "Do perceptions of injustice explain the endorsement of conspiracy theories?"

Emanuele Politi (KUL, UNIL) & Christian Staerkle (UNIL). "Neoliberalism and citizenship: The role of meritocracy in citizenship boundary making and evaluations of naturalization applicants"

Kim Dierckx (Ugent), Emanuele Politi (KU Leuven), Barbara Valcke (Ugent), Jasper Van Assche (ULB), Alain Van Hiel (Ugent). "The "ironic" fair process effect: A perceived fair naturalization procedure spurs anti-immigration attitudes through increased host national identification among naturalized citizens".

Invited Symposium 4: Consciousness, language and memory: from benchmark to bedside

CHAIR: Dr. Olivia Gosseries (ULiège)

DISCUSSANT: Dr. Nicolas Lejeune (Institute of Neuroscience, Université catholique de Louvain)

Aminata Bicego (Sensation and Perception Research Group, University of Liège) Non-ordinary states of consciousness and their clinical applications

Charlène Aubinet (Psychology and Neuroscience of Cognition Research Unit, University of Liège) Consciousness and language in disorders of consciousness after a coma

Charlotte Martial (Coma Science Group, University of Liège) What connects memories after coma or trauma and psychedelics?

Alison Mary (Center for Research in Cognition and Neurosciences, Université libre de Bruxelles) Memory in ageing and psychological trauma

Invited Symposium 5: Emotion Dynamics in Couples

Lesley Verhofstadt (convener) & Laura Sels (discussant)

Presenters

Anna Schouten (KULeuven); Davide Pirrone (UGent) ; Chiara Carlier (KULeuven) ; Aurelia Lilly Scharmer (UGent); Martine Verhees (KULeuven).

General Abstract

It is by now widely recognized that emotions play a central role in people's lives and relationships. Especially intimate relationships are characterized by relationship partners continuously eliciting, responding to, and regulating each other's emotions. In the current symposium, we bring together cutting-edge research exactly focusing on these so-called interpersonal emotion dynamics in couples. Together, the speakers tackle the question of how emotional experiences and emotional processes arise and unfold between partners during actual interactions and within daily life. To this end, they use advanced methodologies such as observational lab and daily life studies. Specifically, Speaker 1 and Speaker 2 investigate the role of goals and goal frustration in the emergence of emotions in couples during conflict interactions. Speaker 1 shows how cultural differences in goal importance impact the emotions that arise during these interactions in Belgian and Japanese couples. Additionally, direct links between salient relationship goals and the experience of certain emotions were found. These findings link up with the findings of speaker 2, who shows how the frustration of certain relational goals -such as autonomy and relatedness- during conflict result in the experience of specific negative emotions. Speaker 3 takes a more methodological approach, comparing different measures to assess emotional similarity and other similarities between partners. Finally, speaker 4 and 5 investigate empathic accuracy and how it operates in couples. Speaker 4 shows how women's (but not men's) relational need frustration negatively impacts how empathically accurate they are during conflict. Additionally, women were more empathically accurate if their male partner was more frustrated during the conflict interaction. Speaker 5 investigated the role of attachment anxiety and avoidance in accurately perceiving one's partners irritation and indifference, finding no convincing evidence that attachment insecurity mattered for how accurate or biased partners were. Taken together, these findings enhance our insight into how emotion dynamics between partners operate within intimate relationships, which is extremely important due to the extensive impact of these kind of relationships on people's health and well-being.

Talk 1: Understanding cultural differences in Belgian and Japanese couples' emotional interactions during conflict: A goal-based account

Anna Schouten¹, Yuanyuan Ji¹, Eva Ceulemans¹, Yukiko Uchida², Batja Mesquita¹

¹KULeuven, ²Kyoto University

Couples' emotions and behaviors during disagreement have been found to differ systematically across cultures. For example, video-mediated recall in a lab study suggested that Belgian couples experienced more anger and less empathy than Japanese couples. We also observed more dominant but less validating behavior in Belgian than in Japanese couples. In this study, we tested for the first time whether cultural differences in emotions and behaviors can be understood from the salient relationship goals during disagreement. *N*=150 Belgian and Japanese couples participated in a 14-day diary study and reported their emotions, behaviors and goals for each couple disagreement. We found that Belgian and Japanese couples differed in their emotions and behaviors to the extent that they endorsed different relationship goals. The relatively higher intensity of positive emotions (i.e., proud, calm) and the lower degree of evasive behaviors in Belgian than in Japanese couples was mediated by autonomy goals, which Belgian couples endorsed more than Japanese. In addition, the feeling of worry/concern was mediated by the goal to meet social expectations, which Japanese couples valued more than Belgians. The findings suggest that couples' emotions and behaviors are informed by the salient relationship goals during disagreement interactions, which in turn differ cross-culturally.

Talk 2: Relational goals frustration: An observational study on the role of negative (dis)engaging emotions

Davide Pirrone¹, Laura Sels¹, Lesley Verhofstadt¹

¹Ghent University

The current study examined the role of partners' negative engaging and disengaging emotions in dealing with the frustration of their autonomy and relatedness needs during conflict. In an observational lab study, 141 couples participated in a conflict interaction and a video-mediated recall task where they reported on their level of need frustration and emotions during the interaction. We found that when partners reported more autonomy frustration during conflict, they experienced more negative disengaging emotions. Additionally, partners who reported more relatedness frustration during conflict, experienced more negative engaging emotions. The association between partners' relatedness frustration and their experience of negative engaging emotions was negatively moderated by the importance of relatedness beliefs. Finally, experiencing more negative disengaging and engaging emotions at one point in time was not associated with a decrease in relational need frustration at a following time point in the interaction. The findings contribute to our understanding of how partners' negative emotions and relational goal frustration are associated.

Talk 3: A comprehensive comparison of measures for assessing profile similarity at specific time points

Chiara Carlier¹, Julian Karch², Peter Kuppens¹, Eva Ceulemans¹

¹KU Leuven

²Leiden University

Profile similarity measures are used to compare two constellations of variables to one another. Over half a century, computing profile similarity has increased in popularity to study for instance how two persons are similar in terms of their personality or profile of experienced emotions (over time). On the one hand, this popularity has brought many new measures into focus, yet on the other hand, many researchers stick to the known correlation and distance of scores. In this study, we have taken four steps to create a comprehensive list of measures that are useful to compare profiles and to identify meaningful groups of measures that produce similar values. During this presentation, we will focus on the last three steps. First, we have reviewed a large set of 88 similarity measures by applying them to both cross-sectional and ESM data sets and retained 43 useful profile similarity measures. Second, we have clustered these 43 measures into similarly behaving groups, and found one cluster with difference measures, one cluster with product measures and one residual cluster. Third, we have interpreted what unifies these groups and their subgroups based on theory and formulas, and linked them to concepts such as shape, scatter and elevation similarity. Last, based on these findings, we will give recommendations and conclusions to be drawn from this comparison with respect to the choice of measure, the Pearson correlation and centering.

Talk 4: The link between relational need frustration and empathic accuracy in romantic relationships

Aurelia Lilly Scharmer¹, Lara Stas¹, William Ickes², Lesley Verhofstadt¹

¹Ghent University, ²University of Texas at Arlington

The frustration of relational needs has been negatively linked to important relationship processes and outcomes. Whether partners' need frustration also undermines their empathic accuracy, the ability to infer their partner's thoughts and feelings accurately, has never been tested empirically, despite indirect evidence suggesting that it might. In the current study, we examined if relational need frustration -general and during a conflict interaction- and empathic accuracy are negatively linked within partners. To this end, we analyzed questionnaire data and data from a lab-based conflict interaction study, including a video-recall task. Using actor-partner interdependence models, we found that both general and interaction-based measures of women's relational need frustration were negatively linked to their empathic accuracy. An exploratory analysis of the cross-partner effects revealed a positive association between men's level of need frustration during the conflict interaction and women's empathic accuracy. Our findings highlight the importance of taking relational need frustration into account when trying to understand and enhance perspective taking in couples during conflict.

Talk 5: Attachment and perceptual accuracy of hard and flat partner emotions in daily life

Martine Verhees¹, Eva Ceulemans¹, Laura Sels², Peter Kuppens¹

¹KU Leuven, ²Ghent University

The ability to accurately perceive your partner's emotions is relevant for relationship functioning and may be affected by perceivers' attachment orientations. In the current study 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). Previous research distinguishing

between these two components focused on the perception of either negative emotions in general or on so-called soft negative emotions. Here we aimed to extend our knowledge about types of partner signals for which perceptual accuracy is affected by attachment by focusing on a hard and a flat partner emotion which can signal a relationship threat, i.e., irritation and indifference towards the partner. 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. Overall, the findings suggest that attachment insecurity does not robustly relate to directional bias or tracking accuracy of partner irritation and partner indifference in everyday life.

Invited Symposium 6: Cognitive-affective processes and offending: From assessment to treatment.

Chair: Dr. Steven Gillespie, Department of Primary Care and Mental Health, Institute of Population Health, University of Liverpool (UoL), United-Kingdom.

General Introduction :

Violent offending, including sexual offending, is a multifaceted phenomenon and a major public health concern. Forensic psychologists and other professionals involved in assessment and risk management therefore play a vital role in the Health and Justice systems. Challenges associated with this work include the need to accurately assess offenders' characteristics to guide therapeutic care, and also to assess offenders' risk of recidivism. This symposium provides updated empirical research regarding the main characteristics of offenders, especially their cognitive and affective competencies, and is intended to guide academic and professional understanding of offender characteristics and treatment needs. It is divided into three parts. First, Dr. Audrey Vicenzutto will focus on the value of neuropsychological assessment to inform a more accurate profile of forensic inpatients' cognitive functioning. Based on previous research, such as Hancock et al. (2010), who aimed to identify a functioning pattern related to aggressive or violent tendencies, Dr. Vicenzutto assessed the Executive Functions of violent forensic inpatients in a High-Risk Security Hospital in Belgium. Results indicate that impulsivity, planning, and problem-solving all represent risk factors for violent recidivism. She will notably discuss the central role of neuropsychological assessment in forensic institutions to design an adequate treatment plan for forensic inpatients.

Second, Mr. Luca A. Tiberi will consider the emotion recognition competency of Forensic Inpatients who Commit Sexual Offenses. Although emotion recognition is not a risk factor for sexual offending, difficulties in socio-affective functioning more broadly represent a psychologically meaningful risk factor for sexual offending. He will present empirical data on the multi-modality associations between facial, prosody, semantic, and body posture recognition. Results suggest that all modalities combined predict the recognition of facial cues, but the two vocal modalities (prosody and semantic) do not predict each other. Mr. Tiberi will emphasize the central role of emotion recognition in the offending process. This work is of particular importance when considering that emotions are often overlooked by forensic psychologists (Gannon & Ward, 2017).

Third, Dr. Steven Gillespie will discuss the need for empirically-based typologies of individuals who commit sexual offenses to guide both assessment and treatment plans. Dr. Gillespie will present results from Latent Profile Analyses, which indicate the presence of five latent profiles: 1) low psychological impairment, 2) impulsive, 3) distorted thinker, 4) rape preoccupied, and 5) child fantasist. He will highlight the potential value of using these profiles to guide risk management and treatment, in the context of the Risk-Need-Responsivity framework.

Talk 1: Executive functions and risk of violent behavior: Which links? An exploratory study among a forensic inpatients' sample.

VICENZUTTO, Audrey, TIBERI, Luca A., LEFEBVRE, Laurent, & PHAM, Thierry H.

Understanding the criminal career is one of the most critical challenges to establishing specific treatments and preventive strategies (Tuominen et al., 2017). In a recent approach, researchers focused on individual cognitive abilities to determine a functioning pattern related to aggressive or violent tendencies (Hancock et al., 2010). To our knowledge, this is the first study in French-speaking Belgium to examine the relationship between executive functioning assessment and risk factors for violent behavior. The sample of forensic inpatients (N = 29) was recruited voluntarily from the High-Risk Security Psychiatric Hospital (SPH) of the Regional Center for Psychiatric Care (RCP) "Les Marronniers" (Belgium). Inpatients were assessed on the WAIS-IV (Wechsler, 2011), The Tower of London (ToL; Shallice, 1982), The Stroop Test (Stroop, 1935), The MCST (Nelson, 1976), the d2 Attention Test (Brickenkamp, 2007), the VRAG (Harris et al., 1993) and the HCR-20 second version (Webster et al., 1997). Some demographic and clinical variables were controlled using the MINI (Sheehan et al., 1998) and the SCID-II (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). Regression analyses indicated that impulsivity, planning, and problem-solving (ToL) indices were predictors of risk factors for violent recidivism. The results are in line with the literature. We will also discuss the interest in implementing neuropsychological tests to operationalize some risk factors for violent behavior.

Talk 2: Multi-modality emotion recognition among forensic inpatients: Exploratory associations between face, prosody, semantic, and body posture sensitivity using Signal Detection Theory.

TIBERI, Luca A., VICENZUTTO, Audrey, SALOPPE, Xavier, MANCINI, Margaux, & PHAM, Thierry H.

Emotion recognition (ER) is a central competency in social interactions. Accurate ER enables the inference of affective and mental states, which are necessary for regulation and adaptation (Feldman-Barrett, 2016). Previous research highlighted significant associations between facial and vocal ER modalities in non-clinical samples (Lewis et al., 2016; Schlegel et al., 2012). In addition, a supramodal factor overseeing ER, divided into modality-specific factors, has been found (Connolly et al., 2020). To the authors' knowledge, no study assessing associations between multi-modality of ER has been undertaken with forensic inpatients. Previous research focused on unimodal ER (Brook & Kosson, 2013; Dawel et al., 2012; Marsh & Blair, 2008). The preliminary sample includes 60 male inpatients from a High-Risk Security Forensic Hospital. They are 45.88 years old (SD = 13.22) and have been hospitalized for over 10 years (SD = 8.47). Four computerized tasks were used to assess the three main ER modalities: NimStim (Tottenham et al., 2009) for faces, GEMEP (Bänziger et al., 2012) for prosody, homemade scenarios created based on EMOTAIX (Piolat & Bannour, 2009) and vocalized using Acapela-Box for semantic, and BESST (Thoma et al., 2013) for body postures. Using Signal Detection Theory, sensitivity indices (d') were computed. Multiple linear regressions were undertaken using the backward entry method, which is suitable for an exploratory model (Field, 2018). Overall, all modalities predicted facial ER, exhibiting the highest model-explained variance ($R^2 = .45$). Counterintuitively, although correlated, semantic and prosodic modalities do not predict each other. Results will be discussed regarding the international literature.

Talk 3 : A genuine triadic measure for capturing stress transmission and synchronization in a family

Shiyao Wang 1, Chiara Carlier 1 & Eva Ceulemans 1
1Research Group of Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium

How stress synchronizes and transmits within a family is an important research topic. To assess synchronization and transmission across time, many statistical methods have been developed. Most of

the measures are dyadic, which restricts the studies to the interaction between two family members. However, family is a system, in which all members might have an effect on others. Hence, to get a more complete understanding of stress synchronization and transmission within a family, interactions between all the possible pairs of members should be taken into account. A few triadic studies attempted to analyze the interactions by combining dyadic measures. However, it has been argued that a genuine triadic approach would yield novel insights. Our study will develop a novel true triadic association measure. The validity of this measure will be tested on data generated from vector autoregressive models with different parameter settings, which can simulate the temporal features of family interactions.

Talk 4: A more Flexible Social Relations Model to investigate family dynamics

Leila Van Imschoot¹, Tom Loeys², Justine Loncke³, Ann Buysse¹ & Lara Stas^{1,4} ¹Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium, ²Department of Data Analysis, Ghent University, Ghent, Belgium ³Independent researcher, ⁴Department of Biostatistics and Medical Informatics, Vrije Universiteit Brussel, Brussels, Belgium

To gain a comprehensive perspective on family functioning, researchers can evaluate family dynamics on the individual, dyadic and family level, while also accounting for family members' distinct roles through the Social Relations Model (SRM) with roles. This analysis requires directed dyadic measurements, obtained by asking family members to report on their relations with every other family member. The specification of the traditional SRM with roles demands that all these dyadic measurements contribute equally to the family effect, i.e., the family culture or climate. Put differently, the SRM assumes that the perceptions of all family members affect the shared family norms, values and goals in exactly the same way (Kenny et al., 2006). We argue that this equal-weights assumption is too restrictive for family systems. Therefore, this study introduces a more Flexible SRM which allows these weights to differ. We performed simulations to assess the performance of the Flexible SRM and reanalyzed data from published SRM studies to investigate to what extent the equal-weights assumption holds in family research. Our findings show that the Flexible SRM yields good model fits and unbiased estimators under both a violated and fulfilled equal-weights assumption. Moreover, results from real family research indicate that the equal-weights assumption is often untenable. In this presentation, we demonstrate the Flexible SRM and discuss the possible implications of our findings for the commonly observed insignificance of family effects in the literature.

Symposia on abstract submission

Symposium with Abstract Number A13

Session: Parallel session 3 (13h50) - Curie

Title: « Dyadic Data in Close Relationships: Applications and Methodological Innovations »

Authors: Organizer: Leila Van Imschoot, Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium

Speaker Talk 1: Pauline Verhelst, Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium

Speaker Talk 2: Otto Versyp, Research Group of Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium

Speaker Talk 3: Shiyao Wang, Research Group of Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium

Speaker Talk 4: Leila Van Imschoot, Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium

Our bonds with others shape who we are as humans. A key concept to understand the significance of interpersonal processes is interdependence: the mutual bidirectional influences we have on each other's thoughts, feelings, and behavior. This interdependence is especially fundamental to the scientific understanding of close relationships, for instance romantic couples and parent-child relationships. Properly measuring interpersonal constructs in close relationships requires collecting data from both dyad members. Indeed, these constructs are inherently relational and involve how dyad members influence each other, which cannot be fully understood based on one person's view. Historically, such designs posed obstacles for researchers, because traditional statistical techniques based on the general linear model do not account for the nonindependence in the data, which causes biased estimates and incorrect p-values. In response to this problem, methodologists started to develop dedicated conceptual and analytical models to study interdependence, for instance the Actor Partner Interdependence Model (APIM) and the Social Relations Model (SRM). Together with the accessibility of multilevel and structural equation modeling, these advancements in the field of dyadic data analysis have made relationship science flourish. Today, psychologists interested in close relationships have many options to adequately analyze dyadic data and the relationship researcher's statistical toolbox is ever-growing.

The aim of this symposium is to demonstrate recent applications as well as methodological innovations in the field of dyadic data analysis.

The first two talks demonstrate the application of dyadic data analysis in the study of romantic couple relationships. The first study explores how positive humor as an interpersonal emotion regulation strategy contributes to emotional and relational well-being, while taking into account psychological intimacy as a possible mediator. The second talk shows how using dyadic data in intensive longitudinal research designs facilitates our understanding of how relational dynamics unfold over time. Using experience sampling methodology, this study examines the prevalence and correlates of the pressure felt from romantic partners to not feel bad. The talk will discuss how this pressure relates to relational well-being and context, as well as participants' own experienced negative emotions and how their partner perceives these emotions.

The third and fourth presentation intend to offer researchers new approaches to dyadic data analysis that consider the broader network of close relationships in families.

The third presentation introduces a novel true triadic association measure. With this measure, researchers can assess the synchronization and transmission of emotions (e.g., stress) among mother, father and child in a family. The fourth talk introduces an adaptation of the Social Relations Model with roles, an analytical model that can study family processes at the individual, dyadic, and family level, while considering the different roles in a family. With a more flexible SRM conceptualization, the family effect becomes a measure of the family climate. We will explain this approach and show how to easily analyze such data.

In conclusion, the contributions to this symposium underscore how dyadic data analysis promotes a deeper comprehension of the complex and dynamic nature of close relationships.

Talk 1: Humor as interpersonal emotion regulation strategy in couples during conflict: an observational lab study Pauline Verhelst¹, Lilly Scharmer¹, Davide Pirrone¹, Laura Sels¹, & Lesley Verhofstadt¹
¹ Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium
The use of humor plays a vital role in our health and well-being, especially shared laughter with close others (Maiolino & Kuiper, 2016; Martin, 2002, 2004). However, it is still not fully understood how the use of humor in close relationships promotes well-being, and which mechanisms might explain this association. The aim of the present study was to investigate whether the use of positive humor as an interpersonal emotion regulation strategy (IERS) during a negative social interaction is related to the emotional and relational well-being of both individuals and their romantic partners. We additionally examined the possible mediating role of psychological intimacy within these associations. After engaging in a negative lab interaction, 129 couples reported on their use of positive humor as an attempt to regulate their partner's mood, psychological intimacy, feelings about the relationship, and momentary affect. An actor-partner interdependence mediation model revealed actor and partner effects of humor on affect. In addition, the use of positive humor was associated with an increase in the partner's relational well-being. Psychological intimacy partially mediates these relationships. These findings have implications for understanding how humor can be used as an IERS for managing conflict and promoting individual and relational well-being in romantic relationships.

Talk 2: Pressure to not feel bad among (heterosexual) romantic partners: prevalence, and correlates Otto Versyp¹, Ginette Lafit^{1,2}, Laura Sels³, Lesley Verhofstadt³, Eva Ceulemans¹ & Peter Kuppens¹
¹Research Group of Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium
²Department of Neurosciences, Center for Contextual Psychiatry, KU Leuven, Leuven, Belgium
³Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium
Western society generally highly values happiness. As a result, people sometimes experience pressure not to feel negative emotions. While it has repeatedly been shown that this pressure not to feel bad can be detrimental to our wellbeing, most previous research has focused on the degree to which people experience pressure not to feel bad from society but not within specific relationships. In this study we examined when, how often and how intensely people experience pressure not to feel bad from their romantic (heterosexual) partners, using experience sampling methodology data. We discuss how this pressure is related to context (presence of, contact and or conflict with a partner), experienced sadness and anxiety, perceived experienced emotions by their partner, and relationship well-being (relationship quality and satisfaction). Findings reveal that although people generally do not experience strong pressure from their partner not to feel sad or anxious, they experience some pressure for about 50% of the time. Furthermore, we find that predictors associated with negative affect (i.e. negative emotions, conflict, perceived negative emotions by partner) are related to both the frequency and intensity of perceived pressure not to feel sad or anxious.

Talk 3: A genuine triadic measure for capturing stress transmission and synchronization in a family
Shiyao Wang 1, Chiara Carlier 1 & Eva Ceulemans 1
1Research Group of Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium
How stress synchronizes and transmits within a family is an important research topic. To assess synchronization and transmission across time, many statistical methods have been developed. Most of the measures are dyadic, which restricts the studies to the interaction between two family members. However, family is a system, in which all members might have an effect on others. Hence, to get a more complete understanding of stress synchronization and transmission within a family, interactions between all the possible pairs of members should be taken into account. A few triadic studies attempted to analyze the interactions by combining dyadic measures. However, it has been argued that a genuine triadic approach would yield novel insights. Our study will develop a novel true triadic association measure. The validity of this measure will be tested on data generated from vector auto-regressive models with different parameter settings, which can simulate the temporal features of family interactions.

Talk 4: A more Flexible Social Relations Model to investigate family dynamics
Leila Van Imschoot¹, Tom Loeys², Justine Loncke³, Ann Buysse¹ & Lara Stas^{1,4}
¹Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium, ²Department of Data Analysis, Ghent University, Ghent, Belgium ³Independent researcher, ⁴Department of Biostatistics and Medical Informatics, Vrije Universiteit Brussel, Brussels, Belgium
To gain a comprehensive perspective on family functioning, researchers can evaluate family dynamics on the individual, dyadic and family level, while also accounting for family members' distinct roles through the Social Relations Model (SRM) with roles. This analysis requires directed dyadic measurements, obtained by asking family members to report on their relations with every other family member. The specification of the traditional SRM with roles demands that all these dyadic measurements contribute equally to the family effect, i.e., the family culture or climate. Put differently, the SRM assumes that the perceptions of all family members affect the shared family norms, values and goals in exactly the same way (Kenny et al., 2006). We argue that this equal-weights assumption is too restrictive for family systems. Therefore, this study introduces a more Flexible SRM which allows these weights to differ. We performed simulations to assess the performance of the Flexible SRM and reanalyzed data from published SRM studies to investigate to what extent the equal-weights assumption holds in family research. Our findings show that the Flexible SRM yields good model fits and unbiased estimators under both a violated and fulfilled equal-weights assumption. Moreover, results from real family research indicate that the equal-weights assumption is often untenable. In this presentation, we demonstrate the Flexible SRM and discuss the possible implications of our findings for the commonly observed insignificance of family effects in the literature.

Symposium with Abstract Number A14

Session: Parallel session 2 (11h30) - Vésale 20

Title: « The Challenges of Diversity and Inclusion in Clinical, Organizational, and Societal Settings »

Authors: TALK 1: Rose-Lima Van Keer¹, Johan Bilsen², Luc Huyghens³, & Reginald Deschepper²

¹ Center for Social and Cultural Psychology (CSCP), KU Leuven

² Mental Health and Wellbeing Research Group (MENT), Department of Public Health, Faculty of Medicine and Pharmacy, Vrije Universiteit Brussel

³ Critical Care Department, Faculty of Medicine and Pharmacy, Vrije Universiteit Brussel

TALK 2:

Hilde Depauw¹

¹ Department of Developmental, Personality and Social Psychology, Faculty of Psychology and Educational Sciences, Universiteit Gent

TALK 3:

Julia Oberlin^{1,2}, Claudia Toma^{1,2}, & Jasper Van Assche^{1,3}

¹ Center for Social and Cultural Psychology (CESCUP), Université libre de Bruxelles

² Centre Emile Bernheim de Recherche Interdisciplinaire en Gestion (CEBRIG), Université libre de Bruxelles

³ Department of Developmental, Personality and Social Psychology, Faculty of Psychology and Educational Sciences, Universiteit Gent

TALK 4:

Berfin Acar¹, Luca Fehér^{1,2}, & Jasper Van Assche^{1,3}

¹ Center for Social and Cultural Psychology (CESCUP), Université libre de Bruxelles

² Psychology and Pedagogy Department, Social Psychology Unit, Eötvös Loránd University, Budapest

³ Department of Developmental, Personality and Social Psychology, Faculty of Psychology and Educational Sciences, Universiteit Gent

This symposium features four presentations exploring the challenges of ethnic-cultural diversity in various domains in life. The first two presentations focus on clinical settings, namely hospitals and therapy environments. The latter two presentations are more applied and focus on diversity in organisations and in neighbourhoods. The first presentation by Rose-Lima Van Keer, a postdoctoral researcher from KU Leuven, highlights the importance of effective communication and decision-making in critical medical situations involving ethnic minorities in a hospital setting. Her studies show that linguistic barriers, emotional expression, and cultural differences pose significant challenges in such healthcare situations. Furthermore, the role of intercultural mediators is also discussed, with Van Keer presenting recommendations for improving training and organizational policies to support their work.

The second presentation, by Hilde Depauw from Universiteit Gent, focuses on the critical skill of broaching, i.e., the ability of therapists to engage in discussions on ethnic-cultural topics in psychotherapy with ethnic minority clients. Her study found that broaching was vital for effective therapy outcomes, as ethnic-cultural topics were intrinsically linked to the client's values, worldviews, and beliefs. The study also revealed that therapists often struggle to broach these topics effectively, leading to a negative impact on the therapeutic relationship and the mental health of ethnic minority clients. Recommendations for effective broaching practices will be presented, emphasizing the importance of open exploration and respectful language use.

The third presentation, by Julia Oberlin from the Université libre de Bruxelles, explores the effectiveness of diversity, equity, and inclusion (DEI) policies in promoting inclusivity and equity in the workplace. The study aims to identify the key antecedents to effective and coherent DEI policies and to understand their psychological impact on employees. The study highlights the importance of a positive structural DEI climate at individual, group, and organizational levels, as well as the organization's motivation and commitment to DEI management, in promoting effective DEI policies.

The study also found that perceived DEI climate mediated the relationship between policy effectiveness and various psychological outcomes, such as group conflict and job satisfaction.

The final presentation, by Berfin Acar and Luca Fehér from the Université libre de Bruxelles, focuses on the relationship between ethnic-cultural diversity and outgroup attitudes in different contexts, as the outcomes may vary depending on the social and cultural context. The proposed studies in Belgian neighbourhoods, Dutch cities, and Swiss cantonal districts will shed light on this relationship in different settings. Their hypothesis is that diversity may lead to increased polarization due to strengthening existing attitudes. By exploring diversity's relationship with prejudice and polarization in the three different samples, this study fits nicely with the other talks, as the results can also inform policymakers on the potential impacts of diversity on social cohesion and provide insight into ways to mitigate negative effects and promote positive outcomes.

In conclusion, this symposium highlights the challenges of diversity in healthcare, organisations, and local areas, while simultaneously presenting innovative solutions to promote cultural diversity, effective communication, and equitable policies. The symposium thus seems highly relevant to the conference theme as it emphasizes the importance of a dialectical relationship between theory and practice in addressing the challenges of diversity across various facets of life. Furthermore, the symposium provides a platform for interdisciplinary collaboration, with researchers from different fields and universities coming together to address a critical issue in our current society.

Talk 1: Dealing with cultural diversity in critical medical situations in hospital: When patients are admitted to the hospital care by healthcare workers suddenly becomes a necessity. During the care process, different parties (patients, families, healthcare professionals) are inevitably obliged to communicate with each other in a marked-out environment with its own regulations. Due to societies' increased cultural diversity, this communication happens more often in a multi-ethnic context. In this presentation I will talk about some major insights from my PhD research about communication and medical decision making with ethnic minorities in critical medical situations in hospital. I conducted two studies in total: 1) a qualitative ethnographic fieldwork research in the intensive care unit of a multi-ethnic hospital in Belgium 2) a survey study among intercultural mediators working in hospitals in Brussels and Flanders. During my talk I will discuss some concrete cases thereby pinpointing to different challenges, for instance patients and relatives expressing their emotions, linguistic barriers and having bad news conversations. I will also focus on the situation of intercultural mediators working in hospitals and show that they often feel underappreciated at their work. To finish I will present some recommendations on different levels, such as on the level of training and education and organizational policy.

Talk 2: Client assessment of therapists' broaching behaviour: Towards effective inclusion of ethnic-cultural topics in psychotherapy: Dialogue represents the core of psychotherapy, irrespective of the therapist's theoretical orientation. Research shows that for ethnic minority clients, including ethnic-cultural topics into these dialogues is vital for the therapy process as these topics are intrinsically linked to the client's values, worldviews and beliefs. This is especially important as sociocultural realities are characterised by multiple forms of discrimination ranging from everyday microaggressions to structural inequalities. The negative psychological impact of these experiences underscores the importance of therapists being able to engage with these realities. Broaching - i.e. the intentional efforts to discuss ethnic-cultural topics- is therefore a crucial skill for therapists. Currently, however, many therapists are reluctant to broach, or are tactless when doing so. This leads to the reproduction of ethnic inequalities in mental healthcare. Tackling this requires an in-depth understanding of effective broaching practices. The current study therefore explores the behavioural aspects that encompass broaching and its relation to clients' commitment to therapy and perceived quality of the therapeutic relationship. These

research questions are investigated in two samples of ethnic minority clients (N=213 & N=247). Findings show that broaching behaviour is a multidimensional construct which varies in terms of initiative, continuity, language use and content, resulting in five possible therapist broaching approaches: avoidant, wait-and-see, open, proactive and insensitive approach. The avoidant approach is widely used and negatively associated with outcome measures. Broaching using open exploration, even more so than proactive inquiring, is the overall most favourable approach. The results formulate recommendations on addressing ethnic-cultural topics in an effective and respectful manner.

Talk 3: An integrative understanding of diversity, equity & inclusion (DEI) policies' impact: The key role of DEI climate: Research on the effectiveness of diversity policies and their impact for the employees remains scarce. We intend here to address the important questions of how, when and why diversity, equity & inclusion (DEI) policies lead to positive outcomes for employees, through two interrelated surveys. The first part of our study aims to identify the key antecedents to effective and coherent DEI policies. We hypothesize that a positive (pre-existing) "structural DEI climate" (at individual, group, and organizational levels) will positively predict DEI policy effectiveness and coherence. However, the impact of this relationship will likely be moderated by the organization's motivation and commitment to DEI management. The second part of our study aims to understand the psychological impact of these policies on the employees. Regarding this matter, we predict that "perceived DEI climate" will mediate the relationship between perceived policy effectiveness and various psychological outcomes (including group and individual level consequences such as group conflict or job satisfaction). However, we also hypothesize that an employee's identification with minority or majority groups will moderate these relationships. Since we believe this key identification to influence one's perceptions and interpretations of DEI signals. To test these hypotheses, we plan to conduct multilevel modeling analyses. The results of this study will provide a more comprehensive understanding of DEI policies' impact from a multi-level perspective and highlight the importance of pre-existing organizational and structural factors in order to implement successful policies.

Talk 4: Diversity and polarization: Putting political assertions to the test: High levels of ethnic-cultural diversity may yield two diverging outcomes in terms of how people react to the outgroup. Studies have already shown that diversity does not necessarily provoke negative reactions for everyone. On the one hand, some people in the majority group may react negatively, i.e., with more prejudice. On the other hand, other people may not be affected by it, or even respond positively – i.e., with more tolerance. Hence, diversity alone does not result in a uniformly prejudicial reaction, rather it strengthens the attitudes people already endorse. This process may push people to the opposite extremes in terms of outgroup attitudes, which causes increased polarization in society. To test this hypothesis, we will analyse data from three different samples. We will explore diversity's relationship with prejudice and polarization in Belgian neighbourhoods (Study 1), Dutch cities (Study 2), and Swiss cantonal districts (Study 3). We expect to see higher levels of polarization in areas with higher levels of diversity. This investigation will add to the literature by taking into account the nuances within the link between diversity and prejudice by highlighting that diversity does not only provoke prejudice for some people but can also nurture tolerance for others.

Symposium with Abstract Number A15

Session: Parallel session 1 (09.50) - Vésale 20

Title: « The relations between language processing, executive functions, and short-term memory in brain-damaged patients. »

Authors: Chair : Clémence Verhaegen, Faculty of Psychology and Education, University of Mons, Belgium

Chair : Sandrine Basaglia-Pappas, Faculty of Psychology and Education, University of Mons, University of Mons, Belgium

Speakers :

- Marion Bouffier, Psychology & Neuroscience of Cognition – PsyNCog Research Unit, University of Liège, Liège, Belgium

- Steve Majerus, Psychology & Neuroscience of Cognition – PsyNCog Research Unit, University of Liège, Liège, Belgium

- Grégoire Python, Faculty of Psychology and Educational Sciences, University of Geneva, Switzerland and Neurorehabilitation Unit, Department of Clinical Neurosciences, CHUV, Lausanne, Switzerland

- Charlotte Jacquemot, Département d'Etudes Cognitives, ENS-PSL, Neuropsychologie Interventionnelle, INSERM U955, Paris, France

In recent years, studies have highlighted the implications of cognitive processes such as executive functions and short-term memory (STM) in language processing, and argue that language disorders in some brain-damaged patients are not due to a disorder of language representations per se, but to an impairment in maintaining or accessing these representations, related to an executive or STM disorder (Code, 2018; Jacquemot & Bachoud-Levy, 2021; Martin et al., 2018). These hypotheses have important implications, both for fundamental research -to understand the relationships between these different cognitive functions- and for clinic -to improve the evaluation and management of brain-damaged patients (aphasia, primary progressive aphasia, etc.). In this symposium, we will address the question of these relations between language and STM, as well as language and executive functions through four talks, whose authors have research expertise in the field. First, Dr. Bouffier will address the issue of phonological and lexical-semantic precision in STM in neurotypical subjects. Then, Prof. Majerus will examine the neural and cognitive specificity of phonological vs. semantic resistance-to-interference ability in aphasia and cognitive aging. The third talk will be presented by the Dr. Python who will discuss novel ways to assess mild post-stroke anomia with taking into account cognitive control processes. Finally, in the fourth talk, the Dr. Jacquemot will address the question of whether there is a specific verbal executive control, distinct from non-verbal executive control.

Talk 1: Representational quality in working memory: A behavioral and neuroimaging approach. Marion Bouffier¹ and Steve Majerus¹ ¹ Psychology & Neuroscience of Cognition – PsyNCog Research Unit, University of Liège, Belgium- Working memory (WM) precision is defined as the quality with which memoranda are stored in WM. This concept has received relatively little research interest, and this particularly in the auditory-verbal domain. We conducted two behavioral studies aiming at investigating phonological WM precision in healthy young monolingual (Study 1) and trilingual (Study 2) adults, and a functional neuroimaging study (Study 3), where we investigated the neural underpinnings of WM storage. In Study 1, we assessed WM precision using an auditory probe recognition task, where target and probe words could share 25%, 50%, or 75% of their phonemes. Study 2 followed a similar design, but the lists were administered in German, French and English. Study 3 explored the nature and quality of neural WM storage by presenting individual nonwords that could be phonologically close or distant. In Studies 1 and 2, we observed that phonological WM precision was limited: the more similar the negative probes to the target word, the higher the rate of false recognition. Performance was particularly impacted at the single-phoneme level. Study 2 additionally

revealed that this effect was maintained across languages. Finally, Study 3 showed that language cortices provided a richer representational basis for phonologically distant versus close memoranda, with additional representational support from extra-linguistic cortices associated with general WM/attentional processes, and this for both types of memoranda. These studies allow us to better understand the level of detail with which information can be stored in WM, both from a behavioral and neural perspective.

Talk 2: Is resistance-to-interference a domain-specific or domain-general ability? Evidence from a neuroimaging and treatment study. Steve Majerus¹, Coline Grégoire¹, Pauline Querella¹, Mercédès George^{1,2}, Nathalie Wiot^{1,2} & Lucie Attout¹ ¹ Psychology & Neuroscience of Cognition – PsyNCog Research Unit, University of Liège, Belgium ² University Hospital CHU-Liège, Liège, Belgium - The domain-general versus domain-specificity of resistance-to-interference (RI) capacity remains a controversial research question in human cognition. The present study examined the neural and cognitive specificity of phonological vs. semantic RI ability. In a first neuroimaging study in healthy elderly participants conducting a verbal judgment task with interference buildup, we observed a dissociation of neural patterns in the left inferior frontal gyrus and middle temporal gyrus for phonological versus semantic RI. In a second neuroimaging and treatment study in aphasic patients with associated phonological and/or semantic language control deficits, semantic RI treatment selectively influenced semantic language control abilities and associated neural activity, while phonological RI treatment had a similar albeit more limited specific effect on phonological language control abilities and associated neural substrates. Together, these results provide evidence for domain-specific RI abilities as a function of language subdomains.

Talk 3: Attentional and lexical control in language production in aphasia Grégoire Python^{1,2}, Cyrielle Demierre ^{1,3}, Marina Laganaro¹ ¹ Faculty of Psychology and Educational Sciences, University of Geneva, Switzerland ² Neurorehabilitation Unit, Department of Clinical Neurosciences, CHUV, Lausanne, Switzerland ³ Cognitive Neurology Unit, Department of Neurology, University Hospitals of Geneva, Geneva, Switzerland - The aim here is to present novel ways to assess mild post-stroke anomia, that is often underestimated by standard picture naming tests typically focusing on linguistic processes without taking into account cognitive control processes inherent to word production. Indeed, utterance production requires linguistic processes (syntactic, lexical-semantic, phonological, etc.), but also self-monitoring and other attentional resources (Roelofs, 2005). To investigate the control necessary to resolve lexical competition, we used the blocked cyclic naming paradigm (e.g., Harvey & Schnur, 2015; Python et al., 2018; Ries et al., 2014) and to assess more generally the involvement of attentional control in utterance production, we used a dual-task paradigm (e.g., Murray et al., 2000; Laganaro et al., 2019). Groups of aphasic speakers were tested with these paradigms and their response pattern was compared to age-matched neurotypical individuals. Although neurotypical individuals typically showed lexical-semantic and dual-task interference, interference effects were even more prominent in persons with aphasia in both paradigms. More precisely, naming latencies, error rates and error types were modulated by the resolution of lexical competition and by the timing of the concurrent task in dual-task settings (Python et al., in press; Demierre et al., under review). Crucially, some aphasic speakers with residual anomia (i.e., standard anomia tests within the normal range) still showed significant deficits in these paradigms. Interference under conditions of increased lexical/attentional demands strongly suggests that control mechanisms are involved in word production. The assessment tools presented here may also have the potential to capture residual word finding/control difficulties in mild aphasia.

Talk 4: Can language system be functional without executive resources? Charlotte Jacquemot¹ ¹Département d'Etudes Cognitives, ENS-PSL Neuropsychologie Interventionnelle, INSERM U955 -

Executive control is involved in language, particularly in complex syntactic or lexical/semantic tasks. Although the question of the existence of language-specific executive control remains open, there is ample evidence that executively demanding language tasks rely on general, rather than language-specific, executive resources (Fedorenko, 2014). We examined the interaction between the language system and executive control by evaluating stroke patients and neurodegenerative disease patients with language and executive deficits. Studies on neurodegenerative patients with striatal atrophy (Huntington's disease patients), in which verbal tasks requiring high executive load were compared to verbal tasks requiring low executive load, have shown that executive control is entirely part of the language system. At the brain level, these data showed that the striatum involved in this executive network is part of the language system (Jacquemot and Bachoud-Lévi, 2021a). Data from a stroke patient with a dissociation in performance between high and low executive demand conditions in verbal tasks, not present in non-verbal tasks, show that verbal executive control is at least partially distinct from non-verbal executive control. This verbal executive disorder suggests that some aspects of executive control are language-specific (Jacquemot & Bachoud-Lévi, 2021b). I propose that verbal executive control involving the fronto-striatal network improves language efficiency and fluency by regulating the allocation of limited cognitive resources (working memory and attention) at each level of language (phonology, morphology, syntax and lexicon-semantics). These results have implications for the clinical management of lexical-semantic disorders, both for the assessment of these deficits and for their rehabilitation.

Symposium with Abstract Number A16

Session: Parallel session 3 (13h50) - Curie

Title: « Understanding antecedents and consequences of Parental Burnout »

Authors: Eline Desimpelaere (Ghent University, Department of Special Needs Education)

Chloé Jeanne (Liege University, Department of Psychology)

Alice Schitteck (Université Catholique de Louvain, Department of Psychology)

Even though scientific interest in Parental Burnout (PB) is relatively recent, important milestones have already been attained regarding its antecedents, symptoms, and consequences. Researchers increasingly agree that PB emerges from chronic parenting stressors and arises when the parent lacks the resources to face them. In addition, consensus grows that PB symptoms are characterized by intense exhaustion related to one's parental role, emotional distancing from one's children, feeling fed up with parenting, and contrast with the previous parental self. Despite these findings, more work is needed to substantially advance this blossoming field of research.

In recent years, a growing body of research has rigorously attempted to assess the various antecedents predicting PB. However, to date, studies that evaluate the impact of raising a child with special needs in relation to PB are essentially lacking. Given the unique challenges in parenting, these parents are likely at elevated risk for PB. In the first presented study, a qualitative insight is given on the risks, resources, and experiences of 'burnt-out' parents of children with autism.

Additionally, multiple studies have demonstrated that among parenting stressors, family functioning, especially parents' couple and coparental relationship, explains a large part of PB variance. However, few studies have examined the respective contributions of conjugal and coparental variables in the understanding and development of PB. The second study will present the results of the first

measurement time of a longitudinal study that investigates the link between conjugal and coparental variables and PB.

Although a better understanding of antecedents may help to prevent the development of PB, providing insight into why and in which cases PB leads to deleterious consequences is just as important for treatment purposes. Research has established that PB leads to various negative outcomes for both parents and their child(ren), with repercussions on parenting behaviors being particularly examined. Although a significant association between PB and violent behaviors towards the offspring has increasingly been documented, this link is not perfect (r around .50), suggesting that moderators might be at play. In the third presentation, a quantitative cross-sectional study will focus on the moderating role of a parent's insecure attachment style (i.e., avoidant, dismissing, or fearful) in the link between PB and violence towards the offspring. Results show that this link is dangerously potentiated by a parent's fearful attachment style.

The three presented studies may have relevant clinical implications. Considering the high prevalence of PB in Western countries, with Belgium being one of the most affected countries, understanding its antecedents and its consequences is key in order to create both prevention and treatment programs for PB. A better understanding of what leads to PB in the case of parents of children with special needs (presentation 1), how PB is linked to the parental couple relationship (presentation 2), and in what cases PB leads to violence towards the offspring (presentation 3), are clues that could allow creating specific prevention programs and campaigns, as well as personalizing treatment options for burnt-out parents.

Talk 1: Title: About surviving in a whitewater raft: A qualitative exploration of parental burnout in parents of children with ASD Authors: Desimpelaere, E., Verreux, D., & De Pauw, S.S.W. Objectives: Scientific interest in Parental Burnout (PB) has recently expanded, with researchers increasingly agreeing that PB emerges from a chronic imbalance of demands over resources, and as a result from enduring exposure to chronic parenting stress. Although abundant research indicates that parenting stress is particularly prevalent among parents of children with Autism Spectrum Disorder (ASD), almost no research to date evaluates experiences of PB in this specific parent population. The present study aims to address this gap by exploring the specific antecedents and lived experiences of 'burnt out' parents of children with ASD. Method: Sixteen parents of children with ASD, who (had) experienced PB, participated in a semi-structured interview. These parents were probed to talk about the challenges and resources in parenting, the factors that tipped them from parenting stress to PB, and the perceived feelings of PB. Results: The unique challenges of parenting a child with ASD, including the heavy and prolonged caregiving responsibilities, the need to constantly prevent shutdowns or meltdowns, or feeling all alone as a parent, enhanced their parental demands. Although these demands exceeded their resources, parents mentioned that finding joy in small things and non-parenting related activities gave them energy to keep going on. However, this enduring imbalance at some point led to PB, due to escalations at home, difficulties related to the child's developmental stage, and despair. Discussion and conclusion: The results highlight the importance of providing appropriate support and resources to parents of children with ASD to promote their well-being and prevent them from burning out.

Talk 2: Title: Conjugal, coparenting and parental burnout. Preliminary results of a longitudinal study. Authors : Chloé Jeanne¹ & Maria Elena Brianda¹ Affiliation: ¹ Research Unit for a life-Course perspective on Health & Education, Department of Psychology, Université de Liège, Liège, Belgique Abstract Background: As suggested by previous studies on parental burnout (PB) risk factors, characteristics of parents' couple and coparental relationships may largely contribute to PB variance. Cross-sectional studies have identified correlations between PB symptoms and some variables of conjugal and coparental relationships. However, parents' couple relationship can include so many

dimensions that it would be relevant to study them altogether. Moreover, to our best knowledge, these associations have only been examined over a short period of time. Objectives: To apprehend the complex nature of parents' couple relationship, this research aims to study the respective role of several variables of both conjugal and coparental relationships in the case of PB. Given the chronic nature of PB, the role of these variables will be studied in a longitudinal design. Method: Parents from the general population with a romantic partner and a coparent will be recruited on Prolific and social media. Coparental and conjugal variables will be assessed three times via an online self-reported survey with a 6-month interval in between. The results of a scoping review of the literature and an analysis of the questionnaires' psychometric properties were considered in the protocol design. Results: Preliminary results from the first measurement time (T1), i.e. the associations between PB symptoms, conjugal and coparental variables, will be presented. Discussion and conclusion: Results from T1 will be discussed in line with the PB literature. These results may help us to better understand relational dynamics and consider new clinical interventions in the case of PB.

Talk 3: Title: Spiraling down: Fearful attachment style escalates the risk of child abuse among parents in burnout (Schitteck, Roskam, & Mikolajczak, submitted). Objectives: Past research has shown that parental burnout exacerbates violence towards the offspring. Although this effect is of large size (around .50), the correlation is not perfect, which suggests that not all parents in burnout are violent, and that moderators might therefore be at play. Currently, no study has investigated potential moderators in the link between parental burnout and violence. The aim of the current pre-registered cross-sectional study was to examine whether attachment styles moderate the link between parental burnout and violence towards the offspring. We hypothesized that insecure attachment styles would potentiate this link. Method: 914 participants were recruited on Prolific and responded to an online survey. Results: Multiple regression analyses revealed that parental burnout, anxious, dismissing, and fearful attachment styles all significantly predict violence towards the offspring. However, only fearful attachment style significantly potentiated the relation between parental burnout and violence. Discussion and conclusion: Parents' fearful attachment style increases the effects of parental burnout on violence towards the offspring. Results are discussed in light of the role of internal models of self and others. Attachment styles may need to be more systematically investigated and tackled when working with parents in burnout.

Symposium with Abstract Number A17

Session: Parallel session 3 (13h50) - Lafontaine

Title: « Written between the lines? An exchange on how formal aspects of group comparisons affect people's perception, evaluation, and application of information about social groups »

Authors: Felix Hermans; KU Leuven; felix.hermans@kuleuven.be

Florian Dubois; KU Leuven; florian.dubois@student.kuleuven.be

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Marta Małgorzata Stryniak; KU Leuven; martamagorzata.stryniak@student.kuleuven.be

Comparative verbal communication is a crucial vehicle to transmit and change beliefs about social groups. This symposium highlights how formal aspects of group comparisons interact with their meaning in such a way that they influence both the perceived acceptability of such comparisons and the comparisons' capability to evoke stereotype change. Talk 1 presents the outline of a registered report that will compare how the acceptance conditions of quantified sentences ("Many Germans are efficient") and generic sentences ("Germans are efficient") depend on the absolute and relative

prevalence of the described feature. Talk 2 examines how the more-less framing (“Men earn more than women” vs. “Women earn less than men”) and advantage-disadvantage framing influence the perceived truth of social inequality statements and the fairness of the inequality. Talk 3 investigates whether directional (“Men are as emotional as women”) or non-directional similarity claims (“Men and women are equally emotional”) in scientific messages are more effective in changing existing beliefs and associations about social groups. Talk 4 extends the research presented in Talk 3 by testing whether readers’ belief in science might be a prerequisite for comparative format effects to occur. One unique feature of this symposium is that all speakers are junior researchers who will present their ongoing research on the interplay of language and beliefs about group differences. The presented research will be in different stages of completion, inviting the audience to meaningfully contribute to our research through a fruitful exchange of ideas.

Talk 1: The causal influence of absolute and relative prevalence on the acceptability of generics – A registered report Authors: Felix Hermans, Walter Schaeken, Vera Hoorens Stereotypes are often shared using generic sentences like: “Germans are efficient”. Unlike quantified sentences (e.g., “Many Germans are efficient”), generics are very unspecific about how prevalent a property is in a group. This talk reviews puzzling findings on their acceptance conditions and perceived implications. For example, generics are often accepted at surprisingly low prevalence levels and are highly resistant to counterexamples. This makes generics an ideal vehicle to transmit stereotypes. We therefore present a study that aims to uncover the puzzling acceptance conditions of generic sentences. To this aim, we will manipulate sentence type (generic or quantified), absolute prevalence (high, intermediate, low), relative prevalence (positive, equal, negative), and property type (physical, biological-behavioral, cultural-behavioral). On each trial, participants will see a contingency table showing the prevalence levels of a specific property in two alien groups living on a faraway planet. Participants will judge the acceptability of a sentence prescribing the property to one of the alien groups. One group of participants will judge the acceptability of quantified sentences and the other group will judge the acceptability of generic sentences. The acceptability of the quantified sentences is hypothesized to depend on absolute prevalence, while the acceptability of generic sentences is hypothesized to depend on relative prevalence. The study is meant to be submitted as a registered report. Therefore, we will also discuss the advantages and disadvantages of registered reports and will strongly welcome questions and comments.

Talk 2: More-less and advantage-disadvantage framing effects on judgments of inequalities: Does “women earn less than men” equal “men earn more than women”? Authors: Florian Dubois, Karl-Andrew Wolfin, Vera Hoorens People may express beliefs about social inequalities (i.e., uneven distributions of burdens and resources in society) in various manners. For example, they may say (1) “Women earn less than men” or (2) “Men earn more than women”. These claims are logically equivalent. In research on claims about intergroup differences, people agree more with claims that emphasize which group has a feature “more” than with claims that emphasize which group has the feature “less”. This entails the prediction that people more readily agree with a claim like (2) than with a claim like (1). In the domain of inequalities, however, claims about how a group is being disadvantaged occur more often than claims about how another group is being advantaged, and people also find the inequality more problematic. People may therefore agree more readily with a claim like (1) than like (2). We pitted these hypotheses against each other in an experiment where participants judged descriptions of inequalities and where we manipulated the more-less wording and the advantage-disadvantage framing independently from each other. Although participants generally saw greater truth in more-than inequalities than in less-than inequalities, we observed interactions of both more-less and advantage-disadvantage framing with the type of judgment being given and the type of inequalities being described. Our findings suggest that judgments of truth and evaluative judgments

depend on various types of framing, which may affect these judgments to divergent extents. We explore directions for future research on perceptions of and responses to inequalities.

Talk 3: Men are as emotional as women vs. men and women are equally emotional - Stereotype change following a directional vs. non-directional similarity claim Authors: Alexandra Lux, Marta Małgorzata Stryniak, Susanne Bruckmüller, Vera Hoorens There are diverse ways to express that social groups are similar. One way is to use a directional similarity claim that expresses how a target group resembles a referent group, as in “Men are as emotional as women”. An alternative way is to use a non-directional similarity claim that expresses how two groups resemble each other, without assigning roles, as in “Men and women are equally emotional”. Although these similarities are logically equivalent, earlier research suggests that they are not psychologically equivalent (e.g., Chestnut & Markman, 2016). In our earlier research, participants found directional claims truer than non-directional claims but found claimants of directional claims less likable and more prejudiced than claimants of non-directional claims. This raises the question which role directionality plays in claims aiming to change stereotypes. To answer this question, we asked people to read a brief article expressing that “Men are as emotional as women” (directional) versus “Men and women are equally emotional” (non-directional) and examined changes in their beliefs and implicit associations regarding the emotionality of men and women. In addition, we measured those potential changes on two occasions (two-wave structure) to allow us to assess the stability and durability of potential effects. We discuss if and why directionality may impact changes in beliefs and implicit associations, and how these insights can be applied to successfully change harmful stereotypes.

Talk 4: The role of belief in science in stereotype change following a scientific message using directional vs. non-directional claims Authors: Marta Małgorzata Stryniak, Alexandra Lux, Susanne Bruckmüller, Vera Hoorens There are a lot of factors influencing whether disconfirming information is likely to change stereotypes. One of them is how credible individuals find the information or its source. Hence, when claims aiming to disconfirm stereotypes are based on scientific evidence, belief in science may play a key role in moderating other mechanisms of stereotype change. We examined the influence of the directionality of similarity claims on implicit associations and explicit beliefs towards the emotionality of men and women. Participants read a text stimulus expressing that “men are as emotional as women” (directional claim) or that “men and women are equally emotional” (non-directional claim). The information in the text was evidenced by several scientific studies with sources visible to participants. We measured their associations and beliefs three times: once before and right after participants read the text as well as one to three days later, to assess the durability of the potential effect. We investigated whether participants’ belief in science (as measured with the shortened Belief in Science Scale) can undermine the potential effect of directionality on stereotype change. We discuss the implications of our findings for both science communication and stereotype change research. Given that science communication strongly relies on verbal communication, including messages meant to change harmful stereotypes, it is essential to understand which specific factors play a role in the general reception of such messages.

Symposium with Abstract Number A18

Session: Parallel session 3 (13h50) - Vanghogh

Title: « Exploring the interrelated aspects of neuropsychological, psychoaffective and medical aspects in the clinical care of older adults: bridging the gap between the clinical and the fundamental research by a multi-determined approach »

Authors: Chair: Pr. Isabelle Simoes Loureiro (Department of Cognitive Psychology and Neuropsychology, University of Mons)

Talk 1: Delphine De Ro, Neuropsychologist (Hospital Van Gogh)

Talk 2: François-Xavier Sibille, MD, Chief assistant Clinique Mont-Godinne, Louvain Drug Research Institute

Talk 3: Auriane Gros, University of Côte d'Azur, CoBteK Laboratory), Senior Lecturer in Neuroscience, Speech-Language Pathologist, and Educational Director of the Speech-Language Pathology Department of Nice. UFR Médecine de Nice

Talk 4: Sandra Invernizzi (speaker)¹, Alice Bodart¹, Laurent Lefebvre², Isabelle Simoes Loureiro² (University of MONS, Department of Cognitive Psychology and Neuropsychology ; ¹Ph.D. Student; ²Professor)

In this symposium, we will explore several interrelated neuropsychological, psychological and medical aspects to better understand cognitive and behavioral symptoms of psychogeriatric patients. To start with, Delphine De Ro, a Neuropsychologist in a psychogeriatric diagnostic unit of the Van Gogh Hospital, will present the clinical reality of hospitalized older adults. She will explain the difficulties of differential diagnosis as well as the risk of proposing inappropriate treatments, and how the neuropsychological approach is constantly trying to contribute, in accordance with the other clinical disciplines, to refine itself to contribute to a better diagnosis. Then, François-Xavier Sibille, Medical doctor, and Chief assistant at the Clinique Mont-Godinne, as well as researcher at the Louvain Drug Research Institute, will present his work on the relationship between multi-drug therapy and consequential cognitive, emotional, and behavioural disorders. He will propose a particular focus on the medications prescribed in the context of central nervous system management. We will then turn to more fundamental research, with Auriane Gros, senior lecturer at the CoBteK Laboratory of the University of Côte d'Azur, who will present original work on gesture analysis as a tool for assessing social apathy. Finally, Sandra Invernizzi (co-author Pr. Laurent Lefebvre and Pr. Isabelle Simoes Loureiro from the Department of Cognitive Psychology and Neuropsychology at the University of Mons) will present fundamental research on the influence of depression in aging on the cognitive processes involved in the management of multiple meaning contexts. Highly determined by executive-semantic, these processes are indeed expected to be impaired because of the dysexecutive nature of late-life depression.

Talk 1: Orientation through the neuropsychological diagnostic in the psychogeriatric department (Delphine De Ro, Neuropsychologist (Hospital Van Gogh) The role of the neuropsychologist in a psychogeriatric unit is of main importance for the best orientation of the patients towards the, sometimes complicated, differential diagnostic. Many challenges are encountered in this department. The clinical pictures observed, the diversity of the present and pre-existing pathologies, as well as all the medical-psycho-social specificities of an elderly population generate the need for a multidisciplinary team. However, even with the multivariate approach available in psychogeriatric units, questions often remain unanswered and, as a consequence, patients are sometimes misdirected to the unfitted care. The procedure applied by the neuropsychologist to better contribute to a more-grained diagnostic is, firstly, to consider the precise medical, neurological, and psychiatric history. Secondly, pieces of information about the presence of multiple aetiologies must be known as they make it difficult to formulate a reliable prognostic hypothesis. In this presentation, we approach the fundamental question of differential diagnosis between neuroevolutionary syndrome, psychiatric syndrome, and acquired neurological syndrome, and the possibility to perform it in the daily routine of the hospital, with all the issues that remain unclear and in need of new founding allowing to address them.

Talk 2: Medications, and Cognitive, behavioral, and psychological symptoms in older adults (François-Xavier Sibille, MD, Chief assistant Clinique Mont-Godinne, Louvain Drug Research Institute) There are close links between medications and cognitive, behavioural, or psychological disorders. First, several medication classes have been developed to treat or alleviate symptoms from cognitive or psychological disorders: benzodiazepine receptor agonists (BZRA), antiepileptics, antidepressants, antipsychotics... Moreover, medications may induce (symptoms of) cognitive or psychological disorders. For instance, benzodiazepines may induce daytime sleepiness that could be misconceived as cognitive apathy. Maybe more than other medications, prescription of the central nervous system (CNS) acting medications need to consider non-CNS acting drugs and non-cognitive or psychological disorders. We must pay attention to the effective benefit of these medications especially regarding treatment duration, drug-drug interactions, and drug-disease interactions. For instance, anticholinesterase drugs may be involved in bradycardia and ill-tolerated in patients living with heart failure. On the other hand, other drug classes may have effects on CNS, for instance through anticholinergic effects. Older adults are especially at risk of adverse drug events because of the pharmacodynamic and pharmacokinetic changes related to aging. They are also more exposed to multimorbidity and polypharmacy. Diagnosis and treatment may also be more challenging in older adults. Delirium is a useful example of the imbrication of cognitive, behavioral, and psychological symptoms and of the implication of medications, more often part of the explanation than the solution.

Talk 3: Orientation through the neuropsychological diagnostic in the psychogeriatric department (Delphine De Ro, Neuropsychologist (Hospital Van Gogh) The role of the neuropsychologist in a psychogeriatric unit is of main importance for the best orientation of the patients towards the, sometimes complicated, differential diagnostic. Many challenges are encountered in this department. The clinical pictures observed, the diversity of the present and pre-existing pathologies, as well as all the medical-psycho-social specificities of an elderly population generate the need for a multidisciplinary team. However, even with the multivariate approach available in psychogeriatric units, questions often remain unanswered and, as a consequence, patients are sometimes misdirected to the unfitted care. The procedure applied by the neuropsychologist to better contribute to a more-grained diagnostic is, firstly, to consider the precise medical, neurological, and psychiatric history. Secondly, pieces of information about the presence of multiple aetiologies must be known as they make it difficult to formulate a reliable prognostic hypothesis. In this presentation, we approach the fundamental question of differential diagnosis between neuroevolutionary syndrome, psychiatric syndrome, and acquired neurological syndrome, and the possibility to perform it in the daily routine of the hospital, with all the issues that remain unclear and in need.

Talk 3: From Sensoriality to Gesture: The right tool for the best emotional assessment? Focus on social apathy. (Auriane Gros, University of Côte d'Azur, CoBteK Laboratory), Senior Lecturer in Neuroscience, Speech-Language Pathologist, and Educational Director of the Speech-Language Pathology Department of Nice. UFR Médecine de Nice

The three main components of emotions, e.g. emotional, behavioral, and cognitive, can be assessed with different specific tools relying on a wide variety of functions going from sensoriality to the quality of the gesture. In the same way that the smell function can be tapped to assess mood disorders or that the recognition of visual interaction is evaluated in schizophrenia, the social component of emotion will be studied through the analysis of gesture in apathy. A new tool for the evaluation of social apathy named SensRing will be presented. Based on a microcontroller, the SensRing allows the acquisition and storage of reaction time and movement speed data. Thus, within the framework of short tasks (10 minutes), it measures social apathy in a precise and dynamic way by subjecting the patient to two different conditions of gesture processing: or an individual condition in which the participant must pick up a can and put it inside a cup placed on the table, or a social condition in which the participant must grab the can and pass it to his/her partner. Preliminary results show a difference in gesture planification

during the social and individual conditions in the controls but not in the patients with social apathy. These results, beyond their interest in the diagnosis, lead us to wonder about the links between sensory and motor skills in emotional disorders. d of new founding allowing to address them.

Talk 4: When faced with ambiguous concepts, depression in aging does affect semantic cognition through impairment of the subprocess of selection-inhibition but not through control. Sandra Invernizzi¹, Alice Bodart¹, Laurent Lefebvre², Isabelle Simoes Loureiro² (University of MONS, Department of Cognitive Psychology and Neuropsychology ; ¹Ph.D. Student; ²Professor) Manipulation of ambiguous meaning requires executive processes including (1) “selection” of context-coherent meaning, by inhibition of irrelevant competing information, and (2) “control” allowing a goal-directed retrieval through the semantic store when less-salient information is needed. Aging does slow down (1) the selection-inhibition process, but not (2) control (Hoffman, 2018), but what is to be expected when aging is combined with depressive symptoms? 73 individuals (age: 66.5 ± 3.5) were assessed with a depression scale and completed two tasks of semantic management of ambiguous concepts; a primed lexical decision task (PLD) based on ambiguous words and a verbal association of words sharing different types of meaning (VA). In the PLD, the (1) selection-inhibition was enhanced by associating an ambiguous prime (e.g. BANK, meaning ‘building’ or ‘riverside’) to a target corresponding to its weak meaning (e.g. riverside). In the VA (2) control was manipulated by the condition of association, varying among low control (associate an ambiguous word to a synonym of its dominant meaning [e.g. bank - building]) and high control (same request with subordinated meaning synonym [e.g. bank - riverside] or association to a concept sharing a same feature). Our results show an interaction effect ($p < .001$) between depressive symptoms and the priming condition involving high selection-inhibition request in the PLD, but not with the condition enhancing control in the VA. Our results indicate that depressive symptoms in aging do increment the difficulty in semantic cognition in ambiguous contexts through the executive process of selection-inhibition but not because of the control process.

Talks

Talk with Abstract Number A1

Session: Talk S3 - 13h50 - V23

Title: “Exploring the Impact of automation on moral reasoning: a multi-modal investigation via the Trolley Problem”

Federico Cassioli^{1,2,3} Davide Crivelli³, Mandy Rossignol^{1,2}, Michela Balconi³

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Talk with Abstract Number A2

Session: Talk S3 - 13h50 - V23

Title: « "Hot or Cold?" Online nearness-to-solution ratings reveal multiple paths to insight »

Authors: STUYCK hans 1*, MAZZA Alessandro 1, CLEEREMANS Axel 2, VAN DEN BUSSCHE Eva 2; 1. KU Leuven, 2. Université libre de Bruxelles

Abstract: The Aha! experience, demarcating the sudden comprehension of a perplexing problem, has fascinated scientists and laypeople alike. This peculiar phenomenon of insight entails a different problem-solving experience than solving a problem using a multistep, analytical approach (i.e., non-insight). Although extant theories agree that a profound reinterpretation of the problem (i.e., restructuring) is crucial for the occurrence of insight, the (un)conscious nature of the processes leading to restructuring remains debated. We addressed insight's (un)conscious nature by exposing the metacognitive trajectories that lead to insight and non-insight. Participants (N = 65) jointly solved word puzzles from the compound remote associates test while continuously indicating their proximity to the solution on a nearness-to-solution rating scale. After solving each puzzle, participants reported whether a solution was found with insight or non-insight. Our results showed that the nearness-to-solution ratings of insight mainly displayed a discontinuous, all-or-none trajectory, whereas, for non-insight, the ratings showed an incremental trajectory. This shows that the main path to insight was dissimilar to non-insight and more reminiscent of an unconscious process. However, insight and non-insight trajectories were occasionally similar, with an incremental pattern preceding it. This implies that insight is sometimes achieved via a more conscious process. Overall, multiple paths seem to lead to insight. Using a data-driven approach, we also mapped participants' self-reported insight/non-insight classifications on the naturally occurring clusters in the data as derived with unsupervised machine learning algorithms. Results revealed strong correspondence between the self-reports and the naturally occurring clusters, supporting the validity of the insight/non-insight self-report measure.

Talk with Abstract Number A3

Session: Talk S3 - 13h50 - V23

Title: « Function Transformation Tasks: New methods for investigating relational learning »

Authors: Martin Finn, Jan De Houwer & Matthias Raemaekers; Ghent University

Abstract: Relational learning is typically assessed using tasks such as matching to sample, relational matching to sample, and relational evaluation procedures. Successful performance on these tasks requires the ability to respond to the relations between stimuli. However, relational abilities are of psychological interest when the activity of relating stimuli alters behaviors with respect to these stimuli, that is, when a transformation of stimulus functions occurs. Such transformations of functions are frequently a byproduct of performance on such tasks, but are not critical to completion of the task itself. Recent studies by our group have developed methods (i.e., the car race paradigm and bubble task) in which transformations of functions is the critical response component. These methods, which we refer to as Function Transformation Tasks, have generic features: they demonstrate the properties of one stimulus, specify how the properties of other stimuli are related to these properties, and require forced-choice responses to these stimuli that rely on transformations of functions (i.e., the winning racecar, and the easiest task respectively). Across multiple experiments we validated these tasks using natural language stimuli to specify stimulus relations (85% of the sample achieved $\geq 83\%$ accuracy), and investigated the development of contextual control over transformations of novel stimuli with 70% of one sample and 55% of another sample achieving $\geq 83\%$ accuracy. These methods show promise for the investigation of relational abilities requiring transformations of functions. The implications of these methods for the testing and training of these skills will be discussed.

Talk with Abstract Number A4

Session: Talk S3 - 13h50 - V23

Title: « Investigating the cognitive development of preschoolers at risk for dyslexia and/or ADHD: A longitudinal study »

Authors: KELLENS Silke*, BAEYENS Dieter, GHESQUIERE Pol (Parenting and Special Education Research Unit, Faculty of Psychology and Educational Sciences, KU Leuven, Leuven, Belgium)

Abstract: Background: Dyslexia and ADHD frequently co-occur, as approximately 15-40% of children with one diagnosis also have symptoms of the other. However, in prospective research, preschoolers at risk for dyslexia and ADHD are often neglected. Yet, insight into the cognitive profile of these at-risk children might enhance early identification and remediation.

Objective: Overall, our study aimed to investigate the cognitive development of preschoolers at risk for dyslexia and/or ADHD and typically developing preschoolers by following them up longitudinally from preschool (age 5) to third grade (age 8) (N = 178 in third grade). In this presentation, we compared preschool risk status to cognitive deficits and investigated to what extent these preschool deficits were related to formal diagnoses in third grade.

Results: Prospectively, we examined the likelihood of working memory (WM), processing speed (PS), or inhibition deficits in specific risk groups through an individual deviance analysis. The results showed that when a WM, PS, or inhibition deficit was present in preschool, most children were simultaneously at risk for dyslexia, with or without ADHD. Additionally, we retrospectively assessed the relation between these preschool deficits and the probability of a formal diagnosis of ADHD and/or dyslexia by the time they were in third grade. These specific preschool deficits were indeed associated with later difficulties, as preschool WM and PS deficits were related to the probability of a future diagnosis of ADHD and/or dyslexia.

Discussion: This study highlights the importance of cognition in identifying children with special educational needs and developing interventions for these children.

Talk with Abstract Number A5

Session: Talk S2 - 9h50 - V23

Title: « Externalizing and internalizing pathways from childhood irritability to adolescent suicidality: findings from the ABCD Study »

Authors: Nellia Bellaert 1,2 & Wan-Ling Tseng 2. (1) Department of Cognitive Psychology and Neuropsychology, University of Mons, Mons, Belgium, (2) Yale Child Study Center, Yale University, New Haven, CT, U.S.A.

Abstract: Objectives: Irritability predicts later suicidality (Orri et al., 2018), but whether and how this relationship is mediated by the onset of psychopathology is still unclear. We aimed to identify developmental trajectories of childhood irritability and to test their direct and indirect (through psychopathology) associations with adolescent suicidality. Method: This study used four waves of data from the Adolescent Brain Cognitive Development Study (ABCD; N = 6,071). Parents rated their children's irritability yearly from ages 9–10 to ages 11–12, internalizing (e.g., depression) and externalizing (e.g., aggression) symptoms at age 11–12, and suicidal ideations and behaviors at age 12–13 on the Child Behavior Checklist (Achenbach, 2011). Path analysis was conducted to test the total, direct, and indirect pathways from irritability trajectories to suicidality. Results: Four irritability trajectories were identified: low-stable (73.1%), rising (12.0%), declining (10.7%), and high-stable (4.2%). Children following a high-stable irritability trajectory (compared to the other trajectories) were

at higher risk for suicidal ideations and behaviors. For suicidal ideations, 49.6% of this association was direct ($\beta = 0.07$, $p < .05$), 39.2% was mediated by externalizing symptoms ($\beta = 0.06$, $p < .01$), and 11.2% by internalizing symptoms ($\beta = 0.02$, $p < .01$). For suicidal behaviors, the association was mostly mediated by internalizing symptoms ($\beta = 0.04$, $p < .001$). Conclusion: Persistently high irritability across childhood increases the risk for suicidal ideations both directly and indirectly (mostly via externalizing symptoms), whether the risk for suicidal behaviors is mostly explained by the onset of internalizing symptoms.

Talk with Abstract Number A6

Session: Talk S2 - 9h50 - V23

Title: « What do we refer to as coaching in cancer research? A scoping review »

Authors: GERAÏN Pierre*, TANIOUS René, JACQUET Wolfgang, VAN HOOFF Elke; Faculteit Psychologie en Educatiewetenschappen, Vrije Universiteit Brussel, Belgique

Abstract: Objectives: Cancer is a disease that poses many challenges for patients, even for survivors. One way to support them is through empowerment, self-management, and quality-of-life interventions, often referred to as "coaching" interventions. Many studies report the use of coaching or include coaches, but without a clear (theoretical) framework for coaching in cancer.

Method: This scoping review proposes to synthesize the field of cancer coaching by highlighting the frameworks and definitions used, showing they were implemented, as well as the techniques used by coaches. For this purpose, interventional studies including aspects of coaching in oncology were retrieved from scientific databases.

Results: Of the 3630 eligible studies, 183 incorporated coaching components. There was an important variability in the centrality of the coaching component and in the definition used. Eight coaching domains were identified, including communication coaching, self-management coaching, health coaching, and mental health coaching. Most studies however relied on a common set of techniques, such as goal setting, barriers identification, problem-solving, or motivational interviewing. The media used for the coaching component were a balanced mix of face-to-face and communication technologies.

Discussion and conclusion: Coaching interventions in oncology appear to be a broad field encompassing several sets of focuses, techniques, and settings. Nevertheless, the present review provides a framework for structuring future research in the field by defining coaching domains and their characteristics. By doing so, it also shows the common features of coaching interventions, suggesting that even if studies relied on different theoretical frameworks, coaching in cancer could form a coherent field.

Talk with Abstract Number A7

Session: Talk S2 - 9h50 - V23

Title: « Demographics of sleep and mental health: a network analysis »

Authors: COLOMB, Clara, RIAHI, Behrouz DELWICHE, Bérénice WINDAL, Maxime RUNGE, Nils GOOSSENS, Zosia ROLAND, Aurore, KORNREICH, Charles, MAIRESSE, Olivier, Vrije Universiteit Brussel

Abstract: OBJECTIVES

This retrospective study employs network analysis to explore objective sleep parameters and their relationships with factors like age, sex, BMI, and symptoms of anxiety, depression, chronotype, fatigue, and sleepiness. The aim is to better understand sleep disorder etiology and inform targeted interventions.

METHODS

Data from 798 hypnotic-free individuals from a university hospital sleep unit was analyzed, focusing on primary care-referred patients with sleep complaints. Sleep disorders were categorized according to ICSD-3 criteria. Demographics, sleep, and mental health data were examined using regularized Gaussian Graphical Models, with the graphical LASSO regularization process and Extended Bayesian Information Criterion applied (Borsboom et al., 2013, Borsboom, 2017, Epskamp et al., 2018).

RESULTS

Results indicate a relatively weak connection between mental health variables and objective sleep parameters. Female gender is linked to anxiety, fatigue, and longer REM latencies, while male gender relates to apnea-hypopnea indices. BMI exhibits weak connections with AHI but stronger ties to oxygen desaturation levels and physical fatigue. Age is primarily inversely related to SWS and associated with morningness, wake after sleep onset, and periodic limb movements. Respiratory and motility indices relate to sleep fragmentation but surprisingly, show weak connections to mental health parameters.

DISCUSSION AND CONCLUSION

Despite the widely accepted close connection between sleep and mental health (Freeman et al., 2017), our results suggest relatively weak direct associations between mental health variables and objective sleep parameters, i.e. when mutually conditioned. Yet, demographics such as gender, BMI, and age display various connections to sleep and mental health factors, potentially acting as mediators/moderators between sleep and mental health variables.

Talk with Abstract Number A8

Session: Talk S2 - 9h50 - V23

Title: « A scoping review of life skills development and transfer in emerging adults »

Authors: TANIUS René*, GERAIN Pierre, JACQUET Wolfgang, VAN HOOFF Elke, Vrije Universiteit Brussel

Abstract: Emerging adulthood is a unique and sensitive life period during which most psychiatric conditions emerge. Development of life skills and transfer of these skills between contexts may be considered essential for transitioning from emerging adulthood to young adulthood. In the present scoping review of 83 articles published between 2010 and 2022, we address the state of research on life skills development and such transfers in emerging adults aged 18 to 30. Specifically, we were interested in how life skills are defined, which specific life skills are proposed and how life skills transfer is conceptualized for this age group, with an emphasis on cognitive, personal, and interpersonal components. The results indicate that life skills research for emerging adults strongly focuses on vulnerable populations (e.g., developmental and contextual vulnerabilities, and STI treatment and prevention) with the most frequently mentioned life skills being budgeting/finances, communication, decision-making, emotional regulation, and managing housing/household. Only a small minority of the reviewed studies defined the term life skills and an even smaller number mentioned the concept of life skills transfer, with only one study actually mentioning transfer components. We discuss these results

in light of future research directions and the lessons learned for life skills development and transfer teaching in emerging adults.

Talk with Abstract Number A9

Session: Talk S1 - 9h50 - V25

Title: « Couple Similarity in Empathic Accuracy and Relationship Well-being »

Authors: Liesbet Berlamont 1, Eva Ceulemans 2, Chiara Carlier 2, Lesley Verhofstadt 1, William Ickes 3, Céline Hinnekens 1, and Laura Sels 1; (1) Ghent University, (2) KU Leuven, (3) University of Texas at Arlington

Abstract: Are intimate partners similar in how accurately they infer each other's feelings and thoughts, and if so, does this similarity predict their relationship well-being?

To answer this question, we analyzed data from two laboratory-based studies (n = 155 and n = 172 couples) in which couples participated in a conflict interaction task and afterwards reported on their own feelings and thoughts and inferred those of their partner. Relationship well-being was measured on both a global (i.e., relationship satisfaction) and a situational level (i.e., post-interaction closeness and satisfaction with the outcome of the interaction). We found that intimate partners were more similar in their empathic accuracy than randomly-paired individuals. This similarity predicted the extent to which partners reported that the conflict interaction had led to a positive outcome for their relationship, but was not associated with partners' global relationship satisfaction or their post-interaction closeness.

Talk with Abstract Number A11

Session: Talk S1 - 9h50 - V25

Title: « A model for the psychotherapeutic work with severely traumatised asylum seekers »

Authors: Emmanuel Declercq, PhD

Abstract: Giving mental support to people who seek asylum in our country after they escape from their home country where they endured severe traumatic experiences is very challenging. For different reasons: 1/ As western therapists, we cannot imagine what it means to be exposed to acts of barbarism (torture, rape used as war weapon, etc. 2/ there is the impact of the asylum procedure, procedure with a highly uncertain outcome, that can take months, if not years; 3/ cultural obstacles can make therapy more complicated; 4/ working with interpreters can also be very challenging and 5/ last but not least, our western concepts and models of psychotherapy are not adapted to those severe pathologies and to these patients.

In this talk, I will propose a psychotherapeutic model, based on my long clinical experience (more than 15 years of practice and more than 10,000 therapeutic sessions) and my PhD research on that subject that I finished end 2018.

Talk with Abstract Number A12

Session: Talk S1 - 9h50 - V25

Title: « The Role of Comparative Victim Beliefs and Intergroup Threat in The Relationship Between Ingroup Identification and Intergroup Relations in Lebanon »

Authors: ZAHREDDINE Sarah*, LICATA Laurent, KLEIN Olivier, AZZI Assaad Elia. Center for Social and Cultural Psychology, Université Libre de Bruxelles

Abstract: The present research aimed to investigate the impact of ingroup identification (national vs. religious), threat perception, and construals of violence (victimhood perceptions and responsibility attribution) regarding the Lebanese civil war on Christians-Muslims relations in Lebanon. Using a (survey) correlational design conducted among Lebanese citizens in 2020 (N=343), our study showed that stronger religious identification and belonging to the Lebanese Christian group increased perceived intergroup threat, leading to a stronger endorsement of competitive victimhood and a lower endorsement of inclusive victimhood, which decreased positive outgroup attitudes and willingness to engage in intergroup contact. This study replicates prior research on collective memory and its impact on intergroup relations and brings a further understanding of this phenomenon in a complex intergroup context such as Lebanon.

Keywords: inclusive victimhood, competitive victimhood, ingroup identification, Lebanon, Lebanese civil war, intergroup relations, intergroup threat

Flash Talks

Abstract number A136

Session: FT1 - 11h30 - V25

Title: « Interbrain synchronization in psychopathological and neurodevelopmental disorders: a systematic mini-review »

Authors: Sara Scaletti 1, 2*, Federico Cassioli 1, 2, Michel Sfeir 3, Sarah Galdiolo 3, Mandy Rossignol 1, 2; 1. Department of Cognitive Psychology and Neuropsychology, Faculty of Psychology and Education, University of Mons, Mons, Belgium; 2. Interdisciplinary Research Center in Psychophysiology and Cognitive Electrophysiology, Mons, Belgium; 3. Department of Clinical Psychology, University of Mons, Mons, Belgium

Abstract: Objectives: Psychopathological conditions and neurodevelopmental disabilities are characterized by impairments in social cognition and social interactions, yet the mechanisms underlying these deficits are not well understood. Hyperscanning allows to simultaneously measure brain activity in more than one participant and compute interbrain synchrony, thus helping shed light on these mechanisms. Accordingly, this study aimed at conducting a systematic review of EEG hyperscanning research in psychopathological and neurodevelopmental disorders, adopting the suggested literature guidelines (PRISMA and Prospero).

Methods: We performed a systematic review of studies examining EEG interbrain synchrony in adolescents and adults with psychopathological or neurodevelopmental conditions, searching Scopus, PubMed and Google Scholar for articles published between January 1st 1960 and February 7th 2023.

Results: Six studies were included in the review. Study one found different levels of interbrain synchrony in adolescent-parent dyads between high social anxiety dyads and low social anxiety dyads. Study two found stronger interbrain synchrony during conversation rather than baseline in female adolescents with autism spectrum disorder. Study three found increasing interbrain synchrony between the therapist and a depressive patient over the course of therapy sessions. The remaining studies investigated dyadic and triadic interbrain synchrony in children with various neurodevelopmental disabilities.

Discussion and conclusions: The studies identify some specific loci (e.g., frontal and prefrontal areas, temporo-parietal areas) and frequency bands (e.g., beta) where interbrain synchrony was detected. To be noted that in the literature a lack of control for pseudo-interbrain synchrony (e.g., motor-induced synchrony, task-induced synchrony, etc.) can be found, hence the need for higher methodological validity.

Abstract number A19

Session: FT1 - 11h30 - V25

Title : Inducing anger and disgust by mental imagery

Inducing anger and disgust by mental imagery

Yesim Ozuer (1), Rilana Cima (1,2,3), Ilse Van Diest (1). (1) Health Psychology Group, KU Leuven University, Leuven, Belgium. (2) Adelante, Centre for expertise in Rehabilitation & Audiology, The Netherlands. (3) Maastricht University Clinical Psychological Science Department

This study sought to validate mental imagery as a method for the experimental induction of evoking feelings of intrusion and violation of personal borders, anger and disgust. In this investigation we aim to answer the following questions: (a) can participants successfully and vividly imagine the intrusion/violation scenarios (b) can these scenarios provoke anger, disgust and the feeling of intrusion and violation of borders, when compared to a relaxation scenario (c) do participants' personal beliefs contribute to the strength of the anger/disgust provocation.

Our participants (targeted N = 92) were students between the ages of 18 and 22, with normal hearing. Four anger and one relaxation scenarios were auditorily presented online. The topics of the anger provocation scenarios were LGBTQ rights, gender equality, Covid vaccination and vegetarianism. Participants actively imagined each scenario during 4 minutes, after which they rated to what extent each scenario evoked the feelings of intrusion and violation, anger and disgust.

Linear mixed models will be used to evaluate the effects of imagining the scenarios on emotional responses. A moderation analysis will investigate the effect of personal views on this relationship.

The data collection will be completed in the month of April, analyses will take place in May. The results will be available to present during the conference.

Abstract number A20

Session: FT1 - 11h30 - V25

Title : Targeted Emotion Regulation: A Registered Report project

Targeted Emotion Regulation: A Registered Report project

Matthieu Koroma(1), Christina Schmidt(1), Björn Rasch(2), Athena Demertzi(1). (1) : University of Liège (Uliège), BELGIUM. (2) : Division of Cognitive Biopsychology and Methods, Department of Psychology, University of Fribourg, Fribourg, SWITZERLAND

Objectives: In this Registered Report project, we will investigate how reactivations alleviate the visceral tones of emotional memories. Reactivations can be experimentally induced by presenting cues associated with memory traces, a procedure called Targeted Memory Reactivation (TMR). The neurophysiological and cognitive mechanisms leading to the attenuation of emotional memories after TMR remain debated. To address this question, we will couple sound cues with relaxing words to test how reactivations boost the regulation of emotional memories in wakefulness and sleep.

Methods: Healthy adults will be continuously recorded with EEG, EOG, EMG, ECG and respiration. They will first be exposed to fear-related images (eg, wolf) associated with sound cues (eg, woof) and rate their subjective arousal responses to these images. Different sets of sounds cues will then be played alone or simultaneously with relaxing words (eg, "calm") during wakefulness, NREM or REM to trigger reactivations. Finally, participants will rate the same images again. All material and procedure will be openly available at: <https://osf.io/y8u73/>

Results: Results from our pilot study during wakefulness will be presented. We hypothesize stronger arousal reduction, enhanced theta/gamma frontal activity and larger interbeat interval for images cued vs. uncued, and with vs. without relaxing words as measured by subjective and physiological arousal responses.

Conclusions: By investigating the brain, bodily and subjective correlates of aversive memory reactivations coupled or not with relaxing words, we will investigate if reactivating memory contents

render them available for emotional reprocessing and can serve to boost emotion regulation across different arousal states.

Abstract number A21

Session: FT1 - 11h30 - V25

Title : The more detrimental for a non-focal goal people are, the more instrumental they seem for a focal goal: The paradox of interpersonal counterfinality

The more detrimental for a non-focal goal people are, the more instrumental they seem for a focal goal: The paradox of interpersonal counterfinality

WOLTIN Karl-Andrew & BARROT Lucas, Université catholique de Louvain

OBJECTIVE:

Interpersonal relationships and goal pursuit are often interconnected. From a people-as-means perspective, people can serve as means to others' goals and principles of goal pursuit proposed by Goals-System theory can thus provide insight into interpersonal dynamics (Orehek et al., 2018). This work investigates the counterfinality principle: the more a means is perceived as detrimental to an alternative goal, the more it should be perceived as instrumental to a focal goal (Schumpe et al., 2018).

METHODS

Participants (N=191) were randomly assigned to conditions. In the counterfinal condition, they were asked across different scenarios to imagine a person (e.g., a flat mate) who served them for a focal goal #1 (e.g., living in a clean place) whilst at the same time being detrimental for an alternative goal #2 (e.g., being stimulated). Participants chose the respective goals themselves. In the multifinal condition, participants instead were asked to imagine the person also served them for their alternative goal #2. They then reported to what extent they thought protagonists in the different scenarios were instrumental for their focal goal #1, and responded to an adapted version of an objectification scale (Gruenfeld et al., 2008).

RESULTS

Results indicated that indeed others were perceived as more instrumental for the focal goal #1 in the counterfinal compared to the multifinal condition. Objectification did not differ between conditions.

DISCUSSION

We discuss limitations (e.g., goals varying across participants and conditions), theoretical contributions (e.g., extensions of the people-as-means approach) and implications for different interpersonal contexts (e.g., work vs. private spheres).

(1) Orehek, E., Forest, A. L., & Barbaro, N. (2018). A people-as-means approach to interpersonal relationships. *Perspectives on Psychological Science*, 13(3), 373-389. (2) Schumpe, B. M., Bélanger, J. J., Dugas, M., Erb, H.-P., & Kruglanski, A. W. (2018). Counterfinality: On the increased perceived instrumentality of means to a goal. *Frontiers in Psychology*, 9, 1052. (3) Gruenfeld, D. H Inesi, M. E., Magee, J. C., & Galinsky, A. D. (2008). Power and the objectification of social targets. *Journal of Personality and Social Psychology*, 95, 111-127.

Abstract number A22

Session: FT1 - 11h30 - V25

Title : Interpersonal stress predicting inflammation in adolescents: Moderation by emotion regulation and heart rate variability?

Interpersonal stress predicting inflammation in adolescents: Moderation by emotion regulation and heart rate variability?

NATHALIE Michels*, MATTEO Giletta, Ugent

Hypothesis: Parental and peer rejection are positively associated with inflammatory parameters and their change over 1 year. Herein, adaptive emotion regulation and parasympathetic system activity are protective moderators. Strengths of the current study are the longitudinal design in adolescents with multiple inflammatory parameters, while testing moderation.

Methodology: Longitudinal data from the Flemish ChiBS cohort was used from the 2017 (n=185, 50.8% boys, 10-18y of age) and 2018 (n=99) wave. At both moments, C-reactive protein, TNFalpha, IFN-gamma, IL6, IL8 and IL10 were measured in serum. Peer rejection was measured via the Klasgenoten Relatie Vragenlijst and Parental rejection via the parental rearing styles questionnaire. Emotion regulation was reported via the FEEL-KJ. Heart rate variability (HRV) was measured during 5-minute rest and a Trier Social Stress Test to estimate stress reactivity and stress recovery. Following potential confounders were considered: age, sex, socio-economic status, physical activity, smoking and body mass index.

Results: A good fitting latent factor for inflammation was found in 2017 (CFI=0.99) but not for 2018. Interpersonal stress was not significantly related to that latent factor 'inflammation', but it was negatively related to TNFalpha in 2017 and TNFalpha, IFN-gamma and IL6 in 2018. HRV was a significant moderator herein.

Conclusion: The significant results are rather counterintuitive since interpersonal stress was related to higher levels of certain cytokines. Further sensitivity analyses will be done.

Abstract number A23

Session: FT1 - 11h30 - V25

Title : Identity task resolution & (mal)adaptive schema development: looking for the missing link between identity and adolescent adjustment

Identity task resolution & (mal)adaptive schema development: looking for the missing link between identity and adolescent adjustment

Jakke Coenye(1), Prof. Dr. Lien Goossens(1), Prof. Dr. Wim Beyers(1), Prof. Dr. Sandra Verbeken(1). (1: UGent)

Objective. With the introduction of the DSM-5, severe identity disturbance has been included as a criterium for personality disorders, highlighting the concepts poignant role in mental health. However, almost all empirical research into the identity-adjustment relationship lacks a clear rationale to explain this (Klimstra & Denissen, 2017). To that end, this study leans on Youngs (1999; 2003) schema theory. Young et al. (2003) argue that unsuccessful resolution of a developmental task, such as identity, leads to a maladaptive schema, whereas successful resolution leads to an adaptive schema. As such, this study has the aim to investigate how different processes of identity development (i.e. proactive exploration, commitment making, identification with commitment and ruminative exploration; Luyckx et al., 2008) predict (mal)adaptive schemas in emerging adults.

Methodology. Using a cross-sectional design, online questionnaires were distributed and completed by 105 emerging adults from the general population (Mage = 21.05; female = 78%). Linear regression analyses were used to analyze the data.

Results. Measures of adaptive identity development (proactive exploration, commitment making, identification with commitment) tended to negatively predict maladaptive schemas and positively predict adaptive schemas, whereas an opposite pattern could be observed for more maladaptive identity processes (ruminative exploration).

Conclusion. Although these results should be interpreted with caution due to its sample size and the correlational nature of the data, the evidence suggests that positive resolution of the identity task in emerging adults predicts more adaptive schemas, whereas negative resolution predicts more maladaptive schemas.

Klimstra, T. A., & Denissen, J. J. (2017). A theoretical framework for the associations between identity and psychopathology. *Developmental Psychology*, 53(11), 2052. Luyckx et al. (2008). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of research in personality*. Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach*. Professional Resource Press/Professional Resource Exchange. Young et al. (2003). *Schema therapy*. New York: Guilford, 254.

Abstract number A24

Session: FT3 - 13h50 - V25

Title : Untangling the contributions of conceptual similarity and scene entropy in the success of meaning maps

Untangling the contributions of conceptual similarity and scene entropy in the success of meaning maps

Maarten Leemans(1), Claudia Damiano (1), Johan Wagemans (1). (1: Brain & Cognition, University of Leuven (KU Leuven))

The cognitive guidance theory of visual attention states that viewers allocate visual attention to the parts of the scene that are expected to be most informative. The expected information of a scene region is coded in the semantic distribution of that scene. This study investigated the ability of meaning maps to capture the spatial distribution of local scene semantics (Henderson & Hayes, 2017). Two possible sources of information were considered: semantic information and non-semantic scene entropy. Semantic information was measured using a semantic similarity map (Hayes & Henderson, 2021), while scene entropy was measured using a Shannon entropy map. We assessed how well these two maps captured eye-movements of 21 participants freely viewing the scenes for 3s each. Additionally, we conducted a commonality analysis to extract unique and shared sources of variance. Scene entropy accounted for more unique variance in the success of meaning maps than conceptual information. Although meaning maps index some aspect of semantic information, their success is better explained by non-semantic information. Note, however, that meaning maps capture both semantic and non-semantic information and that some explained variance was not accounted for by either source of information. We conclude that meaning maps may not be a good tool for testing cognitive guidance theories of attention, as they capture only a small portion of semantic information. The semantic information contained in meaning maps seems too ambiguous to draw strong conclusions about how and when semantic information guides visual attention. Implications for the semantic guidance theory are considered.

Hayes, T. R., & Henderson, J. M. (2021). Looking for semantic similarity: What a vector-space model of semantics can tell us about attention in real-world scenes. *Psychological Science*, 32(8), 1262–1270. Henderson, J. M., & Hayes, T. R. (2017). Meaning-based guidance of attention in scenes as revealed by meaning maps. *Nature Human Behaviour*, 1(10), 743–747. <https://doi.org/10.1038/s41562-017-0208-0>

Abstract number A25

Session: FT3 - 13h50 - V25

Title : Better insight when growing older? Adult age differences in insight and analytical problem solving

Better insight when growing older? Adult age differences in insight and analytical problem solving

*DEMEYER Febe(1), STUYCK Hans(1), GILLEBERT Céline(1) and VAN DEN BUSSCHE Eva(1). (1: KU Leuven)

One of the challenges of the 21st century is keeping a growing population of older adults professionally active. This is not trivial, as it is known that several cognitive functions decline with age. For example, the ability to suppress irrelevant information and flexibly update outdated information in service of a task. These executive functions (i.e., EF) are essential to solving problems explicitly step-by-step (i.e., analytical problem solving)—a vital skill in the 21st century workplace. As analytical problem solving declines with age, finding other skills that remain preserved is crucial. One such problem solving type that is less reliant on EFs due to its more implicit nature is insight. Insight solutions happen suddenly after being stuck solving a problem and are often accompanied by an affective Aha! experience. As insight is expected to be less reliant on EFs, it might remain intact or even enhance with aging. To study this, we compared insight and analytical problem solving between young and older adults using the Compound Remote Associates test. Participants receive word puzzles that can be solved both with insight and analytical problem solving. Three conditions were created by imposing a no, a low, or a high working memory load during problem solving. Data collection is ongoing and preliminary results indicate that older adults solve problems with insight faster than young adults. If insight problem solving proves to be enhanced in older adults, this could imply that triggering insight, for example, at the workplace, could benefit older adults' problem solving skills.

Bowden, E. M., & Jung-Beeman, M. (2003). Normative data for 144 compound remote associate problems. *Behavior Research Methods, Instruments, & Computers*, 35(4), 634–639. <https://doi.org/10.3758/BF03195543> Bowden, E. M., Jung-Beeman, M., Fleck, J., & Kounios, J. (2005). New approaches to demystifying insight. *Trends in Cognitive Sciences*, 9(7), 322–328. <https://doi.org/10.1016/j.tics.2005.05.012> Stuyck, H., Cleeremans, A., & Van den Bussche, E. (2022). Aha! Under pressure: The Aha! Experience is not constrained by cognitive load. *Cognition*, 219, 104946. <https://doi.org/10.1016/j.cognition.2021.104946> Thornton, W. L., Paterson, T. S. E., & Yeung, S. E. (2013). Age differences in everyday problem solving: The role of problem context. *International Journal of Behavioral Development*, 37(1), 13–20. Scopus. <https://doi.org/10.1177/0165025412454028>

Abstract number A26

Session: FT3 - 13h50 - V25

Title : The Effect of Movement on Learning

The Effect of Movement on Learning

VERHAEGEN Kirsten A.* (1), JANSSENS Lien (1), HUGHES Gethin(2), REYNVOET Bert(1), VAN DEN BUSSCHE Eva(1). (1: KU Leuven ,2: University of Essex)

Research on dual-tasking and embodied cognition suggests that movement could aid learning via several mechanisms. Most scientific studies investigated the effect of sequential and/or task-relevant movements on learning. However, in practice, the use of concurrent task-irrelevant movements during

learning is gaining popularity in schools. Therefore, we studied whether a concurrent irrelevant motor task can improve learning in young adults. In a computerized learning task, participants received novel stimuli and learned the association between two given stimuli and an outcome stimulus. During this task, memorizing and practice blocks were alternated. Crucially, we compared a control group that learned the task without movements to an experimental group that performed task-irrelevant hand gestures, rhythmically timed to the presentation of the stimuli. Next to learning rate, recall of the learned material was tested immediately after learning, and after 1, 7 and 30 days. Results showed a slower learning rate in the control group compared to the experimental group. Furthermore, the experimental group outperformed the control group on all recall tests. Finally, the experimental group reported less frustration and mental effort, as well as better subjective performance. This suggests that task-irrelevant movements can indeed aid learning, highlighting the potential benefits of dual-tasking in the context of learning. However, follow-up research is needed to pinpoint whether these findings are specific to rhythmic movements or whether an advantage can also be observed when using a different concurrent task or arrhythmic movements.

Abstract number A27

Session: FT3 - 13h50 - V25

Title : Thermoception in autism: a systematic mini-review

Thermoception in autism: a systematic mini-review

Naëlle Casterman(1*), Federico Cassioli (1, 2), Mandy Rossignol (1, 2). (1) Department of Cognitive Psychology and Neuropsychology, Faculty of Psychology and Education, University of Mons, Mons, Belgium, (2) Interdisciplinary Research Center in Psychophysiology and Cognitive Electrophysiology, University of Mons, Mons, Belgium

Objectives

Sensorial atypicalities are often present in autism spectrum disorder (ASD). Thus, thermoception, being a component of the somatosensorial system, is of interest in this population. Also, historically, most of research tends to focus on painful stimuli, with less interest in innocuous ones. For these reasons, a systematic work synthesizing the studies carried out to date might be beneficial for future research.

Methods

We led a systematic review, previously registered in PROSPERO (n. CRD42023412663), on thermoception in ASD, following PRISMA guidelines. The search included Pubmed, Scopus, PsychoInfo, and Google Scholar databases (ntot=1261). The string used for the database search was: ("QST" OR "Quantitative Sensory Testing" OR "Cold" OR "Cool" OR "Warm" OR "Hot" OR "Thermal" OR "Temperature" OR "Thermoception") AND ("Autism" OR "autism spectrum disorder" OR "Autistic" OR "Asperger") OR ("Pain" AND "Thermal" AND "Autism"). Following the MOOSE guidelines for selection criteria and the Newcastle Ottawa Scale (NOS) for evaluation, 11 empirical articles focusing on thermoception in autism were included.

Results

A difference in temperature perception between the autistic and allistic populations was highlighted in 3 studies. In these, decreased sensitivity to thermal stimuli in autistics was observed, with less sensitivity to warmth and coolness. The reversed pattern was found in 2 experiments. Instead, 6 of the selected studies reported no difference compared to controls.

Discussion and Conclusion

At present, no clear consensus on a possible thermoception divergence in autism has emerged. Possible explanations are related to a lack of task standardization (e.g., temperature variation rate). More studies are required to build cumulative and well-grounded knowledge.

Cascio, C., McGlone, F., Folger, S., Tannan, V., Baranek, G., Pelphrey, K. A., & Essick, G. (2008). Tactile Perception in Adults with Autism: a Multidimensional Psychophysical Study. *Journal of Autism and Developmental Disorders*, 38, 127-137. <https://doi.org/10.1007/s10803-007-0370-8>; Williams, Z. J., Failla, M. D., Davis, S. L., Heflin, B. H., Okitondo, C. D., Moore, D. J., & Cascio, C. J. (2019). Thermal Perceptual Thresholds are typical in Autism Spectrum Disorder but Strongly Related to Intra-individual Response Variability. *Scientific Reports*, 9, 1-14. <https://doi.org/10.1038/s41598-019-49103-2>; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>

Abstract number A28

Session: FT3 - 13h50 - V25

Title : THE RELATION BETWEEN WORKING MEMORY AND SYNTHESIS WRITING PROCESSES

THE RELATION BETWEEN WORKING MEMORY AND SYNTHESIS WRITING PROCESSES

Luan Tuyen Chau, University of Antwerp, Belgium

Background: Synthesis writing, or writing from multiple sources, is increasingly important in academia and industry, especially in this era of technology and information. Due to its cognitively demanding nature, writing from multiple sources is even challenging for native speakers of that language; writing in a second language even poses a greater challenge. Despite its growing importance, the cognitive processes that underline synthesis writing remain under-explored, due to the predominantly linguistic perspective of writing and limited methodologies.

Objective: This study investigates the relation between working memory capacities and synthesis writing processes. Working memory is an important construct in cognitive psychology that has been found to be related to a wide range of cognitive processes and linguistic abilities. Prior research has shown that working memory is related to the ability to write in a second language.

Methodology: We tracked keyboard activities and other computer activities via a key logger when 136 undergraduate students at a North Californian university were asked to write a synthesis text based on three source texts. Their working memory capacities were also tested with the Complex Operational Span Task. Their texts were assessed using a holistic rubric.

Results: Working memory capacities are found to be related to text scores and many variables of writing processes, such as active writing time and pausing time.

Discussion: Writing research from a cognitive perspective may yield a number of interesting results and implications for writing pedagogy.

Unsworth, N. & Engle, R.W. (2007). The Nature of Individual Differences in Working Memory Capacity: Active Maintenance in Primary Memory and Controlled Search from Secondary Memory, *Psychological Review*, 114 (1), 104-132. Vandermeulen, N., van den Broek, B., Van Steendam, E., & Rijlaarsdam, G. (2020). In search of an effective source use pattern for writing argumentative and informative synthesis texts. *Reading and Writing*, 33(2), 239-266. doi:10.1007/s11145-019-09958-3 Vangehuchten, L., Leijten, M. & Schrijver, I. (2018). Reading-to-write tasks for professional purposes in Spanish as a foreign language: an empirical study among 19 master's students. *Revista española de lingüística aplicada*, 31(2), 638-659. van Daal, T., Lesterhuis, M., Coertjens, L., Donche, V., & De Maeyer, S. (2016). Validity of comparative judgement to assess academic writing. *Assessment in Education: Principles, Policy & Practice*, 1-16.

Abstract number A29

Session: FT3 - 13h50 - V25

Title : Exploring the Representations of Higher Education Students' Language Competencies among Students and Teachers: Insights from the "HÉLangue Project"

Exploring the Representations of Higher Education Students' Language Competencies among Students and Teachers: Insights from the "HÉLangue Project"

Bachar Malki - Haute Ecole Léonard de Vinci

Media discourse regularly echoes concerns about students' language skills: declining levels, spelling deficiencies, lexical gaps, weak reading and writing practices. The HÉLangue project, co-funded by the FRHE and the Pôle Académique de Bruxelles, brings together six Brussels-based higher education institutions. HÉLangue project aims to inventory, analyze, and support the language practices of students in higher education institutions in the Brussels-Capital region. In 2020-2023, a large-scale quantitative and qualitative questionnaire was distributed to students and teachers. As part of the HÉLangue project, we investigated the social representations of students (N=1576) and teachers (N=137) regarding students' language practices and skills. The preliminary results show strong contrasts. This point is not insignificant, as representations can have a significant influence on practices and create polemical representations that can ultimately turn into beliefs, stereotypes, or prejudices, even becoming a source of conflicts and discriminatory behavior.

Abstract number A30

Session: FT2 - 11h30 - V23

Title : Current Psychoeducational Tools on Autism in relation to Neurodiversity in the Flemish context

Current Psychoeducational Tools on Autism in relation to Neurodiversity in the Flemish context

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Introduction: Psychoeducation on autism is frequently used in clinical counseling. A recent study indicates that deficit-focused psychoeducation can have adverse effects such as increased self-stigma (Bury et al., 2022). At the same time, in research, autism is increasingly described in terms of neurodiversity rather than in terms of deficit. However, this shift may not yet have taken place in clinical psychoeducation. In this paper we investigate to what extent this shift to more neurodiversity-affirmative care has already taken place in the Flemish context.

Methods: Three psychoeducational tools (Ik ben speciaal, Brain Blocks, Geef me de 5) were reviewed. They were chosen based on their occurrence in Flanders (survey UGent, unpublished) and the recommendation of Kenniscentrum kinder- en jeugdpsychiatrie.

Results: Although variation between tools exists, preliminary analyses indicated three overarching themes: (1) individual, deficit-focused explanations on autism were dominant (2) societal explanations were sometimes added, but this led to inconsistencies within tools (e.g. "autism develops through complex interaction at different levels" versus "autism is fully explained by different brain function"), (3) specific goals were described in detail, but less attention is paid to why these goals are important or their accordance with the client's needs.

Discussion: Consistent with research on psychoeducation in ADHD (Batstra et al., 2020; van Langen et al., 2022), some attempts to more neurodiversity-affirmative care are visible but deficit-focused views

remain overrepresented. This study provides guidance to critically reflect upon current psycho-educational tools on autism.

Batstra, L., Foget, L., van Haeringen, C., te Meerman, S., & Thoutenhoofd, E. D. (2020). What children and young people learn about ADHD from youth information books: A text analysis of nine books on ADHD available in Dutch. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 8(1), 1–9. <https://doi.org/10.21307/sjcapp-2020-001> --- Bury, S. M., Haschek, A., Wenzel, M., Spoor, J. R., & Hedley, D. (2022). Brief Report: Learning About Autism: Is the Source of Autism Knowledge Associated with Differences in Autism Knowledge, Autism Identity, and Experiences of Stigma. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-022-05823-5> --- de Bruin, C. (2004) Geef me de 5. een praktisch houvast bij de opvoeding en begeleiding van kinderen met autisme (19th ed.) --- Kenniscentrum kinder- en jeugdpsychiatrie. Autismespectrumstoornissen (ASS) bij kinderen en adolescenten. Retrieved april 14, 2023, from <https://kenniscentrum-kjp.nl/professionals/autisme/> --- van de Ven, S. (2021) Brain Blocks. Handboek voor het werken met Brain Blocks (1st ed.) --- van Langen, M. J. M., Szőke, R., Rijkellijkhuizen, D. N. J., Durston, S., & van Hulst, B. M. (2022). Lost in explanation: Internal conflicts in the discourse of ADHD psychoeducation. *BMC Psychiatry*, 22(1), 690. <https://doi.org/10.1186/s12888-022-04327-x> --- Vermeulen, P. (2005) Ik ben speciaal 2. Werkboek voor psycho-educatie bij mensen met autisme.

Abstract number A31

Session: FT2 - 11h30 - V23

Title : Lazy and Biased : the important role of ideological congruency in the assessment of (Fake) News

Lazy and Biased : the important role of ideological congruency in the assessment of (Fake) News

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Misinformation is a pressing societal problem and psychologists are trying to unravel the factors that determine people's vulnerability to it. A factor that has been assumed to determine why people believe fake news is partisanship and more specifically, the ideological compatibility between individuals' political identity and the (fake) news content. Psychological literature on confirmation bias (Nickerson, 1998) and motivated reasoning (Kunda, 199) suggest that people are partial in the way they seek, evaluate, and accept information, making it likely that ideological compatibility determines whether people believe misinformation. Pennycook and Rand (2019) compared two accounts of fake news vulnerability: the motivated system 2 reasoning, according to which people employ their reasoning abilities to believe congruent news more; and the classical analytical account, whereby people employ their reasoning abilities to simply better detect fake news. They find that analytical thinking (measured through Cognitive Reflection Task) does not increase belief in ideologically congruent news but merely predicts fake/true news discernment. Nevertheless, we argue that people may be biased towards ideologically compatible real and fake news, without necessarily relying on their analytical thinking. In a pre-test (N = 50) and a pre-registered experiment (N = 300; 150 US republicans; 150 US democrats), we find that participants consistently believe real and fake news more than incongruent ones, while CRT is an independent predictor of fake-real news discernment. We argue, against Pennycook and Rand, that ideological bias is an important determinant of vulnerability to misinformation parallel to reasoning abilities.

Pennycook, G. & Rand, D. G. (2019). Lazy, not biased: susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*, 188, 39–50. <https://doi.org/10.1016/j.cognition.2018.06.011>

Abstract number A32

Session: FT2 - 11h30 - V23

Title : Dysfunctional Beliefs Towards Parenthood and Depressive Symptoms: A Dyadic Response Surface Analysis (DRSA) Approach

Dysfunctional Beliefs Towards Parenthood and Depressive Symptoms: A Dyadic Response Surface Analysis (DRSA) Approach

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OBJECTIVES

Using a dyadic perspective in the transition to parenthood provides an interesting opportunity to explore the associations of partners’ (dis)similarity can facilitate the risk of psychological problems in both partners. Framed from Beck’s Cognitive Theory, the present study sought to investigate to what extent the degree of (dis)similarity in specific beliefs about parenting (i.e., others’ judgments, parental responsibility, parental role idealization) between partners may be associated with their levels of depression.

METHOD

170 couples of expecting mothers (age: $M = 32.18$, $SD = 4.89$) and fathers (age: $M = 34.86$, $SD = 5.61$), engaged in a stable relationship, filled out: Attitudes Toward Motherhood/Fatherhood Scale and Center for Epidemiologic Studies Depression Scale.

RESULTS

To examine the impact of the dyadic (dis)similarity between two predictors (specific dysfunctional beliefs in mothers and fathers) to two outcomes (their level of depression symptoms) within a dyad, a Dyadic Response Surface Analysis (DRSA) was used. The results showed (a) a predominant actor effect of the personal beliefs related to others’ judgments and parental responsibility on depressive symptoms, for both partners, and (b) a congruence effect, suggesting that a greater similarity between maternal and paternal beliefs related to the responsibility was negatively associated with paternal depressive symptoms.

DISCUSSION AND CONCLUSION

The present study sought to contribute to a better understanding of the relations between similarity in mothers’ and fathers’ dysfunctional beliefs and depressive symptoms. These results underscore the importance of considering the interaction between partners’ beliefs when studying the dynamics involved in the transition to parenthood.

Barranti, M., Carlson, E. N., & Côté, S. (2017). How to test questions about similarity in personality and social psychology research: Description and empirical demonstration of response surface analysis. *Social Psychological and Personality Science*, 8(4), 465-475. <https://doi.org/10.1177/19485506176982> Beck, A. T. (2002). Cognitive models of depression. In R. L. Leahy & E. T. Dowd (Eds.), *Clinical advances in cognitive psychotherapy: Theory and Application* (pp. 29–61). Springer Publishing Company. Humberg, S., Nestler, S., & Back, M. D. (2019). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*, 10(3), 409-419. <https://doi.org/10.1177/1948550618757600> Radloff, L. (1991). The use of the Center for Epidemiologic Studies Depression Scale in adolescents and young adults. *Journal of Youth and Adolescence*, 20(2), 149–165. <https://doi.org/10.1007/BF01537606> Schönbrodt, F. D., Humberg, S., & Nestler, S. (2018). Testing similarity effects with dyadic response surface analysis. *European Journal of Personality*, 32(6), 627-641. <https://doi.org/10.1002/per.2169> Sockol, L. E., Epperson, C. N., & Barber, J. P. (2014). The relationship between maternal attitudes and symptoms of depression and anxiety

Abstract number A33

Session: FT2 - 11h30 - V23

Title : pas de titre (mail envoyé)

pas de titre (mail envoyé)

Julie Segers, Lotte van Esch, Karla Van Leeuwen, Petra Warreyn, Herbert Roeyers, TIARA-team, Jean Steyaert, Ilse Noens

According to the transactional model, parents and children influence each other in a bidirectional manner. Parenting is known to play an important role in the development of children at elevated likelihood of autism. However, it is currently unclear how early differences in these toddlers are linked to subsequent parenting behaviours.

This questionnaire study is embedded in the TIARA-study, a longitudinal, multidisciplinary research project investigating the developmental course of autism. Participants (N = 144; n = 79 boys) are siblings of children with autism (n = 92), preterms (n = 52) and their mothers. We performed regression analyses to predict mothers' parenting behaviours (PBS-T) at three years old, based on preceding child communicative abilities (ABAS-3), internalizing and externalizing difficulties (CBCL), as well as child group and sex.

Our results indicate that child internalizing and externalizing behaviours are indeed predictive of subsequent parenting behaviours, even after controlling for preceding parenting behaviours. More specifically, child internalizing behaviours were associated with more subsequent maternal warmth, support and safety, and indulging behaviour. In contrast, child externalizing behaviours predicted less maternal warmth one year later. We found no significant association between child communicative abilities and subsequent maternal behaviour. We also didn't find significant predictors regarding the other parenting behaviours.

This study sheds lights on the relationship between behaviours in toddlers at elevated likelihood of autism, and subsequent maternal parenting behaviours, supporting the transactional view on parent-child interactions. Our study thus contributes to the understanding of the dynamic interplay between mothers and children of this population.

Achenbach, T. M., & Rescorla, L. A. (2001). Manual for the ASEBA school-age forms & profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families. --- Kreemers, B., Maljaars, J., Briers, V., Bulteel, S., Storms, G., Maes, B., & Noens, I. (2020). ABAS-3 Schaal voor adaptief gedrag [Handleiding]. Amsterdam, Nederland: Hogrefe. --- Lambrechts, G., Maljaars, J., Boonen, H., van Esch, L., Van Leeuwen, K., & Noens, I. (2015). Parenting Behavior in Mothers of Preschool Children with ASD: Development of a Self-Report Questionnaire. *Autism Research and Treatment*, 2015, 1–7. <https://doi.org/10.1155/2015/381236> --- Mandy, W., & Lai, M.-C. (2016). Annual Research Review: The role of the environment in the developmental psychopathology of autism spectrum condition. *Journal of Child Psychology and Psychiatry*, 57(3), 271–292. <https://doi.org/10.1111/jcpp.12501> --- Minuchin, P. (1985). Families and Individual Development: Provocations from the Field of Family Therapy. *Child Development*, 56(2), 289–302. <https://doi.org/10.2307/1129720> --- Sameroff, A. (2009). The transactional model of development: How children and contexts shape each other. American Psychological Association

Posters

Abstract number A35

Session: Poster Session 1 (12.40 - 14.00)

Title: Operationalising loss-chasing in gambling: A Systematic Review

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Background: Gambling disorder (GD) is a major public-health issue today, making it crucial to understand the key clinical symptoms underlying GD. Loss-chasing, which refers to exacerbation of gambling in the face of losses, is one such key clinical symptom underlying the onset, initiation, development, & maintenance of GD. Despite this centrality it remains unclear how the extant literature operationalises loss-chasing. Objectives/Methods: We conducted a systematic review (following PRISMA guidelines) of the extant literature to account for the ways in which loss-chasing has been operationalised. Furthermore, we critically evaluated these operationalisations to discern any inconsistencies the heterogeneous operationalisations induce. Results: The systematic search produced $n = 74$ studies that satisfied our eligibility criteria. Two broad categories of operationalisations namely between-session chasing ($n=40$; defined as returning another day/time to recoup losses) and within-session chasing ($n=39$; defined as continuing gambling by persisting and/or intensifying gambling by increasing bet-sizes, risk-taking & speed of play), emerged as the main forms of operationalisations widely used in the literature. Discussion: A critical analysis of the operationalisations highlighted that 1.) the heterogeneity in the operationalisations induces difficulty in comparing empirical research on loss-chasing, 2.) the various operationalisations exhibit ambiguities at conceptual-level, 3.) operational definitions undermine the role gambling environments/contexts and the type of gambler plays in the expression of loss-chasing and 4.) it remains unclear if the multiple operationalisations account for the superordinate construct of loss-chasing or if they represent multiple distinct phenomenon. Conclusion: The current paper raises awareness of these issues and suggests future directions to address them with an aim to augment the theoretical development of this key clinical symptom of GD.

Ciccarelli, M., Cosenza, M., Griffiths, M. D., D'Olimpio, F., & Nigro, G. (2019). The interplay between chasing behavior, time perspective, and gambling severity: An experimental study. *Journal of Behavioral Addictions*, 8(2), 259–267. <https://doi.org/10.1556/2006.8.2019.29> Cosenza, M., Matarazzo, O., Ciccarelli, M., & Nigro, G. (2020). Chasing the desire: An investigation on the role of craving, time perspective, and alcohol use in adolescent gambling. *Addictive Behaviors*, 111, 106566. <https://doi.org/10.1016/j.addbeh.2020.106566> Coventry, K. R., & Brown, R. I. (1993). Sensation seeking, gambling and gambling addictions. *Addiction (Abingdon, England)*, 88(4), 541–554. MEDLINE®. Coventry, K. R., & Norman, A. C. (1997). Arousal, sensation seeking and frequency of gambling in off-course horse racing bettors. *British Journal of Psychology*, 88(4), 671–681. Social Science Premium Collection. Counce, J. M., & Corbin, W. R. (2010). Effects of Alcohol and Initial Gambling Outcomes on Within-Session Gambling Behavior. *Experimental and Clinical Psychopharmacology*, 18(2), 145–157. <https://doi.org/10.1037/a0019114> Croson, R., & Sundali, J. (2005). The Gambler's Fallacy and the Hot Hand: Empirical Data from Casinos. *Journal of Risk and Uncertainty*, 30(3), 195–209. <https://doi.org/10.1007/s11166-005-1153-2> Dickerson, M., Hinchy, J., & Fabre, J. (1987). Chasing, arousal and sensation seeking in off-course gamblers. *British Journal of Addiction*, 82(6), 673–680. Social Science Premium Collection. Campbell-Meiklejohn DK, Woolrich MW, Passingham RE, & Rogers RD. (2008). Knowing when to stop: The brain mechanisms of chasing losses. *Biological Psychiatry*, 63(3), 293–300. <https://doi.org/10.1016/j.biopsycho.2007.05.014> Carragher, N., & McWilliams, L. A. (2011). A latent class analysis of DSM-IV criteria for pathological gambling: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychiatry Research*, 187(1), 185–192. <https://doi.org/10.1016/j.psychres.2010.12.022> Challet-Bouju, G., Hardouin, J.-B.,

Thiabaud, E., Saillard, A., Donnio, Y., Grall-Bronnec, M., & Perrot, B. (2020). Modeling Early Gambling Behavior Using Indicators from Online Lottery Gambling Tracking Data: Longitudinal Analysis. *Journal of Medical Internet Research*, 22(8), e17675. <https://doi.org/10.2196/17675> Chen, Z., Doekemeijer, R. A., Noël, X., & Verbruggen, F. (2022). Winning and losing in online gambling: Effects on within-session chasing. *PloS One*, 17(8), 1. MEDLINE®. <https://doi.org/10.1371/journal.pone.0273359> Choi-Kain, L. W., & Gunderson, J. G. (2008). Mentalization: Ontogeny, assessment, and application in the treatment of borderline personality disorder. *The American Journal of Psychiatry*, 165(9), 1127–1135. <https://doi.org/10.1176/appi.ajp.2008.07081360> Ciccarelli, M., Cosenza, M., D'Olimpio, F., Griffiths, M. D., & Nigro, G. (2019). An experimental investigation of the role of delay discounting and craving in gambling chasing behavior. *Addictive Behaviors*, 93, 250–256. <https://doi.org/10.1016/j.addbeh.2019.02.002>

Abstract number A36

Session: Poster Session 1 (12.40 - 14.00)

Title: Burnout among scientific staff at the University of Kinshasa: Lack of recognition at work, partially compensated by passion for work and hope

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Objectives. The education sector is particularly affected by burnout. African countries are not spared from the phenomenon either. We present the first results of a large study on the burnout of scientific staff at the University of Kinshasa (UNIKIN). The Job Demands-Resources model (Bakker & Demerouti, 2007) is mobilized and adapted to consider Kinshasa's cultural specificities. This contribution aims to (1) check the cultural relevance of the Western notion of burnout for UNIKIN's scientific personnel, (2) nourish the Western notion of recognition with cultural specificities, (3) determine the antecedents of burnout, beyond the lack of recognition at work.

Method. Semi-structured interviews were conducted with eight scientific staff members of UNIKIN about their burnout, professional constraints, recognition at work, and other professional and personal resources.

Results. The results show the relevance of the concept of burnout in the cultural context of Kinshasa. The lack of recognition was highly mentioned: it concerns the uncertainty of remuneration, but also the double workload (official job and a large part of the professor's job) without financial or symbolic compensation. The resources reported were the passion for teaching and research, as well as the hope for a better life once academic status is achieved.

Discussion and conclusion. These results need to be extended and deepened, but they qualify the burnout in the Kinshasa context, they inform about the specific personal resources, and provide input for a new model to be tested by quantitative study, with tools to adapt to the Kinshasa context.

Abstract number A37

Session: Poster Session 1 (12.40 - 14.00)

Title: Speech-in-noise perception in autistic adolescents with and without early language delay.

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Speech-in-noise perception seems aberrant in individuals with autism spectrum disorder (ASD). Potential aggravating factors are level of linguistic skills and impairments in auditory temporal processing. Here, we wanted to assess the effect of a concurrent (history of) language delay in ASD on the ability to correctly perceive speech in noise in a behavioural testing paradigm. We investigated autistic adolescents with and without language delay as compared to non-autistic peers, and we assessed speech perception in steady-state noise, in temporally modulated noise, and in concurrent speech. We found that autistic adolescents with intact language capabilities and not those with language delay performed worse than non-autistic (NA) peers on words-in-stationary-noise perception. For the perception of sentences in stationary noise we did not observe significant group differences, although autistic adolescents with language delay tend to perform poorer in comparison to their NA peers. We also found evidence for a robust deficit in speech-in-concurrent-speech processing in ASD independent of language ability, as well as an association between early language delay in ASD and inadequate temporal speech processing. We propose that reduced voice stream segregation and inadequate social attentional orienting in ASD result in disproportional informational masking of the speech signal. These findings indicate a severe speech-in-speech processing deficit in autistic adolescents with broad implications for quality of social communication.

<https://psyarxiv.com/c36z4/> (doi: 10.31234/osf.io/c36z4)

Abstract number A38

Session: Poster Session 1 (12.40 - 14.00)

Title: Virtual Reality as a Transversal Tool for Relaxation: Preliminary Results of the Validation of New Virtual Environments

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Objectives

New technologies are increasingly invested in clinical psychology. More specifically, the effectiveness of virtual reality (VR) has been demonstrated in several areas (e.g., treatment of anxiety disorders). A desire to broaden the use of VR is observed in clinical psychology, particularly in the context of learning self-regulation techniques via relaxation. Although relaxation is well-known, important questions need to be addressed about its applicability in VR. Our global research project fits this perspective through two objectives: (1) Validate new virtual environments as relaxing; (2) Assess their efficacy in clinical settings. This communication focuses on the first objective.

Methods

Sixty adults were met four times to be immersed in each of the virtual environments (paradise island, beach, forest) plus a control environment. Participants completed questionnaires to establish their psychological profile. Before and after the VR immersions, they completed visual analog scales (anxiety, stress, muscle tension) and a cybersickness assessment. A heart rate monitor assessed changes in heart rate. It was hypothesized that anxiety, stress, muscle tension and heart rate will decrease during the relaxation immersions, in comparison to the control condition.

Results

Preliminary results confirmed our hypotheses and will be further developed during the conference.

Discussion and conclusion

Our environments seem to be relaxing. Then, we can move forward to our second objective to assess the efficacy of these virtual environments in different clinical settings: anxious outpatients (Clinique Psychologique et Logopédique, ULiège); mothers in their first trimester of pregnancy (umons); cancer patients (Montpellier Institut du Sein); post-intensive care patients (CHU Liège).

Levy, F., Rautureau, G., & Jouvent, R. (2018). Thérapie par réalité virtuelle dans la gestion des soins des troubles anxieux. *Vertex* (Buenos Aires, Argentine), 29(137), 51-54. Riches S, Azevedo L, Bird L, Pisani S, Valmaggia L. Relaxation en réalité virtuelle pour la population en général: une revue systématique. *Soc Psychiatrie Psychiatr Epidemiol*. 021 Oct;56(10):1707-1727. doi: 10.1007/s00127-021-02110-z. EPUB 2021 13 juin.PMID: 34120220; PMCID: PMC8197783. Veling, W., Lestestuiver, B., Jongma, M., Hoenders, H. J. R., & van Driel, C. (2021). Virtual Reality Relaxation for Patients With a Psychiatric Disorder : Crossover Randomized Controlled Trial. *Journal of Medical Internet Research*, 23(1), e17233.

Abstract number A39

Session: Poster Session 1 (12.40 - 14.00)

Title: Generalization of teleworking: Evolution of the quality of relationships and the relation with the city

WILLEPUT Marine* (PsyTC - ULB), DECROLY Jean-Michel (DGES-GAG - ULB), DUCHÊNE Claire (DULBEA - ULB), POHL Sabine (PsyTC - ULB), STRALE Mathieu (DGES-GAG - ULB), VERDONCK Magali (DULBEA - ULB), HELLEMANS Catherine (PsyTC - ULB)

Objectives: Telework has become a major issue in organizations, but also in society in general, since its generalization after the COVID-19 crisis (IBSA, 2021). This communication presents the first results of a 3-year multidisciplinary research on individual and collective "social debt" following the generalization of telework: how do teleworkers define, in light of telework, the quality of their professional relationships (Ruiller et al., 2017) and, as an original aspect of this research, the quality of their relationship in the city environment (housing, mobility, places of consumption and relaxation).

Method: Semi-structured interviews were conducted with 15 workers from Brussels-Capital Region. These workers teleworked full-time during the crisis and continue to telework since then. Attention was paid to the diversity of the sample in terms of gender, seniority, level of education, type of accommodation and distance from home.

Results: Thematic content analysis highlighted that the impact of teleworking on the quality of relationships with colleagues needed to be qualified: most respondents did not report a feeling of professional isolation while teleworking, thanks to videoconferencing meetings, but they did report a decrease in informal exchanges during their teleworking days, as well as during their "face-to-face" days.

Discussion and conclusion: We discuss the future of the quality of private and professional life, at home, at work and in the city, and the responsibility for this future: with teleworking, part of this responsibility is transferred from employers to workers and society as a whole.

IBSA. (2021). Analyse et impact du télétravail en Région de Bruxelles-Capitale. Rapport d'étude. Institut Bruxellois de statistique et d'analyse. https://ibsa.brussels/sites/default/files/publication/documents/IBSA_Rapport_teletravail_0.pdf
Ruiller, C., Dumas, M., & Chédotel, F. (2017). Comment maintenir le sentiment de proximité à distance? Le cas des équipes dispersées par le télétravail. *RIMHE: Revue Interdisciplinaire Management, Homme Entreprise*, 27(3), 3-28.

Abstract number A40

Session: Poster Session 1 (12.40 - 14.00)

Title: A computational model of the pragmatics of spatial language interpretation

MIDAS Vanooteghem*, WALTER Schaecken, KULeuven

How people interpret utterances about the location of objects seems to depend on two elements of the context. First, interpretation by a listener depends on whether the purpose of the speaker is to indicate or to verify. Previous research shows that when interpreting an indicative sentence, 'to the left' is interpreted to mean 'close and horizontally to the left.' On the other hand, in a verificative question 'to the left' is interpreted to mean 'somewhere in the field to the left.' When participants are asked to give a rating of applicability, they take angle into account but not distance. Additionally, interpretation also depends on the presence of other objects (distractors) in the scene.

Recent advances in formal pragmatics have led to the proposal of the Bayesian Rational Speech Act (RSA) framework, which explains how people reason about each other's reasoning about the interpretation of utterances. In our research, we constructed a computational RSA model that tries to explain the findings of the spatial reasoning literature and tested predictions derived from it in an experiment.

In our online experiment, we systematically varied task, direction, angle, distractor presence, and distance in a within-person design. Two tasks involved verification behaviour and two tasks indication behaviour.

Preliminary findings largely confirm our hypotheses. Exploratory analyses show individual differences and differences between the diagonal directions and the other directions. These findings provide evidence for our computational model which, in turn, provides evidence for the fact people reason about each other when interpreting or generating spatial expressions.

Carlson, L. A., & Hill, P. L. (2008). Processing the presence, placement, and properties of a distractor in spatial language tasks. *Memory & Cognition*, 36(2), 240–255. <https://doi.org/10.3758/MC.36.2.240> Carlson, L. A., & Logan, G. D. (2001). Using spatial terms to select an object. *Memory & Cognition*, 29(6), 883–892. Gapp, K.-P. (1995). Angle, distance, shape, and their relationship to projective relations. *Proceedings of the 17th Annual Conference of the Cognitive Science Society*, 112–117. Hayward, W. G., & Tarr, M. J. (1995). Spatial language and spatial representation. *Cognition*, 55(1), 39–84. [https://doi.org/10.1016/0010-0277\(94\)00643-Y](https://doi.org/10.1016/0010-0277(94)00643-Y) Kojima, T., & Kusumi, T. (2006). The Effect of an Extra Object on the Linguistic Apprehension of the Spatial Relationship between Two Objects. *Spatial Cognition & Computation*, 6(2), 145–160. https://doi.org/10.1207/s15427633scc0602_2 Logan, G. D., & Compton, B. J. (1996). Distance and distraction effects in the apprehension of spatial relations. *Journal of Experimental Psychology: Human Perception and Performance*, 22(1), 159. Logan, G. D., & Sadler, D. D. (1996). A computational analysis of the apprehension of spatial relations. In *Language and space*. (pp. 493–529). The MIT Press. <https://doi.org/10.1146/annurev.anthro.25.1.353> Scontras, G., Tessler, M. H., & Franke, M. (2021). A practical introduction to the Rational Speech Act modeling framework. *ArXiv Preprint ArXiv:2105.09867*. van Tiel, B., Franke, M., & Sauerland, U. (2021). Probabilistic pragmatics explains gradience and focality in natural language quantification. *Proceedings of the National Academy of Sciences*, 118(9).

Abstract number A41

Session: Poster Session 1 (12.40 - 14.00)

Title: "Impact of perceptual strength in a lexical decision task in the semantic form of primary progressive aphasia"

MAYART Axel*, MICELI Aurélie & SIMOES LOUREIRO Isabelle ; Department of Cognitive Psychology and Neuropsychology, Faculty of Psychology and Educational Science, University of Mons, Mons, Belgium.

Background: The embodied and situated approach to cognition postulates that knowledge emerges through the interaction between the environment and our sensory-motor processes. In order to study the importance of sensory-motor processes in the conceptual system, the perceptual strength (i.e., the extent to which a word can be experienced through the senses ; PS) of a word is particularly relevant. Indeed, previous research has shown in a lexical decision task (LDT) that words with high PS, that are

semantically richer, are easier to recognize (i.e., shorter reaction time) than words with low PS, that are semantically poorer (Miceli et al., under review). The aim of our research is to explore the impact of PS in a LDT in the semantic form of primary progressive aphasia (PPA-S), a neurodegenerative disorder in which semantic knowledge is selectively deteriorated.

Method: A LTD, including 28 words with high PS, 28 words with low PS, and 56 non-words, will be proposed to 3 patients with PPA-S and a control group (N=30). Participants have to decide whether the word presented is a word of the French language or not. Reaction time and accuracy will be used to compare the performance between the patients and the control group to better understand the impact of PS on semantic processing. Multiple case studies will be conducted.

Results: Data are being collected and results will be presented at the conference. This study has the potential to contribute to the understanding of semantic disorders in PPA-S with an embodied approach of cognition.

Miceli, A., Wauthia, E., Lefebvre, L., Ris, L., & Simoes Loureiro, I. (under review). Influence of perceptual strength on conceptual processing: investigation in aging and in lexical-semantic decisions.

Abstract number A42

Session: Poster Session 1 (12.40 - 14.00)

Title: Happy classrooms, happy teachers: a triangulated qualitative study investigating ergonomic and architectural factors on how classroom design affects teachers satisfaction.

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1. Introduction/Objectives

The massification of schools, new pedagogies, technologies... have given rise to major changes in schools, and therefore, in school spaces (Blyth, 2013). Architectural trends aim to meet the needs of school stakeholders (Mazalto & Paltrinieri, 2013), but what about the specific needs of teachers whose workspace is quite unique (sharing workspace with students, other teachers, and educational staff)? Studies on teacher wellbeing and spatial environment are still rare, while literature on the architectural space effects on student performance is abundant (Manca et al., 2020). This raises the following question: how do classroom spaces meet ergonomic and architectural criteria and influence teachers satisfaction?

2. Method

To address this question, a qualitative study was conducted with 12 teachers in two primary schools, employing a combination of observations tools, interviews, and self-reported questionnaires. The aim was to identify the ergonomic and architectural factors related to classroom spaces that impact teaching activity, and to study their effects on teachers satisfaction. The data were analyzed using a triangular approach, combining vertical and horizontal analysis based on interview verbatims, observed data, and self-reported measures.

3. Results

The study found that modularity/adaptability, surface area, and acoustics were the most important architectural and ergonomic factors that impact teachers satisfaction. Further results from the collected data will be presented.

4. Discussion/Conclusion

Some of the results corroborate findings from previous research on office spaces (Poitras, 2022). Crucial determinants of teachers well-being in their workspace were identified as the possibility to enjoy modular spaces adapted to different practices and acoustic comfort.

Blyth, A. (2013). Perspectives pour les futurs espaces scolaires. *Revue internationale d'éducation de Sèvres*, (64), 53 - 64. / Manca, S., Cerina, V., Tobia, V., Sacchi, S., & Fornara, F. (2020). The effect of school design on users' responses: a systematic review (2008-2017). *Sustainability*, 12(8), 3453. / Mazalto, M., & Paltrinieri, L. (2013). Introduction : Espaces scolaires et projets éducatifs. *Revue internationale d'éducation de Sèvres*, (64), 31-40. / Poitras, A. (2022). Vu d'ailleurs-Comment maximiser le bien-être des travailleurs ?. *Gestion*, 47(3), 26-30.

Abstract number A43

Session: Poster Session 1 (12.40 - 14.00)

Title: French validation of the Highly Sensitive Child (HSC-21) and development of the Interpersonal Reactivity Index for Parents (IRIP)

Logan HANSOTTE*, Anthony MAUROY*, Justine GAUGUE & Sarah GALDIOLO - Department of Clinical Psychology, University of Mons

OBJECTIVES

Environmental sensitivity and empathy are core components of interpersonal relationships, especially in parent-child interactions. Although short and valid instruments exist in English to assess these components, developing such tools in French is needed. Therefore, the aims of this study were to develop a French Validation of two scales: the Highly Sensitive Child scale (HSC-21; Weyn et al., 2022) and the Interpersonal Reactivity Index for Parents (IRIP), adapted from the IRI for Couple (IRIC, Péloquin & Lafontaine, 2010). Recruitment took place in French-speaking countries (Belgium, France, Switzerland), as part of an international project.

METHOD

Individuals in couple relationship, having a child between 2 and 6 years, and living with their partner and child(ren) completed an online questionnaire. Questionnaire included socio-demographic questions, HSC-21, IRIP, IRIC, the Highly Sensitive Person Scale – French version (Bordarie et al., 2022), the Empathy Questionnaire (EmQue-Vf; Nader-Grosbois & Simon, 2019) and the Children's Behavior Questionnaire – Short Form (CBQ-SF; Lemelin et al., 2020).

RESULTS

Results will be available in May. However, we can expect 1) a bifactor model with a general sensitivity factor and two specific factors (Ease of Excitation-Low Sensory Threshold and Aesthetic Sensitivity) for the HSC-21; 2) a bifactor model with a Perspective Taking and Empathic Concern factors for the IRIP, similar to the factor structure of the IRIC.

DISCUSSION

French versions of the HSC-21 and the IRIP seem to be reliable tools to respectively assess environmental sensitivity and empathy in a parental context among French-speaking populations.

Bordarie, J., Aguerre, C., & Bolteau, L. (2022). Validation and study of psychometric properties of a French version of the Highly Sensitive Person Scale (HSPS-FR). *European Review of Applied Psychology*, 72(4), 100781. <https://doi.org/10.1016/j.erap.2022.100781> Lemelin, J.-P., Poirier, M., Le Corff, Y., Toupin, J., & Dery, M. (2020). Validation de la version canadienne francophone du Children's Behavior Questionnaire – Short Form. *Bulletin de psychologie*, Numéro 567-

568(3 4), 167 180. <https://doi.org/10.3917/bupsy.567.0167> Nader-Grosbois, N. & Simon, P. (2019). Evaluer l'empathie chez les enfants : adaptation francophone du questionnaire d'empathie (EmQue-vf). UCLouvain, Louvain-la-Neuve, Belgique. Péloquin, K., & Lafontaine, M.-F. (2010). Measuring Empathy in Couples : Validity and Reliability of the Interpersonal Reactivity Index for Couples. *Journal of Personality Assessment*, 92(2), 146 157. <https://doi.org/10.1080/00223890903510399> Weyn, S., Van Leeuwen, K., Pluess, M., Lionetti, F., Goossens, L., Bosmans, G., Van Den Noortgate, W., Debeer, D., Bröhl, A. S., & Bijttebier, P. (2022). Improving the Measurement of Environmental Sensitivity in Children and Adolescents : The Highly Sensitive Child Scale–21 Item Version. *Assessment*, 29(4), 607 629. <https://doi.org/10.1177/1073191120983894>

Abstract number A44

Session: Poster Session 1 (12.40 - 14.00)

Title: The Brief Evaluation of Receptive Aphasia (BERA): a new tool to assess language comprehension in patients with severe brain damage.

Authors : PAULS Marion (1-2) * , AUBINET Charlène (1-2), GOSSERIES Olivia (1), CARDONE Paolo (1), REGNIER Amandine (1), SALA Arianna (1) & MAJERUS Steve (2). (1) GIGA Consciousness, Coma Science Group, University and University Hospital of Liège, Belgium. (2) Psychology and Neuroscience of Cognition Research Unit, University of Liège, Belgium

Background: The Brief Evaluation of Receptive Aphasia (BERA) is a new tool to assess receptive phonological, semantic and morphosyntactic abilities in patients with severe brain damage, based on visual fixation responses measures via an observational procedure and an eye-tracking device.

Objective: This case report aims to compare BERA scores to other behavioural and neuroimaging data to assess its feasibility and utility

Methods: The BERA tool was administered to a post-comatose patient at two time points: 1/ at the moment of full clinical status assessment via the Simplified evaluation of CONsciousness disorders scale (SECONDS), positron emission tomography (PET) and electroencephalography (EEG); and 2/ three months later, BERA and SECONDS assessments were performed on two consecutive days by multiple, blinded raters.

Results: The patient was initially diagnosed as minimally conscious state plus (i.e., recovery of command-following ability) and the BERA scores suggested the presence of residual language abilities with specific semantic impairment. These results were compatible with the relative functional preservation of left-lateralized language processing neural regions. At the second time point, BERA assessments suggested satisfactory test-retest and inter-rater agreement. BERA and SECONDS scores showed similar improvement from the initial to the second assessment time point.

Conclusions: The BERA assessment allowed the early and reliable detection of residual language comprehension abilities in a minimally conscious patient demonstrating the feasibility of language assessment in this difficult-to-assess patient population. The next step will be to validate the BERA tool in a larger sample of post-comatose patients.

Aubinet, C., Chatelle, C., Gillet, S., Lejeune, N., Thunus, M., Hennen, N., Cassol, H., Laureys, S., & Majerus, S. (2021). The Brief Evaluation of Receptive Aphasia test for the detection of language impairment in patients with severe brain injury. *Brain Injury*, 35(6), 705-717. <https://doi.org/10.1080/02699052.2021.1894482>

Abstract number A45

Session: Poster Session 1 (12.40 - 14.00)

Title: Self-care Strategies for Children with Anxiety Symptoms

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Objectives: Self-care interventions seem to be an interesting way to provide support to the treatment of anxiety disorders during childhood. Difficulties in emotion regulation can lead to the development of anxiety symptoms and require special attention during child development. The main objective of this research was to assess the effectiveness of a self-care program on children's anxiety symptoms.

Method: We carried out an exploratory and interventional study with eleven children from six to eight years old coping with anxiety symptoms. We created a self-care program and used it between pre-test and post-test questionnaires. We hypothesized that anxiety symptoms would decrease after the use of the self-care tool and that emotion regulation would increase. We also kept track of the children's adherence to the tool and we conducted semi-directive interviews to complete the quantitative results.

Results: The findings of this study indicate a decrease in anxiety but also a decrease in emotion regulation. There wasn't a high level of adherence to the task but the interviews allowed to gather information about children's feelings during this experience.

Discussion and conclusion: The results of this study provide support for the effectiveness of self-care tools on anxiety symptoms even though they require a high level of adherence to treatment completion. Regarding emotion regulation, young children of this age range are still learning emotions thus we understand our unexpected result.

Baurain, C., & Nader-Grosbois, N. (2011). Élaboration et validation d'un dispositif méthodologique pour l'observation de la régulation socioémotionnelle chez l'enfant. *Enfance*, 2(2), 179-211. <https://doi.org/10.4074/S0013754511002023> / Bennett, S. D., Cuijpers, P., Ebert, D. D., Smith, M. M., Coughtrey, A. E., Heyman, I., Manzotti, G., & Shafran, R. (2019). Practitioner Review: Unguided and guided self-help interventions for common mental health disorders in children and adolescents: a systematic review and meta-analysis. *The Journal of Child Psychology and Psychiatry*, 60(8), 828-847. <https://doi.org/10.1111/jcpp.13010> / Coutu, S., Bouchard, C., Emard, M. J., & Cantin, G. (2012). Le développement des compétences socioémotionnelles chez l'enfant. Dans J. P. Lemelin, M. A. Provost, G. M. Tarabulsy, A. Plamondon & C. Dufresne (Eds.), *Développement social et émotionnel chez l'enfant et l'adolescent. Tome 1 : Les bases du développement* (pp. 139-184). Presses de l'Université du Québec. / Creswell, C., Hentges, F., Parkinson, M., Sheffield, P., Willetts, L., Cooper, P., & Berkshire Child Anxiety Clinic. (2010). Feasibility of guided cognitive behaviour therapy (CBT) self-help for childhood anxiety disorders in primary care. *Mental Health in Family Medicine*, 7(1), 49-57. <https://pubmed.ncbi.nlm.nih.gov/22477922/> / McLellan, L. F., Fitzpatrick, S., Schniering, C. A., & Rapee, R. M. (2019). Self-Help Treatment of Childhood Anxiety Disorders. In L. J. Farrell, T. H. Ollendick & P. Muris (Eds.), *Innovations in CBT for Childhood Anxiety, OCD, and PTSD : Improving Access and Outcomes* (pp.52-72). Cambridge University Press. / Miu, A. C., Szentágotai-Tătar, A., Balázs, R., Nechita, D., Bunea, I., & Pollak, S. D. (2022). Emotion regulation as mediator between childhood adversity and psychopathology: A meta-analysis. *Clinical Psychology Review*, 93, 1-10. <https://doi.org/10.1016/j.cpr.2022.102141> / Riegel, B., Dunbar, S.B., Fitzsimons, D., Freedland, K.E., Lee, C.S., Middleton, S., Stromberg, A., Vellone, E., Webber, D.E., & Jaarsma, T. (2019). Self-care research: Where are we now ? Where are we going ? *International Journal of Nursing Studies*, 116, 1-7. <https://doi.org/10.1016/j.ijnurstu.2019.103402>

Abstract number A46

Session: Poster Session 1 (12.40 - 14.00)

Title: The concept of Social Desirability among Police Officers, A factorial analysis

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Police officers generally exhibit high levels of Social Desirability (SoD), both to minimize their difficulties (Denial) or to highlight their qualities (Attribution) (Habersaat et al., 2021). It is consistent with their organizational culture (e.g., masculine norms, identification with the caretaker role) and professional expectations (Crank, 2014). SoD is often considered as a control variable in research and clinical practice. Few research has been undertaken regarding SoD, as a main psychological aspect. These study's objectives are twofold. First, we aimed to describe SoD features of police officers according to socio-demographic characteristics. Second, a factorial analysis a SoD self-questionnaire has been carried out. Sample consists of 183 Belgian police officers (68.30% men; MeanAge = 41.29; SDAge = 9.23; MeanYears of Professional Experience = 15.81; SDYears of Professional Experience = 9.92) assessed with Marlowe-Crowne Social Desirability Scale (MC-SDS, Marlowe & Crowne, 1960). Firstly, descriptive and comparative analyses confirm a high score among them (Mean = 17.32; SD = 4.30), particularly for Attribution factor. No differences in SoD scores were observed controlling gender, age, rank, etc. Secondly, analyses of MC-SDS highlight SoD is composed of three factors: control of oneself and others; maintaining a positive self-image, particularly face to constraint; negative interpersonal aspects (being envious, jealous, etc.). Results indicate personality traits relating to SoD are relatively transversal and difficult to describe excluding professional aspects. They have implications for both the MC-SDS's validation in the police population with empirical norms and recruitment, performance assessment, and accuracy in the assessment of complementary self-report measures.

Crank, J.P. (2014). *Understanding Police Culture*. Routledge, London. Crowne, D. P., & Marlowe, D. (1960). Marlowe-Crowne social desirability scale. *Journal of Consulting Psychology*. Habersaat, S., Abdellaoui, S. H., & Wolf, J. M. (2021). Social desirability, stress and health in police officers : preliminary results. *Policing : An International Journal*, 44(2), 213-229. doi: 10.1108/pijpsm-08-2020-0133

Abstract number A47

Session: Poster Session 1 (12.40 - 14.00)

Title: The role of emotion regulation in perinatal depression and anxiety: a systematic review

Authors: Pauline Verhelst¹, Laura Sels¹, Gilbert Lemmens², & Lesley Verhofstadt¹. ¹ Faculty of Psychology and Educational Sciences, UGent, Belgium; ² Faculty of Medicine and Health Sciences, UGent, Belgium

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.

Abstract number A48

Session: Poster Session 1 (12.40 - 14.00)

Title: Psychologists in prison, studying the association between their institutional experiences and their personality

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Prison is a historically punitive institution that may generate negative representations. Psychologists working in this environment must deal with an ambivalence between care under constraint, sometimes legally imposed, and the firmness of this setting (Goldbeter-Merinfeld, 2011). Scientific literature mainly focuses on inmates' experiences rather than professionals'. To the authors' knowledge, no study investigates the institutional experience of psychologists within the carceral environment and the effect of their personality traits on this experience. Fifty-five psychologists (13% male, 87% female; MeanAge = 29.53; SDAge = 6.36; MeanYears of Professional Experience = 5.58; SDYears of Professional Experience = 6.43) from several prisons in France responded to an online survey investigating, among others, their personality dimensions (Big Five Inventory; Courtois et al., 2020) and their institutional experience (6-item questionnaire developed by authors). Descriptive analyses highlight those psychologists exhibit principally conscientious personality traits than other dimensions and higher scores on positive institutional experience (deontology, going to work, professional identity). Factor analysis of the institutional experience questionnaire identified a positive experience factor and a negative experience factor. Correlational analysis indicated that Extraversion (E) was positively correlated with a positive experience, while Neuroticism (N) was positively correlated with a negative experience. Therefore, it is likely that an N-E+ personality profile creates favorable conditions for psychological work in prison. Despite several limitations, the current study has implications for both professionals' recruitment and training in psycho-organizational aspects, leading to recommendations regarding targets of attention or support for these professionals' psychological and organizational health.

Goldbeter-Merinfeld, E. (2011). Aide contrainte et psychothérapie. *Cahiers critiques de thérapie familiale et de pratiques de réseaux*, 46(1), 5–10. doi: 10.3917/ctf.046.0005 Courtois, R., Petot, J.-M., Plaisant, O., Allibe, B., Lignier, B., Réveillère, C., Lecocq, G., & John, O. (2020). Validation française du Big Five Inventory à 10 items (BFI-10). *L'Encéphale*, 46(6), 455–462. doi: 10.1016/j.encep.2020.02.006

Abstract number A49

Session: Poster Session 1 (12.40 - 14.00)

Title: Belief in future occurrence modulates delay discounting

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OBJECTIVES : When imagining a future event, individuals believe to varying degrees that it will or will not happen. This belief has been associated with the actual occurrence of future events, suggesting that it might be useful for decision-making. However, the direct influence of belief in future occurrence on decisions has not yet been studied. Previous studies have shown that future event simulation decreases the tendency to discount the value of future rewards – referred to as delay discounting (DD). In the present study, we sought to investigate how imagining future events that are certain (i.e., highly believed in) vs. uncertain (i.e., moderately believed in) impacts intertemporal choices. **METHOD :** Participants completed an online DD task involving hypothetical monetary rewards during which they imagined either certain future events (n = 83), uncertain future events (n = 83), or remembered recent past events (i.e., control condition; n = 80). **RESULTS :** Robust ANOVA showed that participants' DD was smaller if they imagined certain future events rather than uncertain future events or recent past events. No significant difference in delay discounting was found between remembering recent events and imagining uncertain future events. **DISCUSSION & CONCLUSION :** These results suggest that imagining future events helps one make more flexible intertemporal decisions, and the extent to which one believes in the occurrence of the events may play a key role in this process.

Bulley, A., Henry, J., & Suddendorf, T. (2016). Prospection and the Present Moment : The Role of Episodic Foresight in Intertemporal Choices between Immediate and Delayed Rewards. *Review of General Psychology*, 20(1), 29-47. <https://doi.org/10.1037/gpr0000061> //// Bulley, A., & Schacter, D. L. (2020). Deliberating trade-offs with the future. *Nature Human Behaviour*, 4(3), Article 3. <https://doi.org/10.1038/s41562-020-0834-9> //// D'Argembeau, A., & Garcia Jimenez, C. (2020). The predictive validity of belief in future occurrence. *Applied Cognitive Psychology*, 34(6), 1265-1276. <https://doi.org/10.1002/acp.3708> //// Rösch, S. A., Stramaccia, D. F., & Benoit, R. G. (2022). Promoting farsighted decisions via episodic future thinking : A meta-analysis. *Journal of Experimental Psychology: General*, 151, 1606-1635. <https://doi.org/10.1037/xge0001148> //// Ye, J., Ding, Q., Cui, J., Liu, Z., Jia, L., Qin, X., Xu, H., & Wang, Y. (2022). A meta-analysis of the effects of episodic future thinking on delay discounting. *Quarterly Journal of Experimental Psychology*, 75(10), 1876-1891. <https://doi.org/10.1177/17470218211066282>

Abstract number A50

Session: Poster Session 1 (12.40 - 14.00)

Title: Intimate Partner Sexual Violence in Emerging Adulthood: are Sexual Consent Attitudes a Target for Sexual Coercion Prevention?

Anthony DEPIREUX* (Department of Psychology - Adaptation Resilience and Change Research Unit (ARCh) - University of Liège) and Fabienne GLOWACZ (Department of Psychology - Adaptation Resilience and Change Research Unit (ARCh) - University of Liège)

Objectives: While intimate partner violence is now recognized as a major societal and international issue, sexual violence between partners remains understudied despite its prevalence and specificity. The aim of this study was to analyze the links between different dimensions of sexual consent and sexual coercion within intimate relationships in order to identify targets for prevention campaigns. The study was carried out during a time of transition in the socio-political and legislative context in Belgium linked to the implementation of a reform to the sexual criminal law, which has made the expression of sexual consent central to the qualification of sexual offenses.

Method: 431 young adults (88. 40% female; Mage = 22.19; SDage = 1.79) were recruited from the general population through an online survey to analyze the links between attitudes and beliefs towards sexual consent, attachment style, mental health, and sexual victimization between partners.

Results: Results showed that a lack of perceived behavioral control over establishing sexual consent, and the avoidance of intimacy, predicted sexual victimization.

Discussion: The clinical implications of these findings are discussed and potential public policy responses for prevention and awareness are suggested. Future research should further investigate and conceptualize sexual consent as it relates to sexual coercion in a more representative sample from an intersectional perspective.

Abstract number A51

Session: Poster Session 1 (12.40 - 14.00)

Title: The roles of event structure and working memory in the formation of everyday memories

TERPINI Marianthi*, University of Liège, LEROY Nathan, University of Liège, PsyNCog, Fund for Scientific Research - FNRS, MAJERUS Steve, University of Liège, PsyNCog, Fund for Scientific Research - FNRS, D'ARGEMBEAU Arnaud, University of Liège, PsyNCog, Fund for Scientific Research - FNRS.

Remembering a past event usually takes less time than its actual duration. This temporal compression depends on the density of recalled experience units (EUs; moments of prior experience; Jeunehomme & D'Argembeau, 2019). Previous studies suggest that these EUs are formed in working memory (WM) during event perception and integrated in long term memory at event boundaries (EBs; moments at which a sub-event ends and another begins; Zacks, 2020). According to this view, both EBs density and the level of WM resources available during perception should be positively associated to the number of EUs formed to represent an event in memory (and thus, negatively associated to its temporal compression). To test this hypothesis, we asked 60 healthy young adults to watch and mentally replay sixteen 60-s videos (with either many or few EBs). After each trial, they had to write down the content of their remembering. For half of the videos, participants had to count backwards by 3 during viewing. As expected, the number of recalled EUs and remembering duration were higher for videos containing a high number of EBs. Furthermore, performing a concurrent task during viewing reduced both the number of recalled EUs and remembering duration. Importantly, the number of recalled EUs was a strong predictor of remembering duration, regardless of WM load. Taken together, these results suggest event structure (i.e., EBs density) and WM both play a role in the formation of EUs representing the unfolding of past events in memory, thus determining their temporal compression.

Jeunehomme, O., & D'Argembeau, A. (2019). The time to remember : Temporal compression and duration judgements in memory for real-life events. *Quarterly Journal of Experimental Psychology*, 72(4), 930-942. <https://doi.org/10.1177/1747021818773082>; Zacks, J. M. (2020). Event Perception and Memory. *Annual Review of Psychology*, 71, 165-191. <https://doi.org/10.1146/annurev-psych-010419-051101>

Abstract number A52

Session: Poster Session 1 (12.40 - 14.00)

Title: Impact of transcranial direct current stimulation over the VLPFC on emotion regulation

DUMONT Romain*, VIVEGNIS André, HANSENNE Michel, ULiège

Impact of transcranial direct current stimulation over the VLPFC on emotion regulation

Objectives: The study of emotion regulation constitutes a major area of research for having a complete picture of human emotional experience, and several lines of evidence claim that poor emotion regulation skills are particularly deleterious in different aspects of life. Previous tDCS studies have reported mixed results concerning the beneficial role of DLPFC stimulation to improve emotion processing and regulation. However, the few studies targeting the VLPFC are more promising. Therefore the present study was conducted to confirm and extend the effects of VLPFC stimulation on emotion regulation by including both positive and negative emotional material.

Method: In this between subjects study, participants were randomly assigned to receive active or sham stimulation over the left VLPFC. Participants viewed negative, positive, and neutral pictures while attempting to decrease, increase, or not modulate their emotional reactions. Subjective reactions were assessed via on-line ratings.

Results: The main results show that anodal tDCS stimulation over the left VLPFC does not impact emotion regulation performance.

Discussion and conclusion: The results obtained from this study do not allow to conclude that tDCS modulation of the VLPFC has an effect on emotion regulation. Among the reasons for this absence of effect, it is possible that certain aspects related to the stimulation, the emotional material used, or the single session of tDCS are factors explaining the absence of effect.

Abstract number A54

Session: Poster Session 1 (12.40 - 14.00)

Title: Interoceptive abilities, body perception and eating behaviors in adult women

Mélicca Vandenbol, Alice Bodart, Mandy Rossignol (Department of Cognitive Psychology and Neuropsychology, University of Mons)

Objectives : Body concerns are common in women and can lead to body image disorders, such as body dysmorphic disorder (BDD), or even to eating disorders (ED). This preliminary study aimed to examine the interoceptive abilities of adult women reporting ED or BDD as compared to healthy women.

Method : In collaboration with a referral hospital, we invited seven female patients with an ED and seven patients with BDD to take part in the study, as well as seven control women. They completed a heartbeat counting task (HCT) as well as self-reported assessments of their interoceptive skills (MAIA), anxiety (STAI), depression (BDI), alexithymia (TAS-20), eating behaviors (EAT-26) and a new French version of the Body Dysmorphic Questionnaire – Yale Brown Obsessive Scale (BDDQ-YBOCS).

Results : The fourteen patients presented critical score on the BDDQ-YBOCS, suggesting a BDD in patients with ED. Indeed, scores at the BDDQ-YBOCS highly correlated with the EAT-26, and they were both associated with alexithymia. MAIA scores were negatively correlated with anxiety, depression, alexithymia, eating difficulties and body concerns. However, performances on the HCT task was not predictable by our variables.

Discussion and conclusion : Worry about body defects was associated with eating disorders. These symptoms were concomitant with high scores of anxiety, depression and alexithymia, but did not affect cardiac interoceptive accuracy. Future studies should assess the onset of anxiety-depression symptoms, body image disorders and ED, especially in adolescents, to elucidate the potential causal relationship between these symptoms.

Abstract number A55

Session: Poster Session 1 (12.40 - 14.00)

Title: Assessing social sensitivity in prematurely born preschoolers using frequency-tagging EEG

Charlotte Sente¹, Rowena Van den Broeck¹, Lisa Gistelinck¹, Bieke Bollen^{1,2}, Sam Wass³, Els Ortibus^{1,2}, Gunnar Naeyaert^{1,2}, Bart Boets¹ (1: KU Leuven; 2: UZ Leuven; 3: University of East London)

Objectives: Social sensitivity, the ability to perceive and respond appropriately to social cues, plays a crucial role in the understanding of others situated in a social world. While prematurely born children generally show enhanced survival chances, there is a growing awareness for the elevated likelihood of (sub-)clinical socio-affective impairments, including difficulties with face and voice processing.

Methods: We administered visual and auditory stimulation frequency-tagging electro-encephalogram paradigms to assess the neural tuning for social stimuli in prematurely born 5-year-old preschoolers as compared to full-term born peers. The principle is that the brain responds at exactly the same periodicity as the frequency of stimulation, thereby allowing to unambiguously tag a particular stimulation stream. In the visual multi-input paradigm, we simultaneously present two streams of images (faces (social) versus houses (non-social)) next to each other, each tagged at different frequencies (6 Hz and 7.5 Hz, counterbalanced). In the auditory multi-input paradigm, we simultaneously present two streams of sounds (vocal sounds (social) versus object sounds (non-social)), each tagged at different frequencies (3.45 Hz and 3.70 Hz, counterbalanced).

Results: Preliminary data show a clear social tuning, both for the facial and for the vocal stimulation. Data analysis is ongoing and results will be presented at the conference.

Conclusions: Frequency-tagging EEG offers a fast, double-objective, reliable and straightforward approach to assess social preference and neural tuning towards social information, allowing to pinpoint subtle differences and deficits in social orientation in high-risk populations, including prematurely born preschoolers.

Abstract number A56

Session: Poster Session 1 (12.40 - 14.00)

Title: Correlates of Empathic Accuracy

Nikki Taelemans¹, Céline Hinnekens¹, Liesbet Berlamont¹, Laura Sels¹, William Ickes¹, and Lesley Verhofstadt¹ (1: Ugent)

The current systematic review summarizes the existing literature on the potential correlates of empathic accuracy (EA). EA is defined as the extent to which a person accurately infers a target's spontaneous feelings or thoughts as they occur moment-to-moment in a particular situation. Database searches were performed using Web of Science, Pubmed, Cochrane, and PsycINFO. After screening 541 articles, 92 articles met predetermined inclusion criteria (e.g., EA measured by means of the standard stimulus or dyadic interaction paradigm) and were extracted for review. These studies are described with respect to their conceptualization, operationalization, and calculation of EA. Our summary of the (potential) correlates of EA is divided into three sections: individual, relational, and interactional characteristics. Consistent evidence was found for specific individual characteristics (e.g., training), specific relational characteristics (e.g., relationship duration), and specific interactional characteristics (e.g., quality of the interaction) as correlates of EA. However, there was also quite a bit of inconsistent evidence for other characteristics (e.g., gender). In addition, several promising findings that are in need

of replication were reported. Despite some limitations, this review provides a concise and systematic overview of the correlates of EA, which are relevant for both future research directions and for clinical practice.

Abstract number A57

Session: Poster Session 1 (12.40 - 14.00)

Title: Desistance process, what place for religion and spirituality?

Pelz, Lucie 1 & Glowacz, Fabienne 1 (1: Department of Psychology – Adaptation Resilience and Change Research Unit (ARCh), University of Liège)

Objectives: Research on desistance focuses on various factors supporting this process of stopping delinquent behavior and on the behavioral and identity changes that characterize it. The research presented here aims to understand this process, and more particularly, the way in which delinquents perceive it, lived it, or still live it. Even if religion and spirituality are an integral part of today's society, these two components have rarely been studied in the desistance process in the European context. A second goal of this study was therefore to understand how these two components can support the exit from delinquency.

Method: A qualitative methodology was used, based on the thematic analysis method (Paillé & Mucchielli, 2016). Semi-structured interviews were conducted and analysed. Seven participants were recruited. The individual analysis made it possible to highlight the singularities of the pathways, while the materials developed in the cross-sectional analysis emphasized the common or shared components of the participant's processes of desistance.

Results: Thus, the data developed here reveal that religious or spiritual beliefs can support the cessation of delinquent acts jointly and similarly to other factors such as work or parenthood.

Discussion and conclusion: Identity transition appears as the keystone of the participant's processes of desistance, with individual and social components: changes in the relationship to oneself, in the relationship to others, and in the relationship of others to oneself.

Paillé, P., Mucchielli, A. (2012). L'analyse qualitative en sciences humaines et sociales. Armand Colin. <https://doi.org/10.3917/arco.paill.2012.01>

Abstract number A58

Session: Poster Session 1 (12.40 - 14.00)

Title: The Prospective Statistical Power and Positive-Predictive-Value of Psychotherapies for Treating Depression in adults

LEONARD François* (ULiège, department of educational sciences), TIRELLI Ezio (ULiège, department of psychology)

Objective: The aim of this meta-research investigation was to assess the (prospective) statistical power and Positive-Predictive-Value (PPV) of existing literature until 2022 on the effectiveness of psychotherapies for treating depression.

Method: A set of restrictions were defined for the selection of studies in the Metapsy database (Miguel et al., 2022): (i) it concerns adult populations, (ii) a clinician is measuring and assessing depression on a continuous scales. It ends up selection 105 effect size. Then, a Random-Effect (RE) meta-analysis and three Small Study Effect (SSE) correction methods (the Trim-&-Fill, the Rücker's limit method, and a

three parameters selection model) were implemented to generate four pooled estimates. Using these pooled estimates, median powers and the corresponding PPV curves were computed for all included effect sizes with an alpha risk of 0.05.

Results: RE meta-analysis yielded a pooled estimate of 0.69 (Hedges' g). After applying SSE corrections, pooled estimates were reduced to 0.59 g , 0.39 g , and 0.66 g . The median power of included effects using these pooled estimates ranged from 0.28 to 0.67. When analyzing only the significant effect sizes ($n=58$), the median powers ranged from 0.31 to 0.72 and the PPV from 0.86 to 0.93, assuming a H_1 prior probability of 0.5.

Discussion and conclusion: The findings indicate that psychotherapies exert moderate to strong effects in treating depression for adult populations. However, future studies may face challenges in replicating these likely overestimated effects. Undoubtedly, the methodological quality of future research needs to be improved.

Miguel, C., Harrer, M., & Plessen, C. Y. (2022). metapsy-project/data-depression-psyctr: Version 22.0.2. Zenodo. <https://doi.org/10.5281/zenodo.7255037>

Abstract number A59

Session: Poster Session 1 (12.40 - 14.00)

Title: Multiple Sclerosis and Cognitive Fatigue: An Individualized Account from Behavioral, Subjective and Physiological Measures

HRABOVECKY Jeromy¹, ELANDS Sophie¹, STRAUSS Mélanie¹, DE TIEGE Xavier¹, SLAMA Hichem¹, PEIGNEUX Philippe¹, GASPARD Nicolas¹, 1. Université libre de Bruxelles-Erasme

Objectives:

For approximately 75-80% of persons with Multiple Sclerosis (PwMS), fatigue is one of the most debilitating symptoms. The aim of this study is to better understand the evolution of this symptom using an individually calibrated task.

Methods:

Our matched cohorts of healthy controls and patients ($n=53$; PwMS=21, HC=32) underwent a cognitive fatigue induction task (tLoad-dBack; Borrağan et al., 2017) over the course of 2 days. Day 1 was used to calibrate the task. Day 2 was the fatigue induction phase. Each session used fatigue questionnaires, vigilance tasks and eye tracking before, during and after the tLoad-dBack to track the evolution of cognitive fatigue for the two groups.

Results:

Results indicate that all measures of cognitive fatigue (subjective questionnaire responses, eye tracking data, vigilance and alertness scores) showed significant differences between the different moments (all p 's < .05) throughout the 2 session but not between the 2 groups (all p 's > .05). The only significant difference found between groups was for presentation speed ($p=.003$).

Discussion and Conclusion:

While accounting for differences in interindividual processing speeds, our results suggest that cognitive fatigue evolves in the same way for both HC's and PwMS. These findings may hold keys to not only better understanding the presence of fatigue for PwMS but also strategies to better adapt and respond

to its impact in daily life. Furthermore, the increased sense of fatigue may be due to other factors such as Sleep, Mood and/or Cognitive Load. Future research should focus on this.

Barrouillet, Pierre & Camos, Valérie. (2007). The time-based resource-sharing model of working memory. *The Cognitive Neuroscience of Working Memory*. 10.1093/acprof:oso/9780198570394.003.0004. Borragán, G., Slama, H., Bartolomei, M., & Peigneux, P. (2017). Cognitive fatigue: A time-based resource-sharing account. *Cortex*, 89, 71-84. Daza, R., Morales, A., Fierrez, J., & Tolosana, R. (2020, October). MEBAL: A multimodal database for eye blink detection and attention level estimation. (pp. 32-36). Holmqvist, K. and Andersson, R. (2017). *Eye tracking: A comprehensive guide to methods, paradigms and measures*, Lund, Sweden: Lund Eye-Tracking Research Institute. Lee, I. S., Bardwell, W. A., Ancoli-Israel, S., & Dimsdale, J. E. (2010). Number of lapses during the psychomotor vigilance task as an objective measure of fatigue. *Journal of clinical sleep medicine*, 6(2), 163-168.

Abstract number A60

Session: Poster Session 1 (12.40 - 14.00)

Title: The COVAT_PATTERN test: The evaluation of fluid reasoning in selection and assessment contexts

Sophie DE GRAUWE* (Cebir, Kortenberg); Katrijn VAN PARIJS (Thomas More Antwerpen); Marlies TIERENS (Thomas More Antwerpen)

Objectives

The COVAT_Pattern was developed within the CHC model of intelligence* in a collaboration between Cebir and Thomas More. The test elaborates on the COVAT intelligence tests**, which are aimed at children in an educational context. It builds on one COVAT subtest: Pattern Series, in which participants need to recognize the underlying rules of pattern series and continue the series using the same rules. This way, the test measures fluid reasoning (Gf): the ability to solve novel problems by inferring principles and thinking logically. Our aim was to transform the original classical test into a computerised adaptive test to enable remote online testing of adults in selection and assessment contexts.

Method

First, we collected data on the 56 items of the original test in the experimental COVAT_Pattern test (N=193). Next, we applied Rasch analysis to these data and created new items. The new items (plus 4 existing "anchor" items) were tested in a second experimental test, in which 19 participants had to solve the items and rate their difficulty.

Results

By combining accuracy and difficulty ratings of both new and anchor items, we were able to estimate the difficulty parameters of the experimental items. This allowed us to integrate the experimental items with the original items.

Discussion and conclusion

The final COVAT_Pattern test has enough items (98) of a wide range of difficulties to estimate a wide range of participant abilities. Due to the adaptations to the original subtest, quality assessment of adults' Gf is now possible within selection contexts.

*Schneider, W. J., & McGrew, K. S. (2018). The Cattell-Horn-Carroll theory of cognitive abilities. In D. P. Flanagan & E. M. McDonough (Eds.), *Contemporary Intellectual Assessment: Theories, Tests and Issues* (4th ed., pp. 73-163). New York, NY: Guilford Press. **Magez, W., Tierens, M., Van Huynegem, J., Van Parijs, K., Decaluwé, V., & Bos, A. (2015). CoVaT-CHC Basisversie. Psychodiagnostisch Centrum, Toegepaste Psychologie, Thomas More Antwerpen.

Abstract number A61

Session: Poster Session 1 (12.40 - 14.00)

Title: Influence of perceptual strength on conceptual processing: investigation in aging and in lexical-semantic decisions

A. Miceli a,b,c*, E. Wauthia a,b,c, L. Lefebvre a,b,c, L. Ris b,c,d, I. Simoes Loureiro a,b,c (a Department of Cognitive Psychology and Neuropsychology, Faculty of Psychology and Educational Science, University of Mons, Mons, Belgium ; b Research Institute for Health Sciences and Technologies, University of Mons, Mons, Belgium; c Interdisciplinary Research Centre for Psychophysiology and Cognitive Electrophysiology, University of Mons, Mons, Belgium ; d Department of Neurosciences, Faculty of Medicine and Pharmacy, University of Mons, Mons, Belgium)

Objectives : While the intervention of the sensorimotor system in semantic processing has already been demonstrated in young adults and more recently in children, very few studies have investigated this question in aging. Due to the numerous cognitive, sensory, and motor modifications encountered in aging and the relationships established between the sensorimotor and conceptual systems, it is particularly interesting to study the evolution of semantic representations in this population. The purpose of this study is to explore the effect of perceptual strength (PS) - the extent to which a word can be experienced by multiple sensory modalities, i.e., visual, auditory, haptic, gustative and olfactive - and aging on lexical-semantic processing.

Method : We used linear mixed effects models that predicted reaction times and accuracy to compare data from 32 young healthy adults and 36 healthy older adults in a lexical decision task (experiment 1) and an imageability decision task (experiment 2) that contrast words with high PS and low PS.

Results : In experiment 1, high PS words tended to be processed faster similarly in both groups ($p=.061$), while in experiment 2 the young and older adults show opposite patterns, the older adults being faster for low PS ($p=.014$). No results were observed concerning the accuracy ($p>.05$).

Discussion : The results are discussed with regards to the demand of the task that influences processing in aging. The imageability task, probably involving direct activation of the modal simulation system, seems to suggest a modification of perceptual/semantic processing in aging.

Abstract number A62

Session: Poster Session 1 (12.40 - 14.00)

Title: Testing the Effectiveness of Impulse Control Inference Training to Reduce Deviant Behavior

Tilia Linthout (Ghent University), Pieter Van Dessel (Ghent University), Emilie Caspar (Ghent University)

Objectives: Deviant behavior and its management is a critical issue in our society, most particularly in correctional settings such as prison. An important mediator of deviant behavior is impulse control. However, despite the high demand, effective evidence-based impulse control interventions in such settings are lacking. To address this gap, I will develop and test impulse control interventions based on the current state-of-the-art in cognitive theorizing. I will challenge the traditional notion that impulse control relies on simple automatic associative processes and examines how targeting more complex inferential mechanisms can produce change in impulse control.

Methods: I will compare the effectiveness of a newly developed impulse control inference training to that of a go/no-go training task in a sample of volunteers motivated to improve impulse control.

Results: A pilot study suggests more perceived effectiveness for inference impulse control training than a traditional impulse control training. Results of the main experiment are pending.

Discussion: The findings of this project will advance our understanding of the mental processes underlying impulse control and deviant behavior and may lead to effective interventions in a real-life context where they are much needed.

Abstract number A63

Session: Poster Session 1 (12.40 - 14.00)

Title: Nature's effect on stress and eating behaviour: four lab studies on nature aspect differentiation

NATHALIE Michels*, Ugent

Despite well-recognised health benefits of nature, it is still unclear which nature aspects (colour, smell, sound,...) can counteract stress, how to integrate nature indoors and whether nature also influences eating behaviour.

Methods: Before and after Trier Social Stress Test, participants were exposed to a) one of four slideshows with nature or urban environments in green or grey shades (study 1, n=81); b) one of four slideshows with interiors including plants or objects (study 2, n=92); c) one of three sound tracks of birds, streaming water or wind as control (study 3, n=59); d) one of three smells of pine tree, grass or water as control (study 4, n=91). Group differences were tested on perceived restorativeness, heart rate variability (HRV), salivary cortisol, affect, food craving and food choice.

Results study 1&2: Reported restorative power was highest for the green nature/plant group. Nature overall was more beneficial via lower HRV and negative emotions reactivity. Only study 2 showed more vegetable wanting and less snack wanting in the green plants group.

Results study 3&4: Both bird and water sounds led to better cortisol recovery (not reactivity) and were reported to be more stress reducing, but no differential effects on eating behavior were found. Pine smell led to more cortisol decrease in a non-stress situation, but grass led to more vegetable wanting and was expected to stimulate healthier food choice.

Conclusion: For stress and diet interventions, plants seem most important but green colours or other sensory elements like smell and sound can sometimes help. A focus group, diary study, cohort analysis and pilot intervention are ongoing.

Abstract number A64

Session: Poster Session 1 (12.40 - 14.00)

Title: A Network Analysis of the Relationships between Irritability and Anhedonia Symptoms

SISTIAGA Sonia* (1), ROSSIGNOL Mandy (1), BELLAERT Nellia (1,2) (1) Cognitive Psychology and Neuropsychology Department, University of Mons, Belgium (2) Yale Child Study Center, Yale School of Medicine, Yale University, New Haven CT, U.S.A.

Objectives: Irritability and anhedonia are common symptoms of major depressive disorder (MDD) that are associated with greater depression severity and poor longitudinal outcomes, including suicidality. However, the interactions between these two symptoms are still unclear. Anhedonia is a multifaceted symptom that reflects impairments in multiple dimensions of reward processing, including consummatory pleasure, interest, motivation, and effort to pursue rewards. Each of these facets

differentially interact with irritability. The current study used network analysis to investigate the complex relationships between anhedonia and irritability.

Methods: Participants (N = 422, Mage = 32.6) reported their symptoms of anhedonia and irritability on the French versions of the Dimensional Anhedonia Rating Scale (Rizvi et al., 2015) and the Brief Irritability Test (Holtzman et al., 2014), respectively, in an online survey. We built a regularized Gaussian Graphical Model to estimate the network structure between items.

Results: The network revealed that irritability items were negatively related to 3 items assessing the effort dimension of anhedonia, in the food/drinks (estimate = -.11), pastimes/hobbies (-.11), and social activities (-.13) domains, suggesting that higher irritability was related to less willingness to expand effort to obtain rewards. Two positive relations were found between irritability and items assessing desire in food/drinks (.09) and sensory experiences (.07) domains.

Discussion and conclusion: Results suggest a specific link between irritability and the effort facet of the hedonic response. The study of specific symptoms of depression, such as irritability and anhedonia, as a dynamic system may provide new information about the development and maintenance of MDD.

Vidal-Ribas, P., & Stringaris, A. (2021). How and Why Are Irritability and Depression Linked? *Child and Adolescent Psychiatric Clinics of North America*, 30(2), 401-414. <https://doi.org/10.1016/j.chc.2020.10.009> Rizvi, S. J., Quilty, L. C., Sproule, B. A., Cyriac, A., Michael Bagby, R., & Kennedy, S. H. (2015). Development and validation of the Dimensional Anhedonia Rating Scale (DARS) in a community sample and individuals with major depression. *Psychiatry Research*, 229(1-2), 109-119. <https://doi.org/10.1016/j.psychres.2015.07.062> Holtzman, S., O'Connor, B. P., Barata, P. C., & Stewart, D. E. (2015). The Brief Irritability Test (BITe): A Measure of Irritability for Use Among Men and Women. *Assessment*, 22(1), 101-115. <https://doi.org/10.1177/1073191114533814>

Abstract number A65

Session: Poster Session 1 (12.40 - 14.00)

Title: Is Cognitive Effort Contagious? A replication study.

MAZZA Alessandro*(1), STUYCK Hans(1), VOORRIPS Ellen(1), HUGHES Gethin(2), DESENDER Kobe(1), VAN DEN BUSSCHE Eva(1). (1) KU Leuven, Faculty of Psychology and Educational Sciences, Brain & Cognition Lab; (2) University of Essex, Department of Psychology.

It's quite common, nowadays, to perform daily tasks in the presence of others—e.g., many workplaces have adopted a landscape office where people work side by side. However, the impact of working in the presence of others on our cognitive effort exertion is not yet fully understood. Namely, does the amount of cognitive effort exercised by co-worker X hamper or facilitate the cognitive effort exertion of co-worker Y? Desender et al. (2015) addressed this question by applying a modified Simon task by pairing two participants (a dyad) in front of the same monitor. A board separated this monitor into two halves, of which only half of the screen was visible to each participant. Participant X of the dyad performed either a high-effort or low-effort manipulated Simon task. Then, it was assessed how the cognitive effort exertion of participant X in both these conditions affected the cognitive effort exertion of participant Y of the dyad who had a neutral-effort Simon task. Their main result revealed that when participant X performed a high-effort Simon task, participant Y didn't show a congruency effect (RT incongruent > RT congruent) even though they performed a neutral-effort Simon task. This evidenced the contagious nature of cognitive effort. We aimed to replicate this finding with the current study, including 88 dyads (N = 176). Unexpectedly, we could not replicate the original paper's results. Perhaps the modified Simon task didn't elicit a sufficient amount of effort. It could be interesting to make participants perform a more challenging assignment.

Abstract number A66

Session: Poster Session 1 (12.40 - 14.00)

Title: Attachment behaviours from adults with Intellectual Disabilities towards their support workers : development of a scale.

1 KAHWABI Caroline*, 2 RINALDI Romina, 1PhD student University of Mons, 2Professor University of Mons.

Objectives

Attachment behaviours can be defined as behaviours that occur between an individual and a caregiver that aim at seeking and maintaining proximity and/or protest to separation. Previous studies have shown that primary care staff could be considered as attachment figures for adults with ID, especially in the context of group homes. However, available research indicate a lack of psychometrically-sound tools to address the topic of attachment in adults with ID.

method

We conducted a multilevel approach to develop a scale for the observation of attachment behaviours in adults with ID. A first set of items was generated and rated by a group of experts to obtain a revised version. Following DeVellis and Thorpe's (2022) guidelines on scale development, this "second" set was assessed through cognitive interviewing with support workers to obtain a final version.

Results

(Ongoing study). The first aim is to realize a psychometric study of the scale for the observation of attachment behaviours in adults with ID in living facilities. The scale is rated based on behavioural observation, and is completed twice by two informants along with the Vineland Adaptive Behaviour Scale and the Behaviour Problem Inventory. Psychometric as well as correlational analyses will be presented.

Discussion and conclusion

Developing a scale for the assessment of attachment behaviours from adults with ID towards their support workers can offer a better understanding of the behaviours and needs of these individuals in relation to group home contexts and lead to more sensitive and responsive practices.

Clegg, J. A., & Lansdall-Welfare, R. (1995). Attachment and learning disability: a theoretical review informing three clinical interventions. *Journal of Intellectual Disability Research*, 39(4), 295-305. <https://doi.org/10.1111/j.1365-2788.1995.tb00521.x> Clegg, J., & Sheard, C. (2002). Challenging behaviour and insecure attachment. *Journal of Intellectual Disability Research*, 6(46), 503-506. De Schipper, J. C., Schuengel, C. (2010). Attachment behavior towards support staff in young people with intellectual disabilities: associations with challenging behavior. *Journal of Intellectual Disability Research*, 54(7), 584-596. Rinaldi, R., Batselé, E., & Haelewyck, M-C. (2022). Attachment and Challenging Behaviors in Adults with Intellectual Disability: A Scoping Review. *Journal of Mental Health Research in Intellectual Disabilities*, 15(3), 197-216. Romina Rinaldi, Jordan Duplat, Caroline Kahwaji, Erika Wauthia, Eric Willaye, Elise Batselé (submitted). Attachment behaviors in adults with intellectual disabilities in assisted living facilities: Representations from direct-care staff. *Journal of Applied Research in Intellectual Disability*. DeVellis, R. F., Thorpe, C. T. (2022). *Scale development: Theory and applications*. California: SAGE Publications. Schuengel, C., De Schipper, J. C., Sterkenburg, P. S., Kef, S. (2013). Attachment, Intellectual Disabilities and Mental Health: Research, Assessment and Intervention. *Journal of Applied Research in Intellectual Disabilities*, 26(1), 34- 46. DOI: 10.1111/jar.12010 Schuengel, C., Kef, S., Damen, S., Worm, M. (2010). People who need people : attachment and professional caregiving. *Journal of Intellectual Disability Research*, 54(1), 38-47. DOI:10.1111/j.1365-2788.2009.01236.x

Abstract number A67

Session: Poster Session 1 (12.40 - 14.00)

Title: Young adults' mental health : from cognitions to environmental satisfaction, a generational perspective

RENAVILLE Isaure* (ULiège), WAGENER Aurélie (ULiège)

Young adults' (18 – 25 years old) mental health is declining. Indeed, increases in depression and anxiety into this specific population have been showed. Moreover, it is known that 75% of mental disorders occur before age 25. Nonetheless, there is a lack of data about risk and protective factors towards young adults' mental health. Therefore, we developed a research project which aims at investigating both risk and protective factors which might enable us to develop innovative prevention tools.

The research project – designed for French speaking populations – includes three protocols, that evaluate cognitive, emotional, interpersonal, and behavioral dimensions through several online questionnaires. More precisely, intolerance of uncertainty, negative repetitive thoughts, emotion regulation, environmental satisfaction, negative and positive emotions, anticipated and consumed pleasure, interpersonal relationships, values, and daily goals will be investigated. The first protocol – on which this poster focuses on – assesses emotional and cognitive dimensions. Minimum 200 adults aged 18 years old and older complete a series of questionnaires. Through exploratory analyses, factors which determine the level of mental health will be evidenced. Further, comparative analyses will evidence the specific profiles of young adults in comparison to older ones.

Data collection is still ongoing. Results will be developed during the conference.

Through exploratory analyses, we expect to highlight both risk and protective factors towards mental health which might enable to develop specific and innovative prevention tools for young adults. Further, it is hypothesized that significant difference will be showed between young and older adults.

La recherche en santé mentale : Comblé le fossé des connaissances. (2022). Conseil Supérieur de La Santé. https://www.health.belgium.be/sites/default/files/uploads/fields/fpshealth_theme_file/20220829_css-9667_recherche_et_sante_mentale_vweb.pdf Roberge, M.-C., & Déplanche, F. (2017, juin). Synthèse des connaissances sur les champs d'action pertinents en promotion de la santé mentale chez les jeunes adultes. INSPQ. https://www.inspq.qc.ca/sites/default/files/publications/2283_connaissances_champs_action_promotion_sante_mentale_jeunes_adultes.pdf Shankland, R., Gayet, C., & Richeux, N. (2022). La santé mentale des étudiants : Approches innovantes en prévention et dans l'accompagnement. Elsevier Health Sciences.

Abstract number A68

Session: Poster Session 1 (12.40 - 14.00)

Title: Differential Crel and Cfunc acquisition through stimulus pairing

MARIE Delabie*, JAMIE Cummins, MARTIN Finn and JAN De Houwer (Ugent)

In this talk, I will present two experiments about the acquisition of relational cues (Crels) and functional cues (Cfuncs), two types of relational contextual cues that learning psychologists refer to in their analyses of verbal behavior. However, past research about Crels and Cfuncs is limited in two ways. First, there has been relatively little research into how Crel and Cfunc functions can be acquired, and whether such acquisition is similar to the acquisition of other stimulus functions (e.g., SDs). Secondly, research into Crel and Cfunc functions has typically investigated each separately (i.e., either examining Crels or

Cfuncs), although a better approximate to real-life learning would examine their simultaneous acquisition. We report studies that examined whether Crels and Cfuncs can be learned simultaneously using a common learning procedure (i.e., stimulus pairing). Experiment 1 examined the transfer of Crel functions for sameness and difference relations and the transfer of Cfunc functions for color and shape to novel stimuli. Experiment 2 examined the transfer of comparative Crel functions (bigger and smaller) and Cfunc functions for value and size. In Experiment 2 we also investigated whether the newly learned functions of the novel stimuli would influence responding to stimuli that were not presented in the learning phase. Our results suggest that Crels and Cfuncs can indeed be acquired via stimulus pairing and can affect also responding to stimuli not used during acquisition. This research shows that also stimulus pairing is an effective channel for the transfer of Crel and Cfunc functions.

Delabie, M., Cummins, J., Finn, M., & De Houwer, J. (2022). Differential Crel and Cfunc acquisition through stimulus pairing. *Journal of Contextual Behavioral Science*, 24, 112-119. <https://doi.org/10.1016/j.jcbs.2022.03.012>

Abstract number A69

Session: Poster Session 1 (12.40 - 14.00)

Title: A study of prebiotic fiber intake in children with Autism Spectrum Disorders: an assessment of core symptoms severity and social responsiveness.

De Leener Mélanie* (1,3), Ris Laurence (2,3), Lefebvre Laurent (1,3), Colomar Aurore (2,3). (1) Service de Psychologie Cognitive et Neuropsychologie, Université de Mons (2) Service de Neurosciences, université de Mons (3) CiPSE: Centre de recherche interdisciplinaire en Psychophysiology et Electrophysiology de la cognition, Université de Mons.

Autism Spectrum Disorders (ASD) are neurodevelopmental disorders characterized by impaired social interactions and communication and by restrictive or repetitive behaviors. Previous studies have shown that approximately 23-70% of children with ASD have gastrointestinal (GI) problems consistent with imbalances in the gut microbial population that may correlate with the severity of autistic symptoms. Several studies have examined the effect of prebiotic supplementation in children with ASD and concluded that prebiotic supplementation may reduce the severity of behavioral traits such as social deficits by contributing to the regulation of the brain-gut axis. Currently, no studies have examined the dietary habits of children with respect to dietary fiber intake. Therefore, the objective of this study is to investigate the potential association between prebiotic fiber intake and autistic symptoms in school-aged children without intellectual disabilities. Gastrointestinal symptoms and atypical eating behaviors will be studied as a secondary objective. Autistic symptom severity and social responsiveness will be assessed using the Social Responsiveness Scale (SRS-2) and social cognition using the NEPSY-2 assessment battery. Fiber intake in dietary habits will be assessed using the FiberTag questionnaire. In addition, potential gastrointestinal symptoms will be assessed using a 7-item version of the Gastrointestinal Severity Index (GSI). As the study is ongoing, preliminary results will be presented at the meeting. This study has the potential to contribute to our knowledge of autistics symptoms in relation to dietary habits and atypical eating behaviors, but also of the role of the gut-brain axis in autism.

Abstract number A70

Session: Poster Session 1 (12.40 - 14.00)

Title: Effects of financial and prosocial incentives on pro-environmental behavior

Valentina Kroker*, Master of Psychology: Theory and Research; Dr Florian Lange, Research: Behavioral Economics and Engineering Group, KU Leuven

Objectives:

Incentives are a popular tool for fostering pro-environmental behavior, but it is still largely unknown which types of incentives are most effective and whether their effectiveness persists beyond incentive discontinuation. One likely reason for this is that incentives are often tested in noisy field settings where controlled comparisons and longitudinal assessments are difficult.

Methods:

Here, we address this limitation by studying incentive effects on consequential pro-environmental behavior in the laboratory using the Pro-Environmental Behavior Task. In a preregistered experiment, participants were repeatedly given the choice to save actual energy and CO₂-emissions at a real waiting-time cost.

Results:

Incentivizing the energy-saving option with a 5-Cent bonus payment led to significant increase in pro-environmental behavior in comparison to a no-incentive control group ($p < .001$). Incentivizing the energy-saving option with a 5-Cent donation to charity had a smaller and non-significant effect at the first session ($p = .135$). Given the preliminary nature of these results (data collection is still ongoing), a significant result might still occur. The effect for the self-incentive disappeared in a second experimental session that was completed without incentives.

Discussion and Conclusion:

While these results are preliminary, they illustrate the (temporally-limited) effectiveness of financial incentives and the possibility of studying incentive effects on actual pro-environmental behavior in the laboratory. The effectiveness of a pro-social incentive is not found in this sample at either time point.

Abstract number A71

Session: Poster Session 1 (12.40 - 14.00)

Title: Emotional pathways underlying the effect of coastal landscapes on stress reduction and pro-environmental behaviors

Marine Severin*¹; Ann Buysse ² ; Justine Verheye ², Henri Dunantlaan ², Gert Everaert ¹, Filip Raes ³ (1: Flanders Marine Institute (VLIZ), InnovOcean Campus, Belgium, 2: Department of Experimental Clinical and Health Psychology, Faculty of Psychology and Educational Sciences, Ghent University, 3: Centre for the Psychology of Learning and Experimental Psychopathology, Faculty of Psychology and Educational Sciences, KU Leuven)

An increasing amount of research demonstrate that natural environments, and in particular coastal landscapes, positively affect mental well-being and pro-environmental behaviors. Potential emotional factors explaining these effects remain unclear, as well as for who these effects are most pronounced. We conducted a pre-registered experimental study (1) to examine the effects of exposure to coastal landscapes on stress and pro-environmental behaviors, compared to an urban landscape, and (2) to assess the emotional experience of awe (feelings of small self), nostalgia, and nature connectedness as potential mediators. We targeted a low-income population group to explore whether coastal benefits are more pronounced for this group, as suggested in the literature. Participants completed an online

survey during which they were randomly assigned to watch a video-clip of either (1) a beach with a sunset, (2) coastal dunes, or (3) an urban street (control condition). Prior to the video-clip, participants recalled a past stressful moment and reported their stress level. Following the video-clip, they again reported their stress level as well as their emotions and pro-environmental behaviors, measured by the Work for Environmental Protection Task (Lange & Dewitte, 2022). A total of 494 Dutch-speaking adults took part in the study, of which the majority (60%) were considered to have low-income. Results are expected by the time of the conference. Understanding the impact of coastal landscapes on specific emotions and how these emotions in turn reduce stress and encourage pro-environmental behaviors can help improve human-nature interactions, all within the wider context of mental health and environmental action.

Lange, F., & Dewitte, S. (2022). The Work for Environmental Protection Task: A consequential web-based procedure for studying pro-environmental behavior. *Behavior Research Methods*, 54, 133–145. <https://doi.org/10.3758/s13428-021-01617-2>

Abstract number A72

Session: Poster Session 1 (12.40 - 14.00)

Title: Is there a link between omega-3 intake and social interaction deficits in children with autism spectrum disorders ?

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Autism spectrum disorders (ASD) is a neurodevelopmental disorder characterized by impaired social communication and interaction, as well as restricted behavior and interests. Vancassel et al. (2001) showed that DHA levels were reduced by 23% and total omega-3 fatty acids levels were significantly reduced by 20% in the plasma of autistic children. Yet, this nutrient plays a fundamental role in brain function. Several studies have shown the benefits of omega-3 supplementation on improving core symptoms of ASD. Authors report significant improvements in areas such as sociability and stereotypic behaviour. Our study aims to determine whether there is an association between omega-3 intake in dietary habits and the severity of social deficits in ASD children. This study will involve 20 French speaking children with autism (aged 6-12 years) who have no intellectual disability nor severe language impairment. The Nepsy-II will be used for the assessment of emotion recognition and theory of mind, the SRS-2 for the assessment of social deficits and the omega-3 fatty acid questionnaire, developed by Herter-Aeberli et al. (2019), for the assessment of omega-3 intake. The latter will be filled in by the parents. Data collection is ongoing and the results will be presented in the poster. We hypothesized that children with ASD who consumed a diet rich in omega-3 would perform better on the Nepsy-II and show less severe social deficits.

Herter-Aeberli, I., Graf, C., Vollenweider, A., Häberling, I., Srikanthan, P., Hersberger, M., Berger, G., & Mathis, D. (2019). Validation of a food frequency questionnaire to assess intake of n-3 polyunsaturated fatty acids in Switzerland. *Nutrients*, 11, 1-12. <https://doi.org/10.3390/nu11081863> Vancassel, S., Durand, G., Barthélémy, C., Lejeune, B., Martineau, J., Guilloteau, D., Andrès, C., & Chalon, S. (2001). Plasma fatty acid levels in autistic children. *Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA)*, 65(1), 1-7. <https://doi.org/10.1054/plef.2001.0281>

Abstract number A73

Session: Poster Session 1 (12.40 - 14.00)

Title: Microstructural alterations in white matter tracts involved in socio-emotional processing after preterm birth

Ward Deferm 1, Tiffany Tang 1, Matthijs Moerkerke 1, Nicky Daniels 2, Kaat Alaerts 2, Jean Steyaert 1, Els Ortibus 4, Gunnar Naulaers 3, Bart Boets 1.; 1 Center for Developmental Psychiatry, KU Leuven, Belgium; 2 Neuromotor Rehabilitation Research Group, KU Leuven, Belgium; 3 Neonatal Intensive Care Unit – Neonatology, UZ Leuven, Belgium; 4 Child Neurology – Rehabilitation, UZ Leuven & Center for Developmental Disorders, Belgium

Prematurely born children have an increased risk of developing socio-emotional difficulties. A possible neural substrate for these socio-emotional difficulties are alterations in structural connectivity of the social brain due to premature birth. The objective of the current study is to study microstructural white matter integrity in preterm versus full-term born school-aged children along tracts known to be involved in socio-emotional processing (IFOF, SLF I, SLF II, SLF III, UF, ILF).

We obtained diffusion MRI scans of 39 preterm and 38 full-term born 8-to-12-year-old children. Tractography was performed using TractSeg, a state-of-the-art neural network-based approach. In contrast with previous analysis, TractSeg offers detailed tract profiles instead of an average white matter index. Differences in fractional anisotropy (FA) along the tracts were investigated and correlations were performed with the SRS-2 (assessing social functioning).

No significant group differences in FA were found along the bilateral IFOF, ILF, SLF I, UF, left SLF I, and right SLF I. However, we found a decrease in FA for the preterm group in a middle portion of the right SLF I and a posterior portion of the left SLF II. In the preterm group, FA in portions of the right IFOF, SLF II and left SLF I was significantly correlated with total scores on the SRS-2.

Contrary to previous studies, no significant differences were found in the bilateral ILF, IFOF and UF. TractSeg Allowed us to accurately describe in which components (I, II, III) of the SLF FA was reduced, this was not possible in previous studies.

Abstract number A74

Session: Poster Session 1 (12.40 - 14.00)

Title: Challenges Regarding Cultural Diversity in the Practices of Health Professionnals : How Do They Consider the Cultural Specificities of Children and Elderly Adults from Minorities in their Practices ?

SANTORO Lisa*, LACOURT Léa*, CAUCHIE Dimitri, BRUYNINCKX Marielle - Department of Human Development and Data Processing, University of Mons

Migrations increased the cultural diversity of the Belgian society for several decades. This leads health professionals to interact with more and more people from various cultural groups and reflexions about specific care practices are developing. Therefore, cultural diversity is a challenge for those who are working with children as well as elderly adults.

Researches show that a lot of people from different cultures receive inadequate care and have less access to healthcare services. Practitioners have to consider cultural specificities during their interactions with children and elderly adults from minority groups. They emphasize difficulties such as language barriers, culturally inadequate tools, different perceptions of symptoms depending on the

culture... Literature shows a lack of information about the management of these challenges faced by health professionals in Belgium.

The aim of our simultaneous researches is to investigate how health professionals take, or not, into account cultural specificities of patients with different linguistic and cultural backgrounds in their practices in Belgium. Samples will be composed of health professionals interacting on the one hand with children, on the other hand with elderly people. Participants will have to complete online surveys and to participate in semi-structured interviews.

We expect that results will allow to highlight potential difficulties encountered by health professionals interacting with different cultural groups. We will question their self-reflexivity on the tools, the reasons which, according to them, would lead to inadequate care and potential lack of cross-cultural competences. Data will be collected during the next academic year and will provide an overview of the actual situation.

Azoulay, C., & Chagnon, J. Y. (2019). Le bilan psychologique face aux diversités culturelles. In Press. Babulal, G. M., Quiroz, Y. T., Albensi, B. C., Arenaza-Urquijo, E., Astell, A. J., Babiloni, C., Bahar-Fuchs, A., Bell, J., Bowman, G. L., Brickman, A. M., Chételat, G., Ciro, C., Cohen, A. D., Dilworth-Anderson, P., Dodge, H. H., Dreux, S., Edland, S., Esbensen, A., Evered, L., ... on behalf of the International Society to Advance Alzheimer's Research and Treatment, Alzheimer's Association. (2019). Perspectives on ethnic and racial disparities in Alzheimer's disease and related dementias : Update and areas of immediate need. *Alzheimer's & Dementia*, 15(2), 292-312. <https://doi.org/10.1016/j.jalz.2018.09.009> Daure, I., & Reveyrand-Coulon, O. (2019). Le migrant et sa famille. Défis interculturels en psychologie clinique. *ESF Sciences humaines*. Gounden, Y., Pérodeau, G., & Haudry-Gounden, S. (2019). Plaidoyer pour une neuropsychologie interculturelle en France. *Pratiques Psychologiques*, 25(1), 37-50. <https://doi.org/10.1016/j.prps.2018.03.002> Gove, D., Georges, J., Rune Nielsen, T., Plejert, C., Raouf, M., Lahav, D., Jaakson, S., Kaur, R., Herz, M., Parveen, S., Golan-Shemesh, D. & Smits, C. (2019). Le développement des soins et d'un soutien interculturels pour les personnes atteintes de démence et appartenant à des groupes ethniques minoritaires. *Alzheimer Europe*. <https://www.alzheimer-europe.org/sites/default/files/2021-11/AE%20Report%202018%20%20Intercultural%20care%20French.pdf> Mouchenik, Y., & Moro, M. R. (2021). Pratiques transculturelles : les nouveaux champs de la clinique. In Press. Sagbakken, M., Spilker, R. S., & Nielsen, T. R. (2018). Dementia and immigrant groups : A qualitative study of challenges related to identifying, assessing, and diagnosing dementia. *BMC Health Services Research*, 18(1), 910. <https://doi.org/10.1186/s12913-018-3720-7>

Abstract number A75

Session: Poster Session 1 (12.40 - 14.00)

Title: Uncovering episodes of (dis)connected consciousness in clinically unresponsive emergency patients: study protocol for a prospective study.

Pauline Fritz 1,2, Aurore Ancion 3, Nicolas Lejeune 1,2,4, Glenn van der Lande 1,2, Steven Laureys 1,2, Alexandre Ghuysen 3, Olivia Gosseries 1,2*, Charlotte Martial 1,2*; 1Coma Science Group, GIGA-Consciousness, University of Liège, Liège, Belgium, 2Centre du Cerveau², University Hospital of Liège, Liège, Belgium, 3Department of Emergency, University Hospital of Liège, Liège, Belgium, 4William Lennox Neurological Hospital, Ottignies-Louvain-la-Neuve, Belgium

Objectives: Growing evidence suggests that some patients who appear to be outwardly unconscious during emergency procedures can in fact experience episodes of "connected consciousness" (CC; awareness of the external environment) (1) or "disconnected consciousness" (DC; mental content) (2). This project aims to prospectively investigate the incidence of DC/CC in patients admitted in a resuscitation room, as well as to characterize them and identify the underlying neurobiophysiological mechanisms (2).

Method: One hundred clinically unconscious patients (i.e., ongoing sedation, intubation, cardio-pulmonary resuscitation, electrical cardioversion) admitted to the resuscitation room of our hospital will be included. An audio-visual system will allow for an objective environmental control. Unexpected

auditory and visual stimuli will be displayed. Episodes of CC/DC and potential subsequent consequences (3-5) will be assessed in three semi-structured interviews (>3 days after the admission, at 1 and 6 months) including standardized questionnaires and the recording of freely expressed narratives. We will also collect (A) blood gases levels, (B) blood biomarkers, and (C) frontal cortical electrical activity.

Expected results: We expect to find about 10% and 20% patients with episodes of CC and DC, respectively. We hypothesize that these patients will show high anxiety symptoms and quality of life changes. We expect hypercapnia, high levels of epinephrin and β -endorphin, and a transient spike in EEG activity to be associated with DC episodes (2).

Conclusion: Our project provides a unique understanding of unexpected episodes of consciousness during emergency procedures, allowing to raise awareness in the medical field to ultimately improve patients' care.

(1) Lennertz, R., Pryor, K. O., Raz, A., Parker, M., Bonhomme, V., Schuller, P., Schneider, G., Moore, M., Coburn, M., Root, J. C., Emerson, J. M., Hohmann, A. L., Azaria, H., Golomb, N., Defresne, A., Montupil, J., Pilge, S., Obert, D. P., van Waart, H., ... Sanders, R. D. (2023). Connected consciousness after tracheal intubation in young adults: an international multicentre cohort study. *British Journal of Anaesthesia : BJA*, 130(2), e217–e224 (2)Martial, C., Cassol, H., Laureys, S., & Gosseries, O. (2020). Near-Death Experience as a Probe to Explore (Disconnected) Consciousness. *Trends in Cognitive Sciences*, 24(3), 173–183. 2 (3)Cassol, H., Martial, C., Annen, J., Martens, G., Charland-Verville, V., Majerus, S., & Laureys, S. (2019). A systematic analysis of distressing near-death experience accounts. *Memory (Hove, England)*, 27(8), 1122–1129. (4)Pandit, J. J., Andrade, J., Bogod, D. G., Hitchman, J. M., Jonker, W. R., Lucas, N., Mackay, J. H., Nimmo, A. F., O'Connor, K., O'Sullivan, E. P., Paul, R. G., Palmer, J. H. M., Plaat, F., Radcliffe, J. J., Sury, M. R. J., Torevell, H. E., Wang, M., & Cook, T. M. (2014). 5th National Audit Project (NAP5) on accidental awareness during general anaesthesia: protocol, methods, and analysis of data. *British Journal of Anaesthesia : BJA*, 113(4), 540–548. 19. (5)Gottlieb, M., & Carlson, J. N. (2021). Speechless: Awareness With Recall of Paralysis in the Emergency Department Setting. *Annals of Emergency Medicine*, 77(5), 545–546.

Abstract number A76

Session: Poster Session 1 (12.40 - 14.00)

Title: The effect of model eyesight on automatic imitation

Maura Nevejans (Ghent University), Emiel Cracco (Ghent University), Jan De Houwer (Ghent University), Roeljan Wiersema (Ghent University)

Background and Objectives. Motivational theories of imitation state that we imitate because this behavior can lead to social reward. Based on this idea, it has been argued that imitation should be modulated by social factors that identify whether or not imitation will lead to social reward. Eye contact with one's interaction partner is an important social cue, because imitation can only result in social reward when the imitated person can see the imitating behavior. However, not all studies found such modulation. A potential reason for the inconsistency in these findings is the limited ecological validity of the imitation tasks that are typically used to study the influence of social factors on imitation. In the current study, we will therefore investigate the effect of model eyesight on automatic imitation by using an ecologically valid imitation task in virtual reality. In line with motivational theories, we expect participants to show stronger imitative tendencies when their interaction partner can see them.

Method. Participants will react to auditory cues with a head movement toward the left or right, while one or two virtual agents will also make a head movement. We will manipulate the eyesight of these two virtual agents. That is, one virtual agent will be blindfolded whereas the other can see the participant.

Results: Testing is ongoing. Results will be presented at the conference.

Discussion and Conclusion. The findings of this study will have important implications for the evaluation of motivational theories of imitation.

Abstract number A77

Session: Poster Session 1 (12.40 - 14.00)

Title: 'Didn't see that one coming': The illusion of absence from a driver's point of view.

Jonathan Van den Berckt - KU Leuven *, Vebjørn Ekroll - University of Bergen, Rob van Lier - Radboud University Nijmegen, Johan Wagemans - KU Leuven

Objectives: The illusion of absence causes people to perceive the space behind an occluder as empty even when they know there is an object behind it. This is often used by magicians but can also lead to dangerous situations in daily life, for example in traffic. In this study we test how the illusion of absence can be involved in certain types of car crashes.

Methods: From a driver's point of view, the car's roof support creates an occluded area, potentially hiding another vehicle. To test the hypothesis that drivers perceive this space as empty, we measured the feeling of surprise elicited by a car appearing from behind this occluder. We manipulated occluder width and occlusion time to investigate their effect on the elicited surprise. Participants gave surprise ratings for the two most extreme conditions and explained what they thought happened in the video. Afterwards they completed braking trials to measure reaction times for all conditions.

Results: The colliding car appearing at the intersection elicited mid-level surprise ratings for the driver, hinting the potential involvement of the illusion in these car crashes. We did not observe differences in surprise ratings between the video types, but an unexpected interaction between the video type and the presentation order.

Discussion/conclusion: Our data shows the potential involvement of the illusion of absence in certain types of car crashes in which drivers are often not aware of this danger. Some limitations of the study and improvements for the design of the occluder will be discussed.

Ekroll, V., Svalebjørg, M., Pirrone, A., Böhm, G., Jentschke, S., van Lier, R., Wagemans, J., & Høye, A. (2021). The illusion of absence: How a common feature of magic shows can explain a class of road accidents. *Cognitive Research: Principles and Implications*, 6(1), 22. <https://doi.org/10.1186/s41235-021-00287-0>

Abstract number A78

Session: Poster Session 1 (12.40 - 14.00)

Title: Does atypical face processing underlie social difficulties in school-aged preterm birth survivors? A frequency-tagging EEG approach.

Tiffany Tang* 1, Matthijs Moerkerke 1, Nicky Daniels 2, Stephanie Van der Donck 1, Bieke Bollen 3, Kaat Alaerts 2, Jean Steyaert 1, Gunnar Naulaers 3, Els Ortibus 4, Bart Boets 1.

Affiliations: 1 Center for Developmental Psychiatry, KU Leuven, Belgium; 2 Neuromotor Rehabilitation Research Group, KU Leuven, Belgium; 3 Neonatal Intensive Care Unit – Neonatology, UZ Leuven, Belgium; 4 Child Neurology – Rehabilitation, UZ Leuven & Center for Developmental Disorders, Belgium

Preterm (PT) birth is associated with important socio-communicative vulnerabilities that can have long-term implications and may result in psychopathology (e.g., autism spectrum disorder). A recurring “preterm behavioural phenotype” has been described, although these difficulties may often be subtle and subclinical. As face processing is crucial for social interactions and several studies reported

impaired face processing in PT populations, we hypothesize that altered face processing may underlie these social difficulties. Here, we investigate the long-term impact of PT birth on the quality of socio-communicative sensitivity in school-aged children.

Thirty-nine 8-to-12-year old PT children born between 24 and 32 weeks of gestation and thirty-eight age- and gender-matched term-born controls participated in our study. All children underwent an extensive multimodal test battery, comprising several neural measures (functional, structural and diffusion MRI, and EEG), autonomic nervous system stress physiology, eye-tracking, standardized observations, questionnaires and endocrinological measures. We investigated facial expression and identity discrimination using innovative frequency-tagging EEG-paradigms. More specifically, we evaluated the neural sensitivity of our PT-born participants to implicitly and automatically discriminate emotional (fearful and happy) faces among a stream of neutral faces, and to discriminate a different facial identity among a stream of identical faces.

We found successful implicit facial expression and identity processing in both groups. Unexpectedly, the PT-born participants showed a significantly greater neural sensitivity towards these subtle socio-communicative facial cues compared to their term-born peers. Correlations with neonatal measures such as gestational age and birth weight showed that this greater neural sensitivity is uniformly present among the PT group.

Abstract number A79

Session: Poster Session 1 (12.40 - 14.00)

Title: Cognitive Behaviour Therapy for Insomnia: Implementation Study

Marine Markaryan (ebpracticenet, KU Leuven), Thomas Janssens (ebpracticenet, KU Leuven), Liesbet De Baets (VUB), Celine Labie (VUB), Diana Torta (KU Leuven)

Objectives: Implementation of evidence-based practice necessitates identification of barriers and facilitators as well as using effective implementation strategies tailored to these barriers and facilitators. Collaboration with stakeholders is an essential aspect of implementation, but there is limited guidance on how to combine input from stakeholders with other sources of information when designing implementation actions. In this study, we adapt and evaluate a novel stepwise procedure (based on Knapp et al, 2022) to combine multi-stakeholder input with best available evidence on matching barriers to implementation strategies in the context of an implementation project for physiotherapist led Cognitive Behaviour therapy for Insomnia (CBT-I) in patients with chronic pain.

Methods: a 6-step procedure integrating the aspects of user-centred design, a modified Delphi approach, a participatory approach, and the Expert Recommendations for Implementing Change (ERIC) protocol, resulting in an implementation plan. Evaluation is based on thematic analysis of participant comments and process notes gathered during the design procedure.

Results: The procedure is ongoing. We will present results on stakeholder input during each step and the resulting implementation plan, as well as challenges in using the procedure. Interim findings indicate challenges in balancing top-down and bottom-up approaches in stakeholder consultation, as well as challenges in involving individuals that are new to the field of implementation.

Discussion & Conclusion: The 6-step procedure is a promising tool to develop implementation plans that allows step-by-step combination of stakeholder input with available evidence on implementation. However, challenges need to be addressed when further refining the 6-step approach.

Abstract number A80

Session: Poster Session 1 (12.40 - 14.00)

Title: Clarifying the underlying role of psychophysiological processes in understanding symptom persistence in adolescents' emotional problems

HELEEN Goemaere*, Universiteit Gent - Vakgroep Ontwikkelings-, Persoonlijkeids- en Sociale Psychologie (Henri Dunantlaan 2 9000 Gent) - onderzoeksgroep Klinische Ontwikkelingspsychologie

Objectives: Although CBT has been shown to be effective in treating youth depression and anxiety, it is concerning that symptoms persist. This suggests that some CBT treatments may not address the root mechanisms leading to symptom persistence. Studies indicate that 75% of emotional problems are linked to emotion regulation difficulties. Moreover, recent theoretical models propose that physiological processes may serve as biomarkers to better understand emotion regulation processes. However, physiological parameters are far less studied to examine symptom persistence in youth. We aim to examine physiological parameters as indicators for understanding emotion regulation processes contributing to symptom persistence.

Method: We will recruit youth with depression and anxiety during the intake phase in a therapy center and a healthy comparison group in schools (12-18 year). We will conduct a multi-method study using subjective (multi-informant questionnaires) and psychophysiological measures (heart rate variability and electrodermal activity) prior to the start of treatment and six months later. During a laboratory paradigm, participants will watch film clips that induce neutral moods as well as negative and positive emotions while physiological parameters are recorded using a Porti 16-channel amplifier.

Hypotheses: We hypothesize that youth with depression and anxiety will show more (1) dysfunctional emotion regulation and (2) dysfunctional physiological processes during baseline measures, towards reactivity tasks that elicit negative and positive emotions, and during recovery compared to healthy youth. Moreover, we expect that youth with depression and anxiety will show improvements in physiological processes that will underly adaptive emotion regulation after treatment, which will be associated with recovery of symptoms of depression and anxiety.

The current project is part of an FWO and BOF application.

The project has already been approved by the Medical Ethical Commission of the University Hospital Ghent.

Abstract number A81

Session: Poster Session 1 (12.40 - 14.00)

Title: Discrete rather than continuous division of the hand space

GERIN Sylvain*, ANDRES Michael, LEPOITTEVIN Samuel - Psychological Sciences Research Institute, Université catholique de Louvain.

Fingers are a wonderful tool used in a wide range of situations. However, very little is known about the cognitive map of hands and fingers. Such cognitive representation is necessary to allow finger discrimination as no sensory signals are directly informative about hand size and shape. Prior studies have shown distortions of the cognitive map of our hands and different spatial biases in finger identification. The question of how hand space and relative finger position are represented on the cognitive map has been less addressed, despite its importance for hand action.

Objective

The goal of this study is to investigate whether fingers are coded as discrete or continuous entities in the hand space.

Method

We looked at the respective influence of finger position over the hand and stimulation position over the finger. The medial and lateral sides of the fingers were stimulated at near-threshold intensity and participants were asked to name the number corresponding to the stimulated finger, without visual feedback.

Results

Results showed similar error direction between the dominant and non-dominant hand, revealing that the index finger was biased towards the little finger whereas the ring finger was biased towards the thumb. The side of stimulation did not influence the pattern of errors, except for the index finger of the dominant hand where medial stimulation was associated with less confusions than lateral stimulation.

Discussion

Overall, these results suggest that fingers are coded as discrete units at the hand level but use-dependent modulation is still possible at the finger level.

Abstract number A82

Session: Poster Session 1 (12.40 - 14.00)

Title: The reactive-proactive control balance in clinical aging

DE PUE Sarah*, KU Leuven; GILLEBERT Céline, KU Leuven; DIERCKX Eva, Vrije Universiteit Brussel, Alexianen Zorggroep Tienen; VAN DEN BUSSCHE Eva, KU Leuven

In this aging society, one of the biggest challenges is the increasing cognitive decline with older age. One cognitive function that declines with age and is necessary to achieve our goals in daily life is cognitive control. The Dual Mechanisms of Control theory (Braver, 2012) distinguishes proactive and reactive control. Whereas proactive control works preventively and anticipatory before conflict occurs, reactive control detects and resolves conflict only after it occurs. While young adults can flexibly switch between reactive and proactive control, this balance is disturbed in healthy older adults, where a shift takes place from a mainly proactive to a mainly reactive control pattern. However, little is known about this reactive-proactive control balance in clinical aging. Scarce studies suggest that clinical older populations are at an even increased risk of proactive control impairment, but also declines in reactive control. In this study, we will assess the reactive-proactive control balance in 40 Mild Cognitive Impairment patients, a clinical population reporting early-stage cognitive decline, and 40 healthy controls. We will administer a test battery assessing proactive and reactive control while simultaneously measuring EEG. This design will allow us to assess the reactive-proactive control balance in this clinical condition as compared to healthy aging. Furthermore, it will expose whether ERP components related to reactive and proactive control can be used as objective markers for early onset cognitive decline and, consequently, as early markers for dementia. This may inspire intervention programs aimed at this early cognitive decline population at risk of developing dementia.

Abstract number A83

Session: Poster Session 1 (12.40 - 14.00)

Title: Effect of chronic intranasal oxytocin administration on neural sensitivity for facial identity processing in children with autism: an RCT

Nataliia Grytsenko, Matthijs Moerkerke, Nicky Daniels, Stephanie Van der Donck, Laura Tibermont, Tiffany Tang, Jean Steyaert, Kaat Alaerts, Bart Boets (Center for Developmental Psychiatry)

Background: Efficient face recognition is essential for social cognition but is often impaired in children with autism spectrum disorder (ASD). Intranasal oxytocin administration is assumed to increase salience toward social stimuli and may be a potential therapeutic intervention for ASD. Nevertheless, the effect of repeated oxytocin administration on facial identity processing has not yet been explored.

Objectives: Frequency-tagging EEG (FTEEG) was applied to study the short- and long-term effects of intranasal OT administration on face processing in children with ASD.

Methods: Eighty children with ASD (boys and girls, 8-to-12 years old) were enrolled in a randomized double-blind placebo-controlled multiple-dose oxytocin clinical trial (12 IU, twice a day). FTEEG was used to accurately measure the neural sensitivity for facial identity discrimination. Orientation of face stimuli (upright versus inverted) and fixation (eyes versus mouth) were manipulated. Participants were assessed at four timepoints: baseline (T0), immediately after a 4-week oxytocin/placebo treatment (T1), at a 4-week follow-up (T2), and immediately after a 4-week OT treatment (T3).

Results: At all timepoints, a clear face inversion effect was observed, i.e., enhanced face discrimination for upright versus inverted faces. At three timepoints (T0, T1, T2), neural activation was significantly right-lateralized. No effect of fixation was observed. Contrary to our hypothesis, oxytocin administration did not impact the neural sensitivity for facial identity processing.

Discussion and Conclusion: Results demonstrate that frequency-tagging EEG is a robust method for selectively pinpointing facial identity sensitivity, as evidenced by the inversion effect at all timepoints. Contrary to the view that oxytocin may boost social salience, repeated oxytocin administration did not selectively increase sensitivity towards upright faces.

Abstract number A84

Session: Poster Session 1 (12.40 - 14.00)

Title: Role of synchrony on stress within families: What do we know so far?

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Objectives: Synchrony is defined as being a dyadic (mother-infant) interaction based on reciprocity, regulation and harmony. It can encompass facial expressions, vocalization, mutual gaze as well as other physiological measures. When infants feel their mother isn't looking at them, they also look away or smile less. Synchrony between parents and infant allows the child to develop socio-affective competencies that can be used in face of stressors. This project provides the first systematic review to understand how synchrony can interplay within the family.

Methods: The database search conducted on Scopus, Pubmed and PsycNET yielded a total of 465 studies, of which 55 were selected (n=4,657). All studies considered synchrony measurements, assessed stress or resilience and were family-focused.

Results: Biobehavioral processes via the inter-and intra-individually 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, six-month-old infants and mother's saliva were found to hormonally synchronize, emphasizing a link on the responsiveness of saliva to environmental stimuli. A relationship also exists between higher parent-infant synchrony and lower levels of cortisol and enhanced self-regulation.

Discussion: 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. In fact, caregivers and children may synchronize and exhibit high level of stress if the caregiver was already stressed. The findings highlight the extent in which synchrony may shape family systems.

Harrist, A. W., & Waugh, R. M. (2002). Dyadic synchrony: Its structure and function in children's development. *Developmental review*, 22(4), 555-592. Kochanska, G., Aksan, N., Prisco, T. R., & Adams, E. E. (2008). Mother-child and father-child mutually responsive orientation in the first 2 years and children's outcomes at preschool age: Mechanisms of influence. *Child development*, 79(1), 30-44. McCubbin, H. I., & McCubbin, M. A. (1988). Typologies of resilient families: Emerging roles of social class and ethnicity. *Family relations*, 247-254. Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social development*, 16(2), 361-388. Mumme, D. L., Fernald, A., & Herrera, C. (1996). Infants' responses to facial and vocal emotional signals in a social referencing paradigm. *Child development*, 67(6), 3219-3237. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68. Speer, D. C. (1970). Family systems: Morphostasis and morphogenesis, or "Is homeostasis enough?". *Family process*, 9(3), 259-278. Suveg, C., Shaffer, A., & Davis, M. (2016). Family stress moderates relations between physiological and behavioral synchrony and child self-regulation in mother-preschooler dyads. *Developmental psychobiology*, 58(1), 83-97. <https://doi.org/10.1002/dev.21358>

Abstract number A85

Session: Poster Session 2 (15.10 - 16.10)

Title: Relevance of a model of risk management activity in diverse types of crisis situation

VANDESTRATE Sylvie* (umons), DUBOIS Laurie-Anna (umons), VAN DAELE Agnès (umons)

In civil security, crisis management can be considered as a borderline case of dynamic situation management (Rogalski, 2004). To keep control over the situation, risk management in dynamic situations can be regarded as searching for a compromise between meeting task requirements and preserving cognitive resources (Amalberti, 2013). However, crisis situations differ from dynamic situations by adaptation requirements. Furthermore, crisis responders (e.g., firefighters) must adapt their risk management activity according to the crisis situation type. To this day, the literature lacks a model linking crisis situation features to the risk management activity features. This poster outlines a double reference framework explaining the variability of risk management activity in diverse types of crisis situations. To this end, a crisis situation typology depending on adaptation requirements was first achieved. Based on this typology, a model of risk management activity in crisis situations was designed. This double reference framework is then discussed from a complex system safety perspective. In particular, it leads to (re)think the simulation design of crisis management training.

Amalberti, R. (2013). *Piloter la sécurité : Théories et pratiques sur les compromis et arbitrages nécessaires*. Springer. ; Rogalski, J. (2004). La gestion des crises. Dans P. Falzon (Éd.), *Ergonomie* (pp. 531-544). PUF.

Abstract number A86

Session: Poster Session 2 (15.10 - 16.10)

Title: Virtual reality as a relaxation tool during pregnancy

CULOT Stéphanie* (umons), WAGENER Aurélie (ULiège), SOHET Elisa (umons) & GAUGUE Justine (umons)

The effectiveness of virtual reality (VR) has been demonstrated in several fields, including clinical psychology in the treatment of specific phobias and anxiety disorders. In the perinatal context, VR has already been studied, for example, in the context of pain management or postpartum depression. However, the effects of relaxation through virtual environments remain to be explored and constitute the objective of our study, on a sample of women in their first trimester of pregnancy. Regarding the experimental design, after the completion of a socio-demographic questionnaire, the participants will have to complete different questionnaires constituting a pre-test phase (Perceived Stress Scale, Antenatal Perceived Stress Inventory, General Self-Efficacy Scale, Smith Relaxation States Inventory, Cognitive Emotional Regulation Questionnaire, Igroup Presence Questionnaire, Cambridge Exeter Ruminative Thought Scale). Before and after the immersions in VR, participants will have to complete a questionnaire on cybersickness and visual analog scales measuring their level of anxiety, stress and muscle tension. Any changes in heart rate will also be measured. A psychoeducation module on relaxing breathing will also be administered before or after the first VR immersion. At a second meeting, the pre-/post-immersion and VR protocol as well as the post-test phase will be administered once again. The data are still being collected but we hypothesize that the virtual reality sessions and the psychoeducation module on relaxing breathing will allow pregnant women to develop their self-regulation skills and reduce their stress and anxiety levels.

Abstract number A87

Session: Poster Session 2 (15.10 - 16.10)

Title: How to take care of me ?

LUCASSEN Laurie*, RINALDI Romina & BATSELE Elise (Umons)

Individuals with intellectual disabilities (ID) experience higher rates of health inequities and are more vulnerable to social determinants of health. This study aims at: 1) further exploring how healthcare professionals' representations and practices with people with ID may support or limit inclusive healthcare; 2) evaluate how they are influenced by the diagnosis of ID or if they are rather "unspecific" (shared vulnerabilities regardless of a specific diagnosis); and 3) validate a questionnaire assessing inclusive health practices and representations (QIHPR).

To this end, general practitioners, medical specialists, and nurses have been recruited (n=159). Participants had to complete 2 questionnaires: IDLS and QIHPR. They were randomly assigned to four conditions induced using IDLS: vignettes describing a female or male patient, with or without explicitly mention of the ID diagnosis.

The results indicate better inclusive health representations and practices when the health professional is concerned (i.e., family or job) and when there is less social distancing from people with ID. Furthermore, the diagnostic hypothesis has no influence on the total score of the questionnaire. Finally, 3 dimensions from QIHPR were extracted: perception of health literacy, representations, and current practices in inclusive health.

This study shows that the more the social distancing is reduced, the more the professionals would have inclusive health representations and practices. Moreover, health professionals seem to adopt common representations and practices when faced with a person with cognitive and adaptive vulnerabilities, regardless of the specific disorder identified (or not identified). Finally, the QIHPR would make it possible to assess these dimensions.

EMPL, D. (2021, March). Union of Equality: Strategy for the Rights of Persons with Disabilities 2021-2030. EDF: European Disability Forum. Friedman, C. (2021). Social determinants of health, emergency department utilization, and people with intellectual and developmental disabilities. *Disability and Health Journal*, 14(1), 100964. Rinaldi, R., & Batsel , E. (2022). "Is it my job?" An exploratory qualitative analysis of medical specialists' adaptation strategies when addressing the health needs of people with intellectual disabilities. *Journal of Intellectual Disabilities*, 17446295221095706. Scior, K., & Furnham, A. (2011). Development and validation of the intellectual disability literacy scale for assessment of knowledge, beliefs and attitudes to intellectual disability. *Research in developmental disabilities*, 32(5), 1530-1541.

Abstract number A88

Session: Poster Session 2 (15.10 - 16.10)

Title: "Mental health and Covid-19 : a systematic review in youth population"

DIEU Camille*, MAUROY Anthony, ROSSIGNOL Mandy, GAUGUE Justine (Umons)

Objectives

Numerous studies have assessed the psychological impact of the Covid-19 crisis on the population, notably on children and young people (Ravens-Sieberer et al., 2022; Sel uk et al., 2021). We conducted a systematic review of these works to focus on the youth population to determine how different facets of Covid-19 have an impact on youth mental health.

Method

We followed the PRISMA method and we analyzed all studies conducted to date on the topic. The following electronic databases were investigated : PsycInfo, PsychArticles, Science Direct, PubMed, and Wiley Library. Inclusion criteria were as follows: studies published after December 2019 only; original article or publication in a peer-reviewed scientific journal; participants aged 0 to 25 years; and studies examining the following conditions : stress, depression, anxiety, posttraumatic stress disorder (PTSD), internalizing or externalizing disorders.

Results

The search initially identified 6966 articles and 369 articles were included in the final sample. We distinguished the results by age group: young children under 5, children aged 6 to 12, adolescents aged 12 to 18 and young adults aged 18 to 25. The data are currently being processed.

Discussion and conclusion

Preliminary findings suggest that across all age groups, levels of psychological symptoms were higher during the outbreak. Consequences of Covid-19 such as social distancing and distance learning especially seemed to impact youth's anxiety, depression and stress. While adolescents and young adults seemed to be more affected by symptoms of anxiety and depression, children and young children seemed to be more affected by externalizing disorders.

Ravens-Sieberer, U., Kaman, A., Erhart, M., Devine, J., Schlack, R., & Otto, C. (2022). Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *European child & adolescent psychiatry*, 31(6), 879–889. <https://doi.org/10.1007/s00787-021-01726-5> Sel uk, E. B., Demir, A.  ., Erbay, L. G.,  zcan,  .  ., G rer, H., &

Abstract number A89

Session: Poster Session 2 (15.10 - 16.10)

Title: The incremental validity of testing proactive personality in personnel selection

Evalyne THAUVOYE* (Cebir, Kortenbergh); Yannick DUWE (KU Leuven)

Objectives

In recent years Flemish organisations have shown increasing interest in employability skills. This is especially true for organisations characterised by a dynamic and changing context. The question then is whether it would be valuable to include the mapping of employability – or its underlying personality trait “proactive personality” – in personnel selection. Several meta-analyses have shown that the combination of a reasoning test with personality and integrity questionnaires has a high predictive validity for future work performance. Research has also shown that proactive personality is significantly correlated with integrity and several Big Five personality traits (i.e., extraversion, conscientiousness, openness to experience and emotional stability). Therefore, we investigated the incremental validity of testing proactive personality in personnel selection.

Method

Flemish government employees (N=228) completed a set of questionnaires on proactive personality, Big Five personality and work integrity, as well as a reasoning test. 91 of these employees also evaluated their own work performance, and another 52 employees were evaluated by their supervisor. In both types of evaluation, the same criteria were used.

Results

Hierarchical regression analyses were conducted with work performance as criterion and reasoning ability, Big Five personality traits, integrity and proactive personality as predictors. Results show that proactive personality explains unique variance above and beyond reasoning ability and Big Five personality traits.

Discussion & conclusion

Including a measure of proactive personality in personnel selection provides additional predictive information on candidates’ future work performance and may consequently be valuable for organisations where employability skills are highly required.

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of organizational behavior*, 14(2), 103-118. DOI: 10.1002/job.4030140202 Schmidt, F. L., Oh, I. S., & Shaffer, J. A. (2016). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 100 years. *Fox School of Business Research Paper*, 1-74. DOI: 10.13140/RG.2.2.18843.26400 Spitzmuller, M., Sin, H. P., Howe, M., & Fatimah, S. (2015). Investigating the uniqueness and usefulness of proactive personality in organizational research: A meta-analytic review. *Human Performance*, 28(4), 351-379. DOI:10.1080/08959285.2015.1021041 Tornau, K., & Frese, M. (2013). Construct clean-up in proactivity research: A meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Applied Psychology*, 62(1), 44-96. DOI:10.1111/j.1464-0597.2012.00514.x

Abstract number A90

Session: Poster Session 2 (15.10 - 16.10)

Title: The relation between perceived stress and the frequency, intensity, and duration of negative emotion-episodes

FIGEN Kirkgöz*, LEONIE Cloos, KOEN Niemeijer, PETER Kuppens (KU Leuven)

Stress is a common experience in many people's lives and individual differences in stress levels have been associated with a host of maladaptive outcomes, both physically and mentally. It is therefore important to understand how perceived stress influences people's moods in everyday life.

The goal of this study is to understand how negative emotions develop in the lives of people who report higher versus lower perceived stress levels. Specifically, we want to examine if overall perceived stress levels are related to the frequency, duration, and intensity of negative emotion-episodes people experience in their daily lives. Our expectation was that highly stressed individuals would experience more frequent negative-emotion episodes, with longer durations, and higher intensity. To investigate this, we collected data from N=114 participants in terms of their overall subjectively perceived stress. The sample was stratified on a variation of perceived stress levels. We asked participants to provide continuous ratings of their negative affect throughout daily life for a period of 7 days (using a newly developed continuous measurement in m-Path). On the basis of the latter data, we inferred how often, how long, and with what maximum intensity participants experienced negative emotion-episodes in daily life.

Preliminary analysis shows that perceived stress is positively related to intensity and duration, but not to the frequency of negative emotion-episodes. The implications for how we should understand people's overall subjectively perceived stress are discussed.

Cohen, S., Kamarck, T. W., & Mermelstein, R. J. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*, 24(4), 385. <https://doi.org/10.2307/2136404> Sathyapalan, T., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *Excli Journal*, 16, 1057–1072. <https://doi.org/10.17179/excli2017-480> Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and Health: Psychological, Behavioral, and Biological Determinants. *Annual Review of Clinical Psychology*, 1(1), 607–628. <https://doi.org/10.1146/annurev.clinpsy.1.102803.144141> Stress. (2022, June 17). World Health Organization. <https://www.who.int/news-room/questions-and-answers/item/stress> Thoits, P. A. (2010). Stress and Health: Major Findings and Policy Implications. *Journal of Health and Social Behavior*, 51(1_suppl), S41–S53. <https://doi.org/10.1177/0022146510383499>

Abstract number A91

Session: Poster Session 2 (15.10 - 16.10)

Title: Are language and cognitive deficits in Parkinson's disease linked?

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Objectives

Parkinson's disease leads to various cognitive impairments, but also to language disorders whose nature and relation to cognitive impairment is still poorly understood.

This study provided a comprehensive assessment of performance in cognitive and language tasks and their level of association in patients with Parkinson's disease without dementia as well as healthy participants.

Method

Subjects: Nineteen patients (13 male, 6 female) with confirmed Parkinson's disease ("on" phase, mean duration of disease: 6.3 years, Hoehn and Yahr scale mean score: 1.7, MMSE mean score: 28,7) aged 54 to 78 years and 19 healthy adults, matched for age, gender and socio-economic level, participated in 4 two-hour testing sessions.

Assessment: The language tasks assessed different aspects of language processing (noun and verb naming, verbal fluency, speech elaboration and speech comprehension). Cognitive tasks assessed different aspects of long and short-term memory, attention and executive functioning.

Results

Bayesian statistical analyses provided moderate to strong evidence for reduced performance in the Parkinson disease group in verbal short-term memory and resistance-to-interference tasks. At the language level, there was moderate evidence for reduced performance in figurative language comprehension and picture description tasks. The data provide moderate evidence for a lack of correlation between reduced performance on language tasks and performance on cognitive tasks.

Discussion and conclusion

Although preliminary given the limited sample size, the present results indicate the presence of deficits in Parkinson's disease patients for the most complex aspects of language processing and suggest at the same time their independence from cognitive-executive impairment.

Altmann, L. J. P., & Troche, M. S. (2011). High-Level Language Production in Parkinson's Disease: A Review. *Parkinson's Disease*, 2011, 1-12. <https://doi.org/10.4061/2011/238956> Angwin, A. J., Dissanayaka, N. N. W., Moorcroft, A., McMahon, K. L., Silburn, P. A., & Copland, D. A. (2017). A Neurophysiological Study of Semantic Processing in Parkinson's Disease. *Journal of the International Neuropsychological Society*, 23(1), Art. 1. <https://doi.org/10.1017/S1355617716000953> Auclair-Ouellet, N., Lieberman, P., & Monchi, O. (2017). Contribution of language studies to the understanding of cognitive impairment and its progression over time in Parkinson's disease. *Neuroscience & Biobehavioral Reviews*, 80, 657-672. <https://doi.org/10.1016/j.neubiorev.2017.07.014> Hedman, E., Hartelius, L., & Saldert, C. (2022). Word-finding difficulties in Parkinson's disease: Complex verbal fluency, executive functions and other influencing factors. *International Journal of Language & Communication Disorders*, 57(3), 565-577. <https://doi.org/10.1111/1460-6984.12707> Ma, J., Ma, S., Zou, H., Zhang, Y., Chan, P., & Ye, Z. (2018). Impaired serial ordering in nondemented patients with mild Parkinson's disease. *PLOS ONE*, 13(5), Art. 5. <https://doi.org/10.1371/journal.pone.0197489> van Doorn, J., van den Bergh, D., Böhm, U., Dablander, F., Derks, K., Draws, T., Etz, A., Evans, N. J., Gronau, Q. F., Haaf, J. M., Hinne, M., Kucharský, Š., Ly, A., Marsman, M., Matzke, D., Gupta, A. R. K. N., Sarafoglou, A., Stefan, A., Voelkel, J. G., & Wagenmakers, E.-J. (2021). The JASP guidelines for conducting and reporting a Bayesian analysis. *Psychonomic Bulletin & Review*, 28(3), 813-826. <https://doi.org/10.3758/s13423-020-01798-5> Weintraub, D., Chahine, L. M., Hawkins, K. A., Siderowf, A., Eberly, S., Oakes, D., Seibyl, J., Stern, M. B., Marek, K., Jennings, D., & PARS Investigators. (2017). Cognition and the course of prodromal

Abstract number A92

Session: Poster Session 2 (15.10 - 16.10)

Title: From networking to attitudinal outcomes: Psychological Capital as a mediator

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Although networking behaviors have been positively linked with various career outcomes, little is known about its impact on attitudinal outcomes and about the potential underlying mechanisms explaining the effects of these behaviors on work outcomes. Building on the conservation of resources (COR) theory, the present study investigates the mediating role of Psychological Capital (PsyCap) in the relationships between networking and two attitudinal outcomes (i.e., work engagement and work satisfaction). We proposed that networking, as an investment of personal resources to gain access to other resources, contributes to the prediction of attitudinal outcomes. By doing so, we respond to recent recommendations to investigate potential mediators of networking' effects. We surveyed 254 employees from a Belgian public administrative company. Data were analyzed using structural equation modelling and bootstrapping method. Results show that PsyCap totally mediates the relationships between networking and both attitudinal outcomes. The present study contributes to theoretical development by integrating Networking and PsyCap literatures into the COR theory literature, and demonstrates the legitimacy of COR theory to explain these complex variables and their relationships. Future research directions and practical implications are discussed.

Abstract number A93

Session: Poster Session 2 (15.10 - 16.10)

Title: Does expertise affect the geometry of object representations in the brain?

COSTANTINO Andrea, VAN HOVE Laura*, LUIZ FONTANA VIEIRA Felipe, OP DE BEECK Hans (KULeuven)

Previous research has investigated the geometry of object representations in the human brain, for example in terms of low-dimensional manifolds. Expertise is thought to enhance the efficiency of information processing in the expert's field. At the sensory level, this enhancement is characterised by an increased sensitivity to both low and high-level features of relevant stimuli. We compare expert and non-expert chess players to elucidate the extent and location of changes in manifold representations of expertise-relevant stimuli.

fMRI data is being collected from participants viewing a novel stimulus set designed to differentiate low-level from higher-level dimensions. Multivariate pattern analysis and representational similarity

analysis will be employed to conduct a fine-grained examination of the neural data. We expect the neural response pattern to contain information on basic visual dimensions and, in experts, we predict additional representations based on higher-level dimensions (i.e., theoretically-relevant information). Based on previous research, we explore several locations where optimised neural representations may occur.

Preliminary evidence from a pilot participant with near-expert status suggests our experimental task will generate informative data. By building on the rich history of chess research and examining widespread theories on expertise, our study aims to extend our understanding of how expertise influences the brain.

Abstract number A94

Session: Poster Session 2 (15.10 - 16.10)

Title: Improving clinical assessments of couple interactions: analysis of verbal and nonverbal communication

CETKO Cloé Rose*, MEILLERAIS Sandie, DENIS Jennifer, HANSOTTE Logan (Service de Psychologie Clinique, Université de Mons (Mons, Belgique)

The scientific literature shows a high prevalence of divorce and significative consequences of the phenomenon on the overall well-being of families (Chung, 2014).

It is from this context that the following study aims to explore the ways that couples interact together and how these interactions could be better assessed.

For this purpose, a sample of 20 couples were evaluated based on their interactions. The subjects had to complete 3 surveys on marital satisfaction, overall well-being and their own family representations. Afterwards, the couples were asked to interact together with the assistance of a researcher who led a semi-structured interview. During the interview, two questions on sensitive topics were asked to the subjects. It is from those questions that the couples' interactions were analyzed in two manners. The first analysis followed the T.A.R.D. model which allowed a qualitative appreciation of the interaction. The model was designed to be used by psychologists in a clinical context and helps the professionals to provide an efficient and quick assessment of the couples' interactions based on four dimensions. The second analysis uses the software "The Observer" which allowed to code precisely the behaviors of the partners and their interaction.

Results will show correlations between the analysis methods. They will also suggest links between the data from the surveys and from the interactions.

The tested correlations will indicate if the T.A.R.D model is an adequate tool for psychologists to evaluate efficiently the couples' interactions.

Denis, J. (2019). Évaluation des interactions conjugales sur base de la communication non verbale et de la construction du dialogue conjugal conjoint. Dans L. Souche & A. Sagne (Eds.), *La thérapie de couple : 11 études de cas* (pp. 19-102). Editions In Press. Spanier, G. B. (1976). Measuring Dyadic Adjustment: New Scales for Assessing the Quality of Marriage and Similar Dyads. *Journal of Marriage and the Family*, vol. 38(1), pp. 15-28 Epstein, N. B., Baldwin, L. M. & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, vol. 9(2), pp. 171-180. <https://doi.org/10.1111/j.1752-0606.1983.tb01497.x> Chung, M.-S. (2014). Pathways between attachment and marital satisfaction: The mediating roles of rumination, empathy and forgiveness. *Personality and Individual Differences*, vol.70, pp. 246-251. <https://doi.org/10.1016/j.paid.2014.06.032>

Abstract number A95

Session: Poster Session 2 (15.10 - 16.10)

Title: Communication in the context of organizational change: Impact on employees' organizational commitment and on their perception of organizational justice.

JORIS Eva * 1 , BABIC Audrey *1 (Faculty of Psychology, Speech and Language Therapy, and Education, University of Liege)

Although several studies demonstrate the importance of communication during organizational change (Armenakis & Harris, 2002; Faupel & Helpap, 2021; Helpap & Schinnenburg, 2017; Ouedraogo & Ouakouak, 2018), there is a lack of research on employees' experience of communication during change (Gamble-Smith, 2021; Helpap & Schinnenburg, 2017).

In addition, the few existing studies are mainly based on fictitious organizational change contexts (Faupel & Helpap, 2021; Helpap, 2016; Helpap & Schinnenburg, 2017; Janiczek et al., 2012; Ouedraogo & Ouakouak, 2018).

Based on recent recommendations (Faupel & Helpap, 2021), this research investigates the impacts of communication strategies, during real organizational change, on organizational justice (i.e. global, distributive, procedural, interpersonal, informal) and organizational commitment (i.e. affective, continuity and normative).

More precisely, this study attempts to provide more information about the impacts of programmatic communication (i.e., intended to convey a specific message to passive recipients) and participatory communication (i.e. focused on information sharing among individuals and employee participation).

An online self-reported questionnaire was diffused on a professional network. Validated Likert-type measurement scales were used. Data collection is currently underway. As such, results are forthcoming but will be available for the BAPS meeting 2023. This is also the case for the discussion and conclusion part.

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Abstract number A96

Session: Poster Session 2 (15.10 - 16.10)

Title: How does individuals' regulatory mode influence the way they evaluate a group dissenter?

VANHAELEN Parel*1, BEYLAT Magali 1, WOLTIN Karl-Andrew 1, (1: Université catholique de Louvain)

*objectives

Previous work showed that how dissenters (i.e., individuals who express disagreement or raise questions about a group's majority opinion) are evaluated depends on characteristics of dissenters and the group. However, group members' individual characteristics might also influence how they judge dissenters. We considered differences in individuals' Regulatory Mode (RM), comprising two goal pursuit strategies: assessment (i.e., a concern for critical evaluation, comparisons, and 'getting things right') and locomotion (i.e., a concern for movement, change, and 'just doing it'). High locomotors may judge dissenters more critically as dissenters interrupt goal pursuit, while high assessors may appreciate dissenters for stimulating evaluation of new alternatives.

*method

In one preregistered Study (N = 257), we measured participants' RM and manipulated dissent by presenting participants with scenarios depicting work groups in which one person opposed and questioned (dissent) whilst another person supported (non-dissent) the group's approach or decision. Participants evaluated both targets.

*results

Our results indicate an interaction between locomotion and dissent in the opposite direction of our hypotheses. Contrary to predictions, the higher participants' locomotion mode, the more positively they evaluated dissenting (but not non-dissenting) targets. Individuals' assessment mode did not influence target evaluations and did not interact with targets' dissent.

*discussion and conclusion

A possible explanation for these findings is that individuals high locomotors are driven by novelty and progress and the expression of dissenting views may be perceived as innovative and appealing for them. As such, our results allow better understanding of RM influence on group dynamic and decision making, although additional investigation and replication are needed.

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Abstract number A97

Session: Poster Session 2 (15.10 - 16.10)

Title: Assessing socio-communicative sensitivity in infants at elevated likelihood of autism using EEG

WINNEPENINCKX Britt (1)*, AMELYNCK Steffie(1), VAN DER DONCK Stephanie(1), DE VRIES Lyssa(1), VAN LIERDE Thijs(2), ERDOGAN Maide(2), VAN ESCH Lotte(1), WARREYN Petra(2), ROEYERS Herbert(2), NOENS Ilse(1), NAULAERS Gunnar(1), STEYAERT Jean(1) & BOETS Bart(1) (1: KU Leuven, Belgium, 2: UGent, Belgium)

Background/objective: Autism spectrum disorder (ASD) is a neurodevelopmental condition, characterised by challenges in social communication and interaction, including difficulties in face processing and eye contact. It is defined and diagnosed based on behavioural characteristics. Yet, early diagnosis of ASD is challenging. Neuroimaging approaches, such as electroencephalography (EEG), may be a promising tool to pinpoint early ASD characteristics in infants with elevated likelihood for ASD. Prematurity and having a sibling with an ASD diagnosis, are conditions increasing this likelihood. As part of a longitudinal study, we evaluated whether event-related potentials (ERPs) to social cues in infancy can predict a best-estimate research diagnosis of autism at 3 years.

Method: Throughout a prospective longitudinal design, we monitored the development of 222 infants at elevated likelihood for ASD. ERPs were collected at 10 and 14 months of age, and at 3 years a best estimate diagnosis of ASD was established. Using the EEG paradigm of Elsabbagh et al. (2012), infants were shown images of a woman with direct or averted gaze, or noise stimuli. This paradigm allows extracting selective ERPs for face and gaze processing. Based on these indices, we will investigate the possibility of predicting autism later on.

Results: Preliminary data analysis reveals selective P1, N290 and P400 ERPs, indexing perceptual and social-cognitive processing. Data analysis is ongoing. At the conference, we will present retrospective group comparisons comparing infants who did and did not receive a best-estimate ASD diagnosis at age 3.

Conclusions: This study aims at delineating reliable early ASD-biomarkers.

Abstract number A98

Session: Poster Session 2 (15.10 - 16.10)

Title: Backlash against men whose healthy behavior violates gender norms.

ASTER Van Rossum 1, SARAH Grootjans 1*, Prof. COLETTE van Laar 1, Prof. DAAN Scheepers (1: University of Leuven, 2: University of Leiden, University of Utrecht)

Objectives: Previous research indicated that some masculinity norms encourage unhealthy behavior, like drinking alcohol and smoking. Our goal was to investigate whether men who violate those masculinity norms and engage in certain healthy behaviors receive backlash and whether this is predicted by participants' gender system justification beliefs (GSJ; believing relations between men and women are fair).

Method: We conducted a within-participant experiment, presenting 515 students with four vignettes describing healthy and unhealthy men and women. The participants judged the characters' likability, weakness, masculinity-femininity, sexual orientation, and societal status.

Results: The analyses show that the healthy man was judged as more attracted to men, less attracted to women, and less masculine than the unhealthy man. The healthy man was also judged as more likable than the unhealthy man, but his likability decreased with participants' increasing GSJ. Next, the healthy man was judged as less weak than the unhealthy man, but not for participants with high GSJ. Specifically, increasing GSJ was associated with an increased weakness judgment of the healthy man. Finally, participants with high GSJ judged the healthy man as less agentic than the unhealthy man, as increasing GSJ was associated with lower agency judgments for the healthy man.

Discussion and conclusion: Our findings indeed suggest that men who engage in healthy behaviors are perceived differently and may even face backlash, particularly from individuals with strong GSJ beliefs.

We discuss how men might be discouraged from engaging in healthy behavior due to their expectations of how others may perceive them.

Abstract number A99

Session: Poster Session 2 (15.10 - 16.10)

Title: Evolution of Semantic Facilitation and Interference in Lexical Retrieval in aging and Alzheimer's disease

GILIS Sarah* 1, LEFEBVRE Laurent 1, SIMOES LOUREIRO Isabelle 1 (1: Cognitive Psychology and Neuropsychology department, Institute of Health Sciences and Technologies, University of Mons, Belgium)

Speech production requires the activation of semantic representations and the selection of a specific word among semantically related words in a mental lexicon. The semantic context can therefore influence this lexical retrieval. Research has focused on interference processes (Python et al., 2018). However, it remains unclear how the semantic context can also facilitate lexical retrieval. Some studies shown that semantic interference is frequently caused by coordination-taxonomic relation (e.g., cow-horse; picture and word belonging to the same category), while thematic relation (e.g., cow-milk; picture and word sharing a temporality, spatiality, causality, or functionality) facilitate lexical retrieval (Abdel Rahman & Melinger, 2009). However, it has also been shown that experimental settings, especially for superordination relation (e.g., cow-animal; word as the category of the picture), can switch its effect from interference to facilitation (Python et al., 2018). The first objective of our study is to investigate which semantic link facilitates or interferes with lexical retrieval in a picture word interference task. This study will explore the evolution of these effects with age and Alzheimer's disease (AD). Indeed, it has been showed that AD leads to lexical-semantic difficulties affecting retrieval of words and their meaning. Our protocol will include four experimental conditions relating to the link between a picture to be named and a word written on it: (1) a coordination-taxonomic relation, (2) a superordination relation, (3) a thematic relation and (4) a control condition. We will present the experimental plan of this study as well as the different steps of the methodological construction.

Abstract number A100

Session: Poster Session 2 (15.10 - 16.10)

Title: Is Attention to Culture Enough? The Joint Effects of a Multicultural Curriculum and Equity Pedagogy in Addressing Achievement and Belonging Gaps in Flemish Primary Schools.

INÉS Páramo Barrera *, ROY Konings, JOZEFIEN De Leersnyder; KU Leuven, Belgium

Objectives

Across various countries, pupils from ethnic minoritized groups tend to score lower on academic achievement and school belonging compared to ethnic majority students. In response, multiculturalism - which involves valuing and using diversity as a pedagogical resource - has emerged as a potentially effective alternative to traditional monocultural schooling, as it may help bridge the achievement and belonging gaps between minoritized and majority students. However, criticism has been directed towards multiculturalist schools for their tendency to focus on the inclusion of cultural diversity in the curriculum while paying insufficient attention to issues of power and inequity in the classroom. Advocates of critical multiculturalism argue that the inclusion of equity practices is necessary to better tackle educational inequalities.

Method

Using survey data collected from 59 primary schools in Flanders (174 teachers and 2,772 Pupils), we will first test whether i) multiculturalism in the curriculum and ii) equity pedagogies alone moderate the relations between ethnic status and school outcomes (achievement and belonging). Then, we will test whether iii) the interaction between multiculturalism and both forms of equity pedagogy significantly moderate these relations.

Expected results

We expect that ethnic minority (vs. majority) status will be related to lower levels of achievement and school belonging in our sample. We also expect that multiculturalism in the curriculum and equity pedagogy will decrease educational disparities; we expect the combined approach to be the most effective at reducing school gaps.

Discussion and conclusion

The implications of our findings for multicultural school theories and practices will be discussed.

Abstract number A101

Session: Poster Session 2 (15.10 - 16.10)

Title: To learn or not to learn: spontaneous name learning strategies in young and older adults

Christel Devue, Marie Badolle, Serge Brédart - Université de Liège

People's names are notoriously challenging to learn at all ages, more so than semantic information. Because people are somewhat aware of memory limitations and of the difficulty of learning names, they might use cost-efficient encoding strategies whereby they devote more memory resources to the names of people that are most likely to be useful to learn than others. To test this hypothesis, we told young and older participants that they would judge excerpts of a new Belgian TV series about a group of 12 musicians and that they could first review information about the characters to facilitate the upcoming viewing. Information to review consisted of the character's pictures, their first name and their instrument. The probability of appearance of each character in the series was also specified via an importance label (Main, lead or extra; with four characters per category). We then subjected participants to a cued recall test and asked them to recall names, instruments and importance labels associated with pictures. Preliminary results suggest that young adults have better memory performance than older ones and that semantic information (instruments) is better recalled than names. In line with a cost-efficient encoding strategy, participants in both groups tended to prioritise learning names and semantic information of the most important characters to the detriment of others. Interestingly, individuals who used that strategy with names also used it with semantic information.

N/A

Abstract number A102

Session: Poster Session 2 (15.10 - 16.10)

Title: A pilot-study on the feasibility, acceptance, and benefits of a tailor-made program of coaching for parents of toddlers with an early suspicion of Autism Spectrum Disorder

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In the French-speaking region of Belgium, most of children with an early suspicion of ASD don't access to appropriate support, and their parents' needs differ. We here propose the Gaspa-rd program for these families, a pilot parental coaching program based on 8 topics that parents could choose according to their children's functioning as well as their own concerns.

We conducted a prospective, non-randomized trial. Parents of 43 children younger than 3 years old, considered to be at risk of ASD (M-CHAT score >3) were assigned to either guidance (n=21) or control (n=22) groups, according to their place on a specialized consultation waiting list. Parents of the "guidance group" were proposed 12 sessions of parental coaching, 2 hours every 2 weeks. Feasibility, acceptance of the program, and topics of the sessions were analyzed. Participant satisfaction, parental quality of life and competencies were assessed via questionnaires. Regression analysis was done on an intervention-to-treat basis.

Out of 21 parents enrolled in the guidance group, 16 completed the satisfaction questionnaire and their feedback was positive at 81%. However, only 13(61.9%) completed the whole intervention. Indeed, findings show that a significant proportion of families experienced stressful life events that hindered the program's achievement, highlighting the need to consider the familial context when building parental coaching programs. The program had beneficial effects across time and between groups on personal growth and mothers' parental competencies. Based on the feedback given by parents, we showed that the program was very well received and overall helpful, encouraging future developments.

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Abstract number A103

Session: Poster Session 2 (15.10 - 16.10)

Title: IT4Anxiety: Implementing five innovative solutions of anxiety management in a psychiatric hospital.

Jaeken Marine* (CNP St Martin), Dubuson Macha* (HEPN)

The management of anxiety is a critical challenge in psychiatric hospitals. To address this challenge, the IT4Anxiety Interreg project has implemented five innovative solutions that aim to improve the management of anxiety in Belgium, at CNP St Martin.

The first solution is a virtual reality therapy that allows patients to immerse themselves in relaxing environments and learn coping mechanisms to manage their anxiety. 5 care units propose VR to their patients experiencing anxiety.

The second solution is a professional fragrance diffuser. Some scents are known for their calming properties and may help to reduce feelings of anxiety and stress. One care unit has been testing two fragrances in a relaxing room for patient with stabilized psychiatric symptoms and investigated their well-being.

The third solution is a mobile EEG headset that, in addition to the regular dEEG and qEEG report, shows EEG biomarkers linked to mental health. This headset is compared to the classical EEG exams conducted at the CNP St Martin hospital.

The fourth solution is a Photoluminescence night kit allowing the patients to sleep without artificial light on during the night. Photoluminescence is a process in which light is emitted by a substance when it is exposed to radiation. This solution is tested in five rooms in a geriatric psychiatry care unit.

The fifth solution is a device for guided breathing and cardiac coherence that uses biofeedback technology to help individuals regulate their breathing and heart rate variability (HRV) to achieve a state of coherence, which is a state of physiological and emotional balance. It is tested on 30 patients hospitalized in a unit for young (16 to 23 years) suffering from psychiatric symptoms.

These solutions have been implemented or are still being implemented at CNP St Martin psychiatric hospital and have shown promising results in improving the management of anxiety. By leveraging technology and evidence-based practices, the IT4Anxiety project aims to improve the quality of care for patients with anxiety disorders and reduce the burden on healthcare providers.

Abstract number A104

Session: Poster Session 2 (15.10 - 16.10)

Title: The place of coaching in the Belgian healthcare system: protocol of a Delphi study

MEZIANI Aïcha*, VAN HOOFF Elke, TANIOUS René, JACQUET Wolfgang, GERAIN Pierre (VUB)

Objectives: Cancer is a disease that poses many challenges for patients, even for survivors. One way to support them is through empowerment, self-management, and quality-of-life interventions, often referred to as "coaching". Coaching in cancer necessitates a (theoretical) framework as what it is and includes remains unclear, an issue currently addressed in a scoping review. At the same time, we know of coaching/coaches that are already involved in cancer care, yet in the absence of a clear understanding of what they (should) do and be.

Method: The present study relies on a Delphi approach to explore how professionals in cancer care perceive coaching. To do so, a panel of 30 healthcare professionals, coaches, and representatives of associations and institutions will participate in rounds of online survey to reach a consensus on coaching in cancer. The first round will consist of having a grasp on the different points from the participants. It will address: definition of coaching; goal of coaching; difference coaching/coaches; tasks and roles; techniques used; place in the healthcare system.

Expected results: The Delphi study will try to provide a consensus on what is coaching in oncological settings in Belgium. The goal is to make dialog its results with results from the scoping review that is conducted in parallel and see what the similarities are between the literature and the field. It will also provide the basis for future investigations and implementations of coaching programs by highlighting the current challenges and objectives that coaching can hold in the current system.

Abstract number A105

Session: Poster Session 2 (15.10 - 16.10)

Title: Preferred Balance Between Politicians, Citizens, and Experts in Policy-Making Decisions

TESSA Haesevoets* (Ghent University), BRAM Verschuere (Ghent University), & ARNE Roets (Ghent University)

Objective: The present research examined the preferred balance between politician, citizen, and expert involvement in policy-making decisions.

Method: Using a constant-sum approach, we examined how much say people prefer politicians, citizens, and experts to have, relative to each other. Additionally, we explored how people evaluate the contribution of each of these three actors in terms of input, throughput, and output legitimacy.

Results: We consistently found that people want citizens and experts to both have a greater decisional weight than politicians. Moreover, our research clarifies that whether citizens or experts should have the greatest say in policy decisions depends on the specific issue at hand, with citizens outweighing experts for more ideological issues and experts outweighing citizens for more technical issues. This latter finding is particularly relevant, given that citizens and experts were found to outperform each other on a different legitimacy dimension. Specifically, we found that citizens' contribution is seen most in terms of input legitimacy, whereas experts are perceived as contributing most to output legitimacy. Of the three actors, people consider politicians as contributing the least to all three legitimacy dimensions.

Discussion: Although people clearly want citizens and experts to both have a greater decisional weight than politicians, this desire for more citizen and expert involvement should not be misinterpreted as a desire to fully exclude politicians from the policy decision-making process. A hybrid form of democracy (in which participatory mechanisms and expert opinions exist alongside representative democracy) is what the general public seems to desire.

Abstract number A106

Session: Poster Session 2 (15.10 - 16.10)

Title: The effect of transcutaneous vagal nerve stimulation on the consolidation of negative memory

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The objective of this study was to investigate whether auricular transcutaneous vagal nerve stimulation (tVNS) during encoding improves memory consolidation of emotional images. Emotional memory was investigated in 30 young healthy adults (18-30 years old, 15 women), with a set of 30 positive, 30 negative, and 30 neutral images from the International Affective Picture System. Memory performance was tested the next day with a free recall and a recognition task. We used a within-subjects, randomized cross-over design to deliver stimulation in STIM (left cymba concha) or SHAM (left ear lobe) condition during encoding (~20 min). Participants had a washout period of at least one week between conditions. Stimulation intensity was set individually (i.e., strong tingling sensation, 0.5 mA minimum). Results showed that participants recalled better negative images encoded under STIM compared to SHAM ($p=0.017$) condition. There was no effect of condition for the recognition task ($ps>0.2$). Stimulation intensity did not differ between conditions and did not correlate with memory performance. Although participants reported shorter post-learning sleep in SHAM (mean=7.3 hours) compared to STIM (mean=8.08 hours), sleep duration did not correlate with memory performance. Our findings suggest that tVNS can improve the consolidation of negative stimuli in healthy young adults but does not affect the consolidation of neutral and positive stimuli. The absence of effect on the recognition task can be due to ceiling effect. A future study will aim at testing whether tVNS can similarly improve memory consolidation when applied immediately after learning.

Keywords: transcutaneous vagal nerve stimulation, emotional memory consolidation

Ventura-Bort et al. "Establishment of Emotional Memories Is Mediated by Vagal Nerve Activation: Evidence from Noninvasive Tawns." *The Journal of Neuroscience*, vol. 41, no. 36, 2021, pp. 7636–7648., <https://doi.org/10.1523/jneurosci.2329-20.2021>

Abstract number A107

Session: Poster Session 2 (15.10 - 16.10)

Title: Involvement of physiological reactivity and interoception in emotional experience after a traumatic brain injury: preliminary results

Alice Bodart, Laurent Lefebvre and Mandy Rossignol (Departement of Cognitive Psychology and Neuropsychology, 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.

Abstract number A108

Session: Poster Session 2 (15.10 - 16.10)

Title: UNDERSTANDING REVERSAL ERRORS IN DYSLEXIA: THE ROLE OF THE MAGNOCELLULAR/DORSAL VISUAL STREAM

Houbben Marie 1, Vannuscorps Gilles 1 (1: Psychological Sciences Research Institute, Université catholique de Louvain, Belgium)

Objectives. Although letter reversals errors (e.g., “b” vs. “d”) have been considered a hallmark of dyslexia for decades, there is little evidence supporting this claim. Moreover, the nature and the origin of these putative errors remains elusive, leading to a current debate on whether these errors are phonological or visual. Recent neuropsychological studies suggest that the magnocellular channel of the visual system play an important role in our ability to discriminate mirror images. In accordance, the present study aims at determining if reversals errors could be explained by a magnocellular deficit in some dyslexic children. **Method.** Using a lexical decision task, we test the ability of normo-typical and dyslexic children enrolled in the 6th grade to detect mirror (e.g., “d” for “b”) and phonological (e.g., “g” for “b”) errors. In addition, a flicker fusion threshold task, which is well known to assess the magnocellular channel, was proposed to the participants. **Results and discussion.** Results suggest that dyslexic children showing a magnocellular deficit on the flicker fusion threshold task consistently have a significant difficulty to detect mirror errors, suggesting that at least some dyslexics are prone to mirror errors which are of visual origin and nature.

Abstract number A109

Session: Poster Session 2 (15.10 - 16.10)

Title: Assessing whether a physical button can improve the quality of experience reporting about worry and rumination in daily life

ZILBERBERG Marcelo*, KU Leuven; and RAES Filip, KU Leuven.

The Experience Sampling Method (ESM) is used to obtain data from participants in daily life. Short questionnaires delivered to smartphones monitor affective and cognitive states such as worry and rumination (“piekeren” in Dutch). However, the need to unlock and direct one’s gaze towards the smartphone screen to answer questions several times a day imposes a significant burden on participants and limits the situations in which such data can be collected. This study investigates whether burden in ESM can be mitigated by allowing participants to use a physical button attached to their smartphones compared to using their smartphone screens when reporting mental states such as “piekeren”. We hypothesize that the physical button will contribute to an increase in compliance rates and allow for better observation of the “piekeren” trait captured in a baseline questionnaire. We recruited 26 Dutch-speaking students to participate in a two-week ESM protocol. Each day, participants were sent 20 notifications asking whether they experienced “piekeren” just before receiving the notification. In one of the two weeks, they replied by clicking the physical button and on the other week they replied through their smartphone screen. Once we finish collecting data from all participants, we will use a paired t-test to analyze the difference between mean of compliance rates with and without using the button. This study may help improve ESM by mitigating participant burden while capturing more information through higher compliance rates. In the long run this could inspire the prevention and treatment of excessive worry and rumination.

Abstract number A110

Session: Poster Session 2 (15.10 - 16.10)

Title: "Under- and overconfidence in the brain: The role of prior beliefs in post-decisional neural signals of confidence"

ANDI Smet* , DENIZ Erdil , ESNA MUALLA Gunay , HÉLÈNE Van Marcke , & KOBE Desender, Brain & Cognition ; KU Leuven

When people make a decision they are able to reflect on whether this decision was accurate or not. This sense of decision confidence has been widely studied but the exact mechanisms behind it are still unknown. Previous research has shown that causally manipulating prior beliefs leads to under- or overconfidence, while leaving objective task performance unaffected. In the current study, we investigated the neural implementation of prior beliefs in the computation of decision confidence. Specifically, we looked at a post-decisional centro-parietal EEG component, the error positivity (Pe), which is thought to reflect post-decisional evidence accumulation informing decision confidence. In the experiment, we manipulated participants' prior beliefs about their ability to perform the task, either by providing them with false feedback or by manipulating the difficulty of the training phase. We next tested the influence of these manipulations during a subsequent test phase. We replicated the finding that a manipulation of prior beliefs leads to significant differences in confidence without changing objective task performance. The EEG data showed a monotonic relation between confidence levels and Pe amplitudes, with lower levels of confidence being associated with higher Pe activity. Critically, there was no significant difference for the Pe component depending on the prior beliefs. These findings are in line with recent views suggesting that the Pe reflects post-decisional evidence accumulation, which is combined with prior beliefs to form a confidence judgment.

Van Marcke, H., Denmat, P. L., Verguts, T., & Desender, K. (2022). Manipulating prior beliefs causally induces under- and overconfidence [Preprint]. *Neuroscience*. <https://doi.org/10.1101/2022.03.01.482511>

Abstract number A111

Session: Poster Session 2 (15.10 - 16.10)

Title: A big role for the little brain: Investigating sequence learning in the cerebellum using transcranial direct current stimulation

DUTA Catalina*, DEROOST Natacha, BAETENS Kris (VUB)

In recent years, there has been substantial evidence suggesting the involvement of the cerebellum in recognizing sequences based on previous experience, and using this information to create internal models which predict future outcomes. While most research into sequence learning has focused on investigating the motor domain, the question of the involvement of the cerebellum across other domains, such as the perceptual domain, remains yet unexplored. To elucidate the role of the cerebellum in perceptual sequence learning we will combine behavioural experiments, using an implicit sequence learning picture task, with transcranial direct current stimulation (tDCS). In a behavioural pilot study using the sequence picture task we demonstrated that participants implicitly learned a series of picture sequences. Presently, we are investigating the behavioural effects of cerebellar tDCS on perceptual sequence learning by administering anodal, cathodal and sham cerebellar tDCS (2 mA, 20 minutes each) before the sequence learning task, in a counterbalanced

within-subjects design (n = 48). The data collection for this study is currently ongoing. In line with tDCS studies targeting cortical areas which are believed to be part of the sequencing network, we are expecting to see a beneficial effect of cerebellar anodal tDCS on the acquisition of sequence learning, and a detrimental effect of cathodal tDCS, compared to sham. This will clarify the potential sequence-specific role of the cerebellum, as well as provide insight into experimental manipulations of the cerebellum using non-invasive brain stimulation techniques.

Garvert, M. M., Dolan, R. J., & Behrens, T. E. (2017). A map of abstract relational knowledge in the human hippocampal–entorhinal cortex. *Elife*, 6, e17086.

Abstract number A112

Session: Poster Session 2 (15.10 - 16.10)

Title: The Reward Nature of Active Avoidance

ILIAS* De Boel, LAURA Vercammen, TOM Beckers, LAURA Luyten & BRAM Vervliet, KU Leuven

In active avoidance designs, the subject learns to circumvent the negative stimuli by interacting in a certain way with the context. The subject usually learns to actively avoid the negative stimuli faster if active avoidance is coupled with a reward. This reward is called the safety signal. In this study we investigated if a stimuli with a negative valence can become rewarding in the absence of a punishment. Vocalisations are an indicator of valence for rats. Short and relative high vocalisations are associated with positive valence, while long and relative low vocalisations are associated with negative valence.

A total of 28 Wistar rats, split in a control and a test condition, underwent five days of learning trials with active avoidance trials in shuttle boxes. The experimental group was rewarded with exposure to a light that is known to be irritable for rats for 5s while the control group was not. After five learning days, the shuttle boxes were redesigned to change the context where they could shuffle to be with or without the light. Subjects were tested for 2 days in this new context. In the experiment we looked at learning rate and amount of freezing in the learning trials. In the testing trials we looked at amount of time spent with the light and vocalisations. Subjects in the experimental condition showed more and faster avoidance on all training days than control.

Abstract number A113

Session: Poster Session 2 (15.10 - 16.10)

Title: Exploring individual differences in androcentrism: Gender egalitarianism attitudes and contextual factors

YUCHAO Wang* 1, COLETTE Van Laar 1, JENNY Veldman 2, (1: University of Leuven (KU Leuven), Belgium, 2: University of Utrecht, Netherlands)

Androcentrism posits that men are perceived as more typical examples in categories where men and women are equally represented, revealing a male bias in typicality. It is widespread in various forms of media at the societal level, such as the overrepresentation of men in movies and books, as well as the default male-typed avatars on social platforms. Prevalence of androcentrism varies across gender-unequal societies. However, there is limited knowledge about how androcentrism differs between individuals and what affects levels of androcentrism. The current project seeks to examine how individual explicit and implicit androcentric bias varies those who differ in gender egalitarianism, as well as how this is affected by context. First, we examine whether individual differences in gender role attitudes/beliefs are associated with differences in androcentric bias across different contexts. Second,

we explore what might lessen individual levels of androcentrism, such as the malleability of men/women social roles and gender essentialism) that we might later manipulate. Finally, we examine whether higher individual androcentrism is related to higher gender-specific system justification and lower gender-related collective action intentions. Together, this project aims to examine both national and individual factors that may be associated with androcentrism, as well as the potential consequences for individuals and society. This allows us to understand the various factors that contribute to androcentrism, and to identify strategies for addressing androcentrism and thus allowing the promotion of gender equality in different countries.

Abstract number A114

Session: Poster Session 2 (15.10 - 16.10)

Title: Study of multiple groups identification salience in binge-drinking attitudes

Catherine Grenier, Colin Wathelet, Stephan Van Den Broucke & Stephanie Demoulin (UCLouvain)

Objectives: Binge-drinking (BD) is an increasingly observed drinking practice, especially among college students (Maurage et al., 2020). It may also be a risk factor for future alcohol addiction. It has been shown that norms and attitudes about alcohol consumption can impact BD intention and behaviour, and that social identification could play a background role in that relationship (Willis et al., 2020). Moreover, multiple groups identification seems to be associated with healthier behaviours (Sani et al., 2015). This study objectives are to explore the influence of multiple groups identification salience on BD intention.

Method: 140 second-year college students were recruited and completed online a questionnaire about norms, attitudes and past BD behaviour for baseline measurement. Group identification salience was later manipulated by asking them to write 5 characteristics they share with the students' group VS the students' group and two other groups. They were then asked to complete a questionnaire measuring norms, explicit attitudes, perceived behavioural control and intention about BD, then to do an IAT task measuring implicit attitudes about alcohol (Dormal et al., 2018).

Results: Analyses are undergoing. First tendencies seem to show non-significant but marginal effect of group identification manipulation on implicit attitudes. More t-test will be performed to compared experimental groups and measure from baseline and post-manipulation.

Conclusions: BD being an often socially induced but hazardous behaviours, research should keep exploring explanatory factors. Social identification, and especially its salience could be an interesting lead to do so.

Dormal, V., Maurage, P., Lannoy, S., & D'Hondt, F. (2018). Positive attitude toward alcohol predicts actual consumption in young adults: An ecological Implicit Association Test. *Journal of Studies on Alcohol and Drugs*, 79(5), 733–740. <https://doi.org/10.15288/jsad.2018.79.733> Maurage, P., Lannoy, S., Mange, J., Grynberg, D., Beaunieux, H., Banovic, I., Gierski, F., & Naassila, M. (2020). What We Talk About When We Talk About Binge Drinking : Towards an Integrated conceptualization and Evaluation. *Alcohol and Alcoholism*, 55(5), 468-479. <https://doi.org/10.1093/alcalc/agaa041> Sani, F., Madhok, V., Norbury, M., Dugard, P., & Wakefield, J. R. H. (2015). Greater number of group identifications is associated with healthier behaviour: Evidence from a scottish community sample. *British Journal of Health Psychology*, 20(3), 466-481. doi:<http://dx.doi.org/10.1111/bjhp.12119> Willis, L., Lee, E., Reynolds, K. J., & Klik, K. A. (2020). The Theory of Planned Behavior and the Social Identity Approach : A New Look at Group Processes and Social Norms in the Context of Student Binge Drinking. *Europe's Journal of Psychology*, 16(3), 357-383. <https://doi.org/10.5964/ejop.v16i3.1900>

Abstract number A115

Session: Poster Session 2 (15.10 - 16.10)

Title: Body dissatisfaction in everyday life: associations with positive body image and affective states

TAILLEFER Marie*; RAEMEN Leni; VANKERCKHOVEN Lore; EGGERMONT Kristina; RAYMAEKERS Koen; CLAES Laurence and LUYCKX Koen (KU Leuven)

The aim of this diary study was to investigate the relationships between body dissatisfaction (BD) and affect – two known risk factors of eating disorders – in everyday life. Moreover, as positive body image (PBI) is thought to be a protective factor of body satisfaction and emotional well-being, we further examined its associations with daily experiences of BD and affect.

82 adolescents and emerging adults completed a baseline questionnaire of trait PBI and then reported on state BD, positive affect and negative affect once a day for a period of 14 days. This data was analyzed with multilevel modeling to investigate between- and within-person effects.

Within-person, state BD was negatively associated with positive affect and positively associated with negative affect on the same day. Higher negative affect on a given day predicted higher state BD on the next day. Higher trait PBI was associated with lower average levels of state BD, higher average levels of positive affect and lower average levels of negative affect. Higher trait PBI was associated with lower instability in positive affect and negative affect (but not with instability in state BD), although these results were inconsistent across different operationalizations of instability.

These results suggest that affective states accompany fluctuations in state BD and that negative affect may be a momentary risk factor of elevated state BD. Furthermore, the protective effect of PBI on body satisfaction and emotional well-being seems to translate to daily experiences of BD and affect as well, highlighting its importance in prevention and intervention efforts.

Sala, M., Linde, J. A., Crosby, R. D., & Pacanowski, C. R. (2020). State body dissatisfaction predicts momentary positive and negative affect but not weight control behaviors: an ecological momentary assessment study. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 26(6), 1957-1962. <https://doi.org/10.1007/s40519-020-01048-6> Tylka, T. L., & Wood-Barcalow, N. L. (2015a). What is and what is not positive body image? Conceptual foundations and construct definition. *Body Image*, 14, 118-129. <https://doi.org/10.1016/j.bodyim.2015.04.001>

Abstract number A116

Session: Poster Session 2 (15.10 - 16.10)

Title: Rumination in the multidimensional learning task

JIALING Ding¹, RACHEL L Bedder²; (1. Department of Psychology, KU Leuven, 2. Princeton Neuroscience Institute, Princeton University)

Rumination, the repetitive and persistent focus on negative thoughts and emotions, is a common feature of several psychiatric disorders, including depression and anxiety. Previous research has shown that rumination is associated with deficits in cognitive control and decision-making, but the extent to which rumination affects reinforcement learning remains unclear. Reinforcement learning describes a fundamental learning process to maximize rewards through trial and error. In this study, we analyzed data from a learning task where participants learned about the reward contingencies of multi-dimensional stimuli. Participants were asked to engage in self-focused thought (rumination manipulation) or neutral thought (neutral manipulation) prior to and during each block of the learning task. Previous research has suggested that rumination may disrupt the collaborative interplay between attention and reinforcement learning. Thus, we fitted four computational models based on reinforcement learning to investigate the potential association between rumination and deficits in

breadth of attention in reinforcement learning. We found that models with a decay parameter, which represents the breadth of attention, outperformed models without this parameter. Moreover, the decay parameter correlated with trait rumination across all models. Intriguingly, these correlations were consistently significant only in participants whose affective state was less affected by the rumination manipulation. These findings indicate that while decay is related to trait rumination, further research is needed to investigate its potential association with state rumination.

Abstract number A117

Session: Poster Session 2 (15.10 - 16.10)

Title: Exploring the Impact of Prediction Errors and Reward Outcome on Affect Using a Probabilistic Reward Task

AEYELS Justine* 1, VANHASBROECK Niels 2, MOORS Agnes 2 and TUERLINCKX Francis 2; (1: KU Leuven, 2: KU Leuven, Quantitative Psychology and Individual Differences)

Various theories have been proposed to identify the factors that determine our affect. Among these theories, the appraisal theory suggests that affect is determined by the appraisal of stimuli based on factors such as goal relevance, goal congruence, expectedness, controllability, and cause. According to this theory, goal congruent stimuli elicit positive affect, while incongruent stimuli elicit negative affect. This effect is more pronounced the more unexpected a stimulus is, meaning that unexpected positive stimuli are preferred over expected ones and vice versa for negative stimuli.

Although the impact of the unexpectedness, or prediction error (PE), on affect has been extensively studied, experimental designs used are often complex. The current study used a probabilistic reward task to simplify the experimental design. Six doors were presented to participants, concealing either a win or loss of a certain amount, along with the respective winning probability. We manipulated goal congruence through the reward outcome (win/loss) and PE through winning probability. Using both a linear regression and the more complex, nonlinear Affective Ising Model (AIM), we analyzed how goal congruence, unexpectedness, and their interaction influence reported affect. The different models were compared using Akaike information criterion (AIC).

Results showed that the model with a main effect for goal congruence and unexpectedness was commonly preferred. However, a limitation of the current study was that both factors were confounded, as they were not orthogonally manipulated in the study design. In a subsequent study, we aim to disentangle these factors and reassess their impact on affect.

Vanhasbroeck, N., Loossens, T., Anarat, N., Ariens, S., Vanpaemel, W., Moors, A., & Tuerlinckx, F. (2022). Stimulus-Driven Affective Change: Evaluating Computational Models of Affect Dynamics in Conjunction with Input. *Affective Science*, 3(3), 559-576.

Abstract number A118

Session: Poster Session 2 (15.10 - 16.10)

Title: Contributions of child attachment and cognitive functions to ADHD symptoms

Jean-François Wylock (1) Co-author(s): Véronique Delvenne (1) Hichem Slama (1), Affiliations: (1) Hôpital Universitaire de Bruxelles (H.U.B), Université libre de Bruxelles (ULB), Belgium

Objectives

Several studies have shown an association between child attachment and Attention Deficit Hyperactivity Disorder (ADHD) symptoms. Numerous studies have found a higher prevalence of cognitive impairments in ADHD. However, few studies have simultaneously investigated the respective contributions of child attachment and cognition to ADHD symptoms. This study investigated the impact of attachment and cognitive functions on ADHD symptoms, in ADHD children compared to typically developing (TD) children.

Methods

We included 89 children aged 7 to 10, 45 with an ADHD diagnosis and 44 TD. Child attachment was assessed with self-report and narrative interview. Behavioral and emotional symptoms (ADHD, comorbidities) were investigated by parent reports. A neuropsychological battery assessed main components of attention (alertness, vigilance) and executive functions (EF; inhibition, working memory, flexibility), together with an EF questionnaire (Behavior Rating Inventory of Executive Function; BRIEF). Mediation models were performed.

Results

Compared to TD children, ADHD children present higher levels of ADHD symptoms, cognitive impairments, comorbidities and higher prevalence of insecure and disorganized attachment. A direct contribution of insecure or disorganized attachment on ADHD symptoms was not supported by analyses. Results showed that associations between attachment and ADHD were mediated by comorbidities and EF.

Conclusions

Our results replicate the association between insecure or disorganized attachment and ADHD, EF and ADHD. However, child attachment has indirect effect on ADHD symptoms and was mediated by comorbidities and EF difficulties. A child attachment influence on ADHD comorbidities should be considered in future studies to explain the association between child attachment and ADHD.

Abstract number A119

Session: Poster Session 2 (15.10 - 16.10)

Title: ADHD symptoms in parents of children with and without ADHD: links with parental attachment style and cognitive functioning

Jean-François Wylock (1) Co-author(s): Hichem Slama (1), Véronique Delvenne (1), (1: Hôpital Universitaire de Bruxelles (H.U.B), Université libre de Bruxelles (ULB), Belgium)

Objectives

Several studies have shown associations between attachment difficulties and Attention Deficit Hyperactivity Disorder (ADHD) symptoms. Recent studies observed higher prevalence of insecure attachment in mothers of ADHD children. Associations with confounding factors such parental cognitive difficulties and comorbidities (e.g. depressive symptoms) remains insufficiently explored. The aim of this study was to investigate the attachment style of parents of children with and without clinical ADHD and explore associations with cognitive functions and comorbidities.

Method

We included 64 parents of ADHD children (40 mothers and 24 fathers) and 64 parents (35 mothers and 29 fathers) of typically developing children aged 7 to 10 years old in this study. ADHD symptoms in

parents were assessed with questionnaire. Attachment style was assessed with self-report. Cognitive functions were explored with a comprehensive neuropsychological battery. Comorbidities were explored with semi-structured interview and self-report of depressive symptoms.

Results

Parents of ADHD children had higher levels of anxious attachment but also of inattentive and depressive symptoms, and more difficulties in working memory, flexibility and in daily life executive functions (EF) assessed using in self-report. Direct contributions of anxious attachment in parents on ADHD symptoms were not supported by mediation analysis. The links between anxious attachment and ADHD symptoms were mediated by self-reported executive difficulties.

Discussion and Conclusions

Our results suggested that the association between anxious attachment and ADHD symptoms in adulthood is indirect and is mediated by executive difficulties. Future studies should considerate these factors to explain the association between attachment style and ADHD symptoms in adulthood.

Abstract number A120

Session: Poster Session 2 (15.10 - 16.10)

Title: (preliminary study) The transdiagnostic effectiveness of the multimodal 'Ronnie Gardiner Method' (RGM) in older adult psychogeriatric patients

Dra. Xenia Brancart; Prof. Dr. Eva Dierckx; Prof. Dr. Gina Rossi

In previously published studies the multimodal therapy 'Ronnie Gardiner Method' RGM showed a wide range of cognitive benefits such as improved core executive functions and a better overall mood (see Bunketorp-Käll et al., 2017; Moumdjian et al., 2017; Pohl, 2018; Pohl et al., 2013; Thornberg et al., 2014). RGM is designed to use all parts of your brain, stimulating them and making them work together. This maximization of the brain stimulates neuroplasticity. In this preliminary study we investigated the effectiveness of RGM in older adult patients residentially admitted to the psychogeriatric hospital of Alexianen Zorggroep Tienen. More specifically we tested the effects RGM could have on the transdiagnostic factors like the core executive functions (using CANTAB and COAST), cognitive emotion regulation strategies (using CERQ) and the subjective wellbeing of patients (using WEMWBS). Patients with mild to severe cognitive impairment or with other conditions potentially influencing cognitive functioning were excluded. At baseline, 22 patients were assessed (Meanage = 67,27yrs, SD = 5,71; 14M, 8F), only 9 patients were reassessed after a 6-week period (Meanage = 65,56yrs, SD = 4,78; 6M, 3F). With this limited dataset, findings suggest patients became significantly more focussed on positive things when faced with difficulties (ANDP: $Z = -2,26$, $p = 0,02$) and catastrophic thinking reduced significantly (CATA: $Z = -2,13$, $p = 0,03$). These results are promising given the smaller sample size. With a larger sample size and more power we suspect to see more significant positive effect, in line with current research on the topic.

Bunketorp-Käll, L., Lundgren-Nilsson, S., Samuelsson, H., Pekny, T., Blomvé, K., Pekna, M., Pekny, M., Blomstrand, C., & Nilsson, M. (2017). Long-Term Improvements After Multimodal Rehabilitation in Late Phase After Stroke. *Stroke*, 48(7), 1916–1924. <https://doi.org/10.1161/strokeaha.116.016433> Moumdjian, L., Sarkamo, T., Leone, C., Leman, M., & Feys, P. (2017). Effectiveness of music-based interventions on motricity or cognitive functioning in neurological populations: A systematic review. *European Journal of Physical and Rehabilitation Medicine*, 53(3). <https://doi.org/10.23736/s1973-9087.16.04429-4> Pohl, P. (2018). The Ronnie Gardiner Method: An Innovative Music-Based Intervention for Neurological Rehabilitation - Theoretical Background and Contemporary Research with Focus on Parkinson's Disease. *Neurophysiology and Rehabilitation*, 32–37. <https://doi.org/10.33805/2641-8991.111> Pohl, P., Dizdar, N., & Hallert, E. (2013). The Ronnie Gardiner Rhythm and Music Method – a feasibility study in Parkinson's disease. *Disability and Rehabilitation*, 35(26), 2197–2204.

Abstract number A121

Session: Poster Session 2 (15.10 - 16.10)

Title: Not a Match: Relational Responding Differentiates Humans from ChatGPT

Matthias Raemaekers, Martin Finn and Jan De Houwer (Department of Experimental Clinical and Health Psychology, Ghent University)

Humans possess an unparalleled capacity for responding to one event in terms of its relationship to another. Importantly, they can respond to relations between events not defined by formal stimulus properties but by contextual features. This type of behavior has been referred to as arbitrarily applicable relational responding (AARR) and has been implicated as a cornerstone of many higher cognitive functions. It is interesting that despite the spectacular successes of machine learning approaches in recent years, relatively few efforts have been made to computationally model the flexible, generative and arbitrary nature of AARR that is an essential part of human learning and behavior. Such a model would benefit computational and learning psychologists alike. Existing computational models are limited as models of human learning because of their low efficiency and limited capacity for generalization beyond what they were trained to do. These problems would be solved by including capacities for AARR. Our project aims to contribute to the literature by interfacing reinforcement learning (RL) models with the perspective on AARR taken by relational frame theory (RFT). Our initial efforts have resulted in relatively simple RL model that, by use of hardcoded knowledge of relations and their implications, is able to simulate seminal empirical demonstrations of AARR in a match-to-sample task. We will progress by gradually reducing the amount of hardcoded knowledge and replacing it with mechanisms that allow the artificial agent to learn how to AARR from past experiences (i.e., interactions with the environment), as described by RFT.

N/a

Abstract number A122

Session: Poster Session 2 (15.10 - 16.10)

Title: The role of empathy and depression in antisocial behavior: an investigation among adolescents hospitalized in a forensic psychiatric unit

Raffaella Di Schiena (University of Liège), Stéphanie Charles (Psychiatric Hospital Jean Titeca, Brussels)

Objectives

Anti-Social Behaviour (ASB) has been traditionally associated with a general lack of empathy. However, latest research shows that affective and cognitive empathy should be disentangled, because these two aspects might be differently related to ASB (Yeo, et al., 2011). Co-morbidity between ASB and depression in adolescence is also widely recognized (Angold, Costello, & Erkanli, 1999).

The purpose of the study is to explore association between those variables in a population of adolescents hospitalized in a psychiatric forensic unit.

Methods

N= 30 male inpatients (Mage= 16,37, SD: 1,42) filled in The Basic Empathy Scale (BES; Jolliffe & Farrington, 2006), measuring affective and cognitive Empathy and The Hamilton Depression Rating Scale (HAM-D); ASB was hetero-rated via the Modified Overt Aggression Scale (MOAS, De Benedictis et al., 2012).

Results

Preliminary correlational analyses showed that affective and cognitive empathy had a differential association with ASB: the lower the affective empathy, the higher the tendency to physical aggression; the higher the cognitive empathy, the lower the aggression towards objects and the self-aggression.

Depression correlated positively with self-aggression and negligence, which is commonly observed in research. However, no association was found between depression and any hetero-aggressive behavior, which is in contrast with previous literature.

Discussion

Data collection is still going. The present results already show that the role of empathy in ASB should be better understood, considering the role of its different components. The non-replication of the association between ASB and depression, , if confirmed, will be discussed based on the specific characteristics of our population.

Angold, A., Costello, E.J. and Erkanli, A. (1999), Comorbidity. *Journal of Child Psychology and Psychiatry*, 40: 57-87. <https://doi.org/10.1111/1469-7610.00424> De Benedictis, Luigi & Dumais, Alexandre & STAFFORD, M.-C & Côté, G & Lesage, Alain. (2012). Factor analysis of the French version of the shorter 12-item Perception of Aggression Scale (POAS) and of a new modified version of the Overt Aggression Scale (MOAS). *Journal of psychiatric and mental health nursing*. 19. 10.1111/j.1365-2850.2011.01870.x. Jolliffe, D., & Farrington, D. P. (2006). Development and validation of the Basic Empathy Scale. *Journal of Adolescence*, 29(4), 589–611. <https://doi.org/10.1016/j.adolescence.2005.08.010> Lay See Yeo, Rebecca P. Ang, Shihan Loh, Karen J. Fu & Jennifer K. Karre (2011) The Role of Affective and Cognitive Empathy in Physical, Verbal, and Indirect Aggression of a Singaporean Sample of Boys, *The Journal of Psychology*, 145:4, 313-330, DOI: 10.1080/00223980.2011.568986

Abstract number A123

Session: Poster Session 2 (15.10 - 16.10)

Title: Majorities' emotions acculturate too: The role of intergroup friendships and clarity of minority emotion norms

EREN ASLI Tekin, KU Leuven* ; FELIPE FONTANA Vieira, KU Leuven* ; ALBA Jasini, KU Leuven; BATJA Mesquita, KU Leuven

When people come into contact with members of a new/other culture, their emotions may acculturate. In support of this idea, previous research has found that the emotions of immigrant minorities who have frequent contact with majority others, fit the majority emotion norms better than those who have less contact. Little is known about the possibility of majority emotions acculturating to the minority culture norm. To shed light on this question, the current study investigated the emotional patterns and social contact experiences (i.e., self-reported friendships with minority peers) of 916 majority youths in a representative sample of Belgian middle schools. We computed majorities' emotional fit with minority culture by relating their emotional patterns to the average emotional pattern reported by their minority classmates in comparable situations. We also examined the role of clear minority norms for emotions (measured as a high average fit of minority classmates' emotions with the emotions of other minority students in the class). Our results suggest that the emotional fit of majority students to the minority norm is high when they have close friendships with majority members but only in contexts where there is clarity on the minority emotion norms.

Abstract number A124

Session: Poster Session 2 (15.10 - 16.10)

Title: Testing the Reliability of the tLoad-dBack Cognitive Fatigue Induction Task

*SAMYN, Chloé 1, HRABOVECKY, Jeromy 1, STRAUSS, Mélanie 1, PEIGNEUX, Philippe 1, SLAMA, Hichem, (1: Hôpital Universitaire de Bruxelles (H.U.B), Université libre de Bruxelles (ULB), Belgium)

Objectives

The tLoad-dBack task (TLDB; Borragàn et al., 2017) is an individualized cognitive fatigue (CF) task based on the Time-based Resource-sharing (TBRS) Model (Barrouillet, Bernardin & Camos, 2004). It is carried out over 2 days (calibration day 1, fatigue day 2). The aim of this study is to determine whether the calibration phase of this task is reliable.

Methods

Participants (n=35) completed the calibration phase of the TLDB at 3 separate, randomized times. The TLDB combines two tasks while adding a time pressure. The calibration phase consists of a training phase and a step-wise block format where stimulus presentation speeds (SPS) are increased by 100ms until performance drops below 85%.

Results

The results of a repeated measures ANOVA were significant ($p < .001$). The Bonferroni post-hoc analyses show significant differences between SPS at times 1 and 2 and times 1 and 3 (both p 's $< .001$), but no significant difference between times 2 and 3 ($p = 1$). Mean SPSs for the 3 times are 0.85ms, 0.76ms and 0.75ms.

Discussion and Conclusion

Results suggest that after 3 task calibrations, a small but statistically significant difference occurs: 100ms total between times 1 and 3. This is likely due to learning. The nature of this task is to use the maximum SPS from the calibration to induce CF on Day 2. This is done by running the task for 16 minutes, non-stop. While 90ms may not be significant enough to disrupt the CF induction phase, future studies should consider a second calibration phase in order to account for learning.

Barrouillet, P., Bernardin, S., & Camos, V. (2004). Time constraints and resource sharing in adults' working memory spans. *Journal of Experimental Psychology: General*, 133(1), 83. Borragàn, G., Slama, H., Bartolomei, M., & Peigneux, P. (2017). Cognitive fatigue: A time-based resource-sharing account. *Cortex*, 89, 71-84.

Abstract number A125

Session: Poster Session 2 (15.10 - 16.10)

Title: Targeted Emotion Regulation: A Registered Report project

Matthieu Koroma¹, Christina Schmidt¹, Björn Rasch², Athena Demertzi¹ (1 : GIGA-CRC In Vivo Imaging, Allée du 6 Août, 8 (B30), 4000 Sart Tilman, University of Liège (Uliège), BELGIUM, 2 : Division of Cognitive Biopsychology and Methods, Department of Psychology, University of Fribourg, Fribourg, SWITZERLAND)

Objectives: In this Registered Report project, we will investigate how reactivations alleviate the visceral tones of emotional memories. Reactivations can be experimentally induced by presenting cues associated with memory traces, a procedure called Targeted Memory Reactivation (TMR). The

neurophysiological and cognitive mechanisms leading to the attenuation of emotional memories after TMR remain debated. To address this question, we will couple sound cues with relaxing words to test how reactivations boost the regulation of emotional memories in wakefulness and sleep.

Methods : Healthy adults will be continuously recorded with EEG, EOG, EMG, ECG and respiration. They will first be exposed to fear-related images (eg, wolf) associated with sound cues (eg, woof) and rate their subjective arousal responses to these images. Different sets of sounds cues will then be played alone or simultaneously with relaxing words (eg, “calm”) during wakefulness, NREM or REM to trigger reactivations. Finally, participants will rate the same images again. All material and procedure will be openly available at: <https://osf.io/y8u73/>

Results: Results from our pilot study during wakefulness will be presented. We hypothesize stronger arousal reduction, enhanced theta/gamma frontal activity and larger interbeat interval for images cued vs. uncued, and with vs. without relaxing words as measured by subjective and physiological arousal responses.

Conclusions: By investigating the brain, bodily and subjective correlates of aversive memory reactivations coupled or not with relaxing words, we will investigate if reactivating memory contents render them available for emotional reprocessing and can serve to boost emotion regulation across different arousal states.

Abstract number A126

Session: Poster Session 2 (15.10 - 16.10)

Title: Mechanisms of interoceptive-exteroceptive integration during cardio-audio synchrony

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Objectives: In this preregistered study, we investigate how the synchronization between bodily signals and external stimuli supports efficient interactions with our surroundings. To do so, we build on previous literature showing that detection of deviant stimuli induces a cardiac deceleration if sounds are played in synchrony with heartbeats. This effect has been alternatively explained within the predictive coding framework as a surprise response, an interoceptive active inference process or as resulting from a dynamical coupling between stimuli and cardiac activity.

Methods: We designed an auditory oddball paradigm whereby deviants, played in synchrony or not with the heartbeat, vary in terms of predictability (regular or random) and type of deviation (rare tone or omission). Outcomes measures are reaction times and multi-modal physiological responses (EEG, ECG, EMG, EDA, respiration, pupil) to deviants. In addition, interoceptive abilities will be assessed with FR-MAIA questionnaire and discrimination questions between synchronous and asynchronous conditions during the task.

Results: Results of our behavioral task (n=10) and preliminary results of our physiological experiment (n=40) will be presented. All the procedure, hypotheses, dataframes supporting analyses and codes will be openly accessible via <https://osf.io/6fvuw/>

Conclusion: By specifying how cardio-audio synchrony affects physiology and behavior according to three competing theories, we will obtain a comprehensive picture of the mechanisms supporting interoceptive-exteroceptive integration. By investigating their relation to interoception, we pave the

way for testing the preservation of these mechanisms in low arousal states to gain insight into how consciousness contributes to the integration of the body, the brain and the environment.

Pfeiffer, Christian, et Marzia De Lucia. 2017. << Cardio-audio synchronization drives neural surprise response >>. Number: 1 Publisher: Nature Publishing Group, Scientific Reports 7, no 1 (1er novembre 2017) : 14842. issn : 2045-2322, visité le 20 mars 2023. <https://doi.org/10.1038/s41598-017-13861-8>. <https://www.nature.com/articles/s41598-017-13861-8>. , Pelentritou, Andria, Christian Pfeiffer, Sophie Schwartz et Marzia De Lucia. 2022. Cardio-audio synchronization elicits neural and cardiac surprise responses in human wakefulness and sleep. Pages: 2022.03.03.482861 Section: New Results, 24 octobre 2022. Visité le 20 mars 2023. <https://doi.org/10.1101/2022.03.03.482861>. <https://www.biorxiv.org/content/10.1101/2022.03.03.482861v2>.

Abstract number A127

Session: Poster Session 2 (15.10 - 16.10)

Title: Indicators of Careless Responding in Momentary Experience Sampling Method Questionnaires

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The Experience Sampling Method (ESM; Csikszentmihalyi & Larson, 1987) is a data collection method in which participants are instructed to assess their current experiences several times a day by completing a short questionnaire. It offers high ecological validity and reduces the effect of retrospective or memory biases. Nonetheless, researchers lack an objective standard to determine whether careless responses occurred in momentary ESM questionnaires. Based on a literature analysis (e.g., Curran, 2016; Goldammer et al., 2020), we identified three potential indications of careless response at the measurement occasion level: psychometric antonyms, across-item standard deviation, and long-string. We consider three other possible indicators: written response length, response time, and item-retest consistency. The objective of the present study was to examine the performance of these indicators of careless responding in data from momentary ESM questionnaires. 97 participants were allocated to one of two conditions, distinguished by the instructions provided. Participants receiving the first instruction set (n = 52) were directly guided on how to fill in green (i.e., careful) and red (i.e., careless) questionnaires, whereas participants receiving the second instruction set (n = 45) were told a cover story intended to allow for more flexibility. Diverse analyses were conducted with the computed indices—including correlation analyses and principal component analysis. Finally, logistic regression was performed as a first step towards building an algorithm capable of differentiating careless from careful responses. Overall, low item-retest consistency, low written response length, and low across-item standard deviation were the best predictors of carelessness in that order.

Abstract number A128

Session: Poster Session 2 (15.10 - 16.10)

Title: Emotion regulation, Sleep problems, and Non-suicidal Self-injury in Adjudicated Youth

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Objectives: Emotion dysregulation and sleep problems are important risk factors for non-suicidal self-injury (NSSI) in adolescents. The present study examined the role of maladaptive emotion regulation styles (suppressive and dysregulated emotion regulation) and sleep problems in predicting NSSI after controlling for gender and posttraumatic stress symptoms (PTSS) in a sample of Belgian adjudicated youth.

Method: The sample included 52 adolescents (Mage= 15.77, SD= 1.26) in a juvenile residential facility in Flanders (CIS “De Kempen”). Pearson correlation was used to examine the association between maladaptive emotion regulation styles, sleep problems, and NSSI. Also, hierarchical regression analysis was performed to examine whether suppressive and dysregulated emotion regulation and sleep problems predicted significant variance in NSSI above and beyond gender and PTSS in this population.

Results: Results showed that dysregulated emotion regulation style and sleep problems were positively correlated with NSSI in Belgian adjudicated youth. In addition, dysregulated emotion regulation accounted for significant variance in NSSI after controlling for gender and PTSS. However, suppressive emotion regulation and sleep problems did not predict NSSI beyond gender and PTSS.

Discussion and Conclusion: Findings provide evidence that dysregulated emotion regulation and sleep problems are associated with NSSI in Belgian adjudicated youth.

Abstract number A129

Session: Poster Session 2 (15.10 - 16.10)

Title: The Relationship between Mood and Cannabis Use in High Risk Adolescents

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As more countries are endorsing the legalization of cannabis (Budney & Borodovsky, 2017), it is crucial to thoroughly examine the well-established relationship between cannabis use and psychosis (Ksir & Hart, 2016; Wilkinson et al., 2014). One of the explanations for the higher usage of cannabis by individuals with psychotic disorders is the so-called self-medication hypothesis (Atakan, 2008). It proposes that individuals with psychosis are more likely to use cannabis to alleviate distressing symptoms or medication side effects. Another potential explanation for the fact that only a minority of cannabis users develop psychotic disorders is that vulnerable individuals react differently to cannabis (Henquet and colleagues, 2010; Verdoux and colleagues, 2003). Using data from the SIGMA, a longitudinal and experience sampling cohort study, we plan to test our hypothesis on a subset of participants (N = 159) in Wave 1 who reported cannabis use during the week of testing. To test the self-medication hypothesis, we will perform a multilevel analysis to see whether negative or positive affect is more likely to precede cannabis use in participants with more severe psychotic symptoms. In order to test the differential reactivity hypothesis, we will perform a multilevel analysis to see whether levels of positive or negative affect differ subsequent to cannabis use, according to the severity of participants' psychotic symptoms. We expect to find support for the self-medication hypothesis. Also, we expect to see lower levels of positive or negative affect in participants with more severe psychotic symptoms subsequent to cannabis use.

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Abstract number A130

Session: Poster Session 2 (15.10 - 16.10)

Title: Temporal patterns of association between physical activity and internalizing symptoms: A functional data analysis.

PEETERS Lisa* (KU Leuven), AHN Woo-Young (Seoul National University)

Objectives. Timing of physical activity (PA) is increasingly considered relevant in studies investigating PA and its relationships with covariates such as mental health. To this end, summary measures are not sufficient, as PA varies throughout the day. Functional data analysis (FDA) facilitates the estimation and exploration of smooth functions such as a 24-hour PA function. Therefore, this work explores how it can be a tool for the exploration of temporal patterns of association between PA and mental health.

Methods. Two FDA techniques were applied to Fitbit data in the U.S.-based ABCD study (N = 5411, mean age = 12.0 years) to assess relationships between both broad and detailed temporal PA patterns and internalizing symptoms. First, curve registration and functional PCA yielded subject-specific scores for major sources of variation in PA, which were used to assess relationships between broad PA patterns and internalizing symptoms. Second, Scalar-on-Function-Regression was used to describe the detailed temporal relationships between PA and internalizing symptoms.

Results. The combination of curve registration and functional PCA yielded mixed results. Associations between broad PA patterns and internalizing symptoms differed across PA measures (i.e., heart rate, step count, etc.). In line with previous findings, overall daytime activity was negatively associated with internalizing symptoms for 3 out of 4 PA measures. The Scalar-on-Function-Regression revealed periods of negative association across PA measures right before school and during lunchtime.

Discussion and conclusion. FDA can capture temporal aspects of the relationship between PA and mental health that are overlooked when using summary measures.

Abstract number A131

Session: Poster Session 2 (15.10 - 16.10)

Title: Electroconvulsive therapy improves somatic symptoms before mood in patients with depression: a directed network approach

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Objectives: The recent network perspective of depression conceptualizes depression as a dynamic network of causally related symptoms, that contrasts with the traditional view of depression as a discrete latent entity that causes all symptoms. Our aim is to gain insight into the dynamic interactions among symptoms during an acute course of electroconvulsive therapy (ECT).

Methods: The Quick Inventory of Depressive Symptomatology (QIDS) questionnaire was used to assess depressive symptoms twice a week in 69 patients with a unipolar and bipolar depression treated with ECT, with an average of 12 assessments per participant. Dynamic time warping (DTW) was used to analyse individual time series data, which were subsequently aggregated to calculate a directed symptom network and the in- and out-strength for each depressive symptom.

Results: Participants had a mean age of 49 (SD = 12.7) and 61% were female. Somatic symptoms (e.g., decreased weight and appetite) and suicidal ideation showed significant out-strength values, meaning that their improvements tended to precede improvements in mood symptoms in individuals treated with ECT. Sad mood had the highest in-strength, and thus appeared to be the last symptom to improve during ECT treatment ($p < 0.001$).

Discussion and conclusion: In this study, the temporal and dynamic change of symptoms during ECT were examined for the first time contributing to network theories of depression. The results show that somatic symptoms tend to improve before subjective mood symptoms during ECT.

Abstract number A132

Session: Poster Session 2 (15.10 - 16.10)

Title: The relationship between reaction time for categorization task and intuition-based category grading and predicted and observed brain activation.

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This study investigated the association between reaction time in a rapid categorization task and an intuition-based grading task and brain activation observed using fMRI and predicted by an artificial neural network (ANN) model.

We conducted a rapid categorization task using existing visual stimuli in four categories: face, body, scene, and object and analyzed the results with the grading task and brain activation data provided in the Ratan et al. (2021) study.

In general, the reaction time required for stimuli with a higher rating in the target category (face/scene) was shorter, while the reaction time required for stimuli with a higher rating in the non-target category (face/body/scene) was longer. As for the observed and predicted brain activation, the higher the activation in the target category (face), the shorter the reaction time required; the higher the activation in the non-target category (face/body/scene), the longer the reaction time required.

Our study highlights the relationship between brain activation and categorization behavior. High activation in response to stimuli leads to faster categorization decisions in the target category but not for all categories. As for the non-target category, high activation leads to slower decision time in all categories. These suggest that brain responses contain complex information beyond categorization. Our findings highlight the consistency between fMRI-observed brain responses and those predicted by the ANN model, demonstrating the high accuracy of the ANN model in predicting brain responses and suggesting the possibility of utilizing ANN models for further exploration of visual information processing.

Ratan Murty, N.A., Bashivan, P., Abate, A. et al. Computational models of category-selective brain regions enable high-throughput tests of selectivity. *Nat Commun* 12, 5540 (2021). <https://doi.org/10.1038/s41467-021-25409-6>; Ritchie, J. B., Tovar, D. A., & Carlson, T. A. (2015). Emerging object representations in the visual system predict reaction times for categorization. *PLoS computational biology*, 11(6), e1004316. <https://doi.org/10.1371/journal.pcbi.1004316>

Abstract number A133

Session: Poster Session 2 (15.10 - 16.10)

How exciting: Cerebellar transcranial direct current stimulation enhances cerebellar activation during social action prediction based on personality trait information

Authors: Naem Haihambo, Qianying Ma & Frank van Overwalle

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Abstract: Transcranial Direct Current Stimulation (tDCS) has emerged as a promising tool for modulating brain activity and enhancing cognitive and social abilities. The posterior cerebellum has been identified to play a part in social processes, and being part of the mentalizing network, which has traditionally included the TPJ, mPFC and precuneus. In this combined tDCS - fMRI study, we investigated the effects of offline anodal cerebellar tDCS on activation in cerebellar and cerebral mentalizing areas during social action prediction.

Forty-one participants were randomly assigned to either an anodal tDCS group, receiving stimulation over the midline of the cerebellum at 2mA for 20 minutes, or a sham stimulation (i.e., 0mA). Participants then entered the MRI scanner to complete a social action prediction task 20 minutes after stimulation. During the task, participants ordered randomly presented sentences depicting social agents or non-social objects in the correct chronological order based on their personality trait or object characteristic.

Results showed that participants who received anodal tDCS over the cerebellum had increased activation in both the posterior cerebellar and mid-line cerebral (mPFC and precuneus) mentalizing areas, but not the TPJ, compared to those who received sham stimulation. We also found marginally significant increase in reaction times of the anodal tDCS group compared to the sham group.

These findings suggest that cerebellar tDCS can enhance activity in mentalizing areas, highlighting the importance of the posterior cerebellum in social. Our study provides further support for the potential use of cerebellar tDCS as a tool for enhancement of social processing.

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Abstract number A134

Session: Poster Session 2 (15.10 - 16.10)

Title: Analysis of the relationship between children's attitudes towards the environment and their pro-environmental behaviours and behaviours to influence others to adopt pro-environmental behaviours

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Objectives: While pro-environmental behaviours and attitudes toward the environment form the basis for a sustainable future, little is known about their development during childhood (Otto et al., 2019). Yet it is children who will face future environmental challenges and who can in turn encourage behavioural changes in their parents (Legault & Pelletier, 2000). The purpose of this research is to analyze the relationships between children's attitudes toward the environment and their pro-environmental behaviours and behaviours that aim to influence others to adopt pro-environmental behaviours.

Method: A two-wave design was used to collect the data. Survey data was gathered from 45 adolescents from 5 schools in Belgium. The sample consists of 28 girls and 18 boys. The average age is 13 years. Regression and mediation analyses were carried out.

Results: Results show a positive relationship between adolescents' attitudes measured at T1 and their self-reported pro-environmental behaviours measured two months later. Results revealed also that pro-environmental behaviours mediates the relationships between attitudes toward environment and behaviours that aim to influence others to adopt pro-environmental behaviours.

Discussion and conclusion: Some of the pro-environmental behaviours of adolescents may depend on their parents or close circle of friends. Nevertheless, it is important to take into consideration adolescents' attitudes towards the environment because they are associated with a greater likelihood of action.

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Abstract number A135

Session: Poster Session 2 (15.10 - 16.10)

TREATMENT OF LEXICAL-SEMANTIC DISORDERS IN EARLY ALZHEIMER'S DISEASE: PRESENTATION OF THREE INTERVENTION PROGRAMS

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Objectives: Semantic memory can be rapidly affected in early Alzheimer's disease (AD). This semantic impairment results in lexical-semantic disorders affecting the patients' communication skills. The aim of this research is to investigate three methods of lexical-semantic treatment: 1) Elaborated Semantic Feature Analysis (ESFA) based on classical network models of semantic memory, 2) Sensorimotor Stimulation (SSM) based on the theories of embodied cognition, and 3) the mixed method (MM) basing on a hybrid conception of semantic memory combining ESFA and SSM. **Method:** Thirty patients with early AD (MMSE>20) will be selected and randomly assigned to the three intervention programs. The experimental design will be based on the Single Case Experimental Design (SCED) methodology and will be ABAA (A=baseline; B=intervention). During the evaluation phases (pretest, posttest, and follow-up), several tasks will be administered to assess lexical-semantic abilities. The intervention phase will take place over a period of 8 weeks and participants will be met twice a week for 50 minutes. The different intervention methods and methodology will be presented. Moreover, some preliminary results obtained with the ESFA will be also presented.