

EPV0015

Subjective responses to emotional body odors and common odors in autism-spectrum disorders

J. Grave^{1,2,3,*}, J. Noll³, F. Barros^{1,2}, L. Kogler³, J. Freiherr⁴, D. Wildgruber³, S. Soares^{1,2} and B. Derntl^{3,5,6}

¹William James Center For Research, Department Of Education And Psychology, University of Aveiro, Aveiro, Portugal; ²Centre For Research In Health Technologies And Services, Department Of Education And Psychology, University of Aveiro, Aveiro, Portugal; ³Faculty Of Medicine, Department Of Psychiatry And Psychotherapy, University of Tübingen, Tübingen, Germany; ⁴Department Of Sensory Analytics, Fraunhofer Institute for Process Engineering and Packaging (IVV), Freising, Germany; ⁵Lead Graduate School And Research Network, University of Tübingen, Tübingen, Germany and ⁶Werner Reichardt Centre For Integrative Neuroscience, University of Tübingen, Tübingen, Germany

*Corresponding author.

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Introduction: Autism-spectrum disorders (ASD) are characterized by deficits in social domains, associated with abnormal socioemotional perception. Although olfaction provides access to socioemotional cues, little is known about the perception of emotional odors considering their social meaning in ASD.

Objectives: To investigate the subjective responses to emotional body odors (BOs) versus non-social, common odors (COs) in ASD.

Methods: Eleven ASD and 49 typically developed (TD) adults were asked to smell negative, positive, and neutral BOs (axillary sweat from healthy individuals exposed to fearful, happy, and neutral film-clips) and COs, and to rate each odor on perceived pleasantness, intensity, familiarity and arousal. Odors were presented for 5 sec. Analyses were performed with linear mixed-effect models with fixed factors (group × odor type × valence) and covariates (e.g., age; intensity for arousal/familiarity; familiarity for pleasantness). Post-hoc comparisons were Bonferroni-corrected.

Results: Odors were perceived as significantly more intense ($p=.044$) and pleasant ($p<.001$) in ASD than TD. Distinct response patterns were found in ASD and TD. First, positive BOs and COs were similarly arousing and pleasant in ASD ($p>.05$), but not in TD ($p<.001$). Second, positive and neutral COs were equally arousing, familiar and pleasant in ASD ($p>.05$), but not in TD ($p<.001$). No differences were observed between BOs in ASD and TD ($p>.05$).

Conclusions: ASD is associated with abnormal subjective responses to emotional odors, which could contribute to the social communication difficulties characterizing ASD. Since emotional BOs elicit psychological responses in others, analyses on subjective and automatic responses will allow a better understanding of the role of olfaction in ASD.

Disclosure: No significant relationships.

Keywords: Autism-spectrum disorders; olfaction; body odor; emotion

EPV0014

Adults with adhd symptoms express a better inhibitory capacity when the perceptual load is higher

L.R. Carreiro¹, W. Machado-Pinheiro² and A. Afonso Junior^{1*}

¹Developmental Disorders Graduate Program, Mackenzie Presbyterian University, São Paulo, Brazil and ²Departamento De

Ciências Da Natureza, Universidade Federal Fluminense, Rio das Ostras, Brazil

*Corresponding author.

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Introduction: ADHD is associated with impairments in different inhibitory functions, including suppression of an already initiated response and inhibition of distracting information. This work used a protocol that combines the Stroop-matched and stop-signal tasks to examine the association between the frequency of ADHD symptoms and different inhibitory abilities in a young adult.

Objectives: To investigate how the symptoms of inattention and hyperactivity / impulsivity are associated with three forms of inhibition evaluated by the Stroop-matched / stop-signal task: inhibiting an automatic response, controlling interference and canceling a response.

Methods: 38 participants (33 women; mean age = 23.3; SD = 5.17) completed Adult ADHD Self-Report Scale (ASRS) assessing ADHD symptoms before performing the task. Reaction times, accuracy and stop-signal reaction time (SSRT; the latency of the inhibitory process of response cancellation) were calculated for each task condition.

Results: There was a significant correlation of ADHD symptoms and SSRT in the condition with the higher perceptual load (i.e., a greater number of colors presented in the same test). This correlation was negative ($r = -.36$, $p <.05$), which indicates that participants with higher ADHD symptoms frequency had more efficient inhibitory processes in this condition.

Conclusions: (1) the perceptual load of the task influences the cancellation of responses; (2) individuals with higher frequency of ADHD symptoms may have a better inhibitory capacity when the perceptual load is high, possibly reflecting a lower availability of attentional resources to process distracting information.

Disclosure: No significant relationships.

Keywords: Stop-signal reaction time; ADHD; Inhibitory process

EPV0015

Exogenous attention to social stimuli in the neurotypical population: The impact of autism traits

F. Barros^{1,2,*}, N. Teixeira¹, C. Figueiredo³, S. Silva^{4,5} and S. Soares^{1,2}

¹William James Center For Research (wjcr), Department Of Education And Psychology, University of Aveiro, Aveiro, Portugal; ²Center For Health Technology And Services Research (cintesis), Department Of Education And Psychology, University of Aveiro, Aveiro, Portugal; ³Research Unit On Governance, Competitiveness And Public Policies (govcopp), University of Aveiro, Aveiro, Portugal; ⁴Institute Of Electronics And Informatics Engineering Of Aveiro (ieeta), University of Aveiro, Aveiro, Portugal and ⁵Department Of Electronics, Telecommunications, And Informatics (deti), University of Aveiro, Aveiro, Portugal

*Corresponding author.

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Introduction: Autism Spectrum Disorders (ASD) have been associated with decreased spontaneous attention to social stimuli. Several studies further suggest that a higher expression of autism traits (AT) in the neurotypical population (NTP) may also be related to

decreased social attention, although the evidence is still scarce, especially when considering faces as task-irrelevant distractors.

Objectives: This study aimed to explore the relationship between the expression of AT in the NTP and exogenous attention to social stimuli.

Methods: Fifty-one adult participants were recruited and asked to complete the Autism Spectrum Quotient (AQ), to measure AT, and to perform an attentional capture task. In the latter, they were instructed to detect a target letter in the middle of perceptually similar (high perceptual load) or dissimilar (low perceptual load) distractor letters. In 25% of the trials, task-irrelevant distractors, consisting of images of faces (social) or houses (non-social), were shown flanking the letter stimuli.

Results: Response times were found to be affected by distractor-response compatibility, increasing for contralateral distractors, but decreasing for ipsilateral distractors, in relation to trials with no distractors (baseline). Importantly, these trends were magnified for distractor faces in the group with less AT, considering the social skills dimension of AQ, while the same tendency was observed in the group with higher AT, but for distractor houses.

Conclusions: Our results support an altered attentional performance in the subclinical phenotype of the autism spectrum. Furthermore, they also add to existing literature documenting similar attentional abnormalities in both the clinical and subclinical extremes of the spectrum, hinting possible shared mechanisms.

Disclosure: No significant relationships.

Keywords: autism; Attention; social cognition; Broader Autism Phenotype

EPV0016

Evaluation of tava program to improve the quality of life in young adults with autism spectrum disorders (ASD)

A. Alvarez Pedrero^{1*}, I. Parra Uribe¹, R. Muñoz¹, N. Reina¹, M. Llorens², A. Palacin³, S. Membrives^{1,2}, J.A. Monreal⁴ and D. Palao Vidal¹

¹Mental Health, Parc Taulí University Hospital. Autonomous University of Barcelona (UAB). I3PT, Sabadell, Spain; ²Mental Health, Hospital Sant Joan de Deu., Barcelona, Spain; ³Mental Health, Parc Hospitalari Martí i Julià, Girona, Spain and ⁴Mental Health., Hospital Universitari Mútua de Terrassa. CIBERSAM, Terrassa, Spain

*Corresponding author.

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Introduction: Autism spectrum disorders (ASD), is a population that does not usually receive specific treatment.

Objectives: The main objective of the present study is to evaluate whether specific interventions within the TAVA program (transition program to adult life for patients with ADS), produce significant improvements in the quality of life of young adults with ASD.

Methods: This is a prospective randomized clinical study of patients with ASD (according to DSM-5 criteria) seen in outpatient of the Parc Taulí University Hospital in Sabadell (Barcelona) since September 2017. We compared the quality of life, functionality, caregiver burden, and comorbidity of patients in TAVA program (beneficiaries of group therapy and specific medical and psychosocial interventions), with that of control patients (treatment as usual), after 2 years of intervention.

Results: Our sample is composed of 12 patients with ASD. The average age is 18.4 years. 83% of the sample are men (n = 10). 5 of the patients belonged to TAVA and the other 7 were controls. Overall, TAVA patients presented improvement in the ZARIT and BAI scales compared to control patients. The control patients evolved less favorably in the AAA, SRS and RAAS levels compared to TAVA.

Conclusions: Specific interventions in adults with ASD, improve the caregiver's feeling of overload and the patients anxiety, compared to the usual interventions. The lack of regulated interventions produces an unfavorable evolution of the core symptoms of autism. More studies are needed to specify efficient interventions to improve the quality of life of adults with ASD.

Disclosure: No significant relationships.

Keywords: autism; ASD; quality of life; Functionality

EPV0017

The relationship between cognitive test anxiety and mindfulness among university students

P. Ünal-Aydın, M. Sevinç, Y. Arslan, M. Güçlü* and O. Aydın

Psychology, International University of Sarajevo, Faculty of Arts and Social Sciences, Sarajevo, Bosnia and Herzegovina

*Corresponding author.

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Introduction: Cognitive test anxiety is acknowledged as intense anxiety that prevents the effective use of the previously learned knowledge during the exam and leads to a decrease in success. Mindfulness is indicated as the ability to bring one's attention to experiences in the present moment in a non-judgmental way. Despite promising outcomes of mindfulness techniques in regulating stress levels, much uncertainty still exists about the specific associations between cognitive test anxiety and mindfulness subcategories.

Objectives: The aim of this study was to investigate the relationship between cognitive test anxiety and subcategories of mindfulness among university students which may help improving current mindfulness interventions that show promising results to tackle cognitive test anxiety.

Methods: One hundred-eighty-two university students were recruited for the study via online forms. Mindfulness was measured with Five Facet Mindfulness (FFMQ-S) and the cognitive test anxiety was assessed with Cognitive Test Anxiety Scale-Revised (CTAR).

Results: Total scores of CTAR-R has an association between subscales of FFMQ; act-aware and non-judge in a positive direction, whereas; observe and describe in a negative direction. In addition, according to our regression model, FFMQ subscales of describing to indicated lower levels of CTAR scores, whereas act aware and non-judge indicated higher levels of CTAR scores.

Conclusions: The findings of the study partially corroborated the previous results by offering inferences about the subcategories of mindfulness. Additionally, these findings suggest that current interventions may target specific subcategories of mindfulness to maximize the positive outcomes of the treatment.

Disclosure: No significant relationships.

Keywords: Cognitive; stress; test anxiety; mindfulness