

EPV0013

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

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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

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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

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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