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Background

- ❖ Interoception is broadly understood as the perception of the internal state of the body, including physiological sensations such as hunger, thirst, and temperature (Murphy et al., 2017).
- ❖ Recent research suggests that atypical interoception may be associated with autism spectrum disorder (ASD), although some findings are inconclusive (DuBois et al., 2016; Quattrocki & Friston, 2014).
- ❖ The current study investigated the relationship between interoceptive awareness and autism trait severity in order to better understand the link between interoception and ASD.

Objectives

- 1) To explore the group differences in a sample of adults with ASD and typically developed (TD) adults.
- 2) To examine how interoceptive awareness is correlated with autism traits within groups.

Participants & Procedures

- ❖ This study uses data collected via questionnaire; data collection is ongoing.
- ❖ Participants were adults aged 18-40 (ASD n=11; TD n=41).
- ❖ ASD diagnoses were confirmed by clinicians with the Autism Diagnostic Observation Schedule-2 (ADOS; Lord, et al., 2000).
- ❖ Participants completed two questionnaires:
 - The Interoception Sensory Questionnaire (ISQ; Fiene, Ireland & Brownlow, 2018) to assess interoceptive awareness; an example item is “It is difficult for me to describe what it feels like to be hungry, thirsty, hot, cold or in pain.”
 - The Social Responsiveness Scale (SRS; Constantino & Gruber, 2012) to assess autism trait severity

Results

- ❖ As variances were unequal, Mann-Whitney U tests were conducted to examine group differences.
 - **Participants with ASD exhibited higher total scores on the SRS** ($M=68.36$, $SD=30.84$) than TD participants ($M=35.09$, $SD=19.37$), $U=84.5$, $p=.001$ one-tailed.
 - **Participants with ASD also exhibited higher total scores on the ISQ** ($M=41.54$, $SD=22.82$) than TD participants ($M=29.52$, $SD=11.39$), $U=138.5$, $p=.031$ one-tailed.
- ❖ As distributions were non-normal, Spearman’s rank-order correlation tests were run to explore the relationship between interoceptive functioning and autism trait severity within both groups (see Table 1 below).

Table 1. Correlations between ISQ scores and SRS subscale scores.

SRS Subscales	Correlations with ISQ	
	ASD	TD
(1) Social Awareness	.349	.096
(2) Social Cognition	.846**	.393**
(3) Social Communication	.809**	.348*
(4) Social Motivation	.708**	.387**
(5) Restricted Interests and Repetitive Behavior	.727**	.338**

Note. * = $p < .05$; ** $p < .01$

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Conclusions

- ❖ Participants with ASD scored lower on interoceptive awareness than TDs and demonstrated a strong positive association between interoceptive difficulties and autism trait severity in the domains of social cognition, social communication, social motivation, and RRBs.
- ❖ **This association is consistent with prior literature and suggests that interoceptive difficulties are related to ASD trait severity.**
- ❖ As interoceptive challenges are higher in ASD and are related to core social-communicative and RRB symptomatology, future research should evaluate whether interoceptive difficulties represent a meaningful intervention target for improving developmental outcomes in individuals with ASD.

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