

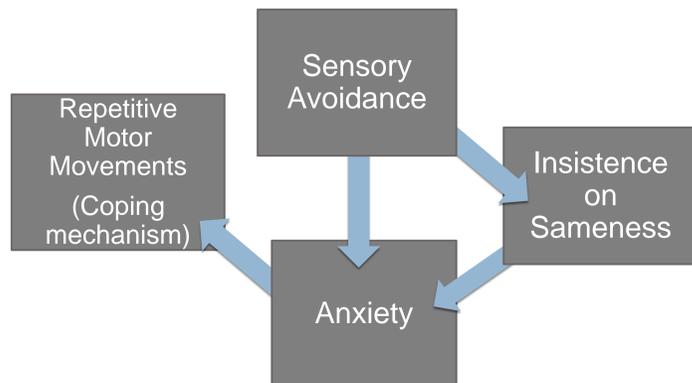
Sensory Processing, Anxiety and Repetitive Behaviour in Children With ASD

Karen R. Black¹, Ryan A. Stevenson¹, Busi L. Ncube², Magali Segers², Morgan D. Barense¹, Susanne Ferber¹

¹Department of Psychology, University of Toronto; ² Department of Psychology, York University

INTRODUCTION

- 40% of children with autism spectrum disorder (ASD) are diagnosed with at least 1 co-morbid anxiety disorder.
 - Most common: social anxiety & OCD
- Mood problems over time lead to increased aggression and self-injury.
- Distress in children with ASD leads to repetitive behaviour:
 - Repetitive motor movements (RMM) → help soothe anxiety
 - Insistence on sameness (I/S) → linked with increased anxiety
- Avoidance of sensory stimulation may mediate the relationship between I/S and anxiety



To test the sensory-RB-anxiety relationship, we asked parents of children with ASD and without (TD) to complete 3 questionnaires about:

- 1) Sensory-related behaviours
- 2) Repetitive behaviours
- 3) Anxious behaviours

We predicted:

- 1) I/S would be positively correlated with avoidance and anxiety (for all subscales)
- 2) I/S-avoidance-anxiety correlations would be significantly different between ASD and TD groups

PARTICIPANTS

Parent-reported characteristics of ASD & TD children

	N	Age		Sex		FSIQ	
		M(SD)	Min/Max	M	F	M(SD)	Min/Max
ASD	39	11.95(3.1)	7/20	29	10	93.41(22.56)	45/135
TD	34	11.56(3.1)	6/18	10	24	102.79(10.32)	86/121

METHODS

Questionnaires

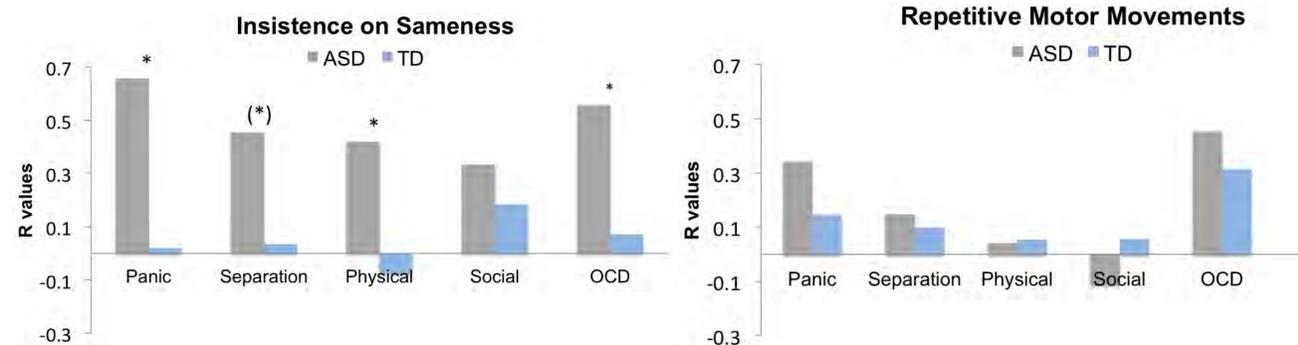
Sensory Profile 2: Child	Repetitive Behaviour Questionnaire-2	Spence Children's Anxiety Scale
4 quadrants of behavior affected by sensory processing: low registration, seeking, sensitivity, and avoiding	Frequency and severity ratings of repetitive behaviours: RMM, I/S	Assessment of different types of anxiety: Panic, separation, physical, social, OCD

All subscales were correlated

RESULTS

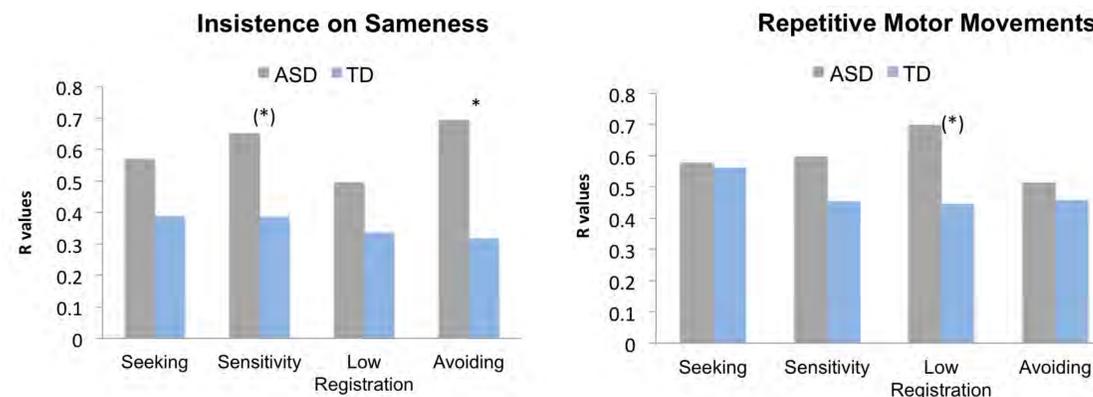
* = $p < .05$ (two-tailed)
(*) = near significant

Correlations between anxiety and repetitive behaviour



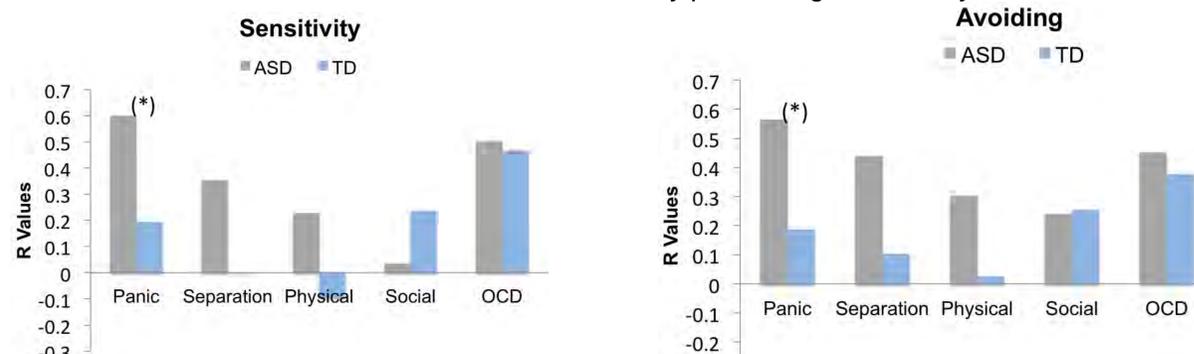
Only I/S showed significant differences: with all anxiety subscales except for social.

Correlations between repetitive behaviour and sensory processing



Sensory processing was related to only I/S, and only for the Sensitivity & Avoiding subscales

Correlations between sensory processing and anxiety



Within Sensitivity and Avoiding, only panic trended towards a significant difference

CONCLUSION

- Anxiety, in almost all forms, is differently related to repetitive behaviour, specifically "insistence on sameness," in individuals with ASD relative to their typically developed peers.
- Findings indicate significant differences between ASD and TD groups for sensitivity and avoiding:
 - Subscales of sensitivity and avoiding correlate with I/S but not RMM.
 - Sensitivity and avoidance correlate with panic, which also demonstrated the strongest relationship with I/S.
- Results expand on previous research:
 - show which types of anxiety are driving the anxiety-RB relationship
 - Highlight that social anxiety is not related to either RMM or I/S

FUTURE DIRECTIONS

- We now need to investigate the directionality of these relationships:
 - Sensory sensitivity may lead to anxiety (panic), which is then dealt with through I/S.
- Next Steps
 - A hierarchical regression to assess causality as opposed to descriptive measures.
 - Teacher reports of the Sensory Profile (to improve response validity)

Improving our understanding of the role sensory sensitivity plays within the anxiety-RB axis of ASD will enable development of interventions which treat the underlying sources of distress rather the symptom.