



## Background

Repetitive behaviours (RBs) are a core feature of Autism Spectrum Disorder (ASD) and impact day-to-day life.

Atypical sensory processing is also a common ASD symptom, specifically hypersensitivity.

Evidence suggests a relationship between hypersensitivity and repetitive behaviours.

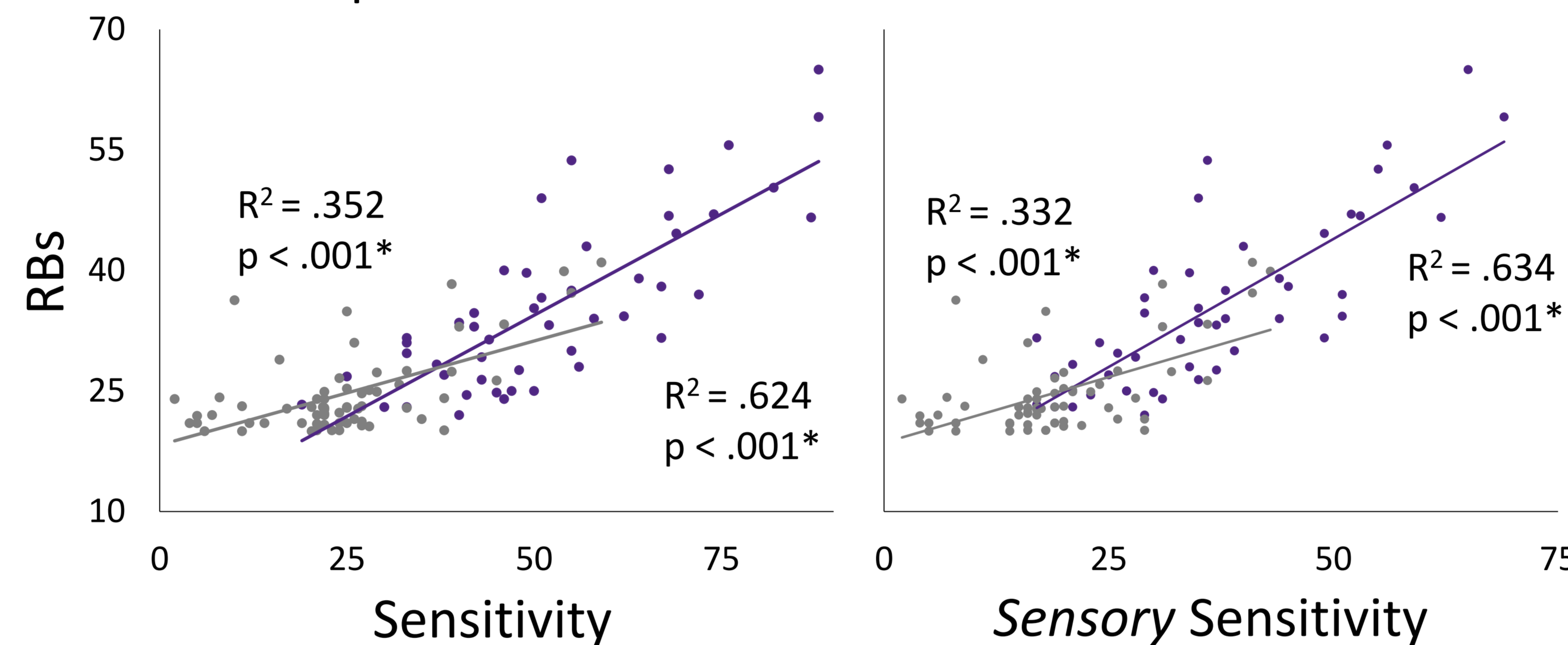
The over-arousal theory suggests that RBs act as a homeostatic mechanism for sensory input.

- 1) How are hypersensitivity and RBs related?
- 2) Is the relationship consistent across sensory modalities?
- 3) Is the relationship specific to ASD?

## Results

First, we correlated the Sensitivity SP-2 subscale and the total RBQ-2 score in both ASD and in TD.

Second, we removed items not specifically measuring *sensory* sensitivities and correlated this variable with total repetitive behaviours.



## Results

A hierarchical regression identified predictive factors of RBs.

Unmatched demographic factors were controlled for in Model 1, sensory sensitivity added in Model 2, and diagnosis in Model 3.

Model R	.420*	.826*	.828
Predictor	Partial Correlation		
Intelligence	-.408*	-.192*	-.162
Age	.004	-.126	-.143
Sex	-.098	-.029	.001
Sensitivity		.817*	.711*
Diagnosis			.085

## Methods

Participants: Parents of 114 children

	N	Females	Males	M Age	IQ
ASD	49	10	39	12	92.69
TD	65	31	34	12	109.06

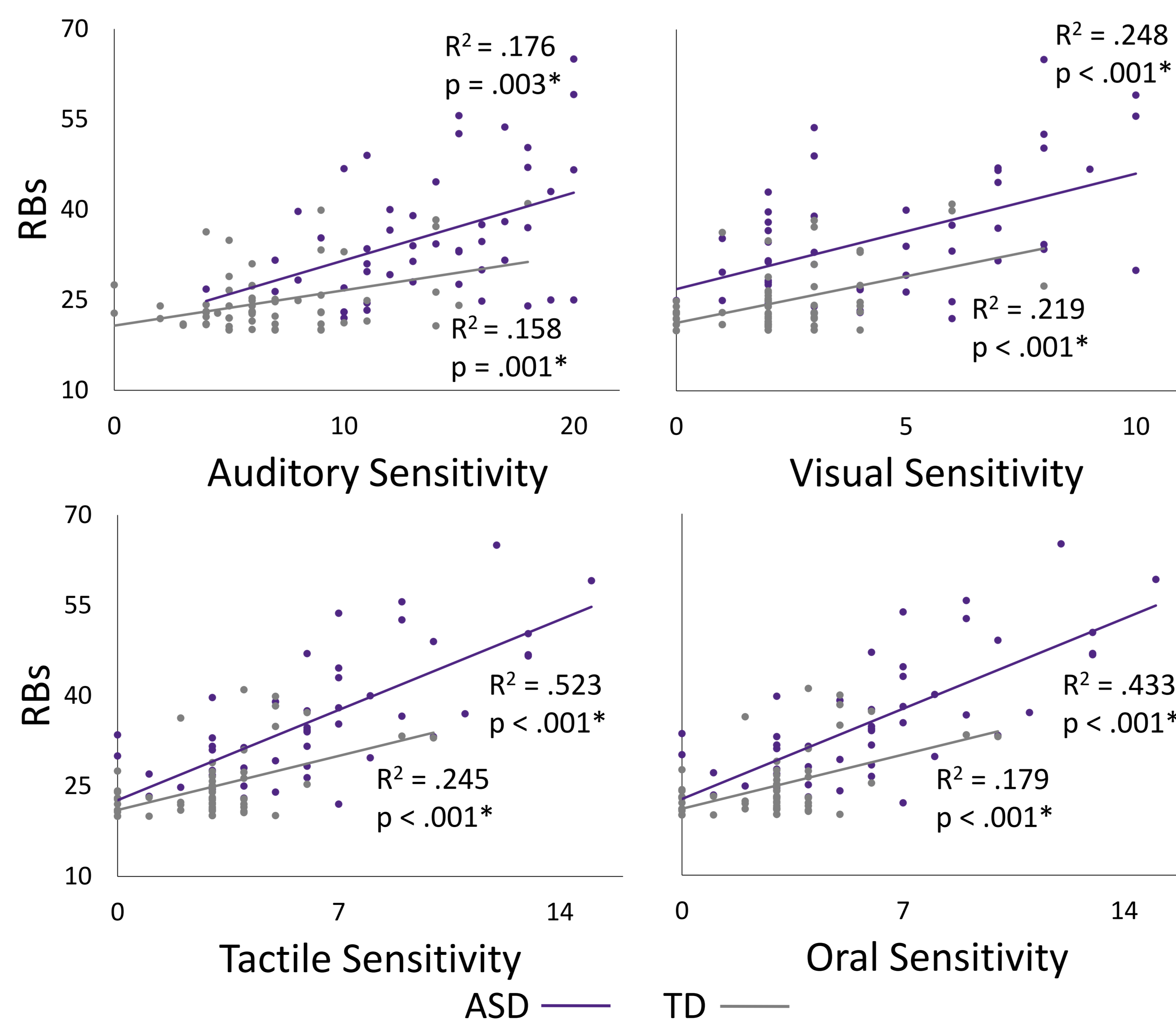
Measures:

Sensory Profile 2 (SP-2)

Repetitive Behaviours Questionnaire 2 (RBQ-2)

## Results

Atypical sensory processing for each sensory modality was then correlated with RBs in ASD and TD groups.

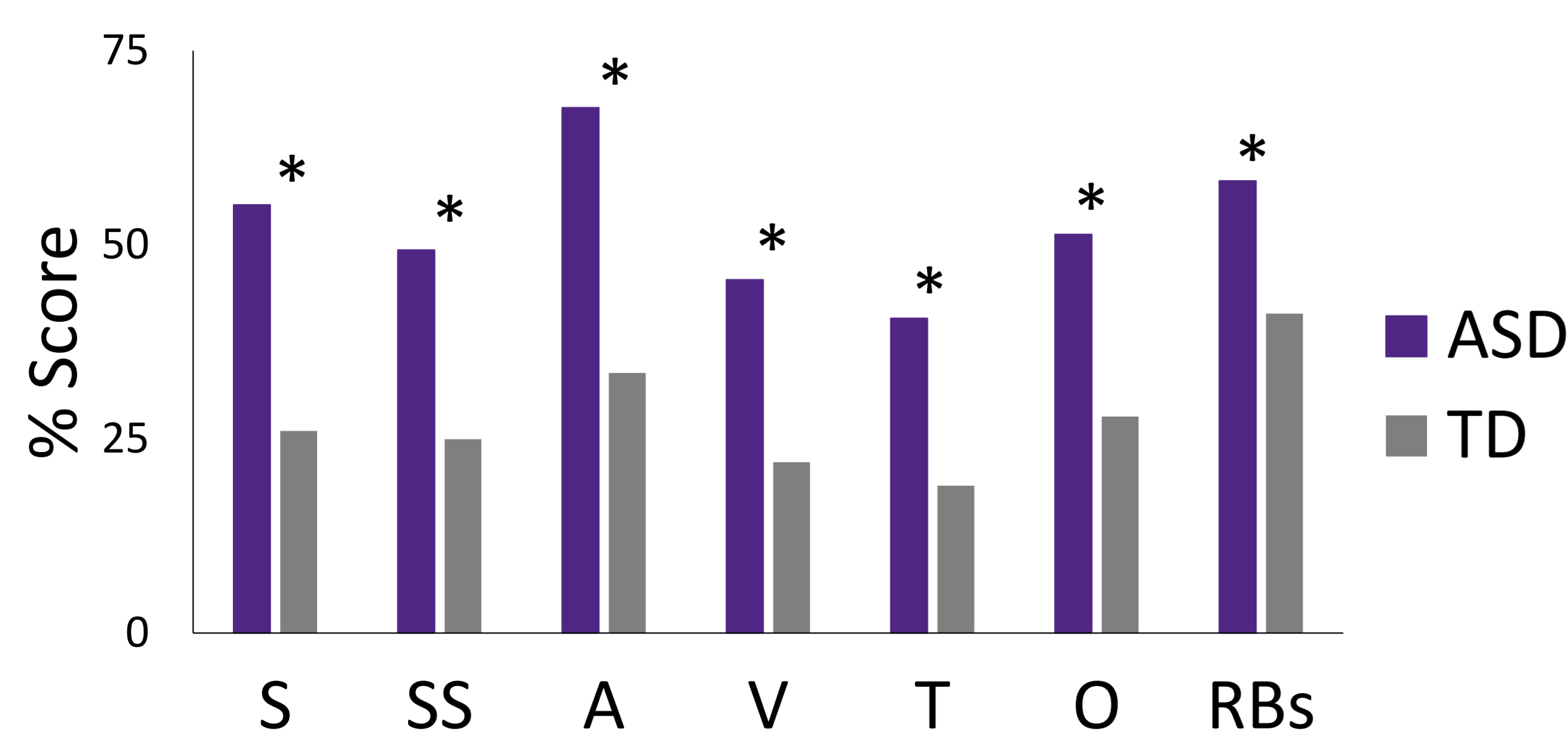


## Discussion

- 1) A strong positive correlation was found between hypersensitivity and RBs. Hypersensitivity was a significant predictor of RBs when controlling for intelligence, age, and sex. Diagnosis did not explain additional variance in RBs.
- 2) The relationship between hypersensitivity and RBs was significant across modalities in both groups.
- 3) The relationship between hypersensitivity and RBs did not differ across groups, but the absolute levels of these symptoms did, showing more severe scores in ASD.
- 4) Follow up studies are currently underway to determine if sensory sensitivities play a causal role in repetitive behaviours in ASD.

## Results

Differences in symptoms between ASD and TD were verified with t-tests.



Hypersensitivity is significantly predictive of repetitive behaviours in ASD and TD.

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