

# Maladaptive Emotion Regulation in Children with Sensory Over-Responsivity

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## Background

- Sensory over-responsivity (SOR) is characterized by extreme negative reactions to normative sensory experiences.
- SOR is found in an estimated 15% to 20% of typically developing children and associated with elevated psychiatry symptoms.<sup>1</sup>
- SOR may be related to alterations in emotion regulation (ER),<sup>2</sup> leading to the development of psychopathologies.

**Aim1:** Characterize if SOR is associated with higher avoidance coping use at different ages.  
**Aim2:** Examine if age moderate the association between SOR and ER.

## Participants

- Data were obtained from the Healthy Brain Network study<sup>3</sup> in New York City.
- Sample is enriched for psychiatric symptoms.
- Limited analyses to 2081 participants aged 8-14.

## Methods

### Measures

- Social Responsiveness Scale-item 42 (SOR)
- Children's Coping Strategies Checklist (ER)

For 2 age groups (8-11 and 12-14 yrs): sex as a covariate

- Linear regression model for avoidance coping strategy by SOR groups (no/mild/severe).
- Moderation analysis on severe SOR age and avoidance coping score using as age as a moderator.

## Results

- Older children (age 12-14) with **severe SOR** tend to employ more **avoidance coping** strategy compared to their counterparts with mild or no SOR.

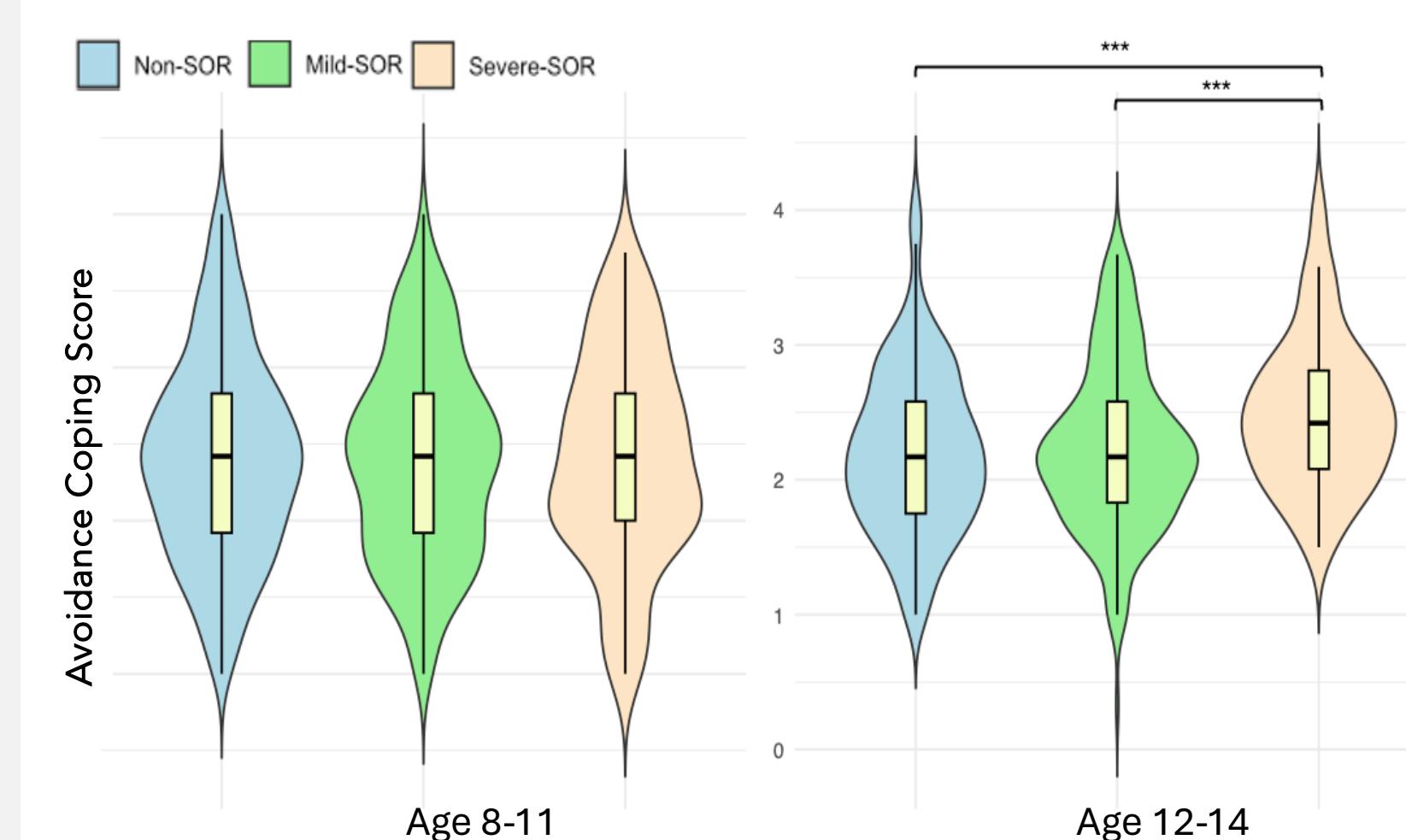
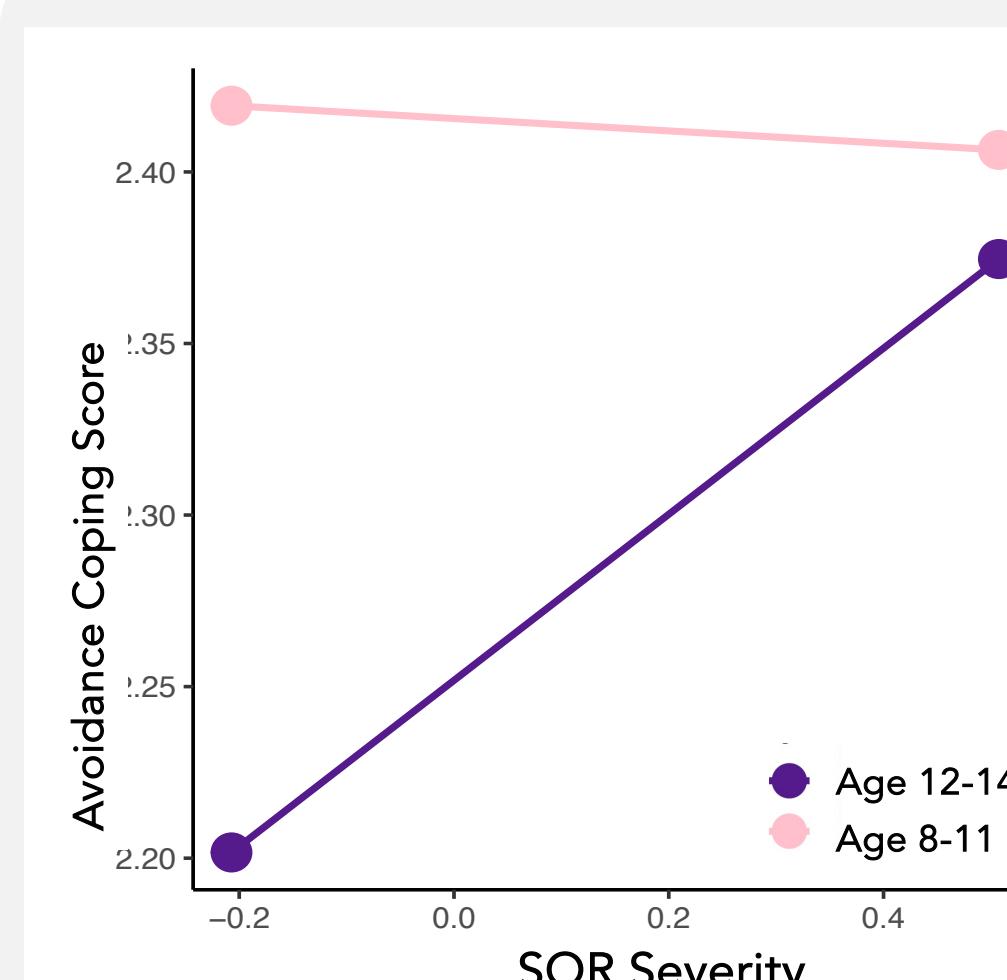


Table 1: Linear Regression: SOR Severity and Avoidance Coping

	B	SE	t	Sig.
Age 8-11(n=1352)				
Mild SOR	0	0.041	-0.007	0.995
Severe SOR	0.021	0.055	0.389	0.699
Age 12-14(n=549)				
Mild SOR	0.04	0.058	0.761	0.447
Severe SOR	0.29	0.083	3.47	<.001***

Note: Sex is controlled for all the analysis



- Age (8-11 versus 12-14) moderates the association between **severe SOR** and **avoidance coping** strategy

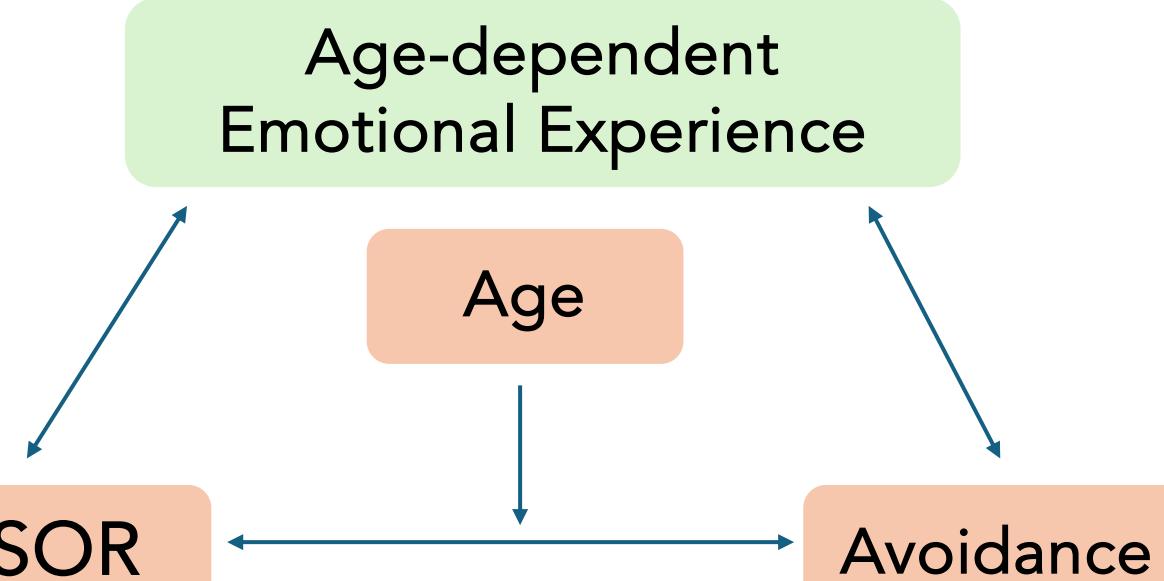
Table 2: Moderation Analysis: SOR Severity, Age, and Avoidance Coping

	Estimate	SE	t	Sig.
Severe SOR	0.03	0.07	0.57	0.57
Age	-0.18	0.04	-0.44	<.001***
Severe SOR*Age	0.29	0.11	2.65	<.01**

Note: Age is a categorical variable in which 0= 8-11, 1=12-14

## Discussion

- SOR is associated with the use of maladaptive ER strategies in older children.



- Severe SOR could impede the development of adaptive ER skills, potentially increase the risk for of psychiatry symptoms. Employing an avoidance ER style may contribute to the persistence of SOR symptoms.

## Future Directions

Future work should examine:

- Whether observed age differences in emotion regulation strategies in this cross-sectional sample extend to longitudinal datasets.
- Whether emotion regulation mediates the development in psychiatry symptoms in children with SOR.
- The pattern of brain activation in response to high-intensity and high-emotion scenes differs between children with and without SOR.

