Sensory sensitivity, but not emotion dysregulation, is correlated with anxiety symptoms in autism spectrum disorder

Background & Rationale

- Over 90% of children with autism spectrum disorder (ASD) have “atypical” sensory processing.
- Up to 84% of children with ASD have anxiety symptoms, and as high as 54% may have co-morbid anxiety.
- A recent survey found that co-morbid anxiety in ASD is as high as 54%.
- Over 90% of children with ASD have “atypical” sensory processing.
- Emotion dysregulation, defined as “the capacity to monitor, evaluate, and modify (increase or decrease) one’s emotional state in order to achieve a goal” manifests irregularly in ASD individuals.
- This may be due to: Inability to reprocess information, Impaired executive functioning, Lower social interest and social cognition.

Research Questions & Hypotheses

- Research Question: In what ways do emotion dysregulation and sensory sensitivity contribute to co-morbid anxiety in ASD?
- Hypothesis: Based on the previous literature, both emotion dysregulation and sensory sensitivity will be correlated with anxiety levels in ASD individuals.
- Null Hypothesis: Emotion dysregulation and sensory sensitivity will not be correlated with anxiety levels in ASD individuals.

Methods

- 31 ASD participants
  - 25 Male, 6 Female
  - Age Range: 7-14
- 37 typically developing (TD) participants
  - 19 Male, 18 Female
  - Age Range: 7-14

Tests Administered

- EDI (Emotion Dysregulation Inventory)
- SSP (Short Sensory Profile)
- SCARED (Screen for Child Anxiety Related Disorders)

Results

- Emotion dysregulation and anxiety were not correlated in ASD participants ($r = 0.2395214, p = 0.1944$), but were in TD controls ($r = 0.4555974, p = 0.004602$).
- Sensory sensitivity and anxiety were correlated in ASD participants ($r = -0.4763028, p = 0.007796$), but not TD controls ($r = -0.1383916, p = 0.414$).

Discussion, Analysis, & Limitations

- The finding that emotion dysregulation and anxiety were not correlated is surprising, as it is inconsistent with past literature.
- It is possible that our sample size was insufficient, or that it was not representative of the larger ASD population due to the male-to-female ratio.

Conclusions & Next Steps

- Further research should be conducted to determine whether sensory sensitivity causes co-morbid anxiety or vice versa, or whether there are underlying factors that cause both.
- This data also indicates that treatments for co-morbid anxiety should emphasize the sensory aspect of the condition.
- This can include: Classroom Modifications, Sensory Integration Training, “Food Chaining,” Developing Self-Stimulation Strategies.

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