A Balancing Act: Cognitive and Affective Empathy in Children with Autism
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Introduction & Background

- Empathy is the ability to perceive, share, and understand other people’s affective states, enabling meaningful social interactions. Often it has been reported abnormal in Autism Spectrum Disorders (ASD).
- Research has identified two aspects of empathy: affective empathy (AE), the ability to share the emotional experiences of others, and cognitive empathy (CE), the ability understand others' emotional states.
- Studies have shown impairments in CE in adults with ASD, but the interaction between CE and AE is unclear in this population, even more so in children.
- Relative empathic ability (REA) assesses an individual’s balance between AE and CE, and is the difference score between these two components of empathy.
- We examined REA and its relationship with social functioning in children with ASD and explored its relationship with intellectual functioning in typically developing children (TDC) and those with ASD.

Research Questions

1. Do children with ASD show different REA scores relative to TDC? Hypothesis: ASD individuals will have lower REA scores than TDC, reflecting greater deficits in CE relative to AE.
2. How do REA scores relate to social skills in individuals with ASD? Hypothesis: The lower the REA score, the higher the social skills impairment.
3. Is there a relationship between REA and IQ? Does a person’s level of intelligence have an impact on an individual’s balance between CE and AE?

Methods

Participants:
- 24 TDC: 19 male, mean age = 10.8 yrs (SD = 2.1 yrs), mean FIQ = 118.7
- 34 ASD: 32 male, mean age = 9.9 yrs (SD = 2.2 yrs), mean FIQ = 109.5

Measures:
- Griffith Empathy Measure (GEM)
- A parent questionnaire composed of CE and AE subscales
- REA score computed as the difference between CE and AE scores
- Autism Diagnostic Observation Schedule (ADOS)

Analysis:
- ANOVA to assess group differences in REA between ASD and TDC

Results

Question #1

- Group difference in REA: t(57) = 2.323, p = 0.0238 → Significant
- Group difference in AE only: t(57) = 0.9810, p = 0.3310 → Not Significant
- Group difference in CE only: t(57) = 7.537, p < 0.0001 → Significant

Question #2

- Correlation between REA and ADOS-SA for ASD: r = -0.406, p = 0.023 → Significant
- Correlation between REA and ADOS Severity for ASD: r = -0.531, p = 0.002 → Significant

Question #3

- Correlation between REA and IQ for TDC: r = 0.005, p = 0.981 → Not Significant
- Correlation between REA and IQ for ASD: r = 0.115, p = 0.560 → Not Significant

Discussion

- Congruent with expectations, relative to TDC, children with ASD had lower REA scores, indicating more prominent deficits in cognitive empathy relative to affective empathy.
- The balance between AE and CE ability, reflected by REA, was significantly related to clinical impairment in ASD as indicated by significant correlations with ADOS scores – more severe impairment in social ability, and greater symptom severity overall were associated with more imbalanced REA scores (greater impairment in CE relative to AE).
- There was no correlation between REA and IQ, suggesting that our findings were not driven by group differences in IQ scores.

References


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