Longitudinal Relationships between Social Anhedonia and Internalizing Symptoms in Autistic Children: Results from the Autism Biomarkers Consortium for Clinical Trials

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Background

- Social anhedonia, reflecting reduced enjoyment from social interaction, is elevated in autistic youth[1].
- It is associated with higher internalizing symptoms[2] in autistic youth and accounts for greater variance in depression and social anxiety than autism symptoms[3].
- Prior longitudinal research indicates that social anhedonia appears to be state-dependent in schizophrenia and depression[4], however, no longitudinal work has been conducted with autistic youth.
- Thus, whether social anhedonia remains stable across time – and how these changes impact internalizing symptoms – remain unknown.
- Our objective was to estimate the six-month stability of social anhedonia in autistic youth and examine its longitudinal relationship with internalizing symptoms.

Methods

Participants

- Participants were 276 autistic youth (M_{age}=8.60, SD_{age}=1.65; 211 male) with IQ≥60 (M_{IQ}=96.74, SD_{IQ}=18.19) and clinician-confirmed autism.

Measures

- Autism diagnosis was confirmed using gold standard diagnostic interviews (ADOS-2 and ADI-R) and DSM-5 clinical diagnosis.
- Clinician-rated autism features were measured with the ADOS-2.
- Caregivers completed the Child & Adolescent Symptom Inventory-5 (CASI-5), a questionnaire regarding co-occurring psychopathology, at baseline, six weeks, and six months.
- The CASI-5 produces a social anhedonia subscale calculated by summing relevant items across several domains and is consistent with traditional measures of social anhedonia[2].

Analyses

- Correlations were run between social anhedonia and co-occurring symptoms.
- ICC was calculated for social anhedonia symptoms using multilevel modeling.
- Finally, cross-lagged panel models were run to examine associations between social anhedonia, depression, and social anxiety symptoms across time.

Results

- At baseline, social anhedonia was associated with clinician-rated symptoms of autism and parent-reported symptoms of social anxiety and depression.
- Symptoms of social anhedonia were relatively stable over the course of the study (ICC= 0.763), however, there was a significant decline in social anhedonia symptoms at six weeks (β=-0.52, p<.001).
- Cross-lagged panel models demonstrated a bidirectional relationship between social anhedonia and depression, such that each predicted the other both concurrently and at the following timepoint (Figure 1a).
- Social anhedonia and social anxiety were concurrently associated but did not significantly predict each other across time (Figure 1b).

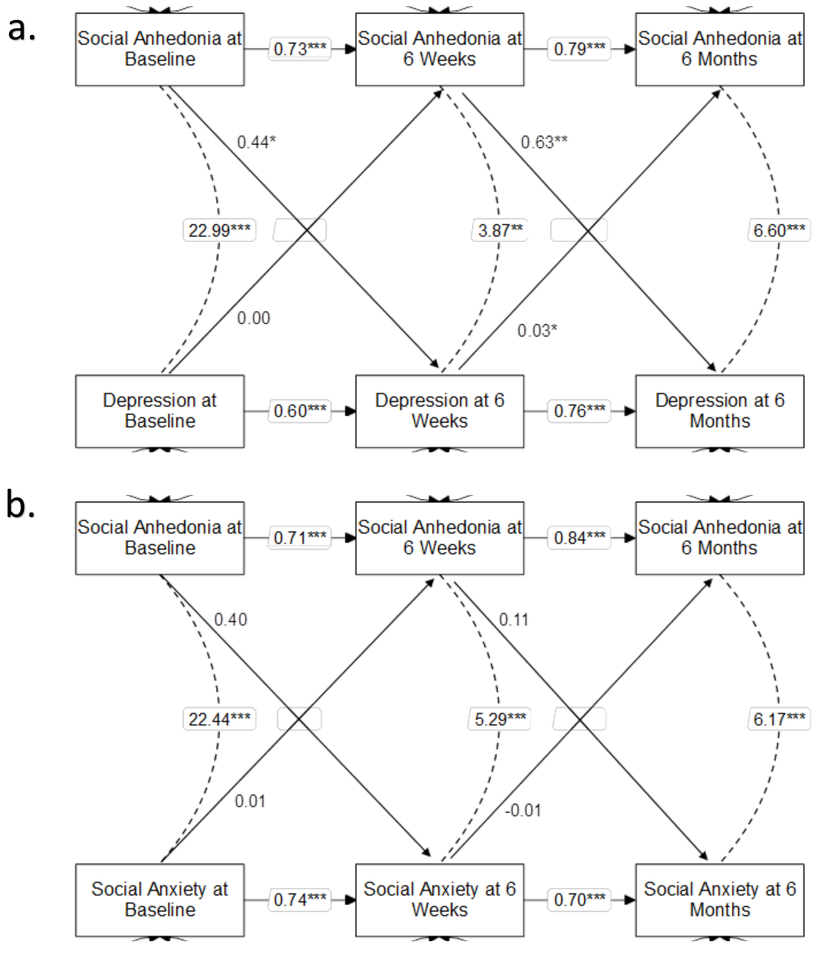

Figure 1a and 1b. Concurrent and bidirectional relationships between symptoms of depression and social anxiety with social anhedonia symptoms.

Conclusions

- Findings replicate prior work indicating elevated rates of social anhedonia in autistic youth and the concurrent relationships between these symptoms and co-occurring psychopathology.
- Results indicated that social anhedonia was relatively stable across six months, suggesting that it may be a more trait-like characteristic in autistic youth.
- Nonetheless, there was a significant group-level decrease at six weeks. It is possible that improvements in social anhedonia symptoms at six weeks could be a result of the sustained contact involved in participating in a longitudinal study.
- Further, findings demonstrated a bidirectional relationship with depression symptoms over time. This is consistent with developmental models of internalizing symptoms in autistic youth, which propose that early negative social experiences lead to social withdrawal and downstream internalizing symptoms.
- Overall, these results underscore the clinical significance of identifying autistic youth elevated in social anhedonia and emphasize the need for comprehensive assessment of these symptoms in autistic youth.

References

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