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Structural Relationships among Executive Functions and Behavioral Brain Activities with Social Skills of Children with Autism: The Mediating Role of Cognitive Emotion Regulation Strategies

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1. Round 1

1.1 Reviewer 1

Reviewer:

The sentence “Within the context of autism, social skills development is further shaped by language and communication abilities…” introduces additional determinants (language, sensory processing, cultural context) but these variables are not operationalized or controlled within the study. The authors should justify why these potential confounders were excluded from the model and discuss the implications.

Although the study includes children diagnosed with autism at the Tehran Autism Center, no demographic details (e.g., age range, ASD severity levels, comorbid conditions) are provided. Given the heterogeneity of ASD, these characteristics are essential for evaluating the representativeness of the sample.

The CEFI description notes internal consistencies from previous studies, but no Cronbach’s alpha results for the present sample are reported. Reliability must be reported for the current dataset to ensure measurement validity.

The authors state “Higher scores indicate more positive social behaviors”, but the four subdimensions are not presented. Reporting subscale reliabilities and potential ceiling/floor effects would strengthen the psychometric section.

Although nine subscales are described, the authors later treat cognitive emotion regulation as a single latent variable. Clarify whether CERQ was modeled as a higher-order factor or through composite scoring, and justify this analytical choice.

The manuscript quotes reliability indices from Carver & White (1994), yet culturally adapted psychometric validation for Iranian populations is not addressed. Provide evidence that the scale performs equivalently in the study's context.

When stating that "executive functions serve as a cognitive scaffold for social competence", the authors should integrate more ASD-specific experimental findings to support this conceptualization, beyond general cognitive developmental literature.

The manuscript states "executive functions may influence social skills indirectly by enhancing emotion regulation capacity". This theoretical pathway is plausible, but the statistical model does not test alternative pathways (e.g., reverse mediation). Discuss model specification limitations.

Authors revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

While the aim statement is clearly stated, the introduction does not explicitly present directional hypotheses. For structural equation modeling, explicitly formulated hypotheses (e.g., H1–H5) should be included to guide interpretation of results.

The manuscript states that "235 valid questionnaires were collected using non-random purposive sampling". Please elaborate on how purposive sampling was operationalized, what inclusion criteria were prioritized, and whether sampling bias (e.g., parent motivation, severity of ASD symptoms) might limit generalizability.

The paragraph following Table 1 states that "the mean score of social skills was higher than the cutoff value… and therefore desirable". Cutoff points (e.g., 120) appear arbitrary; the manuscript needs to explain their origin and psychometric justification.

After reporting non-normality, the manuscript transitions to Spearman correlations but does not clarify whether SEM estimation used PLS-SEM specifically because of non-normal distributions. Provide justification for choosing PLS-SEM over covariance-based SEM.

The authors state that "the value reported… confirms the adequacy of the structural model fit". R^2 values alone are not indicators of global model fit. Provide additional model evaluation indices (e.g., SRMR for PLS-SEM), or appropriately rephrase this interpretation.

Confidence intervals are reported but effect sizes are not contextualized. Consider interpreting whether indirect effects are small, medium, or large according to accepted mediation-effect conventions.

The opening sentence claims the model provides "empirical support for a comprehensive model," but this overstates the strength of cross-sectional correlational evidence. Please temper causal language and emphasize correlational interpretation.

Authors revised the manuscript and uploaded the updated document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.

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