Neural Network Analysis of Adolescent Depression: The Interactive Roles of Loneliness, Family Communication Quality, and Digital Media Dependency

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1. Round 1

1.1. Reviewer 1

Reviewer:

The statement "adolescent depression has emerged as one of the most urgent public health challenges of the twenty-first century" is rhetorically strong but insufficiently substantiated. Please add quantitative global prevalence data or recent large-scale epidemiological statistics to support this assertion.

The claim that loneliness has "reemerged as a central predictor" of depression is ambiguous. Clarify whether this represents a historical shift in theoretical understanding or is based on newly emerging empirical evidence from the digital era.

The phrase "algorithmic social feedback loops" is conceptually important but undefined. Provide concrete behavioral and technological examples (e.g., recommender systems, engagement metrics, personalized content delivery) to clarify this mechanism.

The neural network architecture is insufficiently specified. Please report the exact number of neurons per hidden layer, dropout rates (if any), and regularization parameters to ensure replicability.

The manuscript mentions grid search but does not specify the parameter ranges tested nor the final optimized values. Provide these details, preferably in a supplementary appendix.

Authors uploaded the revised manuscript.

1.2.   Reviewer 2

Reviewer:

The sentence "adolescents compensate for poor family communication through digital environments" suggests a causal pathway. This requires either theoretical justification or citation of longitudinal evidence supporting such compensatory behavior.

The multistage cluster sampling procedure lacks critical detail. Please report: number of schools selected per region, average cluster size, participation rate, and any exclusions. These are essential for assessing sampling bias and generalizability.

The Digital Media Dependency Scale is introduced without referencing its original development or psychometric validation. Please provide its source and core validation properties.

You report Cronbach's alpha coefficients above 0.85 but do not present a table of psychometric properties. Include a measurement model table reporting α, CR, AVE, and standardized factor loadings for all constructs.

Authors uploaded the revised manuscript.

2.   Revised

Editor's decision after revisions: Accepted.
Editor in Chief's decision: Accepted.