




## Machine Learning Modeling of Parental Decision-Making Under Stress and Its Impact on Child Outcomes

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### 1. Round 1

#### 1.1. Reviewer 1

Reviewer:

When discussing protective factors, the claim “Parents who interpret stress as manageable... exhibit better psychological adjustment” should be supported by a brief explanation of the underlying psychological mechanism (e.g., cognitive appraisal theory) to improve theoretical coherence.

The aim is clearly stated, however, the introduction would benefit from an explicit research gap paragraph immediately before the aim, summarizing what existing studies fail to address and how this study advances the field.

Please report Cronbach’s alpha or other reliability indices for the major psychometric instruments alongside the descriptive statistics.

The manuscript states “All correlations were statistically significant at  $p < .001$ ”. Please include exact p-values or confidence intervals for transparency.

Response: Revised and uploaded the manuscript.

*1.2. Reviewer 2*

Reviewer:

The phrase “cross-sectional, predictive modeling design” requires clarification. Please explicitly justify why cross-sectional data are appropriate for modeling decision-making processes that are inherently dynamic.

The exclusion criterion “diagnosed severe psychiatric disorders” is vague. Please specify diagnostic categories or screening procedures used to determine exclusion.

The description of the “stress-induced decision task” lacks sufficient detail. Please provide sample items, scoring procedures, and evidence of reliability or validity.

The manuscript states that teacher ratings and school records were used. Please clarify the inter-rater reliability and standardization procedures across different schools.

The use of “multivariate regression techniques” for imputation is mentioned but not specified. Please indicate the exact algorithm (e.g., MICE, Bayesian regression) and missing data threshold.

The rationale for selecting the four specific machine learning models should be articulated. Why were alternative algorithms (e.g., XGBoost, logistic regression baseline) not included?

Response: Revised and uploaded the manuscript.

**2. Revised**

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.