

Bayesian Network Modeling of Family Stress, Economic Pressure, and Child Adjustment Outcomes

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the paragraph beginning “The Family Stress Model (FSM) provides one of the most influential theoretical frameworks...”, the manuscript would benefit from explicitly stating which specific components of FSM are mapped onto the study variables, as the theoretical operationalization remains implicit.

The claim “Bayesian frameworks permit prediction and simulation” is important but insufficiently grounded. Please include a brief mechanistic explanation of how simulation was or could be implemented in this model (e.g., do-calculus, posterior sampling).

The posterior probability threshold for defining “strong” versus “moderate” effects is not defined. The manuscript should state decision rules for interpreting posterior probabilities.

The term “standardized Bayesian coefficients” is used without definition. Please explain how standardization was conducted in the Bayesian context and whether coefficients represent posterior means or medians.

Response: Revised and uploaded the manuscript.

1.2. Reviewer 2

Reviewer:

The study aim is well stated; however, the manuscript should include explicit hypotheses or research questions immediately following the aim to improve theoretical precision and analytic transparency.

The phrase “strong psychometric properties” is vague. The authors should report Cronbach’s alpha values, factor structure validation, and reliability indices for the current sample.

The back-translation process is mentioned but lacks detail. Please specify number of translators, qualifications, reconciliation procedures, and whether cognitive interviewing was performed.

The manuscript states that “normality, multicollinearity, and homoscedasticity” were assessed, which is conceptually inconsistent with Bayesian modeling assumptions. The authors should justify why these frequentist diagnostics were necessary within a Bayesian framework.

The description of structure learning remains largely conceptual. The authors must report search space restrictions, prior structure constraints (if any), scoring functions, convergence criteria, and software package versions.

The statement “non-informative priors were used” requires elaboration. Specify exact prior distributions and hyperparameters for each major variable group.

Response: Revised and uploaded the manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.