



# A Dyadic Machine Learning Model of Relationship Stability: Integrating Trust, Sexual Satisfaction, Emotional Intelligence, and Conflict Avoidance

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## 1. Round 1

### 1.1. Reviewer 1

Reviewer:

In the Introduction paragraph starting “The stability of intimate relationships has long been regarded as a central concern...”, the conceptualization of relationship stability as a multidimensional construct is well-articulated, but it lacks an operational bridge to the later measurement strategy; specifically, the authors should explicitly define how “stability” is distinguished from closely related constructs such as satisfaction or commitment to avoid conceptual redundancy and enhance construct validity.

In the paragraph beginning “Within this evolving landscape, trust has been consistently identified...”, the statement “Trust is not only an individual attribute but also a relational construct...” is theoretically sound, yet the manuscript does not sufficiently justify how this dual-level conceptualization is statistically operationalized within APIM and machine learning models; the authors should explicitly map theoretical constructs to model features.

In the paragraph starting “Parallel to trust, sexual satisfaction represents a critical yet often underexplored dimension...”, the claim that sexual satisfaction is “often underexplored” appears overstated given the extensive literature cited; the authors

should either qualify this claim (e.g., underexplored in dyadic ML contexts) or provide more precise justification to avoid overgeneralization.

In the Data Analysis paragraph starting “Data analysis was conducted using a hybrid analytical approach...”, the authors mention “normality and multicollinearity diagnostics” but do not report results (e.g., skewness, VIF values); these diagnostics should be explicitly presented to justify model assumptions.

Response: Revised and uploaded the manuscript.

## 1.2. Reviewer 2

Reviewer:

In the paragraph beginning “Emotional intelligence has also emerged as a significant predictor...”, the authors present emotional intelligence as a broad construct but do not specify whether trait EI or ability EI is being measured; given the implications for interpretation, the exact theoretical model and instrument type should be clearly stated and justified.

In the paragraph starting “In contrast, conflict avoidance represents a maladaptive coping strategy...”, the discussion assumes a uniformly negative role of avoidance; however, situational or short-term adaptive functions of avoidance are not acknowledged, which may oversimplify the construct; the authors should discuss boundary conditions under which avoidance may not be detrimental.

In the paragraph beginning “Despite these advances, traditional statistical approaches often struggle...”, the sentence “Machine learning methods offer a promising alternative...” lacks sufficient methodological nuance; the authors should specify which limitations of linear models (e.g., interaction effects, nonlinearity) are empirically demonstrated in this context rather than asserted broadly.

In the Methods section paragraph “The present study was designed as a cross-sectional, correlational investigation...”, the use of stratified convenience sampling is mentioned but not operationalized; the authors should detail the strata used, sampling quotas, and recruitment procedures to assess sampling bias and external validity.

In the same paragraph, the exclusion criterion “severe psychiatric disorders” is vague; the manuscript should specify diagnostic thresholds, assessment methods, and whether screening was self-reported or clinically verified, as this has implications for sample homogeneity.

In the Measures section paragraph beginning “Data were collected using a comprehensive battery...”, the authors refer to “validated self-report instruments” but do not provide scale names, number of items, sample items, or prior psychometric properties; this omission limits reproducibility and should be corrected with full instrument descriptions.

In the same paragraph, the statement “internal consistency coefficients (Cronbach’s alpha) were calculated” is insufficient; the actual alpha values for each scale must be reported to establish reliability within the current sample.

Response: Revised and uploaded the manuscript.

## 2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.