

## Modeling Substance Use Risk via Family Monitoring, Sensation Seeking, and Peer Deviance

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### 1. Round 1

#### 1.1. Reviewer 1

Reviewer:

The sentence “All instruments demonstrated acceptable validity and reliability in previous research and within the current sample” is insufficiently detailed; the manuscript should report explicit psychometric indices (e.g., Cronbach’s alpha, composite reliability, confirmatory factor analysis fit indices) for each scale within the current dataset to ensure reproducibility and measurement validity .

In the peer deviance section, the sentence “Peer deviance not only predicts substance use directly but also mediates the relationship between individual traits” is theoretically important; however, the authors should explicitly state whether their model tests full or partial mediation and provide justification for the chosen mediation structure .

The paragraph “Recent advances in computational methods have further enhanced the capacity to model substance use risk” introduces machine learning, yet the study does not employ such methods; this creates a conceptual mismatch and should either be more tightly integrated into the rationale for SEM or removed to avoid overextension of the theoretical framing .

Response: Revised and uploaded the new document.

## 1.2. Reviewer 2

Reviewer:

In the Findings section, the reported regression result “explaining 46% of the variance in substance use risk” is notable; however, the authors do not discuss whether this level of explained variance is considered substantial relative to prior literature, nor do they address potential omitted variable bias, which should be critically evaluated to contextualize model adequacy .

In the Introduction, the sentence “Adolescence is marked by heightened neurobiological sensitivity to rewards and increased susceptibility to peer influence” is theoretically sound but would benefit from a more precise linkage to the constructs measured in the study, particularly clarifying how neurobiological sensitivity translates operationally into sensation seeking within the chosen measurement framework .

The paragraph beginning “One of the most robust predictors of adolescent substance use is family monitoring” provides a strong literature synthesis, yet it does not sufficiently differentiate between parental monitoring dimensions (e.g., behavioral control vs. psychological control vs. adolescent disclosure), which could have differential predictive effects and should be theoretically disentangled .

In the sentence “recent scholarship has also highlighted methodological concerns in measuring parental monitoring,” the authors acknowledge measurement limitations but do not address how these concerns were mitigated in the current study, particularly given reliance on self-report data; a justification or triangulation strategy should be included .

The paragraph introducing sensation seeking states “Defined as the tendency to seek novel, complex, and intense experiences,” but does not clarify whether the construct is treated as unidimensional or multidimensional in the analysis, despite the BSSS capturing multiple facets; this conceptual ambiguity should be resolved .

Response: Revised and uploaded the new document.

## 2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.