

Explaining FOMO Symptoms Based on Maladaptive Perfectionism and Emotional Loneliness with Emphasis on the Mediating Role of Artificial Intelligence Dependency among Female High School Adolescents

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1. Round 1

1.1. Reviewer 1

Reviewer:

The paragraph stating that “AI-based systems can simulate responsiveness, personalization, empathy, and availability” raises an important theoretical issue. However, the manuscript does not adequately discuss the psychological mechanisms through which perceived AI empathy may contribute to dependency formation. Expanding this section with relevant human-computer interaction theories, such as media equation theory or parasocial interaction frameworks, would considerably strengthen the theoretical foundation of the mediation model.

The authors argue that “Maladaptive perfectionism may contribute to FoMO through several psychological pathways,” yet these pathways remain largely speculative. It would improve conceptual rigor if the manuscript explicitly formulated and visually illustrated these pathways in a theoretical model prior to hypothesis testing, explaining how perfectionistic self-evaluation, fear of mistakes, and social comparison differentially contribute to FoMO development.

In the paragraph defining emotional loneliness as “the perceived absence of close, intimate, and emotionally supportive relationships,” the rationale for selecting emotional loneliness rather than social loneliness requires further justification. Since the SELSA-S includes both social and emotional loneliness dimensions, the authors should explain why only emotional loneliness was incorporated into the structural model and whether social loneliness was examined but excluded.

The statement that “Artificial intelligence dependency may serve as a mediating mechanism between emotional loneliness and FoMO” is theoretically interesting, yet alternative mediators such as social media engagement, online social comparison, emotional dysregulation, or perceived social support are not discussed. The manuscript would benefit from a stronger justification for prioritizing AI dependency over these previously established mediating variables.

In the Methods section, the authors indicate that convenience sampling was employed because “random sampling and access to the entire population were not possible.” While understandable, the manuscript should provide more detailed information regarding the number of participating schools, recruitment procedures, response rates, and demographic characteristics of the sampled students to allow readers to better assess sampling bias and representativeness.

Table 3 reports direct, indirect, and total effects; however, bootstrap confidence intervals for indirect effects are not presented despite the statement that bootstrapping with 5,000 samples was conducted. Reporting bias-corrected confidence intervals would substantially strengthen evidence for mediation and allow readers to independently evaluate the significance of indirect effects.

The explained variance values reported in Table 3 indicate that the model accounts for 42.4% of the variance in AI dependency and 37.5% of the variance in FoMO symptoms. While these values are meaningful, the manuscript does not discuss the remaining unexplained variance. A more balanced interpretation should acknowledge that additional psychological, social, and contextual factors likely contribute to FoMO beyond the variables examined in the current model.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The sample size determination relies on Delavar’s (2006) recommendation that “a minimum sample size of 200 participants is sufficient.” This justification appears somewhat outdated for contemporary SEM research. The authors are encouraged to conduct and report an a priori statistical power analysis or use SEM-specific sample size estimation methods based on model complexity and anticipated effect sizes.

Regarding the Multidimensional Perfectionism Scale, the manuscript reports using the total scale score while theoretically emphasizing maladaptive perfectionism. Because the MPS includes self-oriented, other-oriented, and socially prescribed dimensions, the authors should clarify which dimensions were included in the maladaptive perfectionism construct and provide empirical justification for aggregating them into a single latent variable.

The description of the Social and Emotional Loneliness Scale indicates that one subscale assesses romantic loneliness. Given that the participants were female adolescents enrolled in secondary schools, the authors should clarify whether the romantic loneliness dimension was included in the analyses and discuss the developmental appropriateness of using this subscale in this age group.

The manuscript states that the Artificial Intelligence Dependency Scale was “translated and standardized” in Iran. However, no information is provided regarding the translation procedure, cultural adaptation process, factor structure validation, or measurement invariance. Considering the novelty of this instrument, additional psychometric evidence should be presented to support its use within the current sample.

In the Data Analysis section, the authors mention evaluating model fit using indices such as CFI, NFI, IFI, and RMSEA. However, there is no discussion of construct validity through confirmatory factor analysis prior to structural model testing. Given the use of multiple latent constructs, CFA results including factor loadings, AVE, CR, and discriminant validity statistics should be reported.

The paragraph beginning “Before using path analysis, univariate outliers were examined using box plots” indicates that outlying cases were removed, yet the exact number of deleted cases is not reported. The authors should specify how many observations were excluded, the criteria used for removal, and whether analyses were repeated with and without these cases to assess robustness.

Table 1 reports significant correlations among all study variables, with coefficients ranging from 0.590 to 0.678. While these values do not indicate severe multicollinearity, they suggest substantial overlap between constructs. The manuscript should provide discriminant validity evidence to demonstrate that maladaptive perfectionism, emotional loneliness, AI dependency, and FoMO represent distinct psychological constructs rather than manifestations of a common underlying factor.

In Table 2, the authors conclude that the model demonstrates acceptable fit because “IFI, CFI, GFI, and NFI indices were higher than the desired criterion of 0.90.” Nevertheless, several contemporary SEM guidelines recommend stricter thresholds (e.g., $CFI \geq .95$ and $RMSEA \leq .06$). The authors should acknowledge this methodological debate and discuss the adequacy of the observed fit values in relation to more stringent criteria.

Authors uploaded the revised manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.