

Predicting Digital Emotional Dependence From Loneliness, Attachment Anxiety, and Perceived Social Support Among Adolescents: A Hierarchical Multiple Regression Study

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R e v i e w e r s

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the Introduction, the sentence “Attachment anxiety offers a complementary relational explanation for digital emotional dependence” is theoretically important but underdeveloped relative to the extensive treatment of loneliness. The manuscript should explain in greater depth how attachment anxiety may specifically translate into digital behaviors such as reassurance seeking, checking message-read indicators, monitoring online availability, sensitivity to delayed responses, or fear of exclusion. This would help establish a more precise mechanism linking attachment insecurity to digital emotional dependence and prevent the attachment construct from appearing as merely an additional correlated predictor.

The rationale for the hierarchical ordering of predictors needs more explicit justification. In the Methods, the manuscript states that “loneliness was entered in the second block,” “attachment anxiety was entered in the third block,” and “perceived social support was entered in the fourth and final block.” The authors should explain why this order was theoretically preferred over alternative sequences. Because hierarchical regression makes the increment in explained variance dependent on entry

order, the reported ΔR^2 values cannot be interpreted as absolute importance. The manuscript should therefore clarify that the order reflects an a priori theoretical model rather than a data-driven ranking of predictors.

The perceived social support measurement should be described more carefully in relation to adolescent developmental context. The manuscript reports use of the total MSPSS score combining family, friends, and significant-other support. Because the “significant other” subscale may be interpreted differently by younger adolescents and older adolescents, the authors should explain how this category was presented to participants. It would also be useful to justify the decision to use the global score rather than examining family and peer support separately, particularly because different support sources may show distinct relationships with digital emotional dependence.

The treatment of gender in the regression model requires correction or fuller explanation. The demographic results include 214 females, 190 males, and 8 participants who “identified as another gender or preferred not to report their gender,” whereas Table 2 states that “Gender was entered as a control variable using dummy coding.” The manuscript does not explain how the eight participants outside the male/female categories were coded. The authors should specify the reference category, coding scheme, and treatment of the small third category. Collapsing, excluding, or combining these participants can materially affect interpretation and should be transparently reported.

The manuscript needs a more rigorous description of missing-data handling. The Study Design section reports that 16 questionnaires were excluded because of “substantial missing responses, patterned responding, or failure to complete the principal study measures,” while the Data Analysis section indicates that cases with substantial missing data were excluded and scale scores were computed when sufficient responses were available. The authors should define the threshold for “substantial” missingness, describe how patterned responding was detected, report the amount of item-level missing data, and specify whether any imputation procedure was used. A flow of exclusions would improve reproducibility.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The sampling procedure in the Study Design and Participants section requires greater methodological specificity. The sentence “Recruitment was conducted through participating secondary schools located in urban and suburban communities” does not identify the Canadian province or provinces, number of participating schools, number of school boards, or geographic distribution of the sample. These details are important for assessing external validity and representativeness. The manuscript should also explain how schools were selected, how many schools declined participation, and whether recruitment was concentrated in a particular metropolitan area.

The manuscript should report a formal sample-size or power justification. Although the final analytical sample of 412 adolescents is adequate for the reported regression model, the Methods currently provide no a priori power analysis or sample-size rationale. The authors should indicate the anticipated effect size, alpha level, desired power, and number of predictors used in determining the minimum required sample. This is particularly important for a hierarchical regression design because the relevant question is not only overall model significance but also the ability to detect incremental changes in R^2 at each block.

The ethical procedures require more precision because the participants were minors. The Methods state that participants provided “assent together with parental or legal guardian consent when required by institutional and school-board regulations,” but this language is too conditional for a manuscript involving adolescents aged 13–18 years. The authors should specify the ethics review board that approved the study, approval number if available, whether active or passive parental consent was used, how adolescent assent was obtained, and whether older adolescents were legally permitted to consent independently in the relevant jurisdiction. The current phrasing leaves uncertainty regarding compliance with research ethics requirements for minors.

The operationalization of digital emotional dependence is the most important measurement concern in the manuscript. The Methods state that “the present study used the six-item Social Integration and Emotional Connection dimension as the primary measure of digital emotional dependence.” This subscale was not originally developed or validated under the label “digital

emotional dependence.” The authors should either retain the original construct name throughout the manuscript or provide a strong psychometric and conceptual justification for relabeling it. At minimum, the manuscript should report evidence of construct validity in the present sample and clarify whether the adaptation changed item wording substantially enough to alter the scale's original meaning.

Because the Social Media Use Integration Scale was adapted from references to a specific platform to broad references to “social media,” the manuscript should describe the adaptation procedure in detail. The sentence “The wording of references to a specific platform in the original measure was adapted to refer broadly to ‘social media’ or ‘social media accounts’” indicates a substantive modification. The authors should specify which items were changed, whether cognitive interviewing or pilot testing was conducted, and whether the adapted version underwent reliability or factor-structure evaluation before the main analyses. Without such information, it is difficult to know whether the modified instrument retained the psychometric properties of the original scale.

The assessment of attachment anxiety also requires clarification. The manuscript states that “only the attachment-anxiety items were used for the principal predictor variable” from the ECR-RS and that adolescents completed the items “with reference to their close relationships.” However, the ECR-RS is relationship-specific, and scores can differ depending on whether the reference figure is a mother, father, romantic partner, or close friend. The authors should state precisely which relationship context was used, whether items were averaged across multiple relationship targets, or whether participants selected one attachment figure. This decision has direct implications for construct validity and interpretation.

Authors uploaded the revised manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.