

## Explainable Boosting Models of Attachment Insecurity and Digital Dependency in Adolescents

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### Editor

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### Reviewers

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### 1. Round 1

#### 1.1. Reviewer 1

Reviewer:

In the paragraph beginning with “Attachment theory offers a compelling explanatory framework...”, the manuscript cites Hodge & Gebler-Wolfe (2022), but it does not explicitly articulate how internal working models mechanistically translate into digital dependency behaviors. Please expand on the hypothesized regulatory pathway (e.g., hyperactivation → reassurance seeking → compulsive checking).

The paragraph discussing “digital amnesia” and technostress may dilute the focus on attachment-related mechanisms. Please clarify how cognitive outsourcing (digital amnesia) theoretically connects to attachment insecurity, or consider tightening this section to maintain conceptual coherence.

You note: “Missing responses below 5% per scale were handled using expectation–maximization imputation.” Please justify why EM was preferred over multiple imputation, and clarify whether missingness was tested for MCAR/MAR assumptions.

Authors uploaded the revised manuscript.

#### 1.2. Reviewer 2

Reviewer:

In the paragraph: “Explainable machine learning methods offer a promising avenue...”, the manuscript justifies EBMs on interpretability grounds. However, no comparison table is provided demonstrating superiority over linear regression or random forest models. Since sensitivity analyses were conducted, please report comparative  $R^2$  values and error metrics in a supplementary table.

The Introduction heavily cites Asian and European studies, yet the sample is Colombian. Please include a short paragraph contextualizing attachment processes and digital engagement patterns within Latin American adolescent populations to justify generalizability assumptions.

In the “Study Design and Participants” section, you state: “Adolescents with identified neurodevelopmental disorders or severe psychiatric diagnoses... were excluded.” Please specify how these diagnoses were determined (self-report? school records? clinical verification?). This affects sampling validity.

Regarding the ADDS scale: please provide citation of its original validation study and specify whether confirmatory factor analysis (CFA) was conducted in the present sample. Reporting factor structure stability would strengthen psychometric rigor.

Authors uploaded the revised manuscript.

## 2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.