




# Deep Learning Prediction of Emotional Dysregulation in Adolescents Based on Social Media Use Patterns, Sleep Quality, and Parental Attachment Styles

Arman. Hovhannisyanyan<sup>1</sup>, Daniela. Restrepo<sup>2\*</sup>, Nino. Tsiklauri<sup>3</sup>


<sup>1</sup> Department of Cognitive Psychology, Yerevan State University, Yerevan, Armenia

<sup>2</sup> Department of Social Psychology, Universidad de Antioquia, Medellín, Colombia



<sup>3</sup> Department of Clinical Psychology, Tbilisi State University, Tbilisi, Georgia

\* Corresponding author email address: [daniela.restrepo@udea.edu.co](mailto:daniela.restrepo@udea.edu.co)

## Editor

John S. Carlson<sup>1</sup>  
Distinguished Professor of the  
Department of Educational  
Psychology, Michigan State  
University, East Lansing, MI,  
United States  
[carlsoj@msu.edu](mailto:carlsoj@msu.edu)

## Reviewers

**Reviewer 1:** Fahime Bahonar<sup>1</sup>  
Department of counseling, University of Isfahan, Isfahan, Iran.  
Email: [Fahime.bahonar@edu.ui.ac.ir](mailto:Fahime.bahonar@edu.ui.ac.ir)  
**Reviewer 2:** Mahdi Khanjani<sup>1</sup>  
Associate Professor, Department of Psychology, Allameh Tabataba'i University,  
Tehran, Iran.  
Email: [khanjani\\_m@atu.ac.ir](mailto:khanjani_m@atu.ac.ir)

## 1. Round 1

### 1.1. Reviewer 1

Reviewer:

The sentence “Emotional dysregulation... has been identified as a core transdiagnostic vulnerability factor...” would benefit from a concise operational definition that clearly distinguishes emotional dysregulation from related constructs such as affective instability and poor self-regulation, to strengthen conceptual precision.

In “Social media platforms have become deeply embedded in adolescents’ daily routines...”, the authors should briefly clarify whether “social media use” is conceptualized primarily as behavioral exposure, emotional engagement, or both, as this distinction becomes central to later modeling decisions.

The custom composite battery is central to the study, yet item examples, scoring procedures, and reliability indices are missing. These should be added for reproducibility.

Authors uploaded the revised manuscript.

*1.2. Reviewer 2*

Reviewer:

The claim “Sleep quality constitutes one of the most robust physiological foundations of emotional regulation” is theoretically strong, but the paragraph would be improved by explicitly linking this assertion to the study’s computational modeling rationale.

The statement “Recent studies further indicate that parental attachment interacts with adolescents’ engagement in digital environments” invites a short explanation of the hypothesized causal directionality, which remains conceptually ambiguous.

The final sentence defining the study aim is clear, but the authors should explicitly state the primary hypothesis and secondary hypotheses to improve theoretical coherence.

The description of the “multistage cluster sampling strategy” lacks detail regarding cluster size, school participation rate, and final classroom selection procedure. This information is essential for evaluating sampling bias.

In the sentence “Adolescents with diagnosed neurological disorders... were excluded”, the authors should clarify how diagnoses were verified (school records, parental report, self-report).

Although internal consistency is reported, no evidence of construct validity within this sample is provided. Please include confirmatory factor analysis indices or cite previous Colombian validation studies more explicitly.

Authors uploaded the revised manuscript.

**2. Revised**

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.