

Identifying Novel Endophenotypes of Adolescent Insomnia and their Association with Emotional Dysregulation

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1. Round 1

1.1. Reviewer 1

Reviewer:

The methodology is generally robust, particularly the combination of actigraphy, ISI, and DERS with latent profile analysis and MANCOVA; however, key sampling information (final N, exact age range, and participation rate/response rate) appears unclear or inconsistently reported and should be specified precisely, along with a flow diagram of recruitment and exclusions to allow readers to evaluate selection bias and external validity.

The characterization and labeling of the three profiles (“Normative Sleepers,” “Sleep Onset Delay,” and “High Fragmentation”) are intuitively appealing, yet the paper would be strengthened by presenting a clear graphical depiction (e.g., z-score profile plots of all sleep and insomnia indicators) and reporting standardized means and effect sizes across groups, allowing readers to appreciate the magnitude and pattern of differences rather than relying on qualitative descriptors and omnibus significance tests alone.

The analysis of emotion dysregulation is a valuable contribution, especially the differentiation of global versus domain-specific DERS patterns; nonetheless, the authors should explicitly report multivariate test statistics (Wilks’ λ , F, df, p), univariate test details for each DERS subscale (F, p, partial η^2), and consider correction for multiple comparisons across subscales or, alternatively, present a clear rationale for prioritizing certain subdomains to guard against Type I error inflation.

The discussion offers a rich and sometimes ambitious integration with literatures on digital technology use, trauma, personality traits, and emotion regulation; however, some of these extrapolations (e.g., links to nomophobia, internet addiction, or specific personality dispositions) are not directly measured in the current study and should therefore be more clearly framed as hypotheses or speculative interpretations, with explicit acknowledgement of the absence of those constructs in the data.

The limitations section is appropriate but could be expanded and made more nuanced: beyond the cross-sectional nature and actigraphy's inability to capture sleep stages, the authors should discuss the potential impact of cultural and school-system specific factors in Egyptian adolescents (e.g., school start times, exam stress, family structure) on the generalizability of their findings, and consider whether the urban/semi-urban sampling may underestimate or overestimate insomnia and dysregulation relative to rural populations.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The description of the LPA procedures would benefit from greater transparency: the authors should report the full model selection indices (AIC, BIC, adjusted BIC, entropy, Lo–Mendell–Rubin LRT, and BLRT if available) for each tested class solution (e.g., 1–5 classes), justify the choice of the three-class model not only statistically but also conceptually, and provide information on class sizes, posterior probabilities, and classification accuracy to support the stability and interpretability of the identified profiles.

While the actigraphy protocol (14 consecutive days with a sleep diary) is a notable strength, the manuscript should supply more technical details (device model, scoring algorithm, epoch length, thresholds for defining sleep and wake, handling of non-wear time, and criteria for valid nights) and clarify how many nights per participant were retained after quality control, as these factors can substantially influence estimates of sleep onset latency, WASO, and sleep efficiency.

The handling of potential confounders and comorbidities appears limited; beyond controlling for age, gender, and SES, the authors should consider assessing and statistically adjusting for internalizing and externalizing psychopathology (e.g., depression, anxiety, ADHD), medication use beyond explicitly excluded psychotropics, and chronic health conditions, since these variables may simultaneously influence both sleep characteristics and emotion dysregulation and thus complicate causal interpretation of the observed associations.

Authors uploaded the revised manuscript.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.