The Turkish Journal of Pediatrics 2026; Early View: 1-2
https://doi.org/10.24953/turkjpediatr.2026.8504

Rethinking gender differences in social media–related eating behaviors

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I read the recent article by Başar Gökcen and Varol entitled *"Problematic social media use and eating behaviors in adolescence: gender-based differences"* with great interest.[1] The study highlights important gender-specific patterns in the associations between problematic social media use, appearance-related social media consciousness, and eating behaviors among adolescents.

While I appreciate the authors' contribution, several methodological and conceptual considerations may help clarify the interpretation of the findings. Although the cross-sectional design is acknowledged as a limitation, some interpretations appear to suggest causal relationships. Given the lack of temporal data, it remains unclear whether problematic social media use leads to unhealthy eating behaviors or whether pre-existing eating patterns and body image concerns drive greater engagement with appearance-focused content. Therefore, this bidirectional possibility should be more explicitly considered when interpreting the reported associations.

In addition, the absence of key potential confounders may have influenced the observed relationships. Factors such as mental health status, socioeconomic background, sleep patterns, and physical activity are closely associated with both social media use and eating behaviors. Previous research indicates that adolescents with mental health difficulties tend to engage more intensively with social media and exhibit higher levels of social comparison[2], while lifestyle factors such as sleep and physical activity are part of broader behavioral clusters that are also linked to dietary patterns.[3] Therefore, without accounting for these variables, the reported associations may partly reflect shared underlying determinants rather than independent effects.

Another important consideration is that the use of mediation analysis in a cross-sectional framework warrants cautious interpretation. Mediation models assume a temporal sequence in which the exposure influences the mediator, which in turn affects the outcome[4]; however, such temporal ordering cannot be established in cross-sectional studies.[5] As a result, the observed indirect effects through the proposed mediator, appearance-related social media consciousness (ASMC), may reflect statistical associations rather than true causal pathways. Therefore, these findings should be interpreted with caution when considered as evidence of mediation.

Finally, the assessment of eating behaviors using instruments such as the Eating Habits Questionnaire for Adolescents (EHQA) may not fully capture male-specific patterns related to muscularity-oriented eating behaviors. Evidence suggests that adolescent boys are more likely to engage in muscle-enhancing practices, including high protein intake, supplement use,

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Received 15th Apr 2026, accepted 20th Apr 2026.

anabolic steroid use, and intensive exercise.[6] These behaviors, often driven by muscularity-oriented body image concerns, represent a distinct dimension of eating and body-related risk that may not be adequately reflected in traditional measures of unhealthy eating. This may lead to a potential underestimation of maladaptive eating-related behaviors in males and, consequently, may influence the observed gender differences.

Despite these limitations, this study makes an important contribution to the literature on the association between social media and adolescent health behaviors. Future research employing longitudinal designs, objective measures of digital behavior, and more comprehensive, gender-sensitive assessments of eating-related practices will be essential to better understand the complexity of these relationships.

Author contribution

The authors confirm contribution to the paper as follows: Study conception and design: DAA; data collection: DAA; analysis and interpretation of results: DAA; draft manuscript preparation: DAA. All authors reviewed the results and approved the final version of the manuscript.

Source of funding

The authors declare the study received no funding.

Conflict of interest

The authors declare that there is no conflict of interest.

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