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Article

Development and Validation of an Ultra-Brief Scale to Measure Social Media Fatigue: The Social Media Fatigue Scale-3 Items (SMFS-3)

Short title: Social Media Fatigue Scale

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Abstract

Objective: To develop and validate an ultra brief scale to measure social media fatigue, i.e., the Social Media Fatigue Scale-3 items (SMFS-3). **Method:** Construct validity of the SMFS-3 was assessed through corrected item–total correlations and confirmatory factor analysis. Concurrent validity was examined using the Bergen Social Media Addiction Scale (BSMAS), and the Patient Health Questionnaire-4 (PHQ-4). Reliability was evaluated through multiple indices, including Cronbach's alpha, Cohen's kappa, and the intraclass correlation coefficient. Receiver Operating Characteristic analysis was employed to determine the optimal cut-off point for the SMFS-3, using the BSMAS as external criterion. **Results:** Corrected item–total correlations and confirmatory factor analysis confirmed that the final version of the SMFS-3 includes three items in one factor. Concurrent validity of the SMFS-3 was excellent since we found statistically significant correlations between the SMFS-3 and the BSMAS, and the PHQ-4. Cronbach's alpha for the SMFS-3 was 0.762. Cohen's kappa for the three items ranged from 0.852 to 0.919 ($p < 0.001$ in all cases). Additionally, intraclass correlation coefficient was 0.986 ($p < 0.001$). Thus, the reliability of the SMFS-3 was excellent. The best cut-off point for the SMFS-3 was 10, indicating that social media users with SMFS-3 score ≥ 10 were considered as users with high levels of social media fatigue, and those with SMFS-3 score < 10 as users with normal levels of fatigue. **Conclusions:** The SMFS-3 is a one-factor 3-item scale with great reliability and validity. The SMFS-3 is a short and easy-to-use tool that measures levels of social media fatigue in a couple of minutes. Valid measurement of social media fatigue with brief and valid tools is essential to further understand predictors and consequences of this fatigue.

Keywords: social media; Social Media Fatigue Scale; fatigue; burnout; brainrot; scale; instrument; validation; cut-off point

Introduction

Social media has become a dominant force in shaping communication, culture, and behavior worldwide. Its influence is complex, encompassing both positive and negative dimensions. On the positive side, social media fosters global connectivity, enabling instant communication and relationship building across geographical boundaries. It serves as a powerful tool for information dissemination, providing real-time access to news, educational resources, and social awareness campaigns. Additionally, it offers opportunities for entrepreneurship, creative expression, and community engagement, allowing individuals and organizations to interact with diverse audiences [1].

Conversely, the negative implications of social media are increasingly evident. Excessive use has been linked to mental health challenges, including anxiety, depression, and diminished self-esteem, often exacerbated by comparison culture and unrealistic portrayals of life. Recent systematic reviews confirm associations between frequent social media use and increased stress, poor sleep quality, and reduced life satisfaction. Mixed-methods research also highlights that individuals spending more than three hours daily on social media report significantly higher levels of anxiety and depression, with social comparison explaining much of the variance in self-esteem scores. Among adolescents, nearly half believe social media negatively affects their peers' mental health, and teen girls report disproportionate harm to confidence and sleep.[2–5]

Beyond psychological effects, social media contributes to cognitive strain. Studies show that exposure to rapid, fragmented content on platforms like TikTok and Instagram correlates with diminished attention spans and impaired working memory. Short-form video consumption has been found to negatively impact academic performance among university students. Furthermore, problematic social media use is associated with reduced emotional regulation and increased procrastination.[6–10]

Social media platforms have become integral to daily life, offering unprecedented opportunities for connectivity, entertainment, and information exchange. However, the ubiquity of these platforms has introduced new psychological challenges, among which social media fatigue is prominent. Social media fatigue is defined as the tendency to withdraw from social media due to feelings of being overwhelmed by excessive information, social demands, and platform features. Unlike general digital fatigue, social media fatigue specifically relates to the strain induced by continuous social interaction and content consumption in online environments.[11,12] Several factors contribute to social media fatigue such as information overload, system feature overload, social overload and fear of missing out, and privacy concerns and cyberbullying. Information overload refers to continuous exposure to vast amounts of content strains cognitive resources, while system feature overload refers to complex platform functionalities and constant notifications exacerbate fatigue. Additionally, social overload and fear of missing out refer to pressure to maintain online presence that increases emotional strain. Finally, privacy concerns and cyberbullying considered to be perceived risks and negative interactions that contribute to emotional exhaustion.[13–15]

Additionally, social media fatigue or otherwise social media burnout seems to be one last step before brainrot. "Brainrot" caused by social media is a slang term that refers to the mental fatigue, reduced attention span, and cognitive decline people feel after excessive exposure to fast-paced, low-effort content online (like endless scrolling on TikTok, Instagram Reels, or memes). It's not a clinical diagnosis, but rather a cultural way of describing how constant consumption of bite-sized entertainment can make it harder to focus on complex tasks or engage deeply with information.[16,17] "Brainrot" refers to the perceived decline in a person's cognitive or intellectual abilities, often attributed to excessive consumption of content—particularly online material—deemed trivial or unstimulating. It can also describe anything thought likely to cause such decline.[18] "Brainrot" was named the 2024 word of the year by Oxford University Press. The term "brainrot" has surged in popularity during 2024, reflecting growing concerns about the effects of consuming large amounts of low-quality online content, especially on social media. Its usage rose by 230% between 2023 and 2024.

Social media platforms have transformed information consumption via endless, short-form, personalized feeds that maximize engagement through rapid novelty and intermittent social reward. Public vernacular has labeled resultant subjective effects "brainrot," encompassing mental fatigue, fragmented attention, and diminished tolerance for slow, effortful cognition. While the term is not a diagnostic entity, its component features coincide with constructs examined in psychology and cognitive neuroscience: sustained attention, inhibitory control, executive function, reward processing, and affect regulation.[16,19–21]

In this context, valid measurement of variables related to social media is essential to improve our knowledge regarding predictors and outcomes of social media use. For instance, recently, the

TikTok Addiction Scale (TTAS)[22] and a short version of this scale (i.e, TikTok Addiction Scale-Short Form, TTAS-SF)[23] are developed to measure in a reliable and valid way levels of TikTok addiction. A review found that there are 37 instruments that measure negative social networking.[24] For instance, the Bergen Facebook Addiction Scale (BFAS)[25] is the most widely instrument for measuring negative use of Facebook.

However, there are a limited number of scales that measure social media fatigue. For instance, Zhang et al.[26] developed a 15-item scale to measure social media fatigue, while a recent study[27] further validate this scale by producing a 12-item scale among Italian social media users. The main disadvantage of scales measuring social media fatigue is their length, which requires considerable effort to complete. In this context, we developed and validated an ultra-brief scale to measure social media fatigue, i.e., the Social Media Fatigue Scale-3 items.

Methods

Study Design

In September 2025, data were collected through a cross-sectional online survey. Inclusion criteria required participants to be adults, active social media users for a minimum of 12 months, and to have given informed consent prior to participation. Participants were recruited voluntarily and their responses remained anonymous. Prior to participation, they were briefed on the study's objectives and procedures and gave informed consent. Ethical approval was obtained from the Faculty of Nursing Ethics Committee at the National and Kapodistrian University of Athens (approval number; 55, July 2025). Moreover, we conducted our study in accordance with the Declaration of Helsinki.[28]

Procedure

Social media fatigue is commonly examined through the Stressor-Strain-Outcome framework, which posits that stressors (e.g., information overload, social overload, privacy concerns) lead to strain (exhaustion, fatigue, burnout), which then results in outcomes such as discontinuance intention or reduced engagement. Recent studies conceptualize social media fatigue as multidimensional, encompassing three dimensions: (a) cognitive fatigue: difficulty processing excessive information, (b) behavioral fatigue: reduced motivation to interact or post online, and (c) emotional fatigue: irritability, anxiety, and emotional depletion.[26,27,29]

Thus, we employed this framework in our study to develop nine items related to cognitive fatigue, behavioral fatigue and emotional fatigue due to social media use. In particular, we created three items for each component of fatigue. Thus, we included these nine items in a self-report questionnaire. We performed a test-retest study one week after the first administration of the questionnaire to investigate the reliability of the Social Media Fatigue Scale-3 items.

Measurements

The draft version of the Social Media Fatigue Scale-3 items (SMFS-3) includes nine items, three for each of the three dimensions of social media fatigue; cognitive fatigue, behavioral fatigue and emotional fatigue. Answers are on a 5-point Likert scale from 1 (very rarely) to 5 (very often). Higher scores indicate greater social media fatigue. Cronbach alpha was 0.859 in this study. The final version of the SMFS-3 includes three items. Total score on the SMFS-3 ranges from 3 to 15, and higher scores indicate greater social media fatigue.

The Bergen Social Media Addiction Scale (BSMAS) includes six items and measures levels of social media addiction.[30] Total score on the BSMAS ranges from 6 to 30, and higher scores indicate greater social media addiction. We used the valid Greek version of the BSMAS.[31] In our study, Cronbach's alpha for the BSMAS was 0.829 was 0.787.

The Patient Health Questionnaire-4 (PHQ-4) includes four items and measures anxiety (two items) and depression (two items).[32] Answers are on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). Total score for each factor ranges from 0 to 6, and higher scores indicate greater

anxiety and depressive symptoms. We used the valid Greek version of the PHQ-4.[33] In this study, Cronbach alpha for the anxiety and depression was 0.768 and 0.716, respectively. Cronbach alpha for the PHQ-4 was 0.814.

Statistical Analysis

Of the three items within each of the three core dimensions of the social media fatigue, we retained in the final scale the one with the highest corrected item-total correlation. Thus, the final version of the SMFS-3 included three items: one for each of the three core components of the social media fatigue. We expected that these three items refer to one factor. To identify this, we then performed confirmatory factor analysis (CFA). Thus, we expected a one-factor 3-items model of the SMFS-3. We calculated standardized regression weights and factor loading for the final three items of the SMFS-3.

Scores on scales followed normal distribution. Thus, we calculated Pearson's correlation coefficient to examine correlations between SMFS-3, PHQ-4 and BSMAS, and, thus, to identify the concurrent validity of the SMFS-3.

Also, we calculated Cronbach alpha to examine the internal reliability of the SMFS-3. Moreover, we examined the test-retest reliability of answers to SMFS-3, by calculating the intraclass correlation coefficient for the total score of the scale. In particular, we calculated the two-way mixed intraclass correlation coefficient (absolute agreement).

We applied the Receiver Operating Characteristic (ROC) analysis to identify an optimal cut-off point for the SMFS-3 using the PHQ-4 and the BSMAS as external criterion. We calculated sensitivity, specificity, and the Youden index. These measures take values from 0 to 1 with higher values indicating better diagnostic value of the SMFS-3. The Youden index defines an optimal cut-off point and is calculated as (Sensitivity + Specificity) – 1. Additionally, we calculated the area under the curve (AUC), 95% confidence interval (CI), and p-value. Among PHQ-4 and the BSMAS, the latter showed the best discriminant ability, and, thus, we used the BSMAS to find the best cut-off point for the SMFS-3. After establishing the optimal cut-off point for the SMFS-3, individuals scoring above this threshold were classified as having high levels of social media fatigue.

We used AMOS version 21 (Amos Development Corporation, 2018) to conduct CFA using. All other analyses were conducted with the IBM SPSS 28.0 (IBM Corp. Released 2021. IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp).

Results

Participants

The final sample consisted of 317 social media users. Among the participants, 71.9% were female (n = 228) and 28.1% were male (n = 89). The mean age of the sample was 35.5 years (standard deviation = 12.3), with a median age of 32 years (range: 21–61 years). Participants reported an average daily social media usage of 3.3 hours (standard deviation = 1.9), with a median of 3 hours and a range from 1 hour to 10 hours.

Construct Validity

Corrected item-total correlations for the nine items of the original version of the SMFS-3 are shown in Table 1. We kept in the SMFS-3 the items with the highest corrected item-total correlation in each factor. Thus, for factor "cognitive fatigue" we kept the item #3, for factor "behavioral fatigue", we kept the item #5, and for the factor "emotional fatigue" we kept the item #9.

Table 1. Corrected item-total correlations for the nine items of the draft version of the Social Media Fatigue Scale-3 items.

In the last 12 months ...

Corrected item-total
correlation

1.	I feel that the information I receive on social media is overwhelming and mentally exhausting	0.443
2.	I feel tired after using social media	0.551
3.	I feel that using social media reduces my ability to concentrate on tasks that need to be completed	0.648
4.	I check social media without a specific purpose	0.522
5.	I tend to use social media before bed, which contributes to insufficient rest	0.646
6.	I pause my work to check social media	0.628
7.	I feel angry when I realize that social media has consumed too much of my time	0.724
8.	I feel disappointed when I do not engage with others on social media	0.333
9.	I feel frustrated when I realize that social media has consumed too much of my time	0.740

Bold indicate the item with the highest corrected item-total correlation in each factor.

Confirmatory Factor Analysis

Then, we performed CFA to verify the one-factor three-item model of the SMFS-3. Our CFA suggested that the one-factor model with three items of the SMFS-3 had very good fit to data since standardized regression weights for the three items were very high. In particular, standardized regression weights for the items #1, #2, and #3 were 0.76, 0.62, and 0.78, respectively. CFA of the SMFS-3 is shown in Figure 1. Additionally, factor loadings for the three items were very high. In particular, factor loadings for the items #1, #2, and #3 were 0.84, 0.78, and 0.85, respectively. This one-factor three-item model explained 67.91% of the variance of the SMFS-3.

Finally, the SMFS-3 is a one-factor three-item scale; cognitive fatigue (item #1), behavioral fatigue (item #2) and emotional fatigue (item #3) (Table 2).

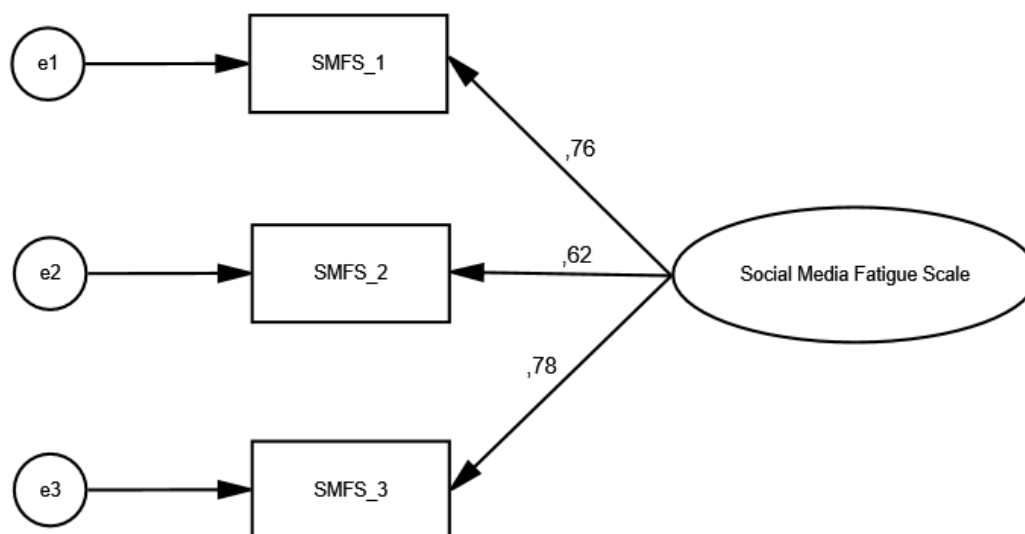


Figure 1. Confirmatory factor analysis of the Social Media Fatigue Scale-3 items.

Table 2. Final version of the Social Media Fatigue Scale-3 items.

During the last 12 months ...	Answers				
	Very rarely	Rarely	Sometimes	Often	Very often
1. I feel that using social media reduces my ability to concentrate on tasks that need to be completed					
2. I tend to use social media before bed, which contributes to insufficient rest					
3. I feel frustrated when I realize that social media has consumed too much of my time					

Concurrent Validity

The SMFS-3 demonstrated strong concurrent validity. A positive correlation was observed between SMFS-3 and BSMAS, indicating that individuals with higher levels of social media addiction also exhibited higher levels of social media fatigue. Similarly, SMFS-3 scores were positively correlated with PHQ-4, suggesting that participants experiencing greater symptoms of anxiety and depression tended to report higher levels of social media fatigue. Table 3 presents the correlation coefficients between SMFS-3 and BSMAS, and PHQ-4.

Table 3. Pearson's correlation coefficients between the Social Media Fatigue Scale-3 items (SMFS-3) and the Bergen Social Media Addiction Scale (BSMAS), and the Patient Health Questionnaire-4 (PHQ-4).

Scales	BSMAS	PHQ-4		
		Anxiety	Depression	Total
SMFS-3	0.666*	0.361*	0.326*	0.32*

* $p < 0.01$.

Reliability

Cronbach's alpha for the SMFS-3 was 0.762. Additionally, corrected item-total correlations had values between 0.539 and 0.628, while removal of each single item did not increase Cronbach's alpha. Cohen's kappa for the three items ranged from 0.852 to 0.919 ($p < 0.001$ in all cases). Additionally, intraclass correlation coefficient was 0.986 (95% confidence interval; 0.977 to 0.992, $p < 0.001$). Thus, the reliability of the SMFS-3 was excellent.

Cut-Off Point

We employed ROC analysis to define an optimal cut-off point for the SMFS-3. We found that the best cut-off point for the SMFS-3 was 10 using the BSMAS as criterion since it presented the best discriminant ability (Figure 2). In particular, we found the highest values for Youden's index (0.607) and AUC (0.859). The value for the AUC indicated high accuracy for the cut-off point of 10. The 95% confidence interval for the AUC ranged from 0.818 to 0.899. Therefore, we considered social media users with SMFS-3 score ≥ 10 as users with high levels of social media fatigue, and social media users with SMFS-3 score < 10 as users with normal levels of fatigue.

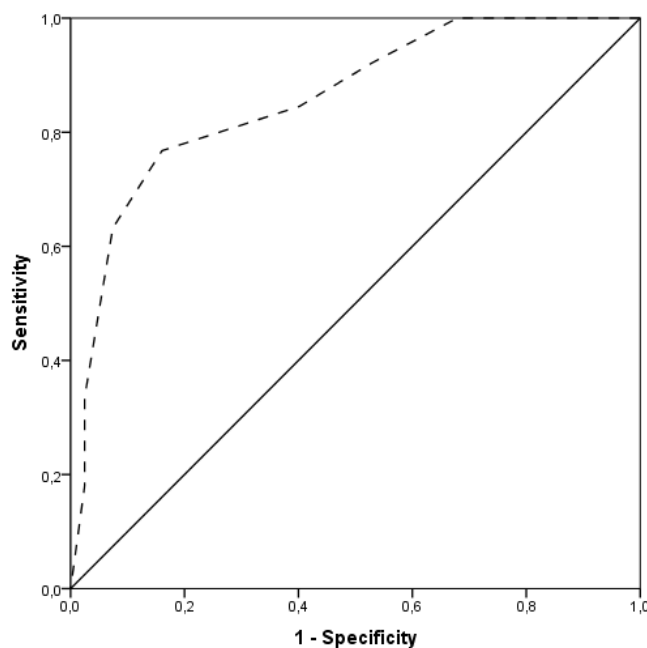


Figure 2. ROC curve of the Social Media Fatigue Scale-3 items.

Discussion

Our study offers a validated and ultra brief instrument to assess social media fatigue as a one-dimensional construct reflecting cognitive, emotional, and behavioral responses to social media overload. By delivering a psychometrically sound measure of social media fatigue, this study equips researchers and practitioners to diagnose, compare, and intervene on a construct central to today's digital experience. Situated within stress/strain theory and supported by reliability and validity evidence, the SMFS-3 enables more precise tests of antecedents and outcomes—from overload and fear of missing out to well-being and disengagement—and provides a practical lens for mitigating social media fatigue through design and policy.

In particular, Cronbach's alpha for the SMFS-3 was 0.762 indicating satisfactory internal reliability of the scale. Also, Cohen's kappa for the three items of the SMFS-3 ranged from 0.852 to 0.919, while intraclass correlation coefficient was 0.986. Thus, the reliability of the SMFS-3 was excellent.

Moreover, we examined construct validity of the SMFS-3 through corrected item-total correlations and confirmatory factor analysis, and we found that the one-factor 3-item model of the SMFS-3 is a valid tool to measure social media fatigue.

Additionally, the concurrent validity of the SMFS-3 was excellent since we found statistically significant correlations between the SMFS-3 and the BSMAS, and the PHQ-4. Users who feel fatigued by social media (overwhelmed, emotionally exhausted, inclined to avoid) often also show more compulsive/problematic patterns of use. Social media fatigue is related to problematic use and discontinuous use intentions, while being only weakly related to general time on platform, suggesting that feeling "burnt out" can coexist with (and even fuel) compulsive engagement. Also, compulsive media use and fear of missing out act as stressors that trigger fatigue, and that fatigue is linked to anxiety/depression, consistent with a maladaptive spiral. When users are persistently exposed to high message volume, social demands, and comparison triggers, compulsive use and privacy worries heighten cognitive/emotional strain (fatigue). In turn, fatigue can reinforce maladaptive coping, such as habitual scrolling or checking to relieve discomfort in the short run—keeping problematic use strong.

Moreover, we found a cut-off point for the SMFS-3, and, thus, social media users with SMFS-3 score ≥ 10 were considered as users with high levels of social media fatigue. Scores at or above the cut-off indicate a level of fatigue likely to be consequential (e.g., linked to problematic use, poorer well-being, or discontinuation intentions), and therefore warrant attention (screening, feedback, or an intervention). In other words, cut-off point in the SMFS-3 operationalizes the point where the risk/impact of fatigue becomes high enough that it's useful to flag users for support or further assessment.

Several limitations should be acknowledged. First, convenience sampling was employed, restricting the external validity of the findings. Future studies should utilize representative samples and include varied populations (e.g., students, adolescents) to enhance generalizability and confirm the SMFS-3 validity. Despite this, the psychometric evaluation remains sound, as the sample size satisfied methodological requirements. Second, the absence of clinical settings necessitates caution in applying these findings for diagnostic purposes; research under controlled clinical conditions would be beneficial. Third, the use of self-report instruments for concurrent validity introduces potential bias. Fourth, validity was examined through correlations with two scales; incorporating additional measures in future research would strengthen the evidence base. Finally, the optimal cut-off point for the SMFS-3 can shift with population base rates, platform mix, and culture. Thus, evaluation of the appropriate cut-off point for the scale in other samples and settings is crucial.

The development and validation of the Social Media Fatigue Scale-3 items offers scholars and clinicians a concise and reliable instrument for assessing social media fatigue, a construct increasingly relevant in mental health contexts.

In particular, the SMFS-3 can be integrated into routine psychological assessments to detect individuals experiencing digital fatigue, which is often associated with stress, anxiety, and burnout. Also, clinicians can use SMFS-3 scores to tailor interventions such as digital hygiene counseling, mindfulness-based strategies, and cognitive-behavioral approaches targeting maladaptive social media use. Additionally, the scale provides a standardized metric for evaluating the effectiveness of interventions aimed at reducing SMF and improving well-being.

The SMFS-3 contributes to advancing empirical work on digital behavior and mental health by offering a psychometrically sound, brief measure. Its brevity and validity enable comparability across research projects and facilitate meta-analyses in digital psychology. Researchers can examine associations between social media fatigue and mental health indicators (e.g., depression, anxiety, sleep quality), academic performance, and workplace productivity. The scale's simplicity makes it suitable for international research, allowing for cross-cultural validation and comparative analyses. Also, the SMFS-3 can serve as an outcome measure in trials assessing digital well-being programs, app-based mindfulness interventions, or platform design modifications.

Given the growing prevalence of social media fatigue, policy-level actions are warranted. Educational initiatives should incorporate awareness of social media fatigue and strategies for healthy social media use, particularly for adolescents and students. Policymakers and technology developers should collaborate to implement design features that reduce overload (e.g., limiting infinite scroll, batching notifications). Institutions should promote balanced digital engagement through scheduled breaks and guidelines for responsible social media use.

To strengthen the evidence base and practical utility of SMFS-3, future studies should (a) establish causal relationships between social media fatigue and mental health outcomes, (b) combine self-report measures with digital telemetry for more accurate assessments, (c) examine the scale's diagnostic utility among populations with anxiety, depression, or digital addiction, (d) include additional psychological constructs (e.g., resilience, self-regulation) to enhance construct validity, and (e) explore demographic and personality factors influencing social media fatigue, as well as cultural variations in digital fatigue experiences.

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Conflicts of interest: none.

References

1. BLANCO-GONZÁLEZ-TEJERO C, ULRICH K, RIBEIRO-NAVARRETE S. Can social media be a key driver to becoming an entrepreneur? *J Knowl Econ* 2024, 15:16780–16798
2. BEHERA N, KHUNTIA S, PANDEY K, SHANKAR S. Impact of social media use on physical, mental, social, and emotional health, sleep quality, body image, and mood: evidence from 21 countries—a systematic literature review with narrative synthesis. *Int J Behav Med* 2025, under press
3. NDINDENG A. The impact of social media on mental health. *Ment Health Digit Techn* 2025, 2:183–212
4. GALANIS P, KATSIROUMPA A, KATSIROUMPA Z, MANGOULIA P, GALLOS P, MOISOGLOU I, ET AL. Association between problematic TikTok use and mental health: A systematic review and meta-analysis. *AIMS Public Health* 2025, 12:491–519
5. CONTE G, IORIO GD, ESPOSITO D, ROMANO S, PANVINO F, MAGGI S, ET AL. Scrolling through adolescence: a systematic review of the impact of TikTok on adolescent mental health. *Eur Child Adolesc Psychiatry* 2025, 34:1511–1527
6. KATSIROUMPA A, MOISOGLOU I, MITROPOULOS A, PASCHALI A, KOUTELEKOS I, KATSIROUMPA Z, ET AL. Association between social media addiction and mental health among Greek young adults. *Int J Caring Sci* 2025, 18:459–466
7. JAIN L, VELEZ L, KARLAPATIS, FORAND M, KANNALI R, YOUSAF RA, ET AL. Exploring problematic TikTok use and mental health issues: a systematic review of empirical studies. *J Prim Care Community Health* 2025, 16:21501319251327303

8. KATSIROUMPA A, KATSIROUMPA Z, KOUKIA E, MANGOULIA P, GALLOS P, MOISOGLOU I, ET AL. Association between problematic TikTok use and procrastination, loneliness, and self-esteem: A moderation analysis by sex and generation. *Eur J Investig Health Psychol Educ* 2025, 15:209
9. KATSIROUMPA A, MOISOGLOU I, GALLOS P, KATSIROUMPA Z, KONSTANTAKOPOULOU O, TSIACHRI M, ET AL. Problematic TikTok use and its association with poor sleep: A cross-sectional study among Greek young adults. *Psychiatry Int* 2025, 6:25
10. BILALI A, KATSIROUMPA A, KOUTELEKOS I, DAFOGIANNI C, GALLOS P, MOISOGLOU I, ET AL. Association between TikTok use and anxiety, depression, and sleepiness among adolescents: A cross-sectional study in Greece. *Pediatr Rep* 2025, 17:34
11. LEE AR, SON S-M, KIM KK. Information and communication technology overload and social networking service fatigue: A stress perspective. *Comput Hum Behav* 2016, 55:51–61
12. CRAMER EM, SONG H, DRENT AM. Social comparison on Facebook: Motivation, affective consequences, self-esteem, and Facebook fatigue. *Comput Hum Behav* 2016, 64:739–746
13. SHENG N, YANG C, HAN L, JOU M. Too much overload and concerns: Antecedents of social media fatigue and the mediating role of emotional exhaustion. *Comput Hum Behav* 2023, 139:107500
14. FU S, LI H, LIU Y, PIRKKALAINEN H, SALO M. Social media overload, exhaustion, and use discontinuance: Examining the effects of information overload, system feature overload, and social overload. *Inf Process Manag* 2020, 57:102307
15. QIN C, LI Y, WANG T, ZHAO J, TONG L, YANG J, ET AL. Too much social media? Unveiling the effects of determinants in social media fatigue. *Front Psychol* 2024, 15:1277846.
16. NGUYEN L, WALTERS J, PAUL S, IJURCO SM, RAINEY G, PAREKH N, ET AL. Feeds, feelings, and focus: A systematic review and meta-analysis examining the cognitive and mental health correlates of short-form video use. *Psychol Bull* 2025, 151:1125–1146
17. BRANNIGAN R, CRONIN F, MCEVOY O, STANISTREET D, LAYTE R. Verification of the Goldilocks Hypothesis: the association between screen use, digital media and psychiatric symptoms in the growing up in Ireland study. *Soc Psychiatry Psychiatr Epidemiol* 2023, 58:1259–1264
18. VEDECHKINA M, BORGONOV F. A Review of evidence on the role of digital technology in shaping attention and cognitive control in children. *Front Psychol* 2021, 12:611155
19. ACHTERBERG M, BECHT A, VAN DER CRUIJSEN R, DE GROEP I, SPAANS J, KLAPWIJK E, ET AL. Longitudinal associations between social media use, mental well-being and structural brain development across adolescence. *Dev Cogn Neurosci* 2022, 54:101088
20. CHEN Y, LI M, GUO F, WANG X. The effect of short-form video addiction on users' attention. *Behav Inform Technol* 2023, 42:2893–2910
21. DU Y, WANG J, WANG Z, LIU J, LI S, LV J, ET AL. Severity of inattention symptoms, experiences of being bullied, and school anxiety as mediators in the association between excessive short-form video viewing and school refusal behaviors in adolescents. *Front Public Health* 2024, 12:1450935
22. GALANIS P, KATSIROUMPA A, MOISOGLOU I, KONSTANTAKOPOULOU O. The TikTok Addiction Scale: Development and validation. *AIMS Public Health* 2024, 11:1172–1197
23. GALANIS P, KATSIROUMPA A, KONSTANTAKOPOULOU O, GALANI O, TSIACHRI M, MOISOGLOU I. Development and validation of the TikTok Addiction Scale-Short Form. *Arch Hellenic Med* 2026, Under press.
24. VARONA MN, MUELA A, MACHIMBARRENA JM. Problematic use or addiction? A scoping review on conceptual and operational definitions of negative social networking sites use in adolescents. *Addict Behav* 2022, 134:107400
25. ANDREASSEN CS, TORSHEIM T, BRUNBORG GS, PALLESEN S. Development of a Facebook Addiction Scale. *Psychol Rep* 2012, 110:501–517
26. ZHANG S, SHEN Y, XIN T, SUN H, WANG Y, ZHANG X, ET AL. The development and validation of a social media fatigue scale: From a cognitive-behavioral-emotional perspective. *PLoS ONE* 2021, 16:e0245464
27. FARACI P, NASONTE G. The Brief Social Media Fatigue Scale (BSMFS): A new short version through exploratory structural equation modeling and associations with trait anxiety, fear of missing out, boredom proneness, and problematic use. *Int J Hum-Comput Interact* 2025, 41:10096–10122

28. WORLD MEDICAL ASSOCIATION. World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA* 2013, 310:2191
29. BAJ-ROGOWSKA A. Antecedents and outcomes of social media fatigue. *Inform Technol Peopl* 2023, 36:226–254
30. ANDREASSEN CS, BILLIEUX J, GRIFFITHS MD, KUSS D, DEMETROVICS Z, MAZZONI E, ET AL. The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychol Addict Behav* 2016, 30:252–262
31. KATSIROUMPA A, KATSIROUMPA Z, KOUKIA E, MANGOULIA P, GALLOS P, MOISOGLOU I, ET AL. Bergen Social Media Addiction Scale: Translation and validation in Greek. *Int J Caring Sci* 2025, 18:661–671
32. KROENKE K, SPITZER RL, WILLIAMS JBW, WILLIAMS J, LOWE B. An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics* 2009, 50:613–621
33. KAREKLA M, PILIPENKO N, FELDMAN J. Patient Health Questionnaire: Greek language validation and subscale factor structure. *Compr Psychiatry* 2012, 53:1217–1226

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