



Predictors of problematic social media use among university students: The roles of escapism, social connectedness, and psychological resilience

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Submitted: 13 July 2026 Revised: 15 October 2026 Accepted: 19 October 2026 Published online: 26 October 2026

Abstract

This study aimed to identify the psychological and behavioral predictors of problematic social media use among university students, focusing on escapism, social connectedness, online disinhibition, perceived social support, and psychological resilience. A cross-sectional design was used. Data were collected online from 515 university students aged 18 to 30 years (74.8% female). Problematic social media use was assessed with the Bergen Social Media Addiction Scale, and risk status was defined using the established cut-off score. Escapism, social connectedness, perceived social support, psychological resilience, online disinhibition (benign and toxic), and daily social media use were examined as predictors in binary logistic regression (risk status) and linear regression (continuous score) models, adjusting for age and gender; discriminative ability was evaluated using receiver operating characteristic analysis. A substantial proportion of participants were classified as being at risk for problematic social media use, and both models explained a considerable amount of variance in the outcome. Escapism was the strongest predictor in both models, followed by daily use duration and lower social connectedness. Psychological resilience emerged as a significant protective factor. Benign online disinhibition predicted problematic use risk status but not the continuous score, whereas toxic disinhibition, perceived social support, age, and gender were not significant predictors. Among university students, the risk of problematic social media use is most strongly associated with escapism-motivated use, whereas psychological resilience plays a protective role. Prevention and intervention efforts in higher education settings should prioritize reducing escapism-driven use and strengthening psychological resilience to support students' mental health and academic functioning.

Keywords: Escapism; Problematic social media use; Psychological resilience; Social connectedness; University students

1. Introduction

Social media platforms have become deeply embedded in the daily lives of university students, providing continuous access to peer interaction, information seeking, and leisure. While moderate engagement is normative during emerging adulthood, a clinically meaningful minority of users develops a pattern characterized by preoccupation, loss of control over use, withdrawal-like reactions upon cessation, and interference with academic and personal responsibilities. This pattern is increasingly described as problematic social media use [PSMU] (Andreassen et al., 2016; Kuss & Griffiths, 2017). University students represent a particularly vulnerable demographic, given their high connectivity, the developmental uncertainties characteristic of emerging adulthood, and the convergence of academic, social, and identity-related pressures they face. Therefore, identifying the psychological and behavioral predictors that distinguish at-risk individuals from other users is important for targeted prevention efforts.

PSMU is generally framed within a behavioral addiction paradigm. Griffiths' (2005) biopsychosocial components model specifies six defining features of addictive behavior (i.e., salience, mood modification, tolerance, withdrawal, conflict, and relapse) that generalize across substance and non-substance domains. Although PSMU does not currently meet formal diagnostic criteria in major classification systems, this components framework has provided a principled basis for instrument development, including the Bergen Social Media Addiction Scale [BSMAS] (Andreassen et al., 2016), and continues to structure empirical investigations of prevalence and etiology. Estimates of PSMU prevalence among university students vary considerably across studies and measures. For example, a 32-nation meta-analysis reported pooled estimates ranging from 5% to 25% depending on the classification scheme applied (Cheng et al., 2021). However, multiple investigations have identified a substantial proportion of students exhibiting clinically elevated profiles (Bányai et al., 2017; Kuss & Griffiths, 2017), and a recent systematic review and

meta-analysis reported that PSMU is a prevalent concern among young adults with consistent mental health correlates (Shannon et al., 2022). Therefore, it is important to identify modifiable risk factors of PSMU.

Among the motivational factors related to PSMU, escapism has attracted growing empirical attention. Escapism refers to the deliberate use of online environments to avoid or distract oneself from unpleasant emotions, personal problems, or unsatisfying real-life circumstances (Kircaburun & Griffiths, 2019). From an emotion regulation perspective, escapism can be considered a maladaptive avoidance strategy in which individuals repeatedly seek temporary relief through online immersion instead of engaging with the sources of distress directly (Aldao et al., 2010; Kardefelt-Winther, 2014). This avoidance cycle is considered to be self-reinforcing because online engagement provides immediate negative reinforcement by reducing distress, which in turn increases the likelihood of future avoidance behavior and compulsive use patterns. Consistent with this account, escapism is one of the most consistently reported predictors of problematic engagement across diverse digital platforms, including social networking sites, online gaming, and video streaming (Kircaburun & Griffiths, 2019; Kuss & Griffiths, 2017; Yildirim Demirdöğen et al., 2024). Furthermore, recent research has identified escapism motives as a proximal mechanism linking stress and maladaptive emotion regulation to PSMU (Yang et al., 2026). Given that escapism reflects a specific motivational mechanism rather than a behavioral pattern alone, it may be a useful target for intervention. Accordingly, it was hypothesized that escapism would be positively associated with problematic social media use and would emerge as the strongest psychological predictor (H1).

A second pathway to PSMU operates through deficits in social connectedness. Individuals who experience a persistent felt sense of isolation from their social environment may turn to online platforms to compensate for unmet needs for belonging and relational connection, a mechanism described as compensatory internet use (Caplan, 2010; Kardefelt-Winther, 2014). However, this compensatory strategy may be self-defeating because online engagement motivated by loneliness may sustain or deepen social isolation over time rather than resolving the underlying relational deficit, reinforcing a cycle of problematic use (Nowland et al., 2018). The construct of perceived social support (i.e., the subjective sense that others are available and willing to provide help) has also been examined as a potentially protective relational factor, though findings have been inconsistent across samples (Bilgin & Taş, 2018). These inconsistencies may partly reflect the conceptual distinction between felt social connectedness (i.e., an experiential sense of belonging and integration) and perceived support (i.e., an appraisal of resource availability). Although these two constructs overlap, they may have distinct associations with problematic use. On this basis, it was hypothesized that greater social disconnection would be associated with elevated problematic social media use (H2).

Online disinhibition provides a complementary behavioral perspective. Suler (2004) described the online disinhibition effect as the tendency to behave more openly, and sometimes more extremely, in digital environments than in face-to-face settings. This tendency is attributed to factors including anonymity, asynchronous communication, the absence of conventional social cues, and dissociative imagination. Suler further distinguished two qualitatively different expressions of this phenomenon: *benign* disinhibition, characterized by increased emotional self-disclosure, greater openness, and the tendency to share thoughts and feelings more freely; and *toxic* disinhibition, characterized by hostility, deception, cruelty, and antisocial behavior enabled by perceived anonymity. The two forms may relate to PSMU through distinct pathways. Benign disinhibition may make social media interaction more rewarding and socially reinforcing, increasing the risk of overengagement, whereas toxic disinhibition may reflect a different mode of online behavior with little bearing on problematic use. However, instruments capable of differentiating benign from toxic disinhibition have rarely been applied within a single study, and the few that have were developed and used mainly in the context of cyberbullying and aggressive online behavior (Kurek et al., 2019; Udris, 2014) rather than problematic social media use. Building on this distinction, it was hypothesized that benign online disinhibition would be positively

associated with problematic social media use, whereas toxic disinhibition would show no comparable association (H3).

Finally, psychological resilience, broadly defined as the capacity to recover from adversity, stress, and difficult life experiences, has been proposed as a protective factor against behavioral problems including PSMU (Bonanno, 2004). It has been suggested that resilient individuals draw on a broader repertoire of flexible and approach-oriented coping strategies, which reduces their dependence on avoidance-based responses such as escapism (Bilgin & Taş, 2018; Bonanno, 2004). Empirical evidence, including recent studies of university students, has linked higher resilience to lower levels of problematic social media use and related behavioral difficulties (Bilgin & Taş, 2018; Çiçek et al., 2026), but the specific and independent protective role of resilience when modeled alongside motivational, relational, and behavioral predictors within a single, well-controlled analytical framework has received limited investigation. Accordingly, it was hypothesized that psychological resilience would be inversely associated with problematic social media use (H4).

The present study addressed these gaps by simultaneously examining escapism, social connectedness, perceived social support, online disinhibition, and psychological resilience as predictors of PSMU in a sample of university students, with daily social media use duration and demographic characteristics as covariates. In order to enhance the robustness and clinical interpretability of the findings, PSMU was operationalized in two complementary ways: as a binary risk indicator (BSMAS ≥ 19) and as a continuous score. These associations were examined after adjusting for daily social media use duration, age, and gender, and were expected to remain meaningful once these covariates were taken into account (H5).

2. Methods

2.1. Study Design and Participants

A cross-sectional, online survey design was employed. Participants were university students recruited through student communication channels (e.g., faculty listservs and social media groups) at a Turkish university. Participation was voluntary and fully anonymous; no compensation or academic incentive was offered. Inclusion criteria were: current enrollment in a university program, age between 18 and 30 years, and complete data on all key study measures. From an initial pool of responses, cases meeting all inclusion criteria were retained. Of the 528 respondents meeting the inclusion criteria, 13 (2.5%) had missing data on daily social media use or online disinhibition and were excluded listwise. The resulting analytic sample comprised 515 students for the fully adjusted regression models (74.8% female; M age = 21.0 years, SD = 2.4, range 18–30). Ethical approval was obtained from the institutional ethics committee of the author's university, and all participants provided informed consent prior to data collection. The study was conducted in accordance with the Declaration of Helsinki.

2.2. Measures

2.2.1. Daily social media use and demographics

Participants reported their typical daily social media use on a six-point ordinal scale indexing average hours of social media use per day, with the following anchors: 0 = *none*, 1 = *less than 1 hour*, 2 = *1–2 hours*, 3 = *2–3 hours*, 4 = *3–4 hours*, and 5 = *more than 4 hours*. Because these categories represent ordered, approximately equal-width time bands, the variable was treated as continuous and standardized alongside the other predictors to keep the odds ratios and regression coefficients on a comparable metric. A sensitivity analysis modeling daily use as an ordered-categorical predictor is reported in the Results.

2.2.2. Bergen Social Media Addiction Scale

PSMU was assessed with the six-item Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2016), rated on a five-point frequency scale (1 = *very rarely*, 5 = *very often*; total range 6–30). The BSMAS operationalizes the six components of behavioral addiction (i.e., salience, mood modification, tolerance, withdrawal, conflict, and relapse) as applied to social media engagement.

Consistent with established practice in the literature, a cut-off of ≥ 19 was used to classify participants as at risk for PSMU (Bányai et al., 2017). The Turkish form of the BSMAS, adapted and validated within Tosuntaş et al. (2024), was employed. Internal consistency in the present sample was good ($\alpha = .85$). The BSMAS is a unidimensional instrument in which each item indexes one of the six addiction components, and its Turkish form has demonstrated a single-factor structure with satisfactory validity and reliability in the adaptation study (Tosuntaş et al., 2024). In the present sample, the internal consistency of the scale was good.

2.2.3. Escapism Scale

Escapism was measured with the four-item scale developed by Gao et al. (2017), assessing the extent to which individuals use social media to escape from reality, daily problems, and unpleasant emotional states, rated on a seven-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The Turkish adaptation of this scale, conducted within the study by Kircaburun and Griffiths (2019), was employed. Internal consistency was excellent ($\alpha = .92$). The scale is unidimensional, with all four items loading on a single escapism factor, and its Turkish adaptation showed adequate construct validity and reliability (Kircaburun & Griffiths, 2019). Internal consistency in the present sample was excellent.

2.2.4. Social Connectedness Scale

Social connectedness was assessed using the eight-item, unidimensional Social Connectedness Scale developed by Lee and Robbins (1995), in its Turkish adaptation by Duru (2007). All items are phrased in terms of social disconnection (e.g., feeling cut off from one's environment, lacking a sense of belonging or integration with one's community). Accordingly, *higher scores reflect lower connectedness*, that is, greater subjective social disconnection. This scoring direction was taken into account in all analyses and interpretations. Internal consistency was excellent ($\alpha = .91$). The Turkish adaptation supported the unidimensional structure of the scale and reported acceptable validity and reliability evidence (Duru, 2007). Internal consistency in the present sample was excellent.

2.2.5. Multidimensional Scale of Perceived Social Support

The 12-item Multidimensional Scale of Perceived Social Support [MSPSS] (Zimet et al., 1988) was used, in its Turkish adaptation (Eker et al., 2001). Items are rated on a seven-point scale (1 = *very strongly disagree*, 7 = *very strongly agree*), and higher total scores indicate greater perceived support from family, friends, and a significant other. Internal consistency was excellent ($\alpha = .91$). The instrument comprises three theoretically derived subscales (family, friends, and a significant other), and its Turkish adaptation confirmed this three-factor structure together with satisfactory reliability (Eker et al., 2001); in line with its use as a global index of perceived support, a total score was computed in the present study. Internal consistency in the present sample was excellent.

2.2.6. The Brief Resilience Scale

The six-item Brief Resilience Scale [BRS] (Smith et al., 2008) was used, rated on a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Items 2, 4, and 6 are negatively worded and were reverse-scored prior to computing total scores, so that higher totals indicate a greater capacity to recover and bounce back from stress. The Turkish adaptation of the BRS was employed (Doğan, 2015). Internal consistency was good ($\alpha = .86$). The BRS is a unidimensional measure of the capacity to bounce back from stress, with three positively and three negatively worded items, and its Turkish adaptation demonstrated a single-factor structure with adequate validity and reliability (Doğan, 2015). Internal consistency in the present sample was good.

2.2.7. UCLA Loneliness Scale

A seven-item short form of the UCLA Loneliness Scale was administered, rated on a four-point scale (1–4); one positively worded item was reverse-scored, with higher totals indicating greater loneliness. The short form derives from the ULS-8 (Hays & DiMatteo, 1987) and was administered

in its Turkish adaptation (Yıldız & Duy, 2014), in which one item was excluded owing to insufficient factor loading, yielding the seven-item form. Internal consistency was acceptable ($\alpha = .81$). Loneliness was examined in bivariate correlational analyses but was not entered into the regression models owing to its substantial overlap with social connectedness ($r = .76$), which would introduce redundancy and multicollinearity. The short form is a unidimensional measure of subjective loneliness, and its Turkish adaptation reported acceptable validity and reliability for the retained items (Yıldız & Duy, 2014). Internal consistency in the present sample was acceptable.

2.2.8. Online Disinhibition Scale

The six-item ODS (Udris, 2016) is a shortened, bidimensional revision of the original scale (Udris, 2014), grounded in Suler's (2004) conceptualization of benign and toxic online disinhibition. The Turkish adaptation of the Online Disinhibition Scale was employed (Tosuntaş & Griffiths, 2026). The scale comprises two subscales capturing qualitatively distinct forms of online disinhibition: a *benign* subscale (three items; $\alpha = .83$), reflecting greater emotional openness and self-disclosure in online settings, and a *toxic* subscale (three items; $\alpha = .92$), reflecting hostility and antisocial behavior facilitated by anonymity. Confirmatory factor analysis in the present sample supported the two-factor structure (CFI = .99, TLI = .98, SRMR = .06; standardized loadings .76–.98), consistent with the scale's validation study. The two subscales were modeled separately throughout all analyses.

2.3. Statistical Analysis

All analyses were conducted in Python (statsmodels library) and independently replicated in R (version 4.4.2; packages: *psych*, *pROC*, and *car*), and the results were identical across the two software environments. Descriptive statistics (means, standard deviations, and ranges) and internal-consistency coefficients (Cronbach's α) were computed for all study measures. Bivariate associations between predictors and the continuous PSMU score were examined using Pearson product-moment correlations.

PSMU was then modeled in two complementary ways. First, a binary logistic regression predicted at-risk status (BSMAS ≥ 19) from escapism, social connectedness, perceived social support, psychological resilience, benign online disinhibition, toxic online disinhibition, and daily use duration, adjusting for age and gender as covariates. Continuous predictors were standardized ($M = 0$, $SD = 1$) prior to analysis, so that odds ratios (ORs) reflect the change in odds associated with a one-standard-deviation increase in each predictor, facilitating comparisons across variables with different scales. Confidence intervals for ORs were obtained via profile-likelihood estimation, which provides more accurate coverage than Wald-based intervals for logistic regression coefficients, particularly when predictors are moderately correlated. The discriminative accuracy of the logistic model was evaluated using the area under the receiver operating characteristic curve (AUC, with a 95% confidence interval obtained via the DeLong method), together with sensitivity, specificity, and positive and negative predictive values at the model-based classification threshold (predicted probability $\geq .50$). Classification metrics were additionally computed at the Youden-optimal threshold, which maximizes the sum of sensitivity and specificity, to characterize model performance under a more balanced classification criterion. Second, a linear regression predicted the continuous BSMAS score from the same predictor set, providing a complementary full-variance perspective. Multicollinearity was assessed using variance inflation factors (VIF) for all predictors. A resilience $\times$ escapism interaction term was tested in both models to evaluate whether resilience buffered the association between escapism and PSMU. Regression diagnostics for the linear model were examined, including the normality of residuals and homoscedasticity, and heteroscedasticity-consistent (HC3) standard errors were computed as a sensitivity check. In addition, both models were re-estimated with daily social media use entered as an ordered-categorical rather than continuous predictor. Statistical significance was set at $p < .05$ throughout.

3. Results

3.1. Descriptive Statistics and Reliability

Descriptive statistics and internal-consistency coefficients for all study variables are presented in Table 1. All multi-item scales showed acceptable to excellent reliability ($\alpha = .81-.92$). The mean BSMAS score was 17.0 (SD = 6.2), and 40.2% of participants met or exceeded the ≥ 19 cut-off for at-risk PSMU.

Table 1

Descriptive statistics and internal consistency of study variables

Variable	M	SD	Range	α
Age	21.05	2.36	18-30	—
Daily social media use	3.11	1.18	0-5	—
Escapism	12.64	6.78	4-28	.92
Social connectedness	18.01	9.57	8-48	.91
Perceived social support (MSPSS)	61.91	16.90	12-84	.91
Psychological resilience (BRS)	18.05	5.74	6-30	.86
Loneliness (UCLA)	11.55	4.38	7-28	.81
Online disinhibition - benign	3.90	2.75	0-9	.83
Online disinhibition - toxic	4.01	3.16	0-9	.92
PSMU (BSMAS)	16.98	6.21	6-30	.85

Note. N = 515. For the social connectedness scale, higher scores indicate greater disconnection.

As shown in Table 1, all multi-item scales reached acceptable to excellent internal consistency, and the variable distributions were suitable for the subsequent regression analyses.

3.2. Correlations

Bivariate correlations with the continuous PSMU score are shown in Table 2. Escapism showed the strongest positive association with PSMU ($r = .48$), followed by daily use ($r = .38$), social disconnection ($r = .27$), benign disinhibition ($r = .24$), and toxic disinhibition ($r = .16$). Psychological resilience was negatively associated with PSMU ($r = -.22$), whereas perceived social support showed only a negligible association ($r = -.07$). Loneliness correlated positively with PSMU ($r = .22$) and, as expected, very strongly with social disconnection ($r = .76$).

Table 2

Pearson correlations among study variables

	1	2	3	4	5	6	7	8	9
1. PSMU (BSMAS)	—								
2. Escapism	.48*	—							
3. Social connectedness	.27*	.36*	—						
4. Perceived social support	-.07	-.08	-.49*	—					
5. Psychological resilience	-.22*	-.11*	-.28*	.14*	—				
6. Disinhibition - benign	.24*	.31*	.15*	-.03	-.04	—			
7. Disinhibition - toxic	.16*	.25*	.17*	-.04	-.07	.52*	—		
8. Daily use	.38*	.27*	.08	.04	-.13*	.20*	.03	—	
9. Loneliness (UCLA)	.22*	.28*	.76*	-.43*	-.32*	.14*	.07	.09*	—

Note. * $p < .05$ (two-tailed)

As shown in Table 2, escapism showed the strongest positive association with problematic social media use, followed by daily use duration and social disconnection, while the pattern of intercorrelations among predictors did not indicate problematic multicollinearity.

3.3. Logistic Regression: PSMU Risk Status

The logistic regression model significantly distinguished at-risk from non-at-risk users (Nagelkerke $R^2 = .30$; correct classification 72.6%; sensitivity = 54.6%; specificity = 84.7%; PPV = 70.6%; NPV = 73.5%; AUC = .78, 95% CI [.74, .82]; Table 3). At the standard .50 classification

threshold, sensitivity was modest (54.6%), reflecting the model's greater tendency to correctly identify non-at-risk than at-risk users at this cut-point. At the Youden-optimal threshold (predicted probability $\geq .43$), sensitivity increased to 65.7% and specificity was 76.0% (correct classification 71.8%), offering a more balanced trade-off between detecting at-risk cases and limiting false positives. Escapism was the strongest psychological predictor (OR = 1.75, 95% CI [1.39, 2.21], $p < .001$), followed by daily use (OR = 1.71, 95% CI [1.38, 2.14], $p < .001$) and social disconnection (OR = 1.39, 95% CI [1.08, 1.82], $p = .013$). Benign online disinhibition was a significant predictor (OR = 1.30, 95% CI [1.02, 1.66], $p = .038$), whereas toxic disinhibition was not (OR = 1.14, $p = .270$). Psychological resilience was a significant protective factor (OR = 0.79, 95% CI [0.63, 0.98], $p = .035$). Perceived social support, age, and gender were not significant. All VIFs were below 1.7, indicating no problematic multicollinearity.

Table 3

Binary logistic regression predicting PSMU risk status (BSMAS ≥ 19)

Predictor	OR	[95% CI]	<i>p</i>
Escapism	1.75	[1.39, 2.21]	< .001
Social connectedness (disconnection)	1.39	[1.08, 1.82]	.013
Perceived social support	1.23	[0.97, 1.58]	.093
Psychological resilience	0.79	[0.63, 0.98]	.035
Online disinhibition - benign	1.30	[1.02, 1.66]	.038
Online disinhibition - toxic	1.14	[0.90, 1.45]	.270
Daily social media use	1.71	[1.38, 2.14]	< .001
Age	0.92	[0.74, 1.13]	.421
Gender (male)	0.70	[0.42, 1.16]	.172

Note. OR = odds ratio; CI = profile-likelihood confidence interval. Continuous predictors were standardized ($M = 0$, $SD = 1$); ORs reflect change per one standard deviation. Nagelkerke $R^2 = .30$; correct classification = 72.6%; AUC = .78; $N = 515$.

As shown in Table 3, escapism was the strongest predictor of at-risk status, lower social connectedness and benign online disinhibition were additional significant predictors, and psychological resilience operated as a protective factor.

3.4. Linear Regression: Continuous PSMU Score

The linear regression model accounted for a substantial proportion of variance in the continuous PSMU score, $R^2 = .33$, adjusted $R^2 = .32$, $F(9, 505) = 27.5$, $p < .001$ (Table 4). Consistent with the logistic model, escapism was the strongest predictor ($B = 2.13$, $p < .001$), followed by daily use ($B = 1.50$, $p < .001$). Greater social disconnection ($B = 0.63$, $p = .030$) predicted higher PSMU, and psychological resilience emerged as a significant protective factor ($B = -0.72$, $p = .003$). Benign disinhibition did not reach significance for the continuous outcome ($B = 0.46$, $p = .105$), indicating that its association was specific to crossing the risk threshold rather than to graded variation in use. The resilience $\times$ escapism interaction was non-significant in both models (linear $p = .36$; logistic $p = .95$), indicating that resilience and escapism contributed independently.

Diagnostic checks supported the assumptions of the linear model: residuals were approximately normally distributed (skewness = 0.39, excess kurtosis = -0.07) and homoscedastic (Breusch-Pagan $p = .43$). Coefficient significance was unchanged when heteroscedasticity-consistent (HC3) standard errors were used, indicating that the results were robust to potential violations of the constant-variance assumption.

As a further robustness check, both models were re-estimated with daily social media use entered as an ordered-categorical predictor. The substantive pattern was unchanged: escapism remained the strongest predictor (logistic OR = 1.81, $p < .001$; linear $B = 2.17$, $p < .001$), and social disconnection and psychological resilience retained their significant associations, whereas perceived social support, toxic disinhibition, age, and gender remained non-significant. The only difference concerned benign online disinhibition in the logistic model, which was marginally non-significant under the ordered-categorical specification (OR = 1.27, $p = .059$) compared with the continuous specification (OR = 1.30, $p = .038$), consistent with the tentative, threshold-specific

interpretation of this effect discussed below. Overall model fit was marginally better under the ordered-categorical specification (logistic $\Delta\text{AIC} = 4.9$; linear $\Delta\text{AIC} = 9.2$), but the substantive conclusions were unaffected.

Table 4

Linear regression predicting the continuous PSMU (BSMAS) score

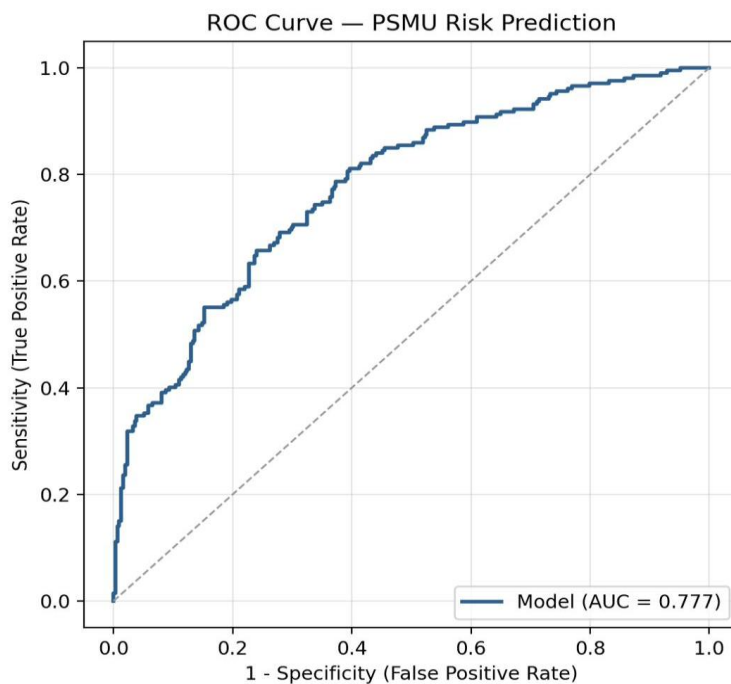
Predictor	B	SE	t	p
Escapism	2.13	0.26	8.10	< .001
Social connectedness (disconnection)	0.63	0.29	2.18	.030
Perceived social support	0.11	0.26	0.42	.677
Psychological resilience	-0.72	0.24	-2.94	.003
Online disinhibition – benign	0.46	0.28	1.62	.105
Online disinhibition – toxic	0.11	0.27	0.40	.687
Daily social media use	1.50	0.24	6.20	< .001
Age	0.00	0.23	0.00	.998
Gender (male)	-0.65	0.56	-1.17	.243

Note. B = regression coefficient (continuous predictors standardized, $M = 0$, $SD = 1$; B therefore reflects the change in raw BSMAS score per one-SD increase and is not a fully standardized β); SE = standard error. $R^2 = .33$; adjusted $R^2 = .32$; $F(9, 505) = 27.5$, $p < .001$; $N = 515$.

As shown in Table 4, the pattern of predictors closely paralleled the logistic model: escapism remained the strongest predictor of the continuous score, lower social connectedness and psychological resilience were also significant, whereas benign online disinhibition did not reach significance for the continuous outcome.

Figure 1

Receiver operating characteristic (ROC) curve for the logistic model predicting PSMU risk status (AUC = .78)



4. Discussion

This study examined the psychological and behavioral predictors of PSMU among university students, operationalizing the outcome both as a binary risk classification (BSMAS ≥ 19) and as a continuous score. The findings were consistent across the two analytical frameworks, which differ in their sensitivity to clinical thresholds versus graded variation in use but are transformations of the same instrument rather than independent replications. This consistency indicates that the core

conclusions are robust to the operationalization of the outcome. All five hypotheses were supported: escapism emerged as the strongest psychological predictor in both models (H₁); greater social disconnection predicted elevated PSMU (H₂); benign online disinhibition predicted PSMU risk status (H₃); psychological resilience was inversely associated with PSMU (H₄); and these associations held after adjustment for daily use duration, age, and gender (H₅).

The finding that escapism was the strongest predictor in both models is consistent with emotion regulation accounts of problematic technology use (Kardefelt-Winther, 2014; Kircaburun & Griffiths, 2019). When social media is used primarily to escape from unpleasant emotions or stressful life circumstances, engagement becomes embedded in an avoidance-based coping cycle. Online immersion provides immediate relief from distress (i.e., negative reinforcement), which increases the probability of future avoidance behavior and gradually turns the pattern into compulsive use (Aldao et al., 2010). Over time, repeated reliance on this strategy may prevent the development of more adaptive and approach-oriented coping strategies, further increasing the individual's dependence on social media for emotion regulation (Aldao et al., 2010; Kuss & Griffiths, 2017). The effect of escapism was considerably larger than that of all other psychological predictors, suggesting that escapism should be considered a primary target for both screening and intervention in this population. In practice, clinical and preventive approaches that address avoidance motivation and equip students with alternative emotion regulation strategies (e.g., cognitive reappraisal, behavioral activation, distress tolerance) may be particularly effective.

Lower social connectedness (i.e., greater subjective disconnection) predicted higher problematic social media use in both models, whereas perceived social support was non-significant in both once connectedness and the other predictors were included. In addition, the adjusted estimate for support was directionally positive despite a negligible negative bivariate association. This suppression pattern can be attributed to the moderate negative association between support and disconnection, and indicates that the two constructs share variance but relate differently to problematic use. This dissociation is theoretically and practically meaningful. The social connectedness scale used in the present study assesses a subjective and experiential sense of integration with one's social environment. All items are phrased in terms of disconnection; therefore, higher scores reflect the degree to which individuals feel cut off, isolated, or lacking a sense of belonging. On the other hand, perceived social support reflects a cognitive appraisal of others' availability and willingness to provide help rather than an experiential sense of integration. The present results suggest that the felt sense of social isolation, rather than the perceived availability of supportive relationships, motivates compensatory social media engagement. This finding is in line with Nowland et al.'s (2018) account, which emphasizes that the experiential pain of loneliness, rather than the structural absence of a support network, drives individuals toward online environments in search of relational substitutes. The null multivariate effect of perceived social support contrasts with the bivariate associations reported in comparable student samples (Bilgin & Taş, 2018). Therefore, the two constructs should not be conflated in research design or preventive programs, and instruments designed to identify problematic use risk should prioritize measures of felt disconnection over generic perceived support inventories.

An interesting pattern emerged from the disinhibition analyses. Benign disinhibition predicted at-risk problematic social media use status but did not significantly predict the continuous score, whereas toxic disinhibition was non-significant in both models. Because the two outcomes are transformations of the same items, and because the difference between a significant and a non-significant coefficient is not itself statistically significant (Gelman & Stern, 2006), this divergence should be read as a tentative descriptive pattern rather than as established evidence of a threshold mechanism. One possible interpretation is that benign disinhibition increases the probability of crossing into clinically meaningful use without proportionally elevating problematic use across its full range. A speculative mechanism is that the rewarding and socially facilitating qualities associated with benign disinhibition (e.g., greater ease of emotional self-disclosure, diminished fear of social judgment) increase the appeal of social media for susceptible individuals and push vulnerable users past the risk threshold. The absence of an association for toxic disinhibition

suggests that problematic social media use, at least in a university student sample, is more closely related to the prosocial and affiliative aspects of online interaction than to hostility or antisocial behavior. Although this dissociation requires replication in independent samples, it extends the benign/toxic distinction proposed by Suler (2004) and highlights the value of assessing the two subscales separately rather than treating online disinhibition as a unitary construct.

Psychological resilience was a significant protective factor in both models. The resilience-by-escapism interaction was non-significant in both frameworks, indicating that resilience and escapism contribute independently and additively to problematic social media use risk. In other words, resilience does not specifically buffer the effect of escapism; rather, it reduces problematic use risk across all levels of escapism. This independence is practically relevant because it implies that interventions targeting either construct may reduce risk regardless of the student's standing on the other variable. This finding is consistent with the suggestion that resilient individuals are less likely to rely on avoidance-based coping, which reduces the probability that social media use becomes the preferred means of emotion regulation (Bilgin & Taş, 2018; Bonanno, 2004). Together with the escapism findings, these results suggest that reducing avoidance-based motivations for social media use and strengthening psychological resilience are complementary intervention targets that can be addressed independently or in combination.

Toxic disinhibition, perceived social support, age, and gender did not emerge as significant predictors. The absence of a gender effect, which has been reported as significant in some but not all previous studies of problematic social media use, may partly reflect the predominantly female composition of the present sample, which limits statistical power for detecting between-group differences and constrains the generalizability of the null finding to male students. The non-significant age effect may be due to the restricted age range of the sample, within which developmental differences in social media use may be too small to detect. The null effect of toxic disinhibition supports the conclusion that hostile and antisocial online behavior is not a primary driver of problematic social media use as measured in this context.

5. Limitations and Future Studies

Several limitations should be noted. First, the cross-sectional design prevents making causal inferences between variables. Longitudinal and experimental designs are needed to clarify the temporal ordering of escapism, social disconnection, resilience, and PSMU. Second, all data were collected using self-report questionnaires, which are prone to common method variance, social desirability bias, and recall inaccuracies regarding daily use duration. Third, the sample was recruited via online voluntary participation, which may introduce self-selection bias and limit representativeness. In addition, the predominantly female composition (74.8%) limits the generalizability of the findings to male students and non-student populations. Data collection took place during a period of predominantly online/remote instruction, when students' online activity was elevated relative to typical in-person semesters, which may have elevated the overall levels and variability of social media use, and may have altered the salience of escapism as a motivator. In addition, the ≥ 19 BSMAS cut-off is a screening rather than a diagnostic threshold and was originally derived in a nationally representative adolescent sample (Bányai et al., 2017). Therefore, the at-risk proportion observed here (40.2%) is threshold-dependent and should not be interpreted as a clinical prevalence estimate. Finally, the study was conducted in a single Turkish university. Future studies should replicate the results using samples from different countries and cultural contexts.

6. Conclusion

Among university students, the risk of problematic social media use was most strongly predicted by escapism-motivated engagement. Greater social disconnection and benign online disinhibition contributed additional independent risk, whereas psychological resilience was a protective factor. These findings were consistent across the dichotomous and continuous operationalizations of PSMU and have implications for risk identification and prevention in university settings. Efforts to

identify at-risk students should prioritize escapism-driven use patterns and low resilience. Prevention and intervention programs should address both the reduction of avoidance-based motivations for social media engagement and the strengthening of psychological resilience and adaptive coping skills. Integrating brief risk assessment with skills-based components within existing student mental health and counseling services may be a feasible way to reduce PSMU and support the psychological wellbeing of university students.

AI Usage Disclosure: This manuscript was prepared with the assistance of AI tools (Claude) for language refinement. All intellectual contributions are the responsibility of the author.

Data availability: The data are available from the corresponding author upon reasonable request.

Declaration of interest: The author declares no conflicts of interest.

Ethics statement: This study received ethical approval from the Ethics Committee for Social Sciences and Humanities at Bursa Uludağ University (Decision No: 45, Date: 26.08.2022), in accordance with the principles outlined in the Declaration of Helsinki. Informed consent was also obtained from all subjects involved in the study.

Funding: Şule Betül Tosuntaş received support from The Scientific and Technological Research Council of Türkiye, International Postdoctoral Research Fellowship Programme (TÜBİTAK 2219).

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