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Relationship of Social Media Use with Psychological Well-Being and Quality of Life in Medical Students

Tıp Fakültesi Öğrencilerinde Sosyal Medya Kullanımının Psikolojik İyi Oluş ve Yaşam Kalitesiyle İlişkisi

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ABSTRACT

Objective: This study aimed to investigate the relationships between social media addiction, psychological well-being, quality of life, and academic success among medical students.
Method: A total of 84 volunteer students aged 18–25 from Çukurova University Faculty of Medicine participated in the study. Participants completed the Bergen Social Media Addiction Scale, Flourishing Scale, WHOQOL-BREF, and Pittsburgh Sleep Quality Index. Academic performance was measured using students' latest clinical rotation scores.
Results: A significant and negative relationship was found between social media addiction and overall quality of life, particularly in the psychological and physical domains of the WHOQOL-BREF. While the regression between social media addiction and psychological well-being was not significant, a negative correlation was observed. Academic achievement was significantly and negatively predicted only by the environmental quality of life domain. No other significant gender differences were found except for clinical performance scores, which were higher among female students.
Conclusion: Social media addiction appears to negatively impact the psychological and physical aspects of quality of life among medical students. Although its effect on academic performance and psychological well-being is less direct, the findings suggest that the nature and quality of social media engagement may be critical to students' overall functioning.
Keywords: Social media addiction, quality of life, psychological well-being, medical students, academic performance

ÖZ

Amaç: Bu çalışmada, sosyal medya bağımlılığıyla psikolojik iyi oluş, yaşam kalitesi ve de akademik başarı arasındaki ilişkilerin tıp fakültesi öğrencileri örnekleminde incelenmesi amaçlanmıştır.
Yöntem: Çalışmaya Çukurova Üniversitesi Tıp Fakültesi'nde öğrenim gören, 18-25 yaş aralığında 84 gönüllü öğrenci katılmıştır. Katılımcılara Bergen Sosyal Medya Bağımlılığı Ölçeği, Psikolojik İyi Oluş Ölçeği, WHOQOL-BREF ve Pittsburgh Uyku Kalitesi İndeksi uygulanmış; akademik başarı ise son staj puanlarıyla değerlendirilmiştir.
Bulgular: Sosyal medya bağımlılığı ile yaşam kalitesi arasında anlamlı ve negatif yönde bir ilişki saptanmıştır. Özellikle WHOQOL'un psikolojik ve fiziksel alt boyutlarında düşüş gözlenmiştir. Psikolojik iyi oluşla sosyal medya bağımlılığı arasındaki regresyon ilişkisi anlamlı çıkmamıştır, ancak korelasyon düzeyinde negatif ilişki bulunmuştur. Akademik başarı (staj puanı) yalnızca çevresel yaşam kalitesi boyutuyla anlamlı negatif ilişki göstermiştir. Cinsiyetler arasında staj puanı dışında anlamlı bir fark saptanmamıştır.
Sonuç: Sosyal medya bağımlılığı, tıp fakültesi öğrencilerinin yaşam kalitesini özellikle psikolojik ve fiziksel alanlarda olumsuz yönde etkilemektedir. Psikolojik iyi oluş ve akademik başarı üzerindeki etkisi daha dolaylıdır. Bulgular, sosyal medya kullanım biçiminin bireylerin genel işlevselliği üzerinde belirleyici bir rol oynayabileceğini göstermektedir.
Anahtar sözcükler: Akademik başarı, psikolojik iyi oluş, sosyal medya bağımlılığı, , tıp fakültesi öğrencileri, yaşam kalitesi

Introduction

The discovery of the Internet represents one of the most significant milestones in human history (Castells 2002). By the late 1960s, the development of ARPANET enabled computers to communicate with each other (Leiner et al. 2009). This advancement initiated a process that gradually evolved into a vast global network, significantly facilitating information sharing worldwide (Berners-Lee 1999). Today, through social media, the Internet has transcended its role as a mere information resource, enabling interpersonal interaction, community formation, and the rapid dissemination of ideas (Shirky 2011). However, this transformation has also brought about several challenges, such as information pollution, diminished social competence, concerns about privacy, and the adverse effects of virtual interactions on real-life relationships (Van Dijck, 2013, Spangler, 2013, Fuchs et al. 2017). This digital shift can directly impair psychological well-being and quality of life (Fuchs 2017). Over time,

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social media addiction has increasingly been recognized as a distinct behavioral issue, separate from other internet-based problems such as online gaming or general internet addiction (Özyeşil and Erdoğan 2018, Twenge 2019, Ayar et al. 2022).

It is well-established that social media use is significantly more prevalent among young adults than the general population (Stocking et al. 2022). In the specific context of medical students, social media platforms can serve academic purposes such as accessing medical knowledge, sharing clinical cases, engaging with professional communities, and reaching scientific resources (George et al. 2013, Jaffar 2016). Additionally, due to the demanding workload associated with medical education, students may use social media to communicate with family and peers or as a means of mental relaxation to cope with stress from long and exhausting study hours (Al-Dubai et al. 2013). In this regard, social media functions as an information resource and a tool for emotional support (Alsuraihi et al. 2016).

Given the extent to which social media occupies time and cognitive energy, it is inevitable that it exerts both positive and negative effects on individuals' lives. It has been shown to offer certain benefits, such as networking opportunities, professional development, rapid information exchange, and access to peer support groups (George et al. 2013). Particularly for medical students and healthcare professionals, social media can be a powerful tool for accessing up-to-date information and fostering professional solidarity (Jaffar 2016, Köseoğlu and Taşdelen 2023). However, excessive use has been linked to issues such as poor time management, disrupted sleep quality, and reduced time allocated to academic work—factors that may adversely affect academic performance, especially during high-stress periods such as exam preparation (Al-Dubai et al. 2013, Wolniczak et al. 2013). Furthermore, frequent exposure to idealized content on social media platforms has been shown to lead to psychological distancing from reality, feelings of inadequacy, and pressure to achieve perfection, which in turn may trigger anxiety and burnout symptoms (Chou and Edge 2012, Valdez and Datu, 2022, Ayar et al. 2022).

Social media addiction is considered a form of behavioral addiction and exhibits core clinical features. According to Griffiths' component model of behavioral addiction, such addictions are characterized by six core criteria: salience, tolerance, withdrawal, conflict, mood modification, and relapse. These criteria are also applicable in the context of social media addiction. For instance, individuals may no longer derive the same level of satisfaction from social media use unless they increase the duration of their engagement, indicating the development of tolerance. Social media may be used as a coping mechanism to regulate negative emotions or escape personal problems. When access is restricted, individuals may experience withdrawal symptoms such as irritability and restlessness. Attempts to reduce or cease use often result in failure (relapse), and excessive use may begin to impact interpersonal relationships negatively, as well as physical and psychological health (Andreassen et al. 2012, Griffiths et al. 2016).

Psychological well-being is a successful existential struggle that includes progressing toward one's goals, engaging in positive relationships with others, and striving to improve one's current condition. It also refers to a state in which positive feelings and thoughts about life outweigh negative ones (Myers and Diener 1995, Keyes et al. 2002). Psychological well-being is typically conceptualized across six dimensions: self-acceptance, willingness to pursue personal growth, autonomy, having a sense of purpose in life, establishing positive relationships with others, and possessing environmental mastery—that is, the ability to manage and shape one's surroundings (Ryff 1995).

Quality of life, on the other hand, refers to an individual's perception of their own life within the framework of their characteristics, cultural context, values, standards, and life expectations (Eriş and Anıl 2012). There are three main approaches to defining quality of life. The first is a normative perspective focusing on societal or personal ideals; the second emphasizes satisfaction resulting from personal preferences; and the third highlights subjective individual experiences (Diener et al. 2010).

Various studies have demonstrated that both psychological well-being and quality of life are influenced by individuals' levels of social media use (Bányai et al. 2017, Twenge and Campbell, 2018, Kırcaburun and Griffiths 2019). In particular, increased time spent on social media has been associated with life satisfaction and declines in subjective well-being. These two constructs are also closely linked to academic performance, as the sustainable fulfillment of academic responsibilities is directly related to cognitive focus, motivation, emotional stability, and overall life satisfaction (Keyes et al. 2002).

In recent years, there has been a marked increase in social media usage, especially among young adults. Numerous national and international studies have emphasized that this increasing use may adversely affect individuals' psychological well-being and quality of life (Keles et al. 2020). These effects are often attributed to

social media–induced stress, social comparison, overstimulation, and digital burnout (Elhai et al. 2017, Andreassen et al. 2017). However, many existing studies have not sufficiently focused on populations under unique stress loads, such as medical students. Medical students may be more psychologically vulnerable due to prolonged academic demands, examination pressures, and professional expectations (Dyrbye et al. 2008). Findings from such studies can provide valuable guidance for interventions limiting or directing social media use.

This study aims to investigate the effects of social media use on psychological well-being, quality of life, and academic performance among medical students. The central hypothesis is that social media use may indirectly affect academic performance by influencing psychological well-being and quality of life. Specifically, it is anticipated that excessive use of social media may lead to psychological stress among students, thereby reducing their quality of life and negatively impacting their academic performance.

Method

Sample

This study was conducted with volunteer students aged 18 to 25 enrolled at Çukurova University Faculty of Medicine. One hundred ten students were initially recruited, and after applying exclusion criteria, 26 participants were excluded. The final sample consisted of 84 individuals. Exclusion criteria included having a current psychiatric disorder, not being in remission despite ongoing psychiatric treatment, or not actively using social media. A post-hoc power analysis was conducted using the G*Power program. For comparisons between gender groups, the analysis indicated that a sample size of 43 and 41 participants achieved a statistical power of 73% (Faul et al. 2007).

Procedure

This study was approved by the Research Ethics Committee of Çukurova University Faculty of Medicine, under meeting number 148 and decision number 45, dated 04.10.2024. Participants were provided with detailed information about the study prior to participation, and written informed consent was obtained from all participants.

The study was designed as a cross-sectional investigation. Data collection commenced after obtaining ethical approval, which included providing participants with detailed information about the study and obtaining written consent. All measurement tools were administered in face-to-face sessions under supervision, each lasting approximately 20–25 minutes.

Psychiatric diagnoses were assessed through a sociodemographic form based on self-reported information. Participants were asked whether they had previously received a psychiatric diagnosis, whether they were currently undergoing treatment, and, if so, whether their symptoms were in remission. All participants completed the Bergen Social Media Addiction Scale, the Psychological Well-Being Scale, the WHO Quality of Life Scale-Short Form, and the Pittsburgh Sleep Quality Index. Academic performance was evaluated using the average grade of the participants' most recent clinical internship in medical school.

Measures

Sociodemographic Data Form

The Sociodemographic Data Form was used to collect information regarding participants' age, gender, total years of education, marital status, residential area (urban or rural), cigarette, alcohol, and substance use, and the presence of any physical illness.

Bergen Social Media Addiction Scale (BSMAS)

Initially developed by Andreassen and colleagues to assess Facebook addiction, the scale was later expanded in scope and adapted to evaluate general social media addiction (Andreassen et al. 2012). The Bergen Social Media Addiction Scale can be used to identify the level of addiction and to evaluate the effectiveness of intervention programs. The scale consists of six items covering the core symptoms of addiction: salience, mood modification, tolerance, withdrawal, conflict, and relapse. Each item is rated on a 5-point Likert scale ranging from 1 (very rarely) to 5 (very often). The total score ranges between 6 and 30, with higher scores indicating a greater tendency toward addictive social media use. The developers did not propose a clinical cut-off score for diagnosis

(Andreassen et al. 2012). However, some studies have interpreted a score of 3 or higher on each item (i.e., a total score of 18 or above) as indicative of potential risk for social media addiction (Level 2023, Doğan 2024). In this study, no cut-off score was used; total scores were treated as continuous variables for use in correlational and predictive analyses. The internal consistency coefficient was reported as 0.88 in the original version of the scale and 0.83 in the Turkish adaptation (Andreassen et al. 2012, Demirci et al. 2015).

Psychological Well-Being Scale (PWBS)

The Psychological Well-Being Scale (PWBS) consists of eight items that capture key aspects of human functioning, such as positive relationships, feelings of competence, and having a purposeful and meaningful life. Originally developed by Diener and colleagues, the scale was initially named the Psychological Well-Being Scale but was later renamed the Flourishing Scale to reflect its content better. Since the term flourishing does not have a direct equivalent in Turkish, the scale was translated as the Psikolojik İyi Oluş Ölçeği in Turkish. The items are rated on a 7-point Likert scale, with no reverse-scored items. The total score ranges from 8 to 56, with higher scores indicating greater psychological strengths and resources. The Cronbach's alpha coefficient of internal consistency was reported as 0.87 (Diener et al. 2010). The Turkish adaptation was carried out by Bülent Baki Telef, who reported that the scale loaded onto six dimensions (self-acceptance, positive relations, autonomy, environmental mastery, purpose in life, and personal growth) and demonstrated adequate validity and reliability (Telef 2013).

World Health Organization Quality of Life Scale–Short Form (WHOQOL-BREF)

The WHOQOL-BREF is a short version of the original 100-item WHOQOL scale developed by the World Health Organization to assess individuals' perceptions of their quality of life. This abbreviated form includes 26 items and consists of closed-ended questions. The scale is structured around four primary domains: general health, physical health, psychological health, social relationships, and environmental factors. Specifically, general health is assessed with items 1 and 2; physical health with items 3, 4, 10, 15, 16, 17, and 18; psychological health with items 5, 6, 7, 11, 19, and 26; social relationships with items 20, 21, and 22; and the environmental domain with items 8, 9, 12, 13, 14, 23, 24, and 25. The scale does not yield an overall score; higher scores within each domain reflect more favorable perceptions of quality of life in that area (Krageloh et al. 2013). The Turkish adaptation, including validity and reliability testing, was conducted by Eser and colleagues in 1999 (Eser et al. 1999).

Pittsburgh Sleep Quality Index (PSQI)

The Pittsburgh Sleep Quality Index (PSQI) was developed by Buysse et al. in 1989. Its Turkish adaptation and validation study were conducted by Ağargün and colleagues in 1996. The PSQI consists of 24 items and assesses seven components: subjective sleep quality, sleep latency, duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction. The scale does not diagnose sleep disorders or quantify the frequency of specific sleep issues but offers a general assessment of sleep quality. A score of 5 or above indicates poor sleep quality and may warrant clinical attention (Buysse et al. 1989).

Statistical Analysis

Data analysis was performed using IBM SPSS version 25. The assumption of normality was considered met if the skewness and kurtosis values of the variables were within the range of -1.5 to +1.5. In addition, histogram plots were examined to assess the variables' distribution visually. Since the sample size ranged between 50 and 300, z-scores between -3.29 and +3.29 also supported normality. Based on these criteria, the variables were assumed to be normally distributed. Pearson's correlation coefficient (r) was used to examine the linear relationships between variables. This coefficient indicates the direction (positive/negative) and the strength (weak/moderate/strong) of the relationship between two continuous variables. Values range from -1 to +1. Negative coefficients indicate inverse relationships, while positive coefficients indicate direct relationships. The threshold for statistical significance was set at $p < .05$ and $p < .01$. Significant correlations between variables were evaluated accordingly, considering both the correlation's magnitude and its contextual meaning (Cohen 2013). Descriptive statistics for the demographic characteristics of the participants (e.g., gender, marital status, place of residence, smoking, and alcohol use) were presented using frequencies and percentages. For continuous variables, means, standard deviations and standard errors were reported. Independent samples t-tests were conducted to compare means between two independent groups (e.g., based on gender). Before performing the t-tests, Levene's Test for Equality of Variances was used to evaluate the homogeneity of variance assumption. When this assumption was met, standard t-test results were reported; otherwise, corrected t-test values for unequal variances were provided. In addition, Pearson correlation analyses were conducted to examine relationships between continuous variables such as total scores on the Pittsburgh Sleep Quality Index (PSQI),

Psychological Well-Being Scale (PWBS), and subdomains of the WHOQOL scale. Correlation coefficients were reported along with their statistical significance levels ($p < .01$ and $p < .05$), and the direction and strength of the relationships were interpreted. Regression analyses were performed to evaluate the effects of social media use on psychological well-being and quality of life. Multiple regression analysis was used to identify variables predicting academic performance. In this analysis, dependent variables included overall quality of life (WHOQOL-BREF) and the average score of the most recent clinical internship. Independent variables included total scores from the Bergen Social Media Addiction Scale (BSMAS), Psychological Well-Being Scale (PWBS), and the subscales of the WHOQOL: physical health (WB_PHYS), psychological health (WB_PSYC), social relationships (WB_SR), and environment (WB_ENV). Due to the high correlation between PSQI and PWBS scores, multicollinearity was detected during the regression analysis. As multicollinearity may reduce the reliability of regression coefficients, increase standard errors, and impair the interpretability of the model, PSQI was excluded from the regression model. Model validity was assessed using R^2, adjusted R^2, and the F-test. Confidence intervals (95%) were calculated for all variables, and statistical significance was determined at $p < .05$.

Results

Table 1 summarizes the sociodemographic characteristics of the participants. Of the 84 medical students included in the study, 51.2% were female, and 48.8% were male. All participants were single. Among them, 35.7% reported alcohol use, and 19% reported smoking. A past diagnosis of a psychiatric disorder was present in 6% of the participants. Approximately 94% of the students resided in areas smaller than provincial centers. None of the participants reported a history of substance use (Table 1).

Table 1. Demographic characteristics of the participants

Variable	Category	n
Gender	Female	43
	Male	41
Marital Status	Single	84
Alcohol use	Yes	30
	No	54
Place of residence	Smaller than city center	79
	City center	5
Smoking	Yes	16
	No	68
Substance use	No	84
History of Psychiatric Illness	Yes	5
	No	79

Table 2. Comparison of scale scores by gender

Scale	Gender	N	Mean	Std. Deviation
WHOQOL-BREF total	Female	43	94.9302	9.74287
	Male	41	95.9850	11.75495
Final Clinical Rotation Score	Female	43	84.1395	8.79280
	Male	41	77.3659	12.28567
PSQI Total Score	Female	43	6.7209	2.88944
	Male	41	6.4146	3.30133
BSMAS Total Score	Female	43	17.6744	4.75956
	Male	41	16.4390	5.33408
PWBS Total Score	Female	43	44.2791	8.06322
	Male	41	43.0000	7.80705
WHOQOL-BREF Physical Health	Female	43	71.9269	10.32694
	Male	40	75.8036	12.06362
WHOQOL-BREF Psychological	Female	43	63.6628	11.33184
	Male	41	62.8049	16.70283
WHOQOL-BREF Social Relationships	Female	43	64.1473	15.05445
	Male	41	68.0894	18.90238
WHOQOL-BREF Environmental Domain	Female	43	64.2442	12.10888
	Male	41	64.9390	13.08237

WHOQOL-BREF: World Health Organization Quality of Life Scale – Brief Version; PSQI: Pittsburgh Sleep Quality Index; PWBS: Psychological Well-Being Scale; BSMAS: Bergen Social Media Addiction Scale

The participants' mean scores on the study scales by gender are presented in Table 2. According to the results of independent samples t-tests, a statistically significant difference was observed only in clinical rotation scores (t = 2.92, p = .005). Female students had significantly higher clinical rotation scores (M = 84.14) than male students (M = 77.36). No significant gender differences were found in other psychosocial measures, including quality of life, psychological well-being, social media addiction, and sleep quality (p > .05). Total quality of life scores did not differ significantly by gender either (p = .660). Further details on the comparison of rotation grades, psychological assessments, and quality of life variables by gender are presented in Table 3.

Table 3. Comparison of internship scores, psychological measures, and quality of life variables by gender

Variables	**Female (±SD)**	**Male (±SD)**	**P value**
Final Internship Score	84.14 ± 8.79	77.37 ± 12.29	0.005
PSQI Total Score	6.72 ± 2.89	6.41 ± 3.30	0.652
BSMAS Total Score	17.67 ± 4.76	16.44 ± 5.33	0.265
PWBS Total Score	44.28 ± 8.06	43.00 ± 7.81	0.463
WHOQOL-Physical Health	71.93 ± 10.33	75.80 ± 12.06	0.119
WHOQOL-Psychological Health	63.66 ± 11.33	62.80 ± 16.70	0.783
WHOQOL-Social Relationships	64.15 ± 15.05	68.09 ± 18.90	0.292
WHOQOL-Environmental Domain	64.24 ± 12.11	64.94 ± 13.08	0.801

PSQI: Pittsburgh Sleep Quality Index; BSMAS: Bergen Social Media Addiction Scale; PWBS: Psychological Well-Being Scale; WHOQOL-BREF: World Health Organization Quality of Life Scale – Brief Version; SD: Standard deviation; p < .05: statistically significant

Relationships between variables were examined using Pearson correlation analysis, with results shown in Table 4. According to the analysis, no significant correlations were found between clinical rotation grades and psychological well-being, quality of life, sleep quality, or social media addiction (p > .05). However, some noteworthy associations emerged. There was a strong positive correlation between psychological well-being. The WHOQOL psychological domain (r = .618, p < .01).

Table 4. Correlation analysis between quality of life. psychological well-being. and academic performance

		WB-GH	WB-Physical Health	WB-Psych Health	WB-SR	WB-ENV	BSMAS	PWBS	PSQI
WHOQOL-BREF General Health (WB-GH)	r	1	0.546**	0.561**	0.426**	0.439**	-0.076	0.294**	-0.381**
	p		0.000	0.000	0.000	0.000	0.494	0.007	0.000
WHOQOL-BREF Physical Health	r	0.546**	1	0.663**	0.395**	0.452**	-0.215	0.456**	-0.564**
	p	0.000		0.000	0.000	0.000	0.051	0.000	0.000
WHOQOL-BREF Psychological Health (WB-PsychHealth)	r	0.561**	0.663**	1	0.453**	0.465**	-0.235*	0.618**	-0.491**
	p	0.000	0.000		0.000	0.000	0.032	0.000	0.000
WHOQOL-BREF Social Relationships (WB-SR)	r	0.426**	0.395**	0.453**	1	0.319**	-0.067	0.428**	-0.144
	p	0.000	0.000	0.000		0.003	0.545	0.000	0.190
WHOQOL-BREF Environmental Domain (WB-ENV)	r	0.439**	0.452**	0.465**	0.319**	1	-0.169	0.290**	-0.258*
	p	0.000	0.000	0.000	0.003		0.125	0.007	0.018
BSMAS	r	-0.076	-0.215	-0.235*	-0.067	-0.169	1	-0.085	0.349**
	p	0.494	0.051	0.032	0.545	0.125		0.444	0.001
PWBS	r	0.294**	0.456**	0.618**	0.428**	0.290**	-0.085	1	-0.292**
	p	0.007	0.000	0.000	0.000	0.007	0.444		0.007
PSQI	r	-0.381**	-0.564**	-0.491**	-0.144	-0.258*	0.349**	-0.292**	1
	p	0.000	0.000	0.000	0.190	0.018	0.001	0.007	
Final Internship Grade	r	0.037	-0.018	0.110	0.125	-0.159	0.014	0.132	-0.154
	p	0.736	0.870	0.318	0.257	0.149	0.900	0.233	0.161

*p < .05: Statistically significant (two-tailed) p < .01: Highly statistically significant (two-tailed); WHOQOL-BREF: World Health Organization Quality of Life Scale – Brief Version; BSMAS: Bergen Social Media Addiction Scale, PWBS: Psychological Well-Being Scale, PSQI: Pittsburgh Sleep Quality Index. .

Table 5. Regression analysis of the predictive effect of Bergen Social Media Addiction Scale (BSMAS) total score on psychological well-being					
Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1.0	0.084	0.007	-0.005	2.7989	
ANOVA					
Model	Sum of Squares	df	Mean Square	F	p
Regression	4.613	1	4.613	0.589	0.445
Residual	642.375	82	7.834	NaN	NaN
Total	646.988	83	NaN	NaN	NaN
Coefficients					
	B	Std. Hata	Beta	t	p
(Constant)	34.216	1.081		31.641	0.0
BSMAS-total	0.047	0.061	0.084	0.767	0.445

R: Correlation coefficient; R^2: Coefficient of determination; Adjusted R^2: Adjusted coefficient of determination; Std. Error of the Estimate: Standard error of prediction; Sum of Squares: Total variance; df: Degrees of freedom; F: F-test statistic; p: Significance level (p-value); NaN: Not a number; B: Unstandardized coefficient; Std. Error: Standard error; Beta: Standardized coefficient; t: t-test statistic.

Psychological well-being was also positively correlated with social relationships ($r = .428$, $p < .01$) and physical health ($r = .456$, $p < .01$). Social media addiction was negatively correlated with both psychological health ($r = –.235$, $p = .032$) and physical health ($r = –.215$, $p = .051$). Moreover, a significant positive correlation was found between social media addiction and PSQI scores ($r = .349$, $p = .001$), suggesting that higher levels of social media addiction are associated with poorer sleep quality, as higher PSQI scores indicate worse sleep. The regression analysis between social media addiction and psychological well-being did not yield statistically significant results ($p = .445$). The model accounted for only 0.7% of the variance ($R^2 = .007$) (Table 5).

Table 6. Regression analysis of the predictive effect of Bergen Social Media Addiction Scale (BSMAS) Total score on general quality of life (WHOQOL-BREF Total Score)					
Model Summary - WHOQOL					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1.0	0.224	0.05	0.038	10.4979	
ANOVA - WHOQOL					
Model	Sum of Squares	df	Mean Square	F	p.
Regression	471.702	1	471.702	4.28	0.042
Residual	8926.684	81	110.206	NaN	NaN
Total	9398.386	82	NaN	NaN	NaN
Coefficients - WHOQOL					
	B	Std. Hata	Beta	t	p
(Constant)	103.48	4.056		25.511	0.0
BSMAS total	-0.472	0.228	-0.224	-2.069	0.042

R: Correlation coefficient; R^2: Coefficient of determination; Adjusted R^2: Adjusted coefficient of determination; Std. Error of the Estimate: Standard error of prediction; Sum of Squares: Total variance; df: Degrees of freedom; F: F-test statistic; p: Significance level (p-value); NaN: Not a number; B: Unstandardized coefficient; Std. Error: Standard error; Beta: Standardized coefficient; t: t-test statistic.

However, a significant and negative correlation was found between social media addiction and overall quality of life (WHOQOL-BREF total score) ($r = –0.224$, $p = .042$). This model explained approximately 5% of the variance in quality of life scores ($R^2 = 0.050$). This finding suggests that higher levels of social media addiction are associated with lower quality of life (Table 6).

Regarding the WHOQOL subdomains, a marginally significant negative correlation was found between physical health and social media addiction ($r = –0.215$, $p = .051$), while a statistically significant negative correlation was observed between the psychological subdomain and social media addiction ($r = –0.235$, $p = .032$). No significant relationships were found between social media addiction and the social relationships ($p = .545$) or environmental ($p = .125$) subdomains.

A multiple linear regression model was constructed to examine whether psychological well-being, social media addiction, and quality of life subdomains predicted clinical rotation performance. The overall model was not statistically significant ($F(6,76) = 1.362$, $p = .241$), accounting for only 9.7% of the variance in the dependent variable ($R^2 = .097$, Adjusted $R^2 = .026$). However, at the level of individual predictors, only the environmental

quality of life subdomain significantly and negatively affected clinical rotation performance (r = –0.263, p = .042). No other predictors—including psychological well-being, social media addiction, or the physical, psychological, and social subdomains of quality of life—showed significant effects on clinical performance (p > .05) (Table 7).

Table 7. Multiple regression analysis of psychosocial predictors of final internship score

	B	Std. Error	Beta	t	p
(Constant)	97.495	18.328		5.320	0.000
PWBS total	-0.396	0.476	-0.099	-0.831	0.409
WB-Physical Health	-0.420	0.531	-0.119	-0.790	0.432
WB- Psychological Health	0.924	0.529	0.282	1.747	0.085
WB-SR	0.823	0.679	0.152	1.212	0.229
WB-ENV	-0.729	0.352	-0.263	-2.070	0.042*
BSMAS	0.061	0.252	0.028	0.242	0.810

B: Unstandardized regression coefficient; Std. Error: Standard error; Beta: Standardized regression coefficient; t: t-test statistic; p: Significance level (p-value); PWBS: Psychological Well-Being Scale; BSMAS: Bergen Social Media Addiction Scale; WB-SR: WHOQOL-BREF Social Relationships; WB-ENV: WHOQOL-BREF Environmental Domain

Discussion

This study examined the relationships between social media addiction, quality of life, psychological well-being, and academic performance (clinical rotation grades) among medical students. The findings suggest that social media addiction may have specific adverse effects on both individual and academic functioning. One of the main findings of the study was the negative association between the level of social media addiction and quality of life. It was observed that as participants' social media addiction increased, their quality of life scores significantly decreased. This result is consistent with previous studies suggesting that social media use may negatively impact individuals' physical and psychological well-being (Kuss and Griffiths 2015, Griffiths et al. 2016, Lin et al. 2016). In particular, significant declines were found in the physical and psychological domains of the WHOQOL-BREF about social media addiction. This aligns with literature suggesting that social media may increase psychological stress through constant distraction, sleep disturbances, and social comparison (Andreassen et al. 2017, Ahmed et al. 2024, Lin et al. 2024).

Existing literature also supports that behaviors such as spending time on social media until late at night and screen exposure before bedtime may reduce sleep duration and quality, ultimately leading to chronic fatigue (Li et al. 2019). Experts emphasize that the mental stimulation from social media interactions and the blue light emitted from screens may disrupt circadian rhythms, impairing sleep quality (Kwok et al. 2021).

Although the regression model examining the relationship between psychological well-being and social media addiction was not statistically significant, a significant negative correlation was observed at the correlational level. This suggests that as the level of social media addiction increases, there is a tendency for psychological well-being to decrease; however, addiction alone does not appear to be a strong predictor of psychological well-being. These findings support the view that psychological well-being is a multidimensional construct that cannot be fully explained by digital habits alone (Ryff 1995). Previous studies have indicated that social comparison is one underlying mechanism for these adverse psychological effects, often leading to subjective dissatisfaction (Aparicio-Martinez et al. 2019, Amirthalingam and Khera 2024). Exposure to idealized representations of others' lives on social media may reinforce feelings of inadequacy and worthlessness among young adults, primarily through constant comparison regarding physical appearance and success, potentially undermining self-esteem and impairing psychological well-being.

Although individuals with psychiatric disorders that could negatively affect well-being were excluded from this study, the findings reinforce the idea that well-being should be evaluated not only through a health/illness lens but also as a multifactorial phenomenon (Bahar et al. 2009, Twenge 2019).

Correlation analyses revealed strong positive relationships between psychological well-being and several WHOQOL-BREF subdomains, particularly in the psychological and social domains. These findings support existing literature suggesting that individuals with a higher quality of life also report higher psychological well-being and life satisfaction (Diener and Suh 1997). In similar studies, high scores on the WHOQOL-BREF are significantly associated with psychological resilience and academic satisfaction. For example, a study conducted by Akdeniz et al. (2021) with university students in Turkey found that students with a higher quality of life also demonstrated higher psychological resilience, which was positively related to academic motivation. Likewise, Aparicio-Martínez and colleagues (2019) identified significant positive correlations between quality of life,

academic performance, and psychological well-being in health sciences students in Spain. These findings indicate that quality of life is a critical health indicator of psychological resilience and academic functioning.

The only statistically significant difference in gender-based comparisons was in clinical rotation performance. Female students had significantly higher rotation scores than their male counterparts, which may align with previous findings suggesting that women exhibit more organized and motivated behaviors in academic settings (Voyer and Voyer 2014). Several studies on similar topics also support our results, indicating that female students often outperform their male peers in academic performance indicators such as grade point averages and exam scores. For instance, in a sample of education faculty students in Turkey, female students had significantly higher GPA scores than males (Bahar et al. 2009). Similarly, a recent study among medical students reported that female students had significantly higher exam scores and cumulative academic averages than males (Bhatti et al. 2023). In higher education, female students tend to achieve higher grades and are more likely to graduate than male students (Sax and Harper 2007, Conger and Long 2010). However, no significant gender differences were found in other psychosocial variables, which suggests that individual differences may play a more prominent role than gender itself.

The lack of statistical significance in the regression model examining psychosocial predictors of clinical rotation performance indicates that these variables, when considered together, do not strongly predict academic success. Nevertheless, environmental quality of life emerged as the only variable that significantly and negatively predicted rotation scores. This finding may reflect the impact of limited access to environmental resources, inadequate social support, or challenges in coping with academic stressors on students' performance (Bronfenbrenner 1979).

This study offers a unique perspective by examining psychosocial variables such as social media addiction, psychological well-being, quality of life, and academic performance through an integrated approach rather than considering them separately. In particular, the inclusion of WHOQOL-BREF subdomains alongside measures of psychological well-being and social media addiction enabled more detailed and refined analyses of the components of quality of life. As one of the few studies focusing on the impact of digital behavioral habits among medical students, it makes a meaningful contribution to the literature. Furthermore, the statistical examination of gender-based differences has allowed for a more nuanced interpretation of the findings. The results suggest important practical implications, particularly in informing the development of digital behavior-based interventions within university-level psychological counseling services.

The cross-sectional design of the study precludes establishing causal relationships between variables. Accordingly, any inference regarding the directionality of the relationship between social media addiction and quality of life should be interpreted with caution. The use of self-report measures and reliance solely on participants' self-reported psychiatric history, without a structured clinical evaluation (e.g., SCID), may have introduced bias due to social desirability and variability in self-awareness. This is particularly relevant for participants with limited insight into their social media use, potentially affecting data accuracy. Thus, the methodology represents a significant limitation in terms of the validity of the data and may affect the generalizability of the findings. Moreover, evaluating social media use only in terms of addiction levels excluded important contextual variables such as usage motives, content types, and usage patterns. The use of a single indicator of academic performance -the most recent clinical internship grade- also limited the objectivity of the academic performance assessment. The study sample consisted of students from a single institution and a limited number of medical students, which further restricts the generalizability of the findings. Lastly, the analyses did not control for confounding variables such as age, socioeconomic status, screen time, and psychiatric history, limiting the broader interpretation of the observed associations.

Conclusion

This study demonstrated that social media addiction negatively impacts the quality of life of medical students, particularly in the psychological and physical domains. However, no direct effect was observed on academic achievement or psychological well-being. The findings suggest that, beyond the level of addiction, the nature of one's relationship with social media plays a critical role in mental and social functioning. Young individuals must establish a healthy balance between the digital world and real life, especially when training future healthcare professionals.

Awareness programs targeting university students may help inform them about the mental health and quality of life consequences of social media addiction. University counseling services may benefit from providing resources related to social media use and implementing programs that promote digital balance. Future research

is recommended to investigate variables such as duration of social media use, types of platforms, digital behavior patterns, and individual motivations. Due to the limitations of the cross-sectional design, which precludes causal inferences, longitudinal and qualitative studies are needed to explore further and validate these findings.

In conclusion, while social media addiction appears to adversely affect quality of life and psychological well-being, its effect on academic performance is limited. Future studies should take into account broader individual and environmental factors. Investigating qualitative use aspects—such as usage patterns, platform types, and daily duration—will provide a more comprehensive understanding of the phenomenon.

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