

Social Media Addiction, Fear of Missing Out, and Academic Performance Among Students in United States of America and Pakistan

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Abstract

The increasing prevalence of social media use has raised concerns about its potential effects on university students' psychological experiences and academic outcomes. Although previous research has examined social media addiction, fear of missing out (FoMO), and academic performance, cross-cultural evidence comparing students from Pakistan and the United States of America remains limited. The present study aimed to investigate the relationships among social media addiction, FoMO, and academic performance and to examine cross-cultural differences between university students in the two countries. A cross-cultural, cross-sectional correlational design was employed, and data were collected from 200 university students (Pakistan = 100; United States = 100) aged 18–35 years using purposive sampling. Standardized measures of social media addiction, FoMO, and academic performance were administered. Correlation analyses indicated a strong positive association between social media addiction and FoMO, while both variables showed significant negative relationships with academic performance. Independent sample t-tests revealed no significant differences between Pakistani and U.S. students in social media addiction or FoMO. However, Pakistani students reported significantly higher academic performance than their U.S. counterparts. These results underscore the importance of culturally informed strategies to promote balanced social media use and academic success among students.

Keywords: Social Media Addiction, Fear of Missing Out, Academic Performance.

Introduction

The advent of social media represents a significant innovation in information technology, offering numerous benefits across education, business, and communication (Okonkwo & Awad, 2023; McCarthy & Bogers, 2023). Social media platforms facilitate information sharing, collaboration,

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and academic engagement among students; however, their excessive and uncontrolled use has raised growing concerns. While these platforms enhance connectivity and access to information, persistent engagement may interfere with academic responsibilities and psychological well-being. Social media addiction refers to the compulsive and excessive use of social networking sites and applications despite the presence of negative consequences (Fareed et al., 2024; Shahid et al., 2024). Beyond its psychological implications, excessive engagement with social media has been linked to impairments in academic functioning. Students exhibiting addictive patterns of social media use often experience reduced concentration, ineffective time management, and increased academic procrastination, which ultimately undermines academic performance (Agwazie & Usen Stella, 2024; Kurker & Surucu, 2024).

Academic procrastination is the habitual and intentional delay of academic tasks, such as studying or completing assignments, despite awareness of the negative consequences of such delays. This maladaptive behavior is commonly associated with anxiety, fear of failure, low self-esteem, perfectionism, and deficits in emotional regulation (Aljarrah et al., 2025; Almurumudhe et al., 2024; Hamdan-Mansour et al., 2024; Rad et al., 2025). Procrastination not only compromises academic outcomes but also contributes to heightened stress and diminished academic self-efficacy.

The relationship between social media addiction and academic procrastination can be theoretically explained through Self-Regulation Theory, which posits that individuals with limited self-control are more susceptible to engaging in immediately rewarding behaviors at the expense of long-term goals. Social media platforms provide instant gratification and emotional stimulation, which may weaken students' capacity for self-regulation and task persistence, thereby increasing tendencies toward procrastination.

Additionally, prior research has documented a strong association between social media addiction and fear of missing out (FoMO). Fear of Missing Out is characterized as an anxious emotional state in which individuals believe that others are experiencing more rewarding or meaningful events, leading to a persistent desire to remain continuously connected (Emre & Köse, 2025; Sart & Sezgin, 2025; Zhang et al., 2025). FoMO reinforces compulsive social media use, as individuals seek constant updates to alleviate anxiety related to social exclusion. From the perspective of Uses and Gratifications Theory, individuals use social media to fulfill psychological needs such as belongingness and social validation, which may inadvertently foster dependency and maladaptive use patterns.

Rationale

There is substantial literature examining social media addiction, fear of missing out (FoMO), and academic performance among university students. However, evidence from a cross-cultural perspective comparing students in Pakistan and the United States of America remains limited. Cultural norms, technological accessibility, and educational systems differ markedly between the two countries, which may influence students' engagement with social media and related psychological experiences. Despite growing digital globalization, variations in social media use patterns and academic expectations may lead to differential outcomes. Previous studies have largely focused on single-country samples, restricting the generalizability of findings. Therefore, the present study aims to address this gap by examining relationships among social media addiction, FoMO, and academic performance in both contexts. This cross-cultural comparison will enhance understanding of whether these associations are culturally consistent or context-specific.

The findings may inform culturally sensitive interventions for improving students' academic outcomes.

Hypotheses

H1: There is a positive and significant relationship between social media addiction and fear of missing out among university students in Pakistan and the United States of America.

H2: There is a significant negative relationship between social media addiction and academic performance among university students in Pakistan and the United States of America.

H3: There is a significant negative relationship between fear of missing out and academic performance among university students in Pakistan and the United States of America.

H4: There is likely to be a significant mean difference between university students of the United States and university students of Pakistan with respect to study variables, i.e., social media addiction, fear of missing out, and academic performance.

Methodology

The present study adopted a cross-cultural, cross-sectional correlational research design and employed a purposive sampling technique to collect data from university students enrolled in institutions in Pakistan and the United States. Participants were required to be between 18 and 35 years of age, currently enrolled in a Pakistani or U.S. university, and active social media users for at least the past 6 months.

Measures

Social Media Addiction

Social media addiction was assessed using the Bergen Social Media Addiction Scale (BSMAS), a six-item instrument developed by Andreassen et al. (2016). Responses are rated on a 5-point Likert scale ranging from 1 (very rarely) to 5 (very often). The scale has demonstrated satisfactory internal consistency, with a reported Cronbach's alpha of $\alpha = .80$.

Fear of Missing Out

Fear of Missing Out was measured using the FoMO Scale developed by Mazlum and Atalay (2022) for university students. The scale assesses individuals' anxious feelings related to missing rewarding social experiences and the persistent desire to remain continuously connected. It consists of 17 items rated on a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree). Higher scores indicate greater FoMO. In the original validation study, the scale demonstrated high reliability ($\alpha \approx .88$).

The academic performance scale is an 8-item self-report instrument developed by Carson Birchmeier, Emily Grattan, Sarah Hornbacher, and Christopher McGregory in 2015 to assess students' academic behaviors and perceptions of performance. Items are rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating better academic performance. The scale has demonstrated good internal consistency, with a Cronbach's alpha of 0.89.

Ethical Considerations and Procedure

The study was conducted in accordance with the ethical guidelines outlined in the Publication Manual of the American Psychological Association (7th ed.). Permission to use the research instruments was obtained from the respective authors via electronic mail. Following approval, the

study questionnaires—including the demographic form and standardized instruments—were prepared along with an informed consent form.

The consent form was first provided to university students in both Pakistan and the United States, clearly explaining the voluntary nature of participation, the inclusion criteria, and the confidentiality of responses. After providing written informed consent, participants completed the demographic form and study questionnaires. Upon completion of data collection, the responses were entered into IBM SPSS Statistics (Version 26) for analysis.

Results

Table 1: Sociodemographic Characteristics of the study Respondents (N=200)

	Frequency	Percentage	Mean	SD
United States of American University Students	100	50		
Pakistani University Students	100	50		
Age			23.37	3.41
Gender				
Men	151	75.5		
Women	49	24.5		
Socio-economic Status				
Lower Class	98	49		
Middle Class	60	30		
Upper Class	42	21		
Educational Level				
Bachelor	99	49.5		
Master	67	33.5		
Ph.D	34	17		

Note: N = 200, SD = Standard Deviation.

The sample consisted of 200 university students, with an equal distribution from the United States (n = 100, 50%) and Pakistan (n = 100, 50%). The mean age of participants was 23.37 years (SD = 3.41). The majority of the sample were men (n = 151, 75.5%), while women comprised 24.5% (n = 49). Regarding socio-economic status, 49% of participants were classified as lower class, 30% as middle class, and 21% as upper class. In terms of educational level, 49.5% were pursuing a bachelor's degree, 33.5% a master's degree, and 17% a Ph.D.

Table 2: Correlational Analysis Among Study Variables

Variables	1	2	3
1.Social Media Addiction	-	.98**	-.13*
2.Fear of Missing Out		-	-.15*
3.Academic Performance			

Note: N= 200, * $p < .05$, ** $p < .01$

The above table depicts among university students (N = 200), social media addiction was strongly positively correlated with fear of missing out ($r = .98$, $p < .01$). both social media addiction ($r = -$

.13, $p < .05$) and fear of missing out ($r = -.15$, $p < .05$) showed small but significant negative correlations with academic performance, suggesting that higher levels of social media addiction and FoMO are associated with lower academic performance.

Table 3: Social Media Addiction, Fear of Missing Out, and Academic Performance among University Students in United States and Pakistan (N = 200)

	AUS (n=100)		PUS(n=100)		$t(198)$	P	Cohen's d
	M	SD	M	SD			
SMA	16.49	4.41	16.03	4.26	.74	.45	0.10
Fear of Missing Out	46.98	12.61	45.76	11.62	.72	.47	0.10
Academic Performance	18.12	5.37	19.76*	6.08	-2.02	.04	0.28

Note: * $p < .05$, M = Mean, SD = Standard Deviation, SMA = Social Media Addiction

The results indicate that there were no significant differences between university students in the United States (AUS) and Pakistan (PUS) in social media addiction or fear of missing out, as indicated by non-significant t values ($p > .05$). Pakistani university students scored significantly higher in Academic Performance compared to United States students ($t(198) = -2.02$, $p = .04$, $d = 0.28$), suggesting a small to moderate effect size. Social media addiction and fear of missing out levels were similar across the two groups.

Discussion

The study aimed to address a gap in the literature by investigating differences between Pakistani and United States university students regarding social media addiction, Fear of Missing Out (FoMO), and academic performance.

The first hypothesis was supported, as the findings demonstrated significant relationships between social media addiction, FoMO, and academic performance among university students from both countries. Specifically, correlational analyses indicated that higher levels of social media addiction and FoMO were associated with lower academic performance, consistent with prior research (Irfan et al., 2025). Similarly, a study of university students in Kuwait reported a significant negative relationship between social media addiction and academic performance, with time spent online predicting poorer outcomes, whereas engagement alone had no significant effect (Al-Menayes, 2015).

International evidence further supports these findings. Among Italian university students ($N = 306$), FoMO was positively associated with social media addiction and online vulnerability, with regression analyses identifying FoMO as the strongest predictor of addiction (Varchetta et al., 2020). In Saudi Arabia, FoMO was positively associated with social media use and indirectly contributed to poorer academic performance, although its direct effect on performance varied depending on social media engagement and life satisfaction (Abd Ellatif Elsayed, 2025). Similarly, a study of 77 Turkish university students found that FoMO negatively affected certain aspects of academic success, including general academic skills, motivation, and anxiety management, although the effects were not uniform across all dimensions (Khairina & Dwifandra, 2025).

Independent samples t -test results revealed that American students scored higher on social media addiction and FoMO compared to Pakistani students, although these differences were not statistically significant. However, American students scored significantly lower on academic performance ($t(198) = -2.02$, $p = .04$, $d = 0.28$). This finding is supported by the association

between higher social media addiction and FoMO and poorer academic outcomes, as indicated by the correlation analyses and prior research (Al-Menayes, 2015; Irfan et al., 2025). In contrast, Pakistani students reported lower social media addiction and FoMO, which may reflect cultural influences, such as the collectivistic nature of Pakistani society, where social connections and group-oriented behaviors are emphasized, potentially mitigating excessive social media use and its negative impact on academic performance (Hofstede, 2001; Shahid et al., 2024; Triandis, 1995).

Conclusion

This study examined the relationships between social media addiction, Fear of Missing Out (FoMO), and academic performance among university students in the United States and Pakistan. Findings indicated that higher social media addiction and FoMO were associated with lower academic performance. Pakistani students scored lower on social media addiction and FoMO and performed significantly better academically than their American counterparts, highlighting cultural influences on these behaviors. The results underscore the negative impact of excessive social media use and FoMO on student outcomes. Interventions targeting responsible social media use and FoMO management could enhance academic performance. Future research should explore longitudinal effects and additional cultural factors to better understand these relationships across diverse student populations.

Recommendations

Future research should employ longitudinal or experimental designs to better establish causal relationships among social media addiction, FoMO, and academic outcomes. Researchers are encouraged to recruit more diverse and representative samples across different universities and countries to enhance generalizability. Including additional variables such as stress, coping strategies, or digital literacy could provide a more comprehensive understanding of how social media influences academic performance. Intervention studies targeting reductions in social media use or FoMO management are recommended to evaluate practical strategies for improving student outcomes. Moreover, cross-cultural comparisons could further explore how cultural norms and societal values influence social media behaviors and academic performance.

Implications

The findings of this study have both theoretical and practical implications. Theoretically, the study contributes to understanding social media addiction and FoMO as predictors of academic performance across diverse cultural contexts. Practically, the results suggest that universities should develop programs to educate students about responsible social media use and the potential negative effects of FoMO on academic outcomes. Mental health professionals and academic advisors can design interventions to help students manage anxiety related to FoMO and reduce excessive social media use. Culturally, the results highlight the role of collectivistic values in moderating social media behaviors, suggesting that culturally tailored approaches may be more effective in addressing academic challenges associated with social media and FoMO.

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