Problematic Smartphone Use and Academic Procrastination Among Students in Pakistan

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Abstract

There has been substantial literature on smartphone addiction; however, limited studies have been conducted in Pakistan. To address this gap, provide a foundation for future research, and offer valuable implications for the youth of Pakistan, this study was conducted to investigate the effect of problematic smartphone use on academic procrastination. The study employed a cross-sectional correlational research design and a purposive sampling technique to collect data from students aged 18 to 30 at private and public medical colleges, engineering colleges, and universities in Pakistan who own smartphones and have been using them for at least one year. The study utilized the Smartphone Addiction Scale and the Academic Procrastination Scale to assess the variables. The correlational analysis revealed a significant positive association between problematic smartphone use and academic procrastination, while regression analysis indicated that problematic smartphone use significantly and positively predicts academic procrastination. The study provides comprehensive implications, including the need for government policies, positive parental involvement, awareness campaigns, promoting help-seeking behavior among adolescents, and encouraging mental health professionals to provide psychoeducation to the community.

Keywords: Problematic Smartphone Use, Academic Procrastination, Young Adults.

Introduction

A smartphone is a handheld device that functions as a portable computer, offering features such as internet access, application usage, media playback, photography, and communication (Melumad & Pham, 2020; Agu et al., 2013). While smartphones provide numerous benefits, their problematic use, characterized by compulsive behavior, can impair daily functioning, including productivity, social relationships, physical health, and emotional well-being (Masadeh, 2021; Harris et al., 2020; Khan et al., 2024; Jeong et al., 2020; Sut et al., 2016).

Academic procrastination, a domain-specific behavior, refers to the tendency of students to delay or postpone academic tasks despite awareness of deadlines (Zacks & Hen, 2018; Day et

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al., 2000; Rad et al., 2025). Studies have shown that excessive smartphone use exacerbates academic procrastination, negatively impacting academic performance. Li et al. (2020) surveyed 483 college students, using scales to measure smartphone addiction, academic self-efficacy, and academic procrastination. Results revealed a positive correlation between smartphone addiction and academic procrastination, with academic self-efficacy acting as a partial mediator. Similarly, Liu et al. (2022) found that smartphone addiction positively correlates with academic procrastination, while time management and learning strategies mediate this relationship.

Malla (2021) investigated gender differences in smartphone addiction and academic procrastination among secondary school students. The study found that male students exhibited higher levels of both behaviors than females, with factors like cyber-loafing, anxiety, and poor time management contributing to procrastination. Behzad (2021) also identified a significant relationship between smartphone addiction and procrastination, with behaviors like constant phone checking and concentration issues leading to delayed tasks. Chen and Lyu (2024) conducted a meta-analysis, confirming a positive correlation between smartphone addiction and procrastination. Tian et al. (2021) highlighted the prevalence of smartphone addiction and academic procrastination among medical students, noting their negative impact on academic achievement. Iftikhar et al. (2022) further emphasized the mediating role of academic motivation in this relationship, with male students scoring higher between the independent variable of smartphone problematic use and the dependent variable of academic procrastination among students. A study on medical students revealed that cognitive capacity decreases with constant smartphone use in academic procrastination, and tension was also reduced among medical pupils (Hamvai et al., 2023).

Although there is substantial literature regarding the association between problematic smartphone use and academic procrastination among young adults, such studies are limited in Pakistan. Therefore, this gap needs to be addressed. This study aims to investigate the relationship between problematic smartphone use and academic procrastination among college and university students in Pakistan.

Hypotheses

1. There is likely a positive and significant association between problematic smartphone use and academic procrastination among students.
2. There is likely a positive and significant effect of problematic smartphone use on academic procrastination among students.

Methodology

The study adopted a cross-sectional correlational design and used purposive sampling to collect data from 125 participants, engineering, medical, or university students aged 18–30, citizens of Pakistan, and smartphone users for at least one year.

Questionnaires

Two scales were employed: the Smartphone Addiction Scale-Short Version (SAS-SV) by Kwon et al. (2013), a 10-item scale with a reliability coefficient of 0.96, and the Procrastination Assessment Scale for Students (PASS) by Solomon and Rothblum (1988), a 44-item scale with a Cronbach's alpha of 0.93.

Ethical Consideration

Ethical considerations were strictly followed, including obtaining permission for the scales, securing data collection clearances, ensuring participant anonymity, and allowing non-

detrimental withdrawal. Participants provided informed consent, and data were collected online to maintain anonymity and accessibility.

Results

Demographic Characteristics

Table 1: Socio demographic characteristic of participants (N=125)

Participants' Characteristics	Frequency	Percentage	Mean	Standard Deviation
Gender				
Men	101	81		
Women	24	19		
Age			24.23	2.30
Students' study field				
Engineering	9	7		
Medical	69	55		
Social Sciences	47	38		

The table above shows that 101 participants (81%) are men, while 24 (19%) are women. The mean age of the participants is 24.23, with a standard deviation of 2.30. In terms of the field of study, the majority of participants are medical students, comprising 69 (55%), followed by 47 (38%) engineering students, and finally, 9 (7%) social sciences' students.

Correlational Analysis

Table 2: Correlation matrix between Study Variables (N=125)

Variables	1	2	Mean	Standard Deviation
1. Problematic Smartphone Use	-	.35**	19.40	6.54
2.Academic Procrastination		-	95.56	22.15

*Note: **p*<.01

The table above shows a significant positive association between problematic smartphone use and academic procrastination.

Regression Analysis

Table 3: Regression analysis for Academic Procastination (N=125)

						95% Confidence Interval	
Variable	B	SE	β	R^2	F	LL	UL
				.12	18.12		
Constant	72.02	5.83				60.47	83.57
PSU	1.21	.28	.35***			.64	1.77

*Note: ***p<.001, *p<.05,* LL= Lower Level, UL= Upper Level, PSU = Problematic Smartphone Use

The above table depicts that Problematic Smartphone Use is a positive and significant predictor of academic procastination (β=.35***, R^2=.12, F= (1, 123) =18.12, ****p<.001*) accounts 12% variance in academic procrastination among students.

Discussion

Although there is substantial literature regarding the association between problematic smartphone use and academic procrastination, the literature in Pakistan is limited on this topic. Thus, this study was conducted to address the gap in existing literature and provide implications for Pakistani students to enhance their academic performance.

The first hypothesis of the study is supported, as the correlational analysis reveals a significant positive association between problematic smartphone use and academic procrastination among students. The results of this study align with those of a comprehensive meta-analysis, which highlights a significant positive correlation between smartphone addiction and procrastination (Chen & Lyu, 2024). Our findings are also consistent with a recent study conducted on college and university students, which found that TikTok scrolling addiction is positively and significantly associated with academic procrastination (Manzoor et al., 2024). A study conducted on medical students aligns with our results, revealing that cognitive capacity decreases with constant smartphone use, leading to academic procrastination. Moreover, attention was also noted to be decreased among medical students (Hamvai et al., 2023). The reason behind the positive association between problematic smartphone use and academic procrastination could be that smartphones provide immediate gratification—such as watching videos, using social media, and playing online games—which distracts students from academic activities and increases procrastination. This leads to poor time management and delays in completing important tasks. Smartphones serve as a means of escapism from academic work, particularly challenging assignments and projects. As a result, students tend to prioritize the immediate gratification offered by smartphones, delaying their academic responsibilities. Additionally, smartphone use may disrupt sleep patterns, and sleep disturbances are associated with reduced cognitive abilities, such as working memory and attention. Consequently, students may struggle to concentrate fully on their studies, leading to procrastination.

The second hypothesis of the study is also supported, as regression analysis reveals that problematic smartphone use significantly and positively predicts academic procrastination among students. These results align with those of a quantitative study involving 172 students, which found that smartphone addiction significantly influences academic procrastination (Simbolon et al., 2022). Our study is also consistent with another study that identified a relationship between smartphone addiction and procrastination. A clear majority of respondents agreed that they have experienced addictive behaviors due to smartphone use, which has led to procrastination in their lives (Behzad, 2021). The reasons why problematic smartphone use positively and significantly predicts academic procrastination include reduced concentration and focus due to constant smartphone use. The alluring features of smartphones, such as social media, games, and video platforms, provide immediate gratification and foster dependency. This makes it harder for students to concentrate on academic activities, especially when the tasks are challenging and require sustained focus.

Conclusion

The study concluded that among Pakistani students of engineering, medical colleges, and social sciences, there is a significant positive association between problematic smartphone use and academic procrastination. Moreover, the effect of problematic smartphone use on academic procrastination is also significantly positive, highlighting a critical issue among Pakistani students. Timely implications are required, as is the execution of those implications to address this problem. Furthermore, the study fulfilled its hallmark and provided valuable literature for academia to encourage further research.

Implications

The findings of the study suggest that actionable implications must be provided to students in Pakistan. The first implication is the need for awareness campaigns by mental health professionals through seminars, webinars, and workshops in educational institutions and communities. These initiatives should educate students and their parents about the detrimental effects of problematic smartphone use and its impact on academic performance due to increased procrastination. The second implication is to encourage parents to spend quality time

with their children to enhance social connectedness and reduce problematic smartphone use. The third implication is to promote psychological help-seeking behavior among students to address smartphone addiction. The fourth implication is that the government should take vital actions to address excessive smartphone use among students and launch campaigns to mitigate the negative impact of this behavior.

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