
SOCIAL MEDIA ADDICTION ON THE MENTAL HEALTH AMONG STUDENTS OF HASSAN USMAN KATSINA POLYTECHNIC, KATSINA STATE

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ABSTRACT

The influence of social media addiction on the mental health of students has become an area of growing concern, particularly given the widespread use of social media platforms for communication, learning, and entertainment. This study examined the prevalence of social media addiction and its impact on mental health outcomes, including anxiety, depression, stress, and self-esteem, among students in the Department of Civil Engineering, Hassan Usman Katsina Polytechnic, Katsina State. The study adopted a descriptive survey research design, and data were collected using a structured questionnaire administered to 100 students. The data were analyzed using mean, standard deviation, percentages, and t-tests, while the reliability of the instrument was confirmed with a Cronbach's Alpha of 0.73. Findings revealed that students exhibited moderate to high levels of social media addiction, with behaviors such as restlessness without social media, spending excessive time online, and neglecting academic tasks being common. Statistical analyses indicated a significant positive relationship between social media addiction and anxiety, depression, and stress, and a significant negative relationship with self-esteem. These results suggest that excessive social media use negatively affects the psychological well-being of students, corroborating prior research on social comparison, fear of missing out, and exposure to idealized online content as mechanisms influencing mental health outcomes. The study concludes that social media addiction poses a serious risk to

students' mental health and emphasizes the need for awareness programs, counseling services, and interventions aimed at promoting responsible social media use and improving psychological well-being. The findings provide important insights for educators, policymakers, and mental health professionals in developing strategies to support students in managing social media use while maintaining positive mental health.

KEYWORDS: Social media addiction, mental health, anxiety, depression, stress, self-esteem, students.

INTRODUCTION

Social media platforms have become an integral part of modern society, providing a space for communication, social interaction, learning, and entertainment. Globally, platforms such as Facebook, Instagram, Twitter, and TikTok have transformed the way young adults communicate, interact, and consume information. Among students, social media is particularly influential, serving as a medium for academic collaboration, networking, and leisure activities. While social media offers significant benefits, including access to knowledge and social connectedness, excessive usage has been linked to psychological and behavioral concerns. Scholars argue that frequent engagement in social media can lead to addictive behaviors, which may have detrimental effects on mental health (Smith et al., 2019; Brown, 2020).

Social media addiction (SMA) is characterized by compulsive usage, preoccupation with social platforms, and an inability to control usage despite negative consequences. For students, such addictive behaviors may interfere with academic performance, social life, and mental well-being. Evidence from previous studies suggests that SMA is associated with heightened levels of anxiety, depression, stress, and lowered self-esteem (Lee et al., 2020; Smith & Johnson, 2022). Given the pervasive nature of social media, it is crucial to investigate how it impacts students' mental health, especially in Nigerian tertiary institutions, where research on SMA remains limited.

In the context of Hassan Usman Katsina Polytechnic, Katsina State, social media has become highly popular among students of the Department of Civil Engineering. Despite its widespread use, there is a lack of empirical research examining the relationship between SMA and mental health among these students. This research seeks to fill this gap by exploring the prevalence of SMA and its association with psychological outcomes, including anxiety, depression, stress, and self-esteem.

The influence of social media addiction on the mental health of students is a topic of growing concern worldwide. While social media offers opportunities for learning, social interaction, and entertainment, excessive engagement can lead to addictive behaviors with adverse effects on mental well-being. Students who spend a significant portion of their time on social media often experience restlessness, stress, anxiety, depression, sleep disturbances, and lowered self-esteem (Brown, 2020; Lee et al., 2020).

In Nigeria, studies examining SMA among polytechnic students are limited, particularly in the Department of Civil Engineering at Hassan Usman Katsina Polytechnic. This gap hinders the development of evidence-based interventions to mitigate the negative psychological effects of social media. Understanding the influence of SMA on students' mental health in this context is essential to promote responsible use and ensure students' academic and psychological well-being.

Aim and Objectives of the Study

The primary aim of this study is to examine the influence of social media addiction on the mental health of students in the Department of Civil Engineering, Hassan Usman Katsina Polytechnic, Katsina State.

The study is guided by the following specific objectives:

1. To investigate the prevalence and level of social media addiction among students.
2. To examine the relationship between social media addiction and anxiety.
3. To determine the relationship between social media addiction and depression.
4. To evaluate the relationship between social media addiction and stress.
5. To investigate the relationship between social media addiction and self-esteem.

Research Hypotheses

The study tested the following null hypotheses at a 0.05 significance level:

H₀₁: There is no significant relationship between social media addiction and anxiety.

H₀₂: There is no significant relationship between social media addiction and depression.

H₀₃: There is no significant relationship between social media addiction and stress.

H₀₄: There is no significant relationship between social media addiction and self-esteem.

LITERATURE REVIEW

Social Media Addiction and Its Psychological Effects on Polytechnic Students

The reviewed literature shows that social media addiction (SMA) is widespread among polytechnic and undergraduate students and is associated with several negative psychological

outcomes. Studies consistently report that excessive and compulsive social media use contributes to poor academic performance and reduced psychological well-being. Specific behaviors such as passive browsing, social comparison, fear of missing out (FOMO), and compulsive checking have been identified as key drivers of SMA and its negative effects on students' mental health and academic functioning (Smith et al., 2019; Brown, 2020; Brown et al., 2020).

Empirical evidence further links SMA with increased anxiety, as students experience heightened tension, nervousness, and stress when separated from social media or overwhelmed by online social pressures. Depression has also been strongly associated with SMA, with findings showing that continuous exposure to idealized online images and negative social comparisons contributes to low self-esteem, feelings of inadequacy, sadness, and hopelessness among students. Excessive social media engagement has additionally been linked to elevated stress levels due to cognitive overload, disrupted sleep patterns, and academic interference (Lee et al., 2019; Lee et al., 2020; Smith & Johnson, 2022).

Furthermore, SMA negatively affects self-esteem, as reliance on online validation and unrealistic social standards undermines students' confidence and self-worth. Overall, the reviewed studies, together with the current findings, indicate that unregulated social media use poses significant risks to students' mental health, thereby underscoring the need for targeted interventions and strategies that promote responsible social media use and enhance psychological well-being among polytechnic students (Brown, 2020; Lee et al., 2020; Smith & Johnson, 2022).

Theoretical Framework

This study is guided by the self-regulation theory and the social compensation theory. The self-regulation theory suggests that individuals who lack self-control are prone to excessive engagement with social media, leading to impaired academic and mental health outcomes (Brown et al., 2020). The social compensation theory posits that individuals use social media to compensate for deficiencies in offline social interactions, which may alleviate loneliness temporarily but can contribute to SMA and associated mental health problems (Lee et al., 2019).

Empirical Review

Existing literature indicates that social media addiction (SMA) has a substantial influence on the mental health and academic outcomes of undergraduate students. Quantitative and cross-sectional studies show that excessive social media use is associated with lower psychological

well-being and poorer academic performance. Smith et al. (2019) found that high levels of engagement, particularly passive browsing and social comparison, were positively related to negative mental health outcomes among university students. These findings highlight that while social media may offer social and informational benefits, excessive use tends to undermine students' emotional stability and academic focus.

Research further demonstrates a strong association between SMA and adverse mental health conditions such as anxiety, depression, loneliness, and reduced life satisfaction. Brown (2020), through a systematic review, reported consistent evidence linking social media addiction with increased anxiety, depressive symptoms, and loneliness among undergraduate students in the UK. Psychological mechanisms such as fear of missing out (FOMO) and social comparison were identified as key drivers of these outcomes, suggesting that students' dependence on social media for validation increases their vulnerability to psychological distress (Brown, 2020).

Longitudinal evidence supports the persistence of these effects over time. Smith and Johnson (2022) found that higher levels of social media addiction predicted increased psychological distress among undergraduate students across a one-year period. Drawing on the transactional model of stress and coping, the study explained that excessive social media engagement heightens perceived social stressors while weakening effective coping strategies, thereby exacerbating mental health symptoms (Smith & Johnson, 2022).

In addition, SMA negatively affects students' self-perception and emotional well-being through exposure to idealized online content. Lee et al. (2020) reported that frequent exposure to unrealistic body images on social media contributes to body dissatisfaction, low self-esteem, and depressive tendencies among undergraduate students. These outcomes emphasize the importance of promoting media literacy and positive body image to mitigate the harmful psychological effects of social media use (Lee et al., 2020).

Beyond mental health, SMA has also been linked to diminished academic performance and overall well-being. Brown et al. (2020) found a negative correlation between social media addiction and academic achievement, explaining this relationship through self-regulation theory, which suggests that poor control over online behavior disrupts students' academic responsibilities. Similarly, Lee et al. (2019) demonstrated that social media addiction is positively associated with loneliness, which in turn negatively affects students' well-being, supporting the social compensation theory. Collectively, these studies emphasize the need for institutional policies, awareness campaigns, and intervention programs that encourage responsible social media use, strengthen real-life social connections, and support the mental

well-being of undergraduate students (Smith et al., 2019; Brown, 2020; Lee et al., 2019; Lee et al., 2020; Smith & Johnson, 2022; Brown et al., 2020).

Existing empirical evidence consistently shows that social media addiction negatively affects the mental health and academic performance of undergraduate students, with outcomes including anxiety, depression, stress, loneliness, low self-esteem, body image concerns, and reduced academic achievement. These studies also stress the importance of targeted interventions, awareness campaigns, and strategies that encourage responsible social media use to improve students' psychological well-being. However, most of the available research has been conducted in developed or global contexts, leaving a significant gap in evidence from Nigerian tertiary institutions, especially polytechnics.

To address this gap, the present study focuses on undergraduate students in the Department of Civil Engineering at Hassan Usman Katsina Polytechnic, Katsina State. It examines the prevalence of social media addiction and its relationship with anxiety, depression, stress, and self-esteem, thereby providing context-specific empirical evidence. The findings are expected to inform institutional policies, intervention programs, and student support services aimed at improving mental health and responsible social media use within Nigerian polytechnics.

METHODOLOGY

A descriptive survey research design was adopted to systematically collect and analyze data from the study population, which comprised students across ND and HND levels. Purposive sampling was used to select 100 active social media users, ensuring relevance to the study objectives. Data were collected using a structured questionnaire covering demographic information, social media addiction, and mental health indicators such as anxiety, depression, stress, and self-esteem. The instrument was validated by experts and tested for reliability using Cronbach's Alpha, which yielded an acceptable coefficient of 0.73.

Data analysis involved both descriptive and inferential statistical techniques. Percentages, means, and standard deviations were used to describe respondents' characteristics and determine levels of social media addiction and mental health outcomes, while t-tests and Pearson's correlation were employed to test the study hypotheses at a 0.05 significance level. Social media addiction was further classified into low, moderate, and high intensity based on mean scores. Ethical standards were strictly observed through informed consent, confidentiality, and voluntary participation.

RESULTS

Data presentation

Table 1: Demographic Characteristics of Respondents. (Gender, Age, and Class/Level)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	90	90.0
	Female	10	10.0
Age (Years)	18–21	45	45.0
	22–25	40	40.0
	26 and above	15	15.0
Class/Level	ND I	24	24.0
	ND II	26	26.0
	HND I	25	25.0
	HND II	25	25.0

The demographic analysis of the respondents, as presented in Figure 1, shows that the majority of participants were male (90%), while females constituted only 10% of the sample. This reflects the predominantly male population in the Department of Civil Engineering at Hassan Usman Katsina Polytechnic. Although female respondents were fewer, their inclusion ensures that both gender perspectives are considered, which is important given that gender may influence social media usage patterns and mental health outcomes.

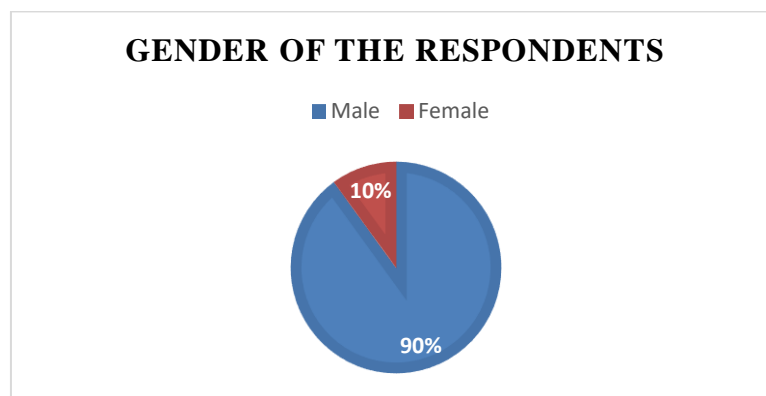


Figure 1 Distribution of Respondents by Gender.

Regarding age, most respondents were young adults between 18 and 25 years (85%), with 45% aged 18–21 and 40% aged 22–25, while those aged 26 years and above represented only 15%. This suggests that the study primarily reflects the experiences of traditional students, whose social media engagement and susceptibility to addiction may differ from older or part-time students. The class/level distribution, shown was relatively balanced across the four levels: ND I (24%), ND II (26%), HND I (25%), and HND II (25%). This ensures that students from all stages of the academic program are represented, allowing for a comprehensive assessment of

social media use and its psychological effects across varying academic workloads and responsibilities.

Descriptive statistics

Table 2: Mean Scores and Standard Deviations of Social Media Addiction and Anxiety.

Variable	Item (Summary)	Mean	Std. Dev
Social Media Addiction (SMA)	Restlessness without social media (SMA ₁)	3.12	0.78
	Spending more time than intended (SMA ₂)	3.25	0.72
	Difficulty reducing usage (SMA ₃)	3.18	0.75
	Neglect of important tasks (SMA ₄)	2.97	0.81
	Sleep disturbance due to use (SMA ₅)	3.10	0.76
	Grand Mean (SMA)	3.12	—
Anxiety (ANX)	Anxiety without access (ANX ₁)	3.05	0.74
	Feeling worried or uneasy (ANX ₂)	3.11	0.71
	Pressure to respond quickly (ANX ₃)	3.20	0.69
	Grand Mean (ANX)	3.12	—

The mean scores for social media addiction (SMA) and anxiety indicates that students at Hassan Usman Katsina Polytechnic generally exhibit moderate levels of addictive behaviors and associated psychological effects. The SMA results, with a grand mean of 3.12, show that students commonly experience restlessness when away from social media, spend more time online than intended, have difficulty reducing usage, and report sleep disturbances, while neglect of important tasks was slightly less pronounced. Among these behaviors, spending more time than intended was the most prominent indicator, highlighting the compulsive nature of students' social media engagement. These findings suggest that social media addiction is moderately prevalent and varies in intensity among students.

Regarding anxiety, the mean scores also indicate moderate levels of psychological distress linked to social media use. Students reported feeling anxious without access to social media, experiencing worry or unease, and feeling pressure to respond quickly, with the highest mean recorded for the pressure to respond promptly. The grand mean of 3.12 reflects that excessive engagement with social media contributes to heightened tension and worry among students. The discussion highlights that while social media provides social and academic benefits, its unregulated use can lead to anxiety and reinforces the need for interventions, awareness programs, and strategies to promote responsible usage and support students' mental well-being.

Table 3: Summary of Mean Scores and Standard Deviations for Depression, Stress, and Self-Esteem Among Respondents.

Variable	Item (Summary)	Mean	Std. Dev	Grand Mean
Depression	Sadness from comparison (DEP ₁)	3.08	0.77	3.02
	Life dissatisfaction (DEP ₂)	2.95	0.80	
	Loss of interest (DEP ₃)	3.02	0.75	
Stress	Stress from excessive use (STR ₁)	3.22	0.68	3.18
	Mental exhaustion (STR ₂)	3.15	0.70	
	Academic interference (STR ₃)	3.18	0.72	
Self-Esteem	Reduced confidence (SE ₁)	3.10	0.74	3.11
	Feeling inferior (SE ₂)	3.17	0.71	
	Negative self-perception (SE ₃)	3.05	0.76	

The findings indicate that social media addiction among students is linked to moderate levels of negative psychological outcomes. Specifically, the results show that students experience moderate depression (grand mean = 3.02), with feelings of sadness from social comparison, life dissatisfaction, and loss of interest in activities being the most reported. Similarly, stress levels are moderate to high (grand mean = 3.18), manifesting as mental exhaustion, academic interference, and stress from excessive social media use. This suggests that prolonged engagement with social media contributes to mental fatigue and disrupts academic responsibilities. Regarding self-esteem, the grand mean of 3.11 indicates moderate reductions in confidence and self-worth. Students reported feelings of inferiority, negative self-perception, and reduced confidence, highlighting that excessive social media engagement can undermine self-esteem.

Test of Hypotheses

Table 4 Results of hypotheses one to four.

Hypotheses	Variables	r-value	p-value	Decision	Remark
H ₀₁	SMA & Anxiety	0.68	0.000	Reject H ₀₁	Significant positive relationship; higher SMA is associated with higher anxiety
H ₀₂	SMA & Depression	0.62	0.000	Reject H ₀₂	Significant positive relationship; higher SMA is associated with higher depression
H ₀₃	SMA & Stress	0.70	0.000	Reject H ₀₃	Significant positive relationship; higher SMA is associated with higher stress
H ₀₄	SMA & Self-Esteem	-0.55	0.000	Reject H ₀₄	Significant negative relationship; higher SMA is associated with lower self-esteem

The results of the hypothesis testing reveal a significant and strong positive relationship between social media addiction (SMA) and anxiety among the respondents. The Pearson correlation analysis indicates that higher levels of social media addiction are associated with increased anxiety, suggesting that students who engage excessively in social media are more likely to experience tension, nervousness, and worry, particularly when access to social media is restricted or when they feel pressured to remain constantly connected. This finding confirms that SMA is a significant predictor of anxiety among students of Hassan Usman Katsina Polytechnic and underscores the need for interventions aimed at regulating social media use to improve emotional stability.

Similarly, the analysis shows a strong positive relationship between social media addiction and depression. Students with higher levels of SMA tend to report increased depressive symptoms, including sadness, dissatisfaction with life, and reduced interest in daily activities. This indicates that excessive engagement with social media may negatively affect students' mood and emotional well-being. The finding highlights the importance of strategies and support systems that help students manage their social media use to reduce depressive tendencies.

The findings also demonstrate a strong positive relationship between social media addiction and stress. As students' level of SMA increases, so does their experience of stress, manifested through mental fatigue, pressure to respond promptly to online interactions, and interference with academic responsibilities. This suggests that excessive social media use contributes to cognitive overload and academic strain, making stress a significant outcome of SMA among the students studied.

In contrast, the relationship between social media addiction and self-esteem is negative, indicating that higher levels of SMA are associated with lower self-esteem. Students who are more addicted to social media are more likely to experience reduced confidence, feelings of inferiority, and negative self-perceptions. Overall, these findings demonstrate that social media addiction significantly predicts anxiety, depression, stress, and low self-esteem among students of Hassan Usman Katsina Polytechnic, emphasizing the need for targeted interventions that promote healthy social media habits and support students' mental well-being.

DISCUSSION OF RESULTS

The study reveals that social media addiction (SMA) significantly affects the mental health of students at Hassan Usman Katsina Polytechnic, Katsina State. Most students reported moderate to high levels of SMA, exhibiting behaviors such as spending more time online than intended, restlessness without access, and difficulty reducing usage, with a grand mean of 3.12.

Correspondingly, students experienced moderate to high levels of anxiety, depression, stress, and reduced self-esteem, with mean scores ranging from 3.02 to 3.18. Hypothesis testing confirmed strong positive correlations between SMA and anxiety, depression, and stress, and a moderate negative correlation with self-esteem, indicating that higher SMA levels increase psychological distress and lower self-worth.

These findings align with existing literature showing that excessive social media use contributes to adverse mental health outcomes, including anxiety, depression, loneliness, low self-esteem, and reduced life satisfaction (Brown, 2020; Lee et al., 2020; Smith & Johnson, 2022). The study also supports evidence that SMA can affect academic performance and overall well-being, with loneliness acting as a mediator (Brown et al., 2020; Lee et al., 2019). Uniquely, this research addresses a gap by examining students in the Department of Civil Engineering at Hassan Usman Katsina Polytechnic, providing context-specific evidence that SMA is prevalent and significantly linked to negative psychological outcomes in this population.

CONCLUSION AND RECOMMENDATIONS

The study concludes that social media addiction (SMA) is prevalent among students at Hassan Usman Katsina Polytechnic, with most exhibiting moderate to high levels of addictive behaviors. Excessive engagement with social media was found to significantly contribute to negative mental health outcomes, particularly anxiety, depression, and stress. Students with higher SMA levels are more likely to experience psychological distress, restlessness, and emotional exhaustion. Additionally, high SMA is associated with reduced self-esteem, suggesting that reliance on online validation can undermine confidence and self-perception.

Based on these findings, the study recommends that students practice self-regulation by limiting daily social media use and engaging more in real-life interactions to reduce loneliness and stress. Academic institutions, particularly the Department of Civil Engineering, should organize awareness campaigns and provide counseling and mental health support for students affected by SMA. Policymakers are encouraged to develop guidelines for responsible social media use and integrate digital literacy and mental health education into curricula. For future research, studies should expand to other polytechnic campuses and use longitudinal designs to assess long-term mental health impacts.

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