Effect Of Social Media Usage Patterns On Academic Performance And Psychological Well-Being Of Undergraduate Students

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Abstract

In the contemporary world, social media has become an integral aspect of human existence, exerting considerable influence in various ways. However, the excessive use of social media is associated with adverse effects on academic achievement and psychological well-being, contributing to heightened levels of anxiety, depression, loneliness, and low self-esteem. The primary objective of the study was to investigate the effect of social media usage patterns on the academic performance and psychological well-being of undergraduate students. The research employed a causal-comparative research design, also known as ex post facto research, with the objective of revealing causal relationships between variables. Employing a simple random sampling technique, 455 students were randomly selected as a sample. Respondents filled out a standardized questionnaire in order to assess their social media patterns. To assess the pupils' psychological well-being, a psychological well-being questionnaire was utilized. Regression analysis and the Pearson correlation coefficient were used to analyze the data. The findings of the study indicate a strong negative relationship between psychological well-being, academic performance, and social media usage patterns. The findings also indicate that social media usage patterns significantly impact students' academic performance and psychological well-being. These findings make a substantial contribution to the current body of knowledge and have implications for educational institutions.

Keywords: *Social media patterns, academic performance, undergraduate students,* psychological well-being.

Introduction

Globally, there has been a noticeable shift in the number of internet users (Freund &Weinhold, 2002). The advancement and development of technology have brought about certain changes in the lives of students (Mese & Aydin, 2019). Social media provides a platform for the instant exch[1]ange of ideas, information, and other emotions. Social media includes Twitter, Instagram,

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Facebook, YouTube, TikTok, Snapchat, and Facebook. The majority of students use several media apps, which might become addictive. Their low CGPs and grades reflect how badly learners are affected academically as a result of this addiction (Burita, 2019; Cargill, 2019; Sabir et al., 2020).There was a notable increase in the number of internet users (Freund &Weinhold, 2002). The lives of students have been influenced to some extent due to technological innovation and evolution (Mese & Aydin, 2019). Social media serves as a platform for the expeditious dissemination of information, viewpoints, and emotions. Instagram, Facebook, YouTube, Tiktok, Snapchat, and Twitter are all components of the realm of social media. Students frequently utilize a variety of media apps, resulting in a propensity for addiction. As a consequence of this addiction, their academic performance is negatively affected, evident by their low cumulative grade points (CGPs) and grades (Burita, 2019; Cargill, 2019 &Sabir et al., 2020).

Psychological well-being is commonly understood as a blend of positive emotional states, such as happiness (from a hedonic perspective), and achieving optimal effectiveness in both individual and social aspects of life (Deci & Ryan, 2008; Kraiss, 2023; Winefield et al., 2012)."When lives are going well, psychological well-being is achieved. It is the union of well-being with efficient operation. People who score highly on psychological well-being are happy, capable, well-supported, and satisfied with life. According to Huppert (2009) review, psychological well-being also has positive effects on physical health, which may be due to genetics, brain activation patterns, and neurochemical effects (Arslan & Coşkun, 2023; Ho, 2023). Silva, 2023).University students today spend a significant portion of their time on the internet, which has drastically altered the way they interact, communicate, and study. However, concerns regarding the potential negative impacts of social networking patterns on these children's psychological well-being have arisen.

This study aims to evaluate the impact of social networking usage patterns on university students' academic achievement and apsychological well-being, providing vital new information on this pressing issue (Al-Hawary et al., 2023; Bovonsunthonchai et al., 2020; Chen & Xiao, 2022).According to recent research, undergraduates are becoming increasingly reliant on online social networking, with a sizable proportion engaging in harmful behaviours or spending a large amount of time on sites such as Instagram, Twitter, Facebook, and Snapchat (Brown, 2022; Smith, 2022). The detrimental impact of social media platforms on the well-being of university students is significant. Persistent exposure to meticulously curated content, idealized lifestyles, and unattainable beauty standards can result in feelings of inferiority, diminished self-worth, and overall unhappiness (Jones, 2021). Continuous comparison to others and frequent reliance on social media highlight videos may contribute to discomfort and issues related to physical appearance (Lee et al., 2020; Hawes et al., 2020). Students continuously seek approval through shares, comments, and likes, they may find themselves involved in repetitive checking behaviors. These actions have the potential to hinder their productivity and concentration on academic tasks (Barker, 2009; Hararah, 2023; Johnson, 2022; Tung et al., 2023).

A student's connections with others may be negatively impacted by their heavy reliance on social media. Excessive use of these platforms can diminish face-to-face interactions, hindering the development of meaningful relationships. The constant scrutiny and online engagements might lead students to experience isolation, making them feel less integrated into their communities. To address this issue and foster responsible technology usage among learners, educational institutions and universities must take proactive measures. Implementing

educational programs that advocate for appropriate internet use and providing mental health services tailored to the challenges associated with social media dependency are crucial steps (Williams & Davis, 2021; Smith et al., 2022; Sujarwoto et al., 2023).

In recent years, the growing concern of social media addiction has specifically captured attention within the university student. This segment presents a concise overview of the research, emphasizing the importance of examining how internet addiction impacts the psychological well-being of university students. Given the adverse consequences associated with excessive internet reliance, educational institutions and universities must proactively address this issue and advocate for responsible technology use among their students. To tackle the unique challenges stemming from social media dependence, it is crucial to implement interventions that address mental health issues and educational initiatives promoting responsible internet usage (Smith et al., 2022; Zhao, 2021).

In recent times, there has been a noticeable rise in social media addiction, particularly among university students. This section provides a concise overview of the study's methodology and underscores the importance of investigating the impact of social media usage patterns on the mental well-being of university students. Numerous studies exploring the prevalence and consequences of internet use among this demographic have shed light on the gravity of the issue. For instance, Smith (2022) conducted a comprehensive survey involving 1,000 college students, revealing that 65% exhibited symptoms of social media addiction. This high prevalence emphasizes the pressing need for further research to examine the effects of electronic dependence on the psychological well-being of university students (Barton et al., 2021; Deka, 2015;Osticetal., 2021; Pontes, 2017).

Furthermore, comprehensive investigations have established a connection between the perils faced by university students and their use of social media. Existing literature document the association between internet dependence and adverse outcomes such as diminished academic performance, decreased self-confidence, and stress. These results underscore the intricate impact of internet dependency on various aspects of university students' live (Gazi et al., 2017; Hawi & Samaha, 2017; Liu et al., 2023; Parlak & Başkale, 2023). It's crucial to keep in mind that digital media addiction not only affects individuals personally but also has repercussions on their interactions with others and interpersonal relationships. Previous research document that excessive internet usage led to feelings of loneliness, reduced face-to-face interactions, and a diminished sense of belonging within the campus community. These findings underscore the significance of understanding the broader social consequences of online internet dependency among university students (Garcia, 2023;Nurudeen, 2023; Zhuang, 2023;Taş, 2023). Model of different patterns of social media usage are presented in the figure **1**
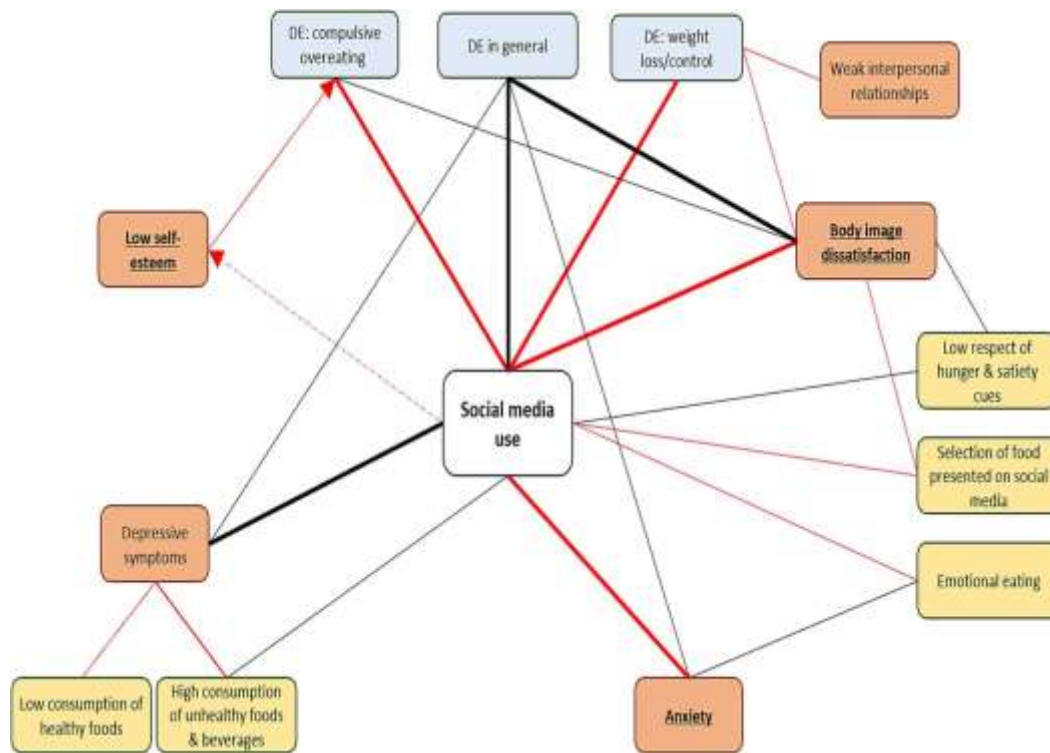
Fig. 1 Model of different patterns of social media usage

Comprehending the distinct ways in which social media addiction impacts self-esteem, social interactions, perception of reality, and academic performance is essential for crafting successful interventions and support structures. This understanding is pivotal in fostering healthier technology usage and ensuring the well-being of students.Nevertheless, limited research has explored the connection between social media usage patterns and the academic performance of students beyond the United States. Furthermore, there is a notable absence of studies examining the effect of social media usage patterns on the psychological well-being of university students in Pakistan. Given these gaps in existing literature, the main goal of this study is to contribute to empirical research in this area. Therefore, the ensuing study seeks to investigate the effect of social media usage patterns on academic performance, and psychological well-being among university students.

Objectives of the Study
Objectives of the study were to:

1. Explore the correlation between social media usage patterns and the academic performance of undergraduate students.

2. Assess the relationship between social media usage patterns and the psychological well-being of undergraduate students.

3. Find out the effects of social media uses patterns on the academic performance of undergraduate students.

4. Find out the effects of social media uses patterns on the psychological well-being of undergraduate students.

Research Hypothesis
Null Hypotheses:

Ho1: There is no significant relationship between social media usage patterns and the academic performance of undergraduate students.

Ho2: There is no significant relationship between social media usage patterns and the psychological well-being of undergraduate students.

Ho3: There is no significant Effect of social media usage patterns and the academic performance of undergraduate students

Ho4: There is no significant effect of social media usage patterns and the psychological well-being of undergraduate students

Relevant Literature

The existing body of practical literature lacks a definitive stance on the impact of social media on learning, as indicated by many studies while certain research findings suggest adverse effects of social media usage on academic performance, the overall consensus remains unclear. Even more fascinatingly, certain studies propose that social media has no noticeable impact on academic performance (Khaola et al., 2022; El-Badawy & Hashem, 2015). Many studies find positive association of social media usage and academic performance of the students. For instance, Hosen et al. (2021) outlined the impact of social media on student performance in education. Employing Structural Equation Modeling (SEM) analysis to assess their hypothesis, they formulated and distributed a questionnaire to university students. The results of the study established that social media capabilities promote information sharing which in turn improve academic performance. Similarly,Shafiq and Parveen (2023) find that students experience and knowledge sharing capabilities improved academic performance.

Moreover, those students engaging with social media facilities exhibit a higher learning outcome. The several aspects explored in the study regarding social media prove beneficial for students, contributing to the enhancement of academic outcomes. Khaola et al. (2022) investigate the relationship between social media usage pattern and academic performance of the students. The results uncovered a negligible connection between social media usage and academic performance. Additionally, the findings demonstrated that aiding others through social media (SCB) had a favorable and notable influence on students' academic learning and performance

Nevertheless, numerous studies have indicated a negative link between students' use of social media and their academic performance (Barton et al., 2018; Koranteng et al., 2019; Wood et al.,2012; Boahene et al., 2019).

The potential explanations for this adverse correlation revolve around the disturbance of students' attention and the human brain's limitations in handling multiple tasks simultaneously. Similarly, Hameed et al. (2022) explored the effect of social media utilization on the academic achievement of undergraduate students. Employing a qualitative approach for data collection, they subjected the hypothesized hypothesis to a Structural Equation Modeling (SEM) analysis. The results revealed that excessive social media utilization negatively impacts students' academic performance. Additionally, the study found that multitasking on social networks does not have an impact on college students' academic performance.Although some studies explore the link between social media usage and academic outcomes in Pakistani cultural contexts,there is a notable absence of studies examining the relationship between social

media usage patterns and the psychological well-being of university students in Pakistan.Given these gaps in existing literature, the main goal of this study is to contribute to empirical research in this area. Therefore, the ensuing study seeks to investigate the effect of social media usage patterns on academic performance, and psychological well-being of the university students.

Material and Methods

This study is quantitative in nature and a non-experimental quantitative design known as causal-comparative design has been used to find out the effect of independent variable on dependent variablesThis study employed the simple random sampling technique to acquire a representative sample from the accessible population, conducted in two phases. In the initial phase, 455 students from the Education University across three campuses were selected using the simple random sampling technique. Students of B.Ed. (Hons.) programs were chosen through a random number generator. In the second phase, the researcher gathered academic results of the selected students from their departments.

Campus Wise Distribution of the Sample
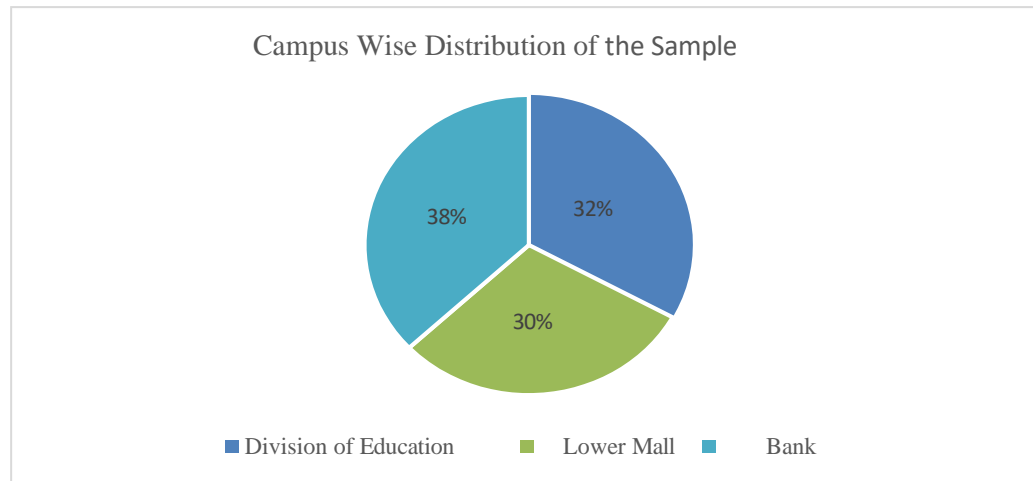
Research Instruments
To collect the data, following research instrument were adopted for the current study. To evaluate the extent of social media addiction, the Social Networking Addiction Scale by Shahnawaz and Rehman (2020) was employed. Respondents were instructed to rate each item on a five-point Likert scale in the questionnaire. The assessment of psychological well-being utilized Ryff's Psychological Well-Being Scales (Ryff et al., 2010). This scale gauges six dimensions of well-being and happiness: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each of these subscales consisted of 18 items, and responses were recorded on a 7-point Likert scale, ranging from 1 (never) to 7 (always).

Reliability of the instruments

The researcher selected 50 respondents from the selected population for pilot testing. Cronbach's alpha was used to check reliability of the instruments of questionnaires Social Media Addiction scale and Ryff's Psychological Well-Being Scales.

Table: 1 Reliability Statistic of Research Instruments

Scales	Cronbach's Alpha
Social Media Addiction scale	0.85
Psychological Well-Being Scale	0.82

The results reported in the table show that Cronbach's alpha value of Ryff's Psychological Well-Being Scales and Social Media Addiction scale is higher than .7 which shows that both scale were internally consistent.

Findings

Table:2 Mean and Standard Deviation of the Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Actual CGPA	455	2.30	3.82	3.455	0.318
Social media usage patterns	455	26.00	107.0	55.39	8.621
Psychological Well-Being Scale	455	12.00	36.00	15.65	3.585

Table: 2 summarized the descriptive statistic for the mental health and social media addiction scales by providing the Minimum, Maximum, Mean and Standard Deviation for the constructs under study. Similarly our main variable of interest is social media addiction. The index for the students psychological well-being that we develop in this study takes the value ranging from a (M=12.00) to the maximum of 36.00 with the standard deviation of 3.585 .The lower standard deviation of the study variables shows that our data do not suffer from the problem of high dispersion.

In order to test this hypothesis, we used Pearson Correlation Coefficient and results are presented in table: 3

Table 3:Pearson Correlation Coefficient between Social Media usage patterns and academic performance of students

Variables	M	SD	R	P
Students' Academic Performance (CGPA)	3.455	0.318		
	- 0.731	0.000		
Social Media usage patterns	55.39	8.621		

p<0.01

From Table 3 it is evident that a significant strong negative relationship (r = 0.731, p < .01) was found between the student's Social Media usage patterns and their CGPA. Thus Null hypothesis claiming that there is no relationship between Social Media usage patterns of master level students and their academic achievement is rejected at 1% level of significance.

In order to test the hypothesis two, we used Correlation Coefficient and results are presented in table 4

Table:4Correlationcoefficient betweenSocial Media usage patterns and Psychological Well-Being

Variables	M	SD	R	P
Psychological Well-Being	15.6507	3.58570		
Social Media usage patterns	55.3928	8.62108	-0.753	.000

The results in table 4 showed that there is a significant strong negative relationship (r=-0.753, p<.001) between the social media usage patterns and Psychological Well-Being of theundergraduate students. Thus the null hypothesis is rejected at 1% level of significance.

To find out the relationship between sub scales ofPsychological Well-Beingland Social Media usage patterns of students Pearson Correlation is used and results are reported below in table 5

Table:5 Pearson correlation Coefficient between sub scales of Social Media usage patterns and Psychological Well-Beingstudents.

Variables	M	SD	R	P
Social Media usage patterns	55.39	8.621		
Autonomy	73.27	13.8	-0.662	.000
Environmental mastery	75.63	14.95	-0.697	.000
Personal growth	70.02	14.69	-0.644	.000
Positive relations	72.65	11.84	-0.669	.000
Life purpose	71.27	12.16	-0.616	.000
Self-acceptance	74.37	13.77	-0.637	.000

p<0.01

Table 5 reveals a statistically significant and robust negative correlation between the sub-constructs of Psychological Well-being and Social Media usage patterns. The correlation coefficients and p-values for the six constructs of Psychological Well-being and social media usage patterns indicate a consistently negative relationship. Specifically, there is a negative association with autonomy (r = -0.662, p < 0.01), environmental mastery (r = 0.697, p < 0.01), personal growth (r = -0.644, p < 0.01), positive relations (r = -0.669, p < 0.01), life purpose (r = -0.616, p < 0.01), and self-acceptance (r = 0.644, p < 0.01). It is noteworthy that all these correlations are not only negative but also statistically significant, indicating a substantial magnitude of association.

Table:6Regression Analysis for the Effect of Social Media Uses Patterns on Academic Performance

Variables	coefficients(β)	SE	β standardized	t	P

(constant)	1.614	1.243		17.395	.000
Social media uses patterns	-0.731	.020	- .732	-4.618	.000

The findings indicate that the patterns of social media usage are statistically significant (t= -4.618, p<0.01), with the negative sign suggesting a negative effect of social media usage on students' academic performance. Thus, the null hypothesis is rejected. Furthermore, on average, a 1% increase in social media usage patterns will result in -0.731 decrease in academic performance. The overall summary of the regression model is provided in Table 5 below

Table: 7Overall regression model summary

R Square	Adjusted R Square	F	df	P
0.49	0.46	14.05	453	.000

Over all it was found that regression model explains a significant amount of the variance in students' performance. As adjusted R square=.046 which shows that almost 46% variation in dependent variable is explained by the regression model. Overall model is highly significant as p<0.01(F= 1,405 p, .001,R²=.49, AdjustedR²=.46).

Table: 8 Regression Analyses for the Effect of Social Media Uses Patterns on Psychological Well-Being

Variables	coefficients(β)	SE	β standardized	t	P
(constant)	1.515	1.142		16.385	.000
Social media uses patterns	-.754	.030	- .752	-3.616	

The results shows that Social media uses patterns are statistically significant (t=-.3.616 and p<0.0) as p value is less than 0.05 with negative sign which implies that effect of Social media patterns are negatively related with the on Psychological Well-Beingof students. Hence, null hypothesis is rejected. Moreover, on average 1% increase in Social media uses patterns will result in-.752 decreased in the Psychological Well-Being of students.The overall regression model summary is presented in the following table 9

Table:9 Overall regression model summary

R Square	Adjusted R Square	F	df	P
.68	.66	18.15	453	.000

Overall, the regression model effectively accounts for a substantial portion of the variance in student mental well-being, with an adjusted R-squared value of 0.66, indicating that approximately 68% of the variability in the dependent variable is elucidated by the model. This overall model demonstrates high significance, as evidenced by a p-value of less than 0.01 (F= 1,815, p < .001, R²=068, Adjusted R²=.66)

Discussion

This research aims to investigate the effect of media usage on academic performance and psychological well-being of students. Additionally, it delves into the relationship between the sub-constructs of social media usage.The results of the study reveal that social media usage have negative impact on academic performance.Moreover, excessive social media usage pattern is also negatively relatedwith the different sub constructs of psychological well-being. These findings align with Johnson's (2023) research, which identified a significant positive correlation between time spent on social networks and mental health. Similarly, Hunt et al. (2018) discovered that the number of social media platforms used is linked to depressive symptoms. Existing literature highlights that excessive online time can lead to anxiety, frustration, distress, and depressed mood (Johnson, 2022; Lee et al., 2020; Shensa et al., 2017). The current study's results are consistent with previous research on the effect of social media usage on student psychological health, as seen significant effect found by Primack et al. (2017). Furthermore, the study's findings indicate a negative effect of social media usage on students' academic performance, corroborating existing literature that demonstrates the adverse impact of excessive social media use on academic performance (Domoff et al., 2020; Foroughi, 2022; Kuss & Griffiths, 2011; Kwok, 2021).

Conclusion

The primary objective of the study was to find out the effect of socialmedia usage patterns on the academic performance and psychological well-being of undergraduate students. The research employed a causal-comparative research design, also known as ex post facto research, with the objective of revealing causal relationships between variables. Employing a simple random sampling technique, 455 students were randomly selected as a sample. Respondents filled out a standardized questionnaire in order to assess their social media patterns. The results of the study reveal that social media usage has negative effect on academic performance. The result also reveals that social media usage has statistically significant negative effect on the psychological well-being.

Moreover, excessive social media usage pattern is also negative related with the different sub constructs of psychological well-being of the Students. Considering negative effect of the excessive social media usage pattern on academic performance, students should be made aware of the prudent use of social media, particularly activities directly linked to their academic responsibilities. Encouraging open discussions or providing tutoring services can assist them in acquiring more effective strategies for time management and handling their academic workload. The current study provides an opportunity for parents of university students and educational institutions to grasp the influence of online social networking dependence on the psychological well-being of students.

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