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Original Article

Investigating the Impact of Social Media Usage on Academic Performance Among Youth in Gujranwala

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ABSTRACT

Background: Social media has become an important part of university students' academic and social lives, offering opportunities for communication, collaboration, and access to educational resources, while also creating risks of distraction, procrastination, and reduced academic engagement. Objective: This study aimed to examine the relationship between social media use and academic performance among university students in Gujranwala, Pakistan. Methods: A cross-sectional observational study was conducted among 50 students from GIFT University, Gujranwala, selected through convenience sampling. Social media use was assessed using the Bergen Social Media Addiction Scale, and academic performance was measured using the Academic Performance Scale. Data were analyzed using descriptive statistics, normality testing, Spearman correlation analysis, and linear regression. Results: Spearman correlation showed a weak positive and statistically insignificant relationship between social media use and academic performance ($r = 0.098$, $p > 0.05$). Linear regression also showed that social media use did not significantly predict academic performance ($R = 0.209$, $R^2 = 0.044$, $B = -0.169$, $SE = 0.105$, $p = 0.115$, 95% CI: -0.380 to 0.042). The model explained only 4.4% of the variance in academic performance. Conclusion: Social media use was not significantly associated with academic performance among the students included in this study. The findings suggest that academic outcomes may be influenced by factors beyond social media use alone, including study habits, self-regulation, motivation, and contextual academic variables. Keywords: social media use, academic performance, university students, Bergen Social Media Addiction Scale, Gujranwala.

INTRODUCTION

Social media has become deeply embedded in university students' academic and social lives, influencing how they communicate, access information, collaborate with peers, and manage learning-related tasks. In higher education settings, social media platforms may support academic engagement by enabling rapid exchange of learning materials, peer discussion, access to educational resources, and collaborative problem-solving; however, the same platforms may also create distraction, procrastination, reduced concentration, and poor time management when used excessively or primarily for non-academic purposes (1,2). This dual role is especially relevant for university students, who often use smartphones and social networking applications during study hours and classroom activities, making social media exposure a routine part of the academic environment rather than a separate leisure activity (3).

The relationship between social media use and academic performance can be understood through the Uses and Gratifications Theory, which proposes that individuals actively select media to satisfy cognitive, emotional, personal, social, and escapist needs (4). From this perspective, university students may use social media for academic purposes, such as obtaining information, discussing coursework, and

maintaining educational networks, but they may also use it for entertainment, social validation, stress relief, or avoidance of academic responsibilities. Therefore, the academic consequences of social media use may depend not only on the amount of use but also on the purpose, intensity, and self-regulation of use. This theoretical lens supports the need to examine whether social media use functions as an academic resource, a source of distraction, or a behavior with no meaningful relationship to academic outcomes in specific student populations (5,6).

Previous empirical evidence on this topic remains inconsistent. Some studies have reported no significant gender-based differences in social media use among medical students and have suggested that patterns of use may not always translate into measurable academic disadvantage (7). Other research has found that excessive or addictive social media use may be associated with poorer academic performance, particularly when online engagement displaces study time, disrupts sleep, or interferes with concentration (8). Studies conducted in Pakistani and university-based contexts have also suggested that students may spend substantial time on social networking sites, often for social interaction rather than educational purposes, with potential consequences for study habits, sleep, family interaction, and academic achievement (9,10). These mixed findings indicate that the association between social media use and academic performance is context-dependent and may vary according to population, measurement approach, academic setting, and patterns of use.

Despite growing international literature, there remains a need for localized evidence from Pakistani university settings, particularly from Gujranwala, where students' social media behavior may be shaped by institutional, cultural, and educational factors. Existing studies have often examined broader student populations or specific professional groups, while fewer studies have focused on university students in this local context using standardized measures of problematic social media use and academic performance. This gap is important because conclusions drawn from other regions or disciplines may not accurately reflect the experiences of students at GIFT University, Gujranwala. A focused investigation can help clarify whether social media use is meaningfully associated with academic performance in this population and can inform educators, students, and policymakers about whether interventions should emphasize restriction, self-regulation, or academic integration of social media.

Using a PICO framework, the population of interest in this study is university students at GIFT University, Gujranwala; the exposure is social media use, assessed through the Bergen Social Media Addiction Scale; the implicit comparison is students with lower versus higher levels of social media use or problematic engagement; and the outcome is academic performance, assessed using an academic performance scale. Therefore, this study aims to examine the relationship between social media use and academic performance among university students and to determine whether social media use significantly predicts academic performance. The study was guided by the research question: is social media use significantly associated with academic performance among university students in Gujranwala? Based on prior evidence suggesting possible academic distraction from excessive use, it was hypothesized that higher social media use would be negatively associated with academic performance.

MATERIALS AND METHODS

A cross-sectional observational study design was used to examine the association between social media use and academic performance among university students. This design was appropriate because the study aimed to assess exposure and outcome variables at a single point in time and determine whether higher levels of social media use were statistically related to students' academic performance. The study was conducted at GIFT University, Gujranwala, Punjab, Pakistan, among currently enrolled university students. The target population comprised undergraduate and postgraduate students who were active users of social media platforms and were within the eligible age range of 18–30 years.

Participants were selected through a convenience sampling technique because it allowed recruitment of accessible students from the university population within the available study period and resources.

Students were eligible for inclusion if they were currently enrolled at the university, aged 18–30 years, male or female, of any marital status, active users of social media, and willing to provide informed consent. Students were excluded if they were not enrolled in a university, were younger than 18 years or older than 30 years, did not use social media, or were unwilling to participate. A final sample of 50 students was included in the study. Eligible students were approached in the university setting, informed about the purpose of the study, and invited to participate voluntarily. Informed consent was obtained before data collection, and participants were assured that their responses would remain confidential and would be used only for research purposes.

Data were collected using standardized self-report questionnaires. Social media use was assessed through the Bergen Social Media Addiction Scale, a six-item measure designed to evaluate problematic engagement with social media. Each item was rated on a five-point Likert scale ranging from 1, indicating "very rarely," to 5, indicating "very often." Total scores ranged from 6 to 30, with higher scores reflecting greater problematic social media use. A score above 24 indicated increased risk of social media disorder. Academic performance was assessed using the Academic Performance Scale, an eight-item self-report measure rated on a five-point Likert scale. Higher scores represented the level of students' perceived academic functioning according to the scale scoring procedure. The independent variable was social media use, operationalized through the total Bergen Social Media Addiction Scale score, and the dependent variable was academic performance, operationalized through the total Academic Performance Scale score.

To reduce information bias, all participants received the same questionnaire format and instructions before completing the study measures. Participation was voluntary, and confidentiality was maintained to encourage honest responses and reduce social desirability bias. The use of standardized scales helped improve consistency in measurement across participants. Selection bias was addressed by applying the same inclusion and exclusion criteria to all potential participants. Because the study used a cross-sectional design and convenience sampling, the analysis focused on association rather than causal inference. Potential confounding factors were minimized through consistent eligibility criteria and uniform data collection procedures.

After data collection, questionnaire responses were reviewed for completeness and coded for statistical analysis. Scale items were computed according to their scoring procedures, and total scores were generated for social media use and academic performance. Frequency distributions were calculated for categorical variables, while descriptive statistics were used to summarize continuous variables. Distributional properties of the main study variables were assessed using skewness, kurtosis, and tests of normality, including the Shapiro-Wilk and Kolmogorov-Smirnov tests. Because the variables did not meet normality assumptions, Spearman correlation analysis was used to examine the relationship between social media use and academic performance. Linear regression analysis was then applied to assess whether social media use predicted academic performance. Statistical significance was evaluated using a p-value threshold of less than 0.05, and regression estimates were interpreted using beta coefficients, standard errors, confidence intervals, R, and R^2 values.

Ethical principles were followed throughout the study. Participants were informed about the purpose of the research, their voluntary participation, and their right to withdraw before submitting responses. Confidentiality of personal information was maintained, and no identifying information was used in the analysis or reporting of findings. Data were handled carefully to preserve accuracy, consistency, and integrity. All responses were coded systematically, computed variables were checked before analysis, and statistical procedures were applied consistently to ensure reproducibility of the findings.

RESULTS

A total of 50 university students were included in the analysis. Social media use was assessed using the Bergen Social Media Addiction Scale, and academic performance was assessed using the Academic

Performance Scale. After computation of total scale scores, normality of the study variables was assessed using Shapiro-Wilk and Kolmogorov-Smirnov tests. Because the distributional assumptions for parametric correlation were not met, Spearman correlation analysis was used to examine the relationship between social media use and academic performance. Linear regression analysis was then applied to assess whether social media use predicted academic performance.

Table 1. Correlation Between Social Media Use and Academic Performance

Variables	Academic Performance	Social Media Use	Correlation Coefficient	p-value
Academic Performance	1.000			
Social Media Use	0.098	1.000	r = 0.098	>0.05

Spearman correlation analysis showed a weak positive association between social media use and academic performance, with a correlation coefficient of r = 0.098. The relationship was statistically insignificant, as the p-value was greater than 0.05. This indicates that higher social media use was not significantly associated with either improvement or decline in academic performance among the included students. The magnitude of the correlation was very small, suggesting that social media use explained little meaningful variation in academic performance at the bivariate level.

Table 2. Linear Regression Analysis of Social Media Use Predicting Academic Performance

Predictor	R	R^2	B	SE	p-value	95% CI Lower	95% CI Upper
Constant			3.513	0.236	0.001	3.040	3.986
Social Media Use	0.209	0.044	-0.169	0.105	0.115	-0.380	0.042

Linear regression analysis showed that social media use did not significantly predict academic performance. The regression model produced an R value of 0.209 and an R^2 value of 0.044, indicating that social media use accounted for approximately 4.4% of the variance in academic performance. The unstandardized regression coefficient for social media use was B = -0.169, with a standard error of 0.105, suggesting a small negative change in academic performance score for each unit increase in social media use score. However, this association was not statistically significant (p = 0.115). The 95% confidence interval ranged from -0.380 to 0.042, crossing zero, which further supports the absence of a statistically significant predictive effect.

Overall, the findings showed no statistically significant relationship between social media use and academic performance among the study participants. Although the correlation analysis indicated a very weak positive association and the regression analysis indicated a small negative predictive coefficient, both analyses were statistically insignificant. Therefore, the null hypothesis was retained, indicating that social media use was not significantly associated with academic performance in this sample.

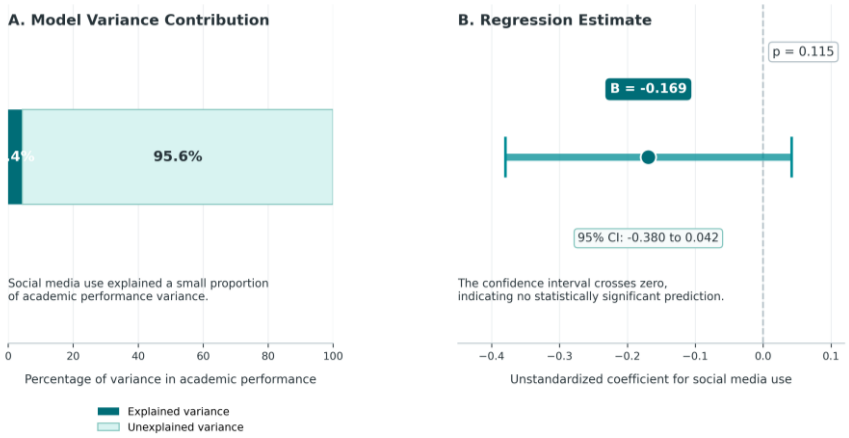

Figure 1. Predictive Contribution of Social Media Use to Academic Performance

Social media use explained 4.4% of the variance in academic performance, while 95.6% of the variance remained unexplained by the model. The regression estimate showed a small negative coefficient (B = -0.169), but the 95% confidence interval ranged from -0.380 to 0.042, crossing the null value of zero. The

nonsignificant p-value (p = 0.115) indicates that social media use did not significantly predict academic performance in this sample, suggesting that the observed negative trend was weak and statistically inconclusive.

DISCUSSION

The present study examined the relationship between social media use and academic performance among university students in Gujranwala. The findings showed a weak positive correlation between social media use and academic performance; however, this association was statistically insignificant. Regression analysis further indicated that social media use did not significantly predict academic performance, as the model explained only a small proportion of variance in academic performance. Although the regression coefficient showed a negative direction, the confidence interval crossed zero and the p-value did not reach statistical significance. These findings suggest that, within this sample, social media use was not a meaningful independent predictor of students' academic performance.

The nonsignificant relationship observed in this study may reflect the complex and context-dependent nature of social media use among university students. Social media is not a uniform exposure; students may use it for academic communication, peer support, access to learning resources, entertainment, social interaction, or avoidance of academic tasks. According to the Uses and Gratifications Theory, individuals actively use media to satisfy different cognitive, emotional, social, and escapist needs, and these motives may shape whether social media supports or interferes with academic functioning (11,12). Therefore, the absence of a significant negative association may indicate that social media use among the participants was not exclusively harmful or academically disruptive. Some students may have used social media for educational purposes, while others may have used it for non-academic activities, producing mixed effects that weakened the overall association.

The present findings are consistent with studies reporting that social media use does not always produce measurable academic disadvantage. For example, previous research among medical students found that social media use patterns were not uniformly associated with poorer academic outcomes and that demographic differences such as gender did not necessarily determine the extent of social media engagement (13,14). Similarly, some research among nursing students has shown no significant effect of social media addiction on academic performance, suggesting that the academic consequences of social media may depend on other factors such as self-regulation, study habits, academic workload, and the purpose of online engagement (15). The weak and nonsignificant relationship observed in the present study supports the view that social media use alone may be insufficient to explain academic performance without considering behavioral, psychological, and educational moderators.

However, the findings differ from studies that have reported negative associations between frequent social networking site use and academic achievement. Previous literature has suggested that excessive time spent on social media may reduce study time, delay assignment completion, interfere with sleep, and weaken concentration during academic tasks (16.17). These negative effects may be more evident when social media use is prolonged, compulsive, or primarily recreational. In the present study, the absence of a significant association may be related to the small sample size, single-university setting, self-reported academic performance, or the possibility that participants maintained a balance between social media use and academic responsibilities. It is also possible that the Bergen Social Media Addiction Scale captured problematic engagement rather than general duration, frequency, platform type, or academic versus non-academic use, which may have limited the ability to detect more specific patterns of association (18).

The regression model explained 4.4% of the variance in academic performance, indicating that most variation in students' academic outcomes was attributable to factors other than social media use. Academic performance is a multidimensional outcome influenced by prior academic ability, study duration, learning strategies, motivation, attendance, sleep quality, psychological well-being,

socioeconomic background, family support, and institutional factors. Because these variables were not included as covariates, the present analysis provides an initial estimate of the direct relationship between social media use and academic performance rather than a fully adjusted explanatory model. The small explained variance highlights that social media use should not be interpreted as a sole or dominant determinant of academic performance in this population (19).

The weak positive correlation and the negative regression coefficient also indicate that the direction of association was not stable across analyses. This pattern may occur when the relationship between variables is very small, when measurement variability is present, or when the statistical model captures variation differently from the bivariate correlation. Since both analyses were statistically insignificant, the most appropriate interpretation is that no reliable association was demonstrated. The findings therefore do not support the hypothesis that higher social media use has a significant negative impact on academic performance among the students included in this study.

These results have practical implications for students, educators, and university administrators. Rather than assuming that all social media use is academically harmful, universities may benefit from promoting responsible and purposeful digital engagement. Students can be encouraged to distinguish between academic and non-academic social media use, manage screen time, avoid multitasking during study periods, and use online platforms for collaboration, information sharing, and academic support. Educators may also integrate structured academic uses of social media where appropriate, while guiding students toward self-regulated and goal-directed online behavior.

The study also has several limitations that should be considered when interpreting the findings. The cross-sectional design does not allow causal conclusions, and the use of convenience sampling limits generalizability beyond the included participants. The sample size was relatively small, which may have reduced statistical power to detect small but meaningful associations. Academic performance was assessed through a self-report scale rather than objective academic records such as GPA or examination scores, which may introduce reporting bias. In addition, the study did not separately assess daily time spent on social media, platform-specific use, academic versus recreational use, sleep patterns, study hours, or psychological factors that may influence both social media behavior and academic performance.

Overall, the findings suggest that social media use was not significantly associated with academic performance among the university students included in this study. The results contribute to the broader literature by supporting the interpretation that the academic role of social media is not uniformly negative and may depend on how, why, and how much students use these platforms. Future research using larger, multi-institutional samples, objective academic records, longitudinal designs, and adjustment for relevant confounders would provide a clearer understanding of the conditions under which social media use may support, hinder, or have no meaningful effect on academic performance (20).

CONCLUSION

The study concluded that social media use was not significantly associated with academic performance among university students in Gujranwala. Although correlation analysis showed a weak positive relationship and regression analysis showed a small negative predictive coefficient, both findings were statistically insignificant, indicating that social media use did not meaningfully predict academic performance in this sample. The regression model explained only 4.4% of the variance in academic performance, suggesting that students' academic outcomes were more likely influenced by other educational, behavioral, psychological, and contextual factors beyond social media use alone. These findings do not support the hypothesis that higher social media use has a significant negative impact on academic performance; instead, they suggest that the academic consequences of social media may depend on how students use these platforms, whether for learning, communication, entertainment, or

distraction. Overall, balanced and purposeful social media use should be encouraged, while future research with larger samples, objective academic records, and broader assessment of digital behavior is needed to better clarify the relationship between social media engagement and academic performance.

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