

THE ADDICTION OF SOCIAL MEDIA AND ITS IMPACT ON THE ACADEMIC PERFORMANCE AMONG UNDERGRADUATE NURSING STUDENTS: A CROSS-SECTIONAL STUDY

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Keywords

Social Media Addiction (SMA), Academic Performance, Nursing Students, Social Networking Sites (SNS), Undergraduate Students, Digital Addiction, Social Media Usage.

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Abstract

Background:

The rapid advancement of technology and internet accessibility in contemporary education system has significantly increased the use of social media worldwide. Especially among young people social media use is more common, nursing students also use social media on daily basis. Despite having beneficial use of social media excessive and addictive use may affect students' academic performance.

Objectives:

The study aims to determine the impact of social media addiction on the academic performance of undergraduate nursing students and identify the association between social media addiction and academic achievement.

Methodology:

An analytic cross-sectional study design was conducted at a private nursing college. A sample of 167 nursing students were selected using stratified random sampling with proportional allocation. Data was collected using 5-point Likert scale. Data was analyzed using SPSS 29. Descriptive statistics mean standard deviation and percentages are used to describe the population.

Results:

The result findings showed a moderate level of social media addiction among students (Mean = 3.59 ± 0.69). Spearman correlation analysis revealed a weak but statistically significant positive association between social media addiction and academic performance ($r = 0.234$, $p = 0.002$). Most participants reported using more than three social media platforms, with Instagram being the most commonly used application, and many students spent more than four hours daily on social media.

Conclusion:

The study concluded that social media addiction significantly affects the academic performance of nursing students. Although social media provides educational benefits and improves communication and learning access, excessive use may negatively influence study habits and concentration. The findings indicate that balanced use of SM is important for maintaining better academic performance among nursing students.

1. INTRODUCTION

Over the past decades, technological and internet innovations have progressed substantially. Global Digital Reports by DataReportal (2024) indicates that most of the world population (62.3%) is now on social media platform, with 5.04 billion active users and average of 2 h and 23 minutes online each day (1). This revolutionary internet era brings astonishing changes to the lifestyle of people, exerting both positive and negative impacts depending on its usage. People are always connected with each other globally on social networking sites (SNS) through smart devices (2). As a result of covid-19 pandemic most of the business are shifted to online platforms, work from home along with E-learning is taking place. Smartphone and social media use on daily basis bring social, personal, vocational, psychological and educational problems for individuals (3).

As people are becoming more and more dependent on cell phone which is leading to development of symptoms such as disrupt sleeping pattern, low self-esteem, mood change, skipping meals, task pending, neck/back pain, procrastination and becoming more prone to aggression, depression and anxiety (4). Academic productivity and motivation level can be effected by SMA (Social Media Addiction), this has been shown in most studies (5).

Stress level increase due to SMA and spending too much time on social media can ultimately cause distraction from studies, which automatically impact learning and academic performance negatively (3). These Social Media Addiction (SMA) accompany by excessive screen time during night on daily basis cause hormonal change like increase cortisol level disrupt melatonin production interfere with sleep and reward cycle can greatly affect academic productivity, motivation level and skill performance (6).

Although study has revealed internet and social networking sites are majorly used and build for academic purpose along as a source of escape route and entertainment, but mostly student use it for recreational purposes (7). Despite of all this, some studies have shown positive influence on academic performance and skill development through various platforms, websites and applications

among students (8). According to Moosa and Baksh (9) these SMNSs (Social Media Networking Sites) offer extensive content and opportunities to nursing students in academic and professional development. Because they are enriched with knowledge, online tools and videos, that help nursing students to understand complex topics with ease and remain aware about the latest technology and advancement in healthcare.

Nowadays social media is of great importance because of its uses in every field including health Professional. Research shows students have positive impacts from interacting with educational content on sites such as Facebook and YouTube, while others might develop bad habits which adversely affect their academic achievement and satisfaction level (10). Similarly, study conducted by Boahene (11) shows social media has the ability to increase student participation, creativity level, communication skills, social interaction, and therefore possibly lead to better academic performance. This dual nature of social media significantly affects nursing student's academic performance outcomes. Research findings indicate that approximately 32% of population demonstrates cell phone addiction (12).

Furthermore, nursing students are highly engaged in face-to-face communication, critical thinking, emotional reasoning, and hands-on skill performance as part of their training. The frequent use of informal language on social media platforms may hinder the development of communication skills in nursing students during their educational program (13).

A study conducted by Alzahrani, Morsi (6) casual language and slangs usage on platforms like Twitter, Instagram, Facebook and TikTok may obstruct student's ability to exercise the articulate and polite communication with professional dialogue required in clinical environments (14). This difference between online and offline communication can lead to difficulties in professional interactions with colleagues and patients (15).

The Research also highlight the importance of individual characteristics like educational level, interests, gender, economical status and internet access along with age that also play role as

mediators between academic performance and use social media (16). Moreover, 31% of users fall in (18 to 29) years age group which are undergraduate students that spent uncontrollable and unsupervised time on social networking sites that develop addictive behavior about staying online for 24 hours, among regular users (84.9%) are nursing students (17).

Research has indicated that heavy involvement in social networking platforms may be influenced by the psychological phenomenon known as fear of missing out (FOMO), defined as a persistent concern about being excluded from rewarding experiences (18). Higher levels of FOMO are associated with greater use of smart devices or applications, poorer emotional states, reduced overall well-being, and lower satisfaction with life (18). Empirical studies have demonstrated that FOMO contributes to negative consequences of excessive SNS use and mediates the association between high SNS engagement and reduced self-esteem (19).

Excessive mobile phone use can impact daily life, contributing to reduced social interaction, isolation, mental health concerns and encourage impulsive usage patterns, which increase repeated engagement with social networking sites (20). Consequently, nomophobia may act as a contributing factor in the development of social media addiction. Nomophobia means the fear of being without a mobile phone. People with nomophobia tend to use their phones a lot, feel anxious when they don't have them, keep checking for messages (even when there are none), and prefer online communication instead of face-to-face interaction. It is mainly linked to the fear of losing social connections (20).

Additionally, a study shown that self-esteem has been identified as a potential underlying factor contributing to the adverse effects of social media addiction (21). For instance, frequent users of Facebook and other social platforms often perceive others as more successful and happier, particularly when they lack real-life familiarity with them. Studies suggest that upward social comparisons are more frequent than downward ones on social media, contributing to reduced self-esteem. Research findings further indicate that

heavy Facebook or online social applications use, as well as negative online feedback, are associated with lower self-esteem (21). Overall, excessive social media engagement is consistently linked with diminished self-esteem, because people constantly compare themselves with others.

However, with the increase frequency of online networking sites in nursing education threat rise about moral implications and breach of patient confidentiality. Even in the presence of strict legal frameworks such as Health Insurance Portability and Accountability Act (HIPAA) and General Data Protection Regulation (GDPR), many other international standards and policies protect patient data (22). A study conducted by Kohanova, Sollarova (22) shows about 35% of Nursing students inadvertently shared content that is unethical and totally unprofessional, like use of vulgar language and offensive remarks about patients, coworkers and Institute resultant in conflicts with the standards of professional conduct. That kind of behavior destroy individual image besides make them traitorous in professional field.

A Research indicate that nursing students not fully acknowledge limitations and boundaries about patient privacy. A study also manifests that if nursing students accidentally post patient information online they have to face legal penalty (23). This point arises the need regarding nursing student's education and awareness, concerning ethical use of digital platforms, standardize care and protection of patient right need vigorous training (23).

According to research, a notable difference in SMA pattern over countries depends on their distinct cultural, values, norms, socio-political setting, and technological environment profoundly influences how social media is perceived and utilize. In Islamic countries the pattern of usage is different, due to factors like attachment style, family dynamics and emotional atmosphere, role and relationship, religious and belief including cultural limitations strongly influence SMA (14). In Pakistan as well as globally excessive use of SNS is dangerous for the youth regarding Mental and physical health. Research on Social network services show comprehensive

correlation analysis of factors including violence, cybercrime and harassment related incidence in youth occur because of extreme use of SM. Greater challenges are faced due to extravagant access to inappropriate sites without age limitation and laws and policies (24).

Nurses are an essential part of healthcare profession without regulatory use of social media can arise psychological problems like short attention span, social detachment, and lack critical thinking skills. Recently American Psychiatric Association include "Social Media Use Disorder" to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) though this remains debated (25). Even though students get diverted due to smartphones and online networking sites, previous literature showed mixed results regarding the impact of social media addiction on nursing students' academic performance (26).

This study is necessary because social media addiction (SMA) has emerged as a significant public health concern that requires immediate attention. Several studies conducted in Pakistan indicate that high social media use is linked to lower academic attitudes, procrastination, depression, and sleep disturbances among university and medical students; however, most of these studies focus either on general university or medical students (not specifically nursing) and examine related outcomes such as depression, procrastination, and smartphone dependence, rather than directly measuring the impact of social media addiction on academic performance in nursing students. Fewer are related to addiction to GPA/Academic performance in nursing students, still provided data is insufficient.

The study findings might be useful to determine the influence of Social media addiction on Academic performance, help students to regulate social media usage and manage their studies. Result finding may also aid teachers and institutes as a framework to educate nursing students on how to use social media beneficially to enhance learning. Therefore, the aim of this study was the impact of social media addiction on academic performance of nursing student.

2-LITERATURE REVIEW

Today the world has become a global village people are more connected to one another they share academic, scientific, social, cultural, economic, domestic and personal information. They use social media as a tool for being active and Up-to-date which made them spend more time on their phone that effect their daily activities. Adults especially undergraduate students are more prone to it (26). The uncontrolled social media usage led to its addiction which on the other hand have a negative impact on their academic performance as student spend their time on social media that could be utilized on academics.

A cross-sectional study that was conducted in Malaysia used to identify the association between digital platforms addiction and academic achievement of nursing students. 141 diploma and degree students' sample was taken. Students' CGPA and Social Media Addiction Scale-Student Form were used as tools of comparison. The study results showed a high level of compulsiveness ($M=86.46$, $SD=13.78$) and mostly students had a high CGPA for each semester. It was observed that frequent usage of social apps does not hinder the academic performance of nursing students. It was also concluded that in future if more universities would include the results may be better (26).

The frequent use of smartphones and social media increases drastically after the Coronavirus pandemic. A study that was cross-sectional study conducted in Southern Ethiopia in which 1232 undergraduate university students' sample was used. In this study simple random sampling technique used. The Bergen Social Media Addiction Scale (BSMAS) and Smartphone Application-Based Addiction Scale were used as instruments to assemble statistics. The results show mean scores for problematic digital devices like mobile phones use were $17 \pm 3.3/36$ and problematic use of social media was $12.7 \pm 2.2/30$. The study also reveals female gender, first year students, insufficient sleep, depression, living in urban areas, and substance use where factors contribute to problematic smartphone use. The study highlights substantial concerns regarding social networking sites use among university students. Therefore, there is a need to offer

psychotherapy, teaching the students about managing screen time is beneficial for them. (3). Descriptive correlational study was conducted by Alzahrani (6) among nursing college students of government university in Jeddah, Saudi Arabia among 267 nursing students. The researcher's project purpose was to identify whether there is association in social networking sites' use and depression among nursing students in governmental universities. Social Media Use Integration Scale and the Beck Depression Inventory scale were used for data collection. The results show high prevalence of internet usage amongst nursing students, with 50.9% reposting high usage 31.1% indicating overuse. Mild depression was also observed in 26% of the study population. Additionally, association between social media platform usage and time spent per day depression level among nursing students were also observed. The study concluded a analytically positive connection between social networks usage pattern and depression in nursing students. There has been a substantial global increase in social media usage in recent years. Prolong and excessive use of it can result in addiction which subsequently contributes to depression. Hussain, Muhammad (25) carried out a study to check the association between use of social media, depression, and demographic variables. The intention of the study was to determine the level of social media usage and also its correlation with depression. They conducted a cross-sectional observational study on 120 nursing students at Sohail University Karachi. Chi-square was used as a descriptive statistical approach. About (55.0%) of students use social media for (0-4hours) and about (44.2%) students have moderate to severe depression. They have also found that demographical factors like age (18- 22 year), sex (male), study program (BSN students) and year of study (1st year and 2nd year) also have a considerable association with excessive social media use (0-4 hours). The study concluded that most of the participants who use social media and almost majority of them have moderate to severe levels of depression and there was a considerable association among social media use and demographical factors. Research also suggested

that there should be some policies and ways to ensure the constrained use of social media and to promote healthy lifestyles and practices. Kohanova (22) conducted a systematized review to gather and synthesize available quantitative empirical evidence on social media behavior and usage pattern among nursing students. In January 2024, a comprehensive literature search was carried out using four scientific databases: PubMed, ProQuest, Web of Science, and Scopus. A total of 3,490 articles were identified, from which 20 studies are ultimately included in the final analysis. Four main topics were emerged from the analysis: engagement of nursing students on social media, awareness about patient privacy and confidentiality, sharing inappropriate content online, using social media in a responsible manner. The study highlight that along with easy access to educational material, it simultaneously poses professional risks, regarding confidentiality breach and professional boundaries. The study concluded that recognizing social media behavior and usage is important for educators and policymakers. The result findings contribute to currently trending topic social media's role in nursing education and professional development, and how to maintain professional standards through cautious and responsible online engagement. Chowdhury (27) analyze the advantages and disadvantages of social media utilization on academic performance. This research study was carried out in Bangladesh. 247 responses were collated from the Undergraduates and postgraduates who were studying in different universities in Bangladesh. This study showed that 54.2% students who spend 1-8 hours on social media with 22.3% being low level (less than 1 hour) and 23.5% massive level (1-8hours) of addictiveness while Instagram and WhatsApp have 6.95% and 2% respectively. The research also demonstrated that skype is unpopular among students. The study determined that social media has both good and bad influences on the performance of students. So, students should maximize their productive use and minimize their drawbacks.

Cross-sectional study conducted in University of Lahore (17). The purpose of study was to identify the influence of social media on the academic performance of nursing students. Data collected from 279 nursing students by using convenient sampling technique. The study reveals that about (84.9%) of the nursing students use social media on daily basis and 70% of them consider that it positively impacts academic performance. The study concluded that students find social media useful because it helps them to connect with their teachers and peers, also they stay updated about new policies, trends and information.

Another study conducted which emphasize the impact of social media on student's academic performances. This study was conducted among students at various colleges of Nepal. Comparative study design was conducted among 360 students this study showed a relationship between academic performance and different social platform usage such as correlation between video watching and academic performance is 0.810 which is highly positively correlated. P-Value which was 0.000 which is less than 0.05 and academic performance was 0.665 which is moderately correlated. The P-Value was 0.000 which is also less than 0.05. like wisely the correlation coefficient between internet searches and academic performance was founded 0.736 which is highly positively correlate. Similarly, the correlation coefficient between video gaming and student's academic performance was found to be 0.737 which is significantly positive correlated. Also, there was a correlation coefficient between media sharing and academic performance which was found 0.665 which is moderately correlate. The P-Value was recorded to be 0.000 which is less than 0.05. Therefore, there is moderate and significant relationship between media sharing and academic performance. Hence, the overall analysis of correlation coefficient was that the P-Value is significantly positive. Thus, it is verified that video watching, has substantial impact on academic performance. Similarly, internet searches, video gaming and media sharing are all have g positive P-Value which shows that all these platforms have crucial impact on student's academic performance. Thus, it was concluded that the use of different social media platforms

such as video watching, internet searches, video games and media sharing have opportunistically and positively enhanced the student's academic performance. To improve learning outcomes there are various alternative modules but the more significant is social media. So, for the purpose of best learning outcomes social media is the practical tool because students amuse themselves and from every platform of social media they learn significantly new things (5).

A descriptive, exploratory study conducted in University of Zambia on topic students' social media use and its perceived impact on their social life (28). The study examined which types of social platforms students mostly use, what is their purpose for using them, the amount of time students spends on social media, and how social media use impacts students' social life. A sample of 240 participants with conveniently was selected, questionnaires were distributed among students pursuing a Bachelor of Library and Information Science and a Bachelor of Special Education at the University of Zambia. 227 questionnaires were returned, with 94.6% response rate. The study findings indicate that WhatsApp being most commonly used platform and students also reported spending 31 to 60 minutes daily on social media application, while saying phrase "just a few more minutes". Moreover, 22.4% students feel addicted to social networking sites, and use it more for social purposes rather than for attaining academic information.

Social networking has become a major part in people everyday lives. Its creating various kind of opportunities and threats on global scale. In a cross-sectional study conducted in Iran, 360 students were enrolled by stratified random sampling technique (29). This study was aimed to identify the relationship between social networking addiction and academic performance in Iranian students of medical sciences, 360 study participants were selected though random sampling. The mean score for social networking addiction was higher in male students (52.65 ± 11.50) compare to that in female students (49.35 ± 13.96) and this difference was statistically significant ($P < 0.01$). The study concluded that there was a negative relationship between social

networking addiction and student academic performance ($r = -0.210$, $p < 0.01$).

The increasing prevalence of smartphone addiction among students has raised concerns regarding its detrimental effects on academic achievement. A cross-sectional study was conducted in Swat (12), and a total of 249 students were selected through convenience sampling technique, from five different nursing colleges. The study aimed to investigate the correlation between smartphone addiction and academic performance among nursing students. Data were collected via Academic Performance Scale APS and Smartphone Addiction Scale Short Version SAS-SV ($\alpha = 0.911$). The results indicate that 67.9% of students were smartphone addicted, while 32.1% were not. Statistical analysis revealed a strong negative correlation ($r = -0.934$, $p < 0.01$), indicating a significant inverse relationship between smartphone addiction and academic performance. Meanwhile, majority of students exhibit poor academic performance, with only a few achieving satisfactory or excellent results.

Social media is widely recognized in modern area for its certain benefits and harms poses on users' academic outcomes, physical and mental health, social wellbeing and motivation level. In a study conducted in Nigeria, 400 students were selected through stratified random technique, the main purpose of study was to explore the effect of social networking technology addiction on academic performance of university students. Results showed that social networking significantly influences students' academic performance, particularly among undergraduate students ($P = 0.000$). Also Pearson's correlation analysis identified a significant relationship between social media addiction and key outcomes, including academic performance, health status, and social well-being ($p = 0.001$). These findings suggest that over and inappropriate use can lead to addiction and cognitive behavioral therapy (CBT) is recommend for reducing the negative effect of social media addiction on students and users (30). A study conducted in china (31) examine social media addiction, fatigue and the effects on young adults' academic performance. This study investigated the relationship between social media

fatigue and academic performance and how gender plays a role in this relationship. Social media fatigue occurs when users reduce or stop using social media due to negative feelings. A quantitative research design was used and data was collected from sample of 34 participants, aged 18 to 22 years. The findings revealed a positive correlation between social media use and both social media fatigue ($p = .626$) and academic performance ($p = .702$) and further results indicated that the impact of social media varies between males and females. The study also shown that there is gradual transition from frequent use to addiction and eventual withdrawal, emphasizing the need to understand social media fatigue. Promoting balanced usage can help young adults manage their academic and personal lives more effectively.

There is no doubt social media is influencing our lives in both positive and negative way. A descriptive study (32) conducted in United Arab Emirates at Al Ain University to examine the relationship between social networking addiction and academic performance in students of university. A random sample of 383 students were selected for this purpose. The results (p value ≤ 0.01 , $r = -0.189$) indicate that there is a strong negative relationship between social media addiction and academic performance and about 68.93% (264 participants), were within the moderate level of addiction.

The trend of using social networking sites through smart devices is becoming common among the youth of Pakistan, which is ultimately effecting their academic outcomes and habits like speaking, writing, reading, learning and so on. A cross-sectional study conducted in Lahore (7) in order to determine the impact of social networking sites' usage on the academic performance of university students. Sample of 260 students were selected through convenient random sampling, and data was analyzed by using descriptive statistics and inferential statistics of Chi-square. The study concluded that social media usage has negative impact on the student's academic performance and habits.

Multitudinous research has been done on SMA and its impact on academic performance but still

they gave widely varied results, with some indicating negative effect on academic performance, while others suggest neutral or even positive outcomes when it is used purposefully. So, more studies are needed to be conducted to draw well informed conclusion which can further help in effective decision making and policy implication regarding to social media usage and its regularity. Many studies also concluded that result could vary if the sample size and study setting will change, as cultural and religious beliefs could also be the factors for these varied results. The aim of this study is to check association between these two variables in Pakistani culture as existing local researches remains scarce, creating a significant gap in understanding the extent and nature of social media use and its academic consequences. This research aims to contribute to the existing body of knowledge by providing data-driven insights that may help to clarify the relationship between SMA and academic performance among nursing students.

3-AIMS & OBJECTIVES

3.1: Objectives

The objectives of this study generally will be

1. To assess how academic performance influence by social media.
2. To determine the association between social media addiction and academic performance among nursing students.

3.2: Hypothesis

The hypothesis is generated in the light of above problems is as follows:

- i. Hypothesis H_0 : There is no influence of social media addiction on academic performance of undergraduate nursing students.
- ii. Hypothesis H_1 : There is an influence of social media addiction on academic performance of undergraduate nursing students.

3.3: Problem Statement

The past decade has witnessed a remarkable rise in the use of digital platforms worldwide. The frequency with which learners are exposed to these platforms primarily for leisure purposes, such playing online games or talking with friends, their extensive use has majorly concerned both parents

and educational institutions (33). Research has shown comprehensive correlation analysis of factors including violence, cybercrime, and harassment related incidence in youth occur due to extreme use of SM. Greater challenges are faced due to extravagant access to inappropriate sites without age limit (34). Addiction to social networking sites can adversely affect students' emotional health, resulting in feelings of loneliness and an increased reliance on online social connections.

Research indicates that there is a significant impact of technology on the social, psychological, and cultural behavior of young people. In Pakistan the pattern of usage is different, due to factors like attachment style, family dynamics and emotional environment, role and relationship, religion and beliefs, including cultural limitations strongly influence SMA (social media addiction) (35). A study conducted by Abbas (36) show the age group (18-24) is commonly engaged in using SNS (social networking sites) at addictive level. The widespread extreme use of social media across the globe including Pakistan has a substantial effect on the social attitude of people especially youth, affect their productivity and academic achievement.

In recent years, social media has become a dominant influence on student's mind. Nurses play key role in the healthcare system, addiction toward SNS (social networking sites) may lead to mental and physical problems like short attention span, social detachment, irrationality, poor insight and judgement skills. Nursing students reading, writing and language skills are highly influence by social media. Furthermore, critical thinking and memory is getting effects. The corresponding results observed from previous researches are incompatible because some show positive while others show negative effect on academic performance. Therefore, the exploring gap still remains to further evaluate whether social media addiction has negative or positive effect. Moreover, there has been finite research studies on influence of social apps addiction on nursing student's academic record in Pakistan. Hence, the recent study explores the addiction of social network site's role on the educational achievement of nursing student.

3.4: Operational Definitions

Independent Variable

Social media addiction is repetitive and compulsive pattern of behavior, accompanied by activities like excessive use of social platforms despite of harmful consequences.

Dependent Variable

Academic performance determines the ability of student how well they perform in class, understand curriculum and maintain good CGPA/Percentage, also enhance their skills performance by using obtained knowledge.

4. MATERIAL AND METHODS

4.1: Study design

Analytical Cross-Sectional Study

4.2: Study Setting

The study will be conducted at a private nursing college in Lahore. It offers a variety of programs such as 2 and 4-year degree program, 2 years and 1year post basic specialty diploma and program.

4.3: Study Duration

The estimated duration of study will be January to April 2026.

4.4: Target Population

All nursing students enrolled in BSN program both in annual and semester system of a private nursing college in Lahore during the data collection period.

4.5: Study Population

All nursing students enrolled in BSN program both in annual and semester system at a private nursing college in Lahore.

4.6: Sample Size

$$n = \frac{N}{1 + Ne^2} \quad (\text{Taro Yamane formula})$$

Sr.no	Professionals	No of enrolled students
1	BSN 1 st year (semester-1)	140
2	BSN 1 st year (semester-2)	66
3	BSN 2 nd year (semester-4)	24
4	BSN 3 rd year	28
5	BSN 4 th Year	23
6	Post RN	05
Total		286

Total BSN student's N = 140 + 66 + 24 + 28 + 23 = 281=N

Using e = 0.05

Substituting values in the formula and after calculations, the estimated size of the sample is 165 approximately.

n = 167

now using proportional allocation method.

Proportional allocation formula

$$n_h = \frac{N_h}{N} \times n$$

Where N = 286 and n = 166

BSN-Stratum	N_h	n_h (proportional)
BSN 1 st Year (Semester-1)	140	82
BSN 1 st Year (Semester-2)	66	39
BSN 2 nd Year (Semester-4)	24	14
BSN 3 rd Year	28	16
BSN 4 th Year	23	13
Post RN	05	3
Total	286	167

Data will be collected by the random selection within each stratum/class.

4.7: Sampling Technique

Stratified random sampling with proportional allocation will be used to select the sample.

4.8: Sample Selection

Sample selection will be done on the basis of following criteria

4.8.1: Inclusion Criteria

- Students who give inform consent to participate.
- Students who actively use at least one social media platform.
- Undergraduate students will be included in the study.
- Age range will be 18-35.
- Both Male and Female students will be included.

4.8.2: Exclusion Criteria

- Internship students will not be included in study.
- Students who will be giving their exams.
- Students performing part time jobs.
- Students on leave.

4.9 : Ethical Considerations

Several steps were taken to protect the study participants.

- Written consent by the voluntary nursing students was obtained.
- Personal communication with students was done regarding ethical concerns.
- All the questions and queries were answered on the spot regarding the study or questions that was confusing to them.
- It was reassured to them that the data was used strictly for research purposes.

- Personal information and responses will remain confidential.
- Students can withdraw anytime without consequences.
- Participants fully informed about study objectives, risks, and benefits.

4.10: Instrument

To achieve the aim of study, a structured questionnaire adapted from (7) will be used. The questionnaire was originally developed on the basis of instruments by Mehmood & Taswir (37) and Peter (38). It consists of three sections. Section A includes demographic variables and academic performance will be assessed through students' self-reported recent CGPA/percentage. Section B consists of Multiple Choice and Yes/No (six items) questions related to social media use (37) and daily screen time duration categorized according to WHO recommendations. Section C include Social Media and Academic Performance of Students (SMAAPOS) Questionnaire consist of 16 questions use to assess addiction of social media. Based on 5-point Likert scale which measure responses from "Strongly Agree (SA)" Neutral (N) to "Strongly Disagree (SD)"(38).

4.11: Data Collection Procedure

Data collection was collected after obtaining permission from the concerned authorities of a private nursing college in Lahore. Questionnaires were then distributed and retrieved after completion. Respondent will be well informed about the objective of the study, and written approval received.

4.12. Data Analysis:

- Data was analyzed using latest version of (SPSS) software Version 29.
- Prior to data analysis, the data was evaluated for completeness and to ensure that all statistical test assumptions are met
- The continuous data will be described in terms of mean \pm SD
- Categorical variables will be represented in form of frequencies and percentages.

- The normality of the data will be checked through Shapiro-Wilk test + histogram/Q-Q plot
- Pearson's correlation and Spearman's correlation will be use to check the association with continuous predictors.
- Multiple linear regression will be use to check the relationship of independent variables with the dependent variables.

4.13: Gantt Chart

The expected timeline for the completion of research is given as follow:

Activities/weeks	November 2025	December 2025	January 2026	February 2026	March 2026	April 2026
Topic Selection and Approval						
Literature Review						
Synopsis Formulation						
Questionnaire Finalization						
Institutional Review Board (IRB) Approval						
Data Collection						
Data entry and Analysis						
Interpretation of Result						
Report Writing						
Final Submission						

5-RESULTS

This chapter provides a comprehensive analysis and interpretation of the data obtained through the study of 167 nursing students to study how social media addiction affects academic achievement. IBM SPSS Statistics Version 29 was used in the analysis of the data. The objectives of the study were met using descriptive statistics, normality tests, correlation analysis and regression analysis.

5.1: Demographic Characteristics of the participants.

Gender Distribution

Data were collected from undergraduate students of both genders. The figure 1 indicates that female students made up a higher proportion of the sample (59.3%) compared to male students (41.7%). This pattern reflects the typical gender distribution in nursing education, where female enrollment is generally higher. Although females are more represented, the inclusion of a substantial proportion of male participants still enhances the generalizability of the findings. It

also allows for meaningful gender-based comparisons in subsequent analyses.

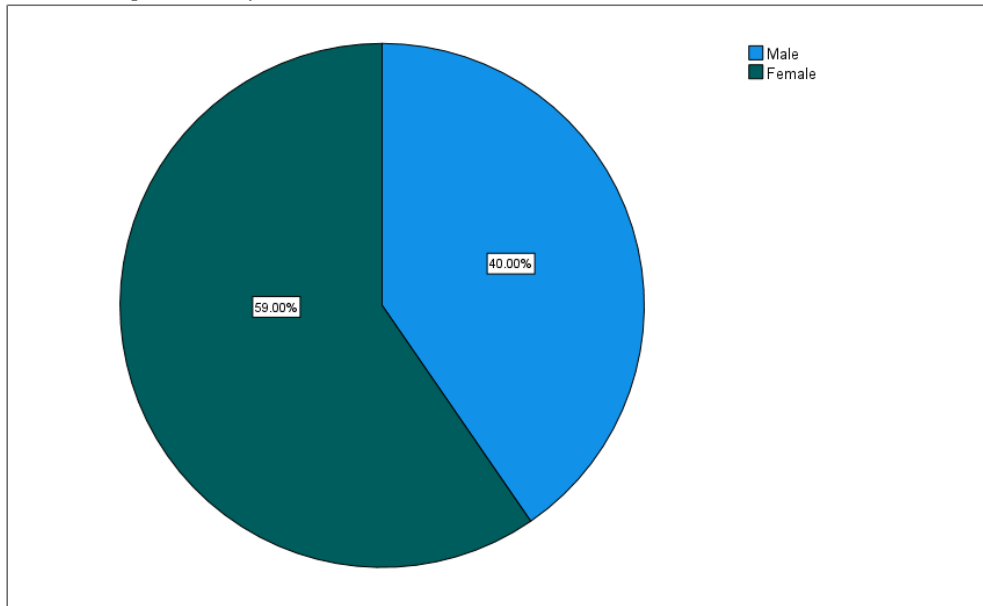


Figure 1: Gender Distribution of Study Participants

Age Distribution

In terms of age, Participants of all ages were enrolled in the study irrespective of age. The distribution shown in figure 2 reveals that a significant proportion of participants 105 (62.9%)

were aged between 16 and 20 years, followed by 56 (35.3%) in the 21–25 years’ category, whereas only a small fraction 3 (1.8%) were aged 26 years and above. This is an indication that the sample size mainly comprised of younger nursing students.

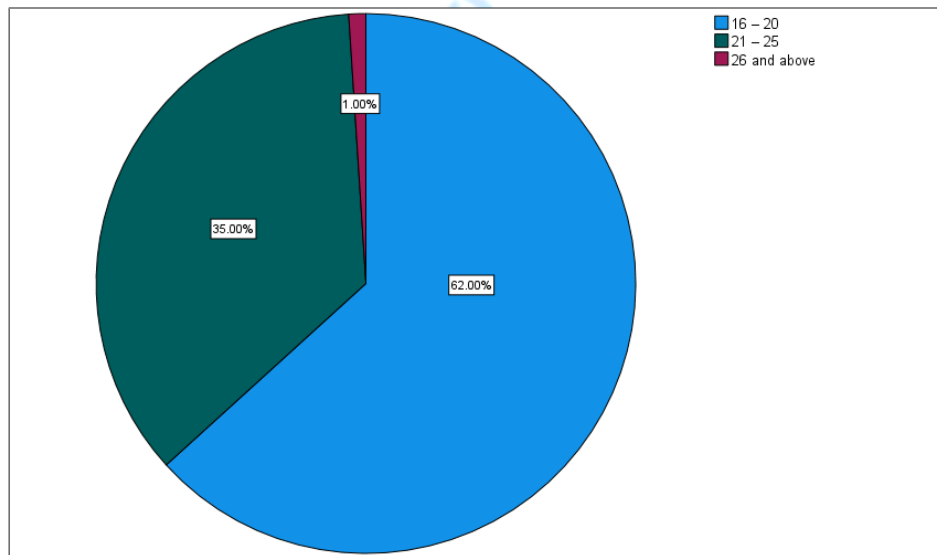


Figure 2: Age of participants

Educational Level

With regards to level of education, almost half of the respondents (49.1%) were in the 1st year (1st

semester), and 23.4% in the 1st year (2nd semester). The rest were spread over at higher levels of academics with the smaller percentages in

2nd, 3rd, 4th year and Post RN programs. This shows that the highest number of students in the sample were early-year students.

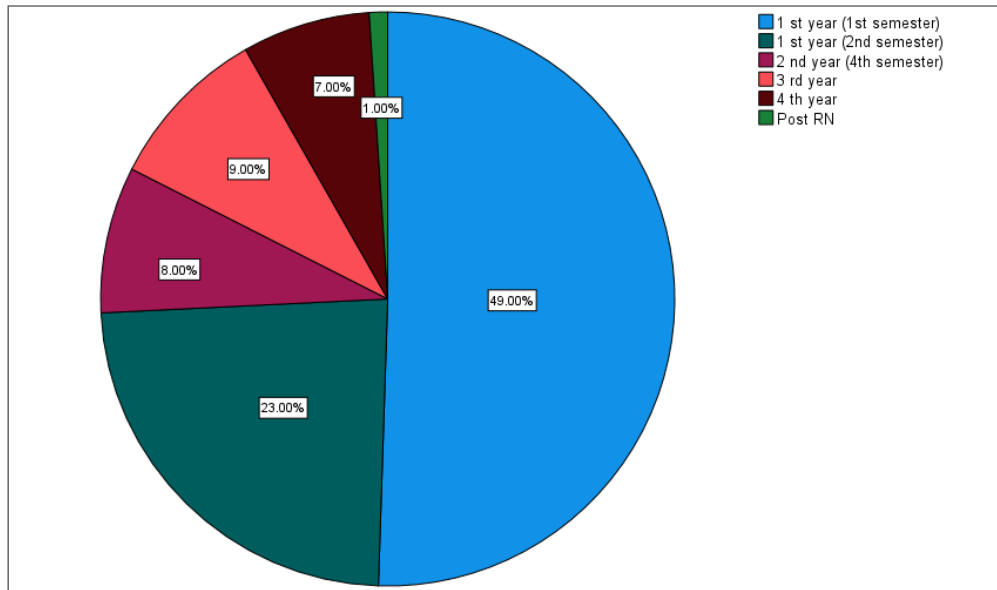


Figure 3: Education Level of Study Participants

5.2: Academic Performance (CGPA/Percentage)

In terms of the performance at school, most students 94(56.3%) claimed that they had CGPA in the interval of (2.8-3.3), followed by 41(24.6%) students having (3.4 – 3.9), while only 27(16.2%)

fall in range (2 – 2.7). And very few falling into the highest (above 90) and lowest (below 60) performance brackets. This implies that the majority of students had moderate performance in terms of academic performance.

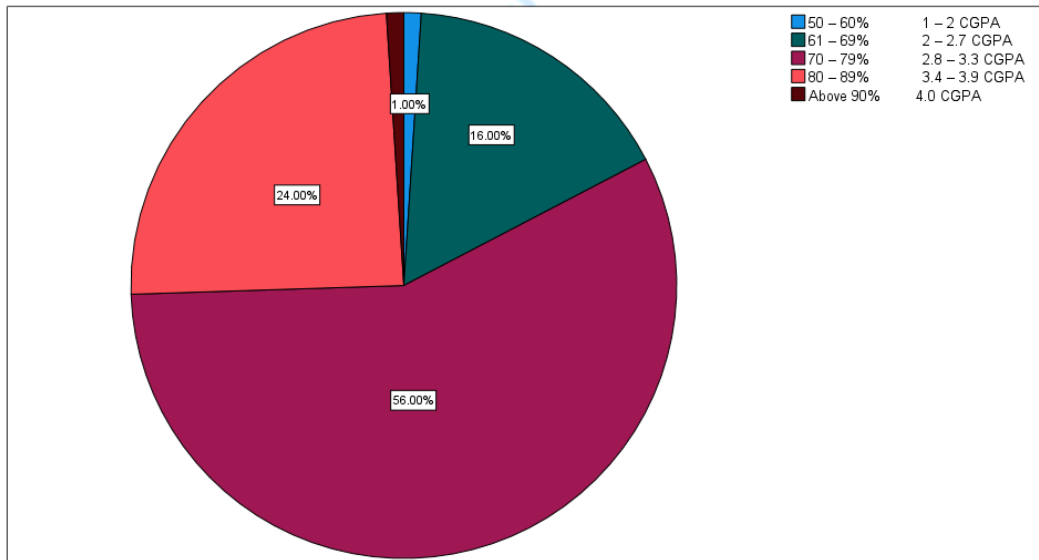


Figure 4: Marks/Percentage Distribution of Participants

5.3: Patterns of using social media.

Table 1: Which SNS (social networking sites) is mostly used by students?

Platform	Frequency (n)	Percentage (%)
YouTube	28	15.6
Instagram	65	38.9
Facebook	7	4.2
Google/Chrome	30	18.0
Chatgpt	37	23.4
Total	167	100

Table 1 presents that social networking sites are widely used among students, with Instagram being the most preferred platform 65 (38.9%). Other platforms included Chatgpt 37 (23.4%),

Google/Chrome 30 (18%), YouTube 28 (15.67%), and Facebook 7 (4.2%). This indicates that Instagram is widely used platform among undergraduate students.

Table 2: How many social networking sites students use?

Number of Platforms	Frequency (n)	Percentage (%)
1	6	3.6
2	20	12.0
3	24	14.4
More than 3	117	70.1
Total	167	100

According to Table 2, only 6 (3.6%) students use one social networking site, while 20 (12%) use two, and 24 (14.4%) use three platforms. In comparison, a substantial majority of students,

117 (70.1%), use more than three social networking sites. This reflects that undergraduate students are highly engaged across multiple social networking platforms.

Table 3: On average, how much time do you spend per day on social media (recreational screen time)?

Time Duration	Frequency (n)	Percentage (%)
1 - 2 hours	23	13.8
2 - 3 hours	42	25.1
3 - 4 hours	38	22.8
More than 4 hours	64	38.3
Total	167	100

Above table no 3 indicates varying durations of social network usage among respondents. It demonstrates that the majority of respondents, 64 (38.8%), use social networking sites for more than 4 hours daily. Other usage patterns include 2-3

hours (25.3%), 3-4 hours (22.8%), and up to 2 hours (13.8%). Overall, finding indicates that undergraduate nursing students devote extended time to social networking, particularly for recreational purposes.

Table 4: What is the trend (access) of using social networking via mobile phone among students?

Response	Frequency (n)	Percentage (%)
Yes	167	100.0
No	0	00
Total	167	100

Table 4 highlights that all 167 respondents (100%) reported using social networking sites on their mobile phone. This indicates how social media is

convenient and easily available using mobiles. Notably, there were no participants who refrained from using social media through mobile phone.

Table 5: What is the purpose of using social networks among students?

Purpose	Frequency (n)	Percentage (%)
Social	55	32.9
Academic	56	33,5
Recreational	56	33.5
Total	167	100

When respondents were asked about the reason they use social media, the study participants reported using social networking sites (SNS) for multiple purposes. A total of 55 (32.9%) reported using SNS for social interactions, such as

maintaining connections with friends and family. Meanwhile an equal proportion 56 (33.5%) utilized SNS for academic and recreational activities.

Table 6: Does social networking affect the students' habits, speaking and writing?

Response	Frequency (n)	Percentage (%)
Yes	148	88.6
No	15	9.0
Any other	4	2.4
Total	167	100

The above table reveals that substantial proportion of nursing students reported that social media usage altered their habits. In contrast, only 15 students (9%) indicated that SNS had no effect,

while 4 participants (2.4%) reported alternative responses. These results suggest that SNS engagement exerts a significant influence on the daily routines and behavior of nursing students.

5.4: Descriptive statistics of variables in the study.

Table 7: Descriptive Statistics of Study Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Addiction Score	167	1.75	5.00	3.59	0.69
Academic Perception	167	1.50	4.75	3.36	0.54
Gender Usage	167	2.00	4.75	3.50	0.59
Age Usage	167	2.00	5.00	3.73	0.59

Descriptive analysis of the variables of study revealed that the mean score of social media addiction was 3.59 (± 0.69) which reflected a

moderate level of social media addiction in students. The score of academic perception was

3.36 (± 0.54) indicating a moderate positive attitude towards academic performance.

The average score of the gender-based usage and age-based usage was 3.50 (SD0.59) and 3.73 (SD0.59), respectively. These findings indicate

that gender and age have a moderating effect on the use of social media.

On the whole, the averages suggest that the students are not highly involved with social media and they have a moderate perception of its effects on their academic performance.

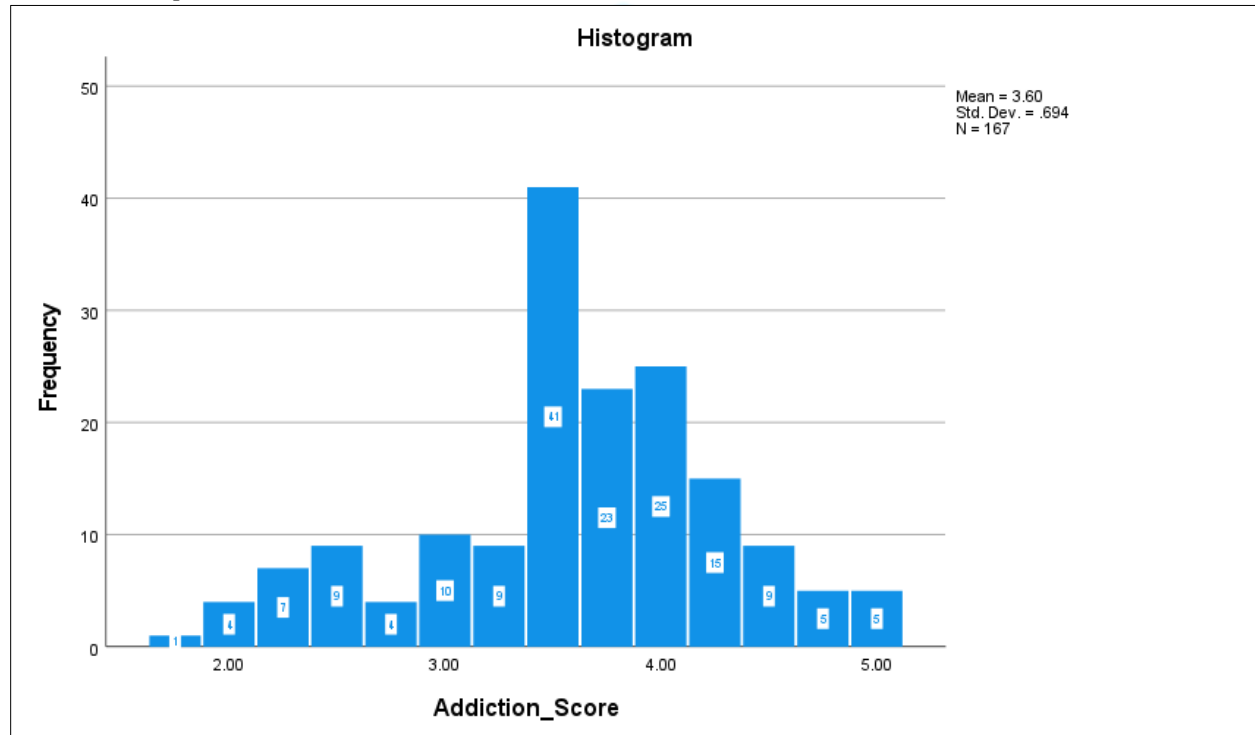
5.5: Normality Testing

Table 8: Tests of Normality (Shapiro-Wilk)

Variable	Statistic	df	Sig.
Addiction Score	0.959	167	0.000
Academic Perception	0.967	167	0.001
Gender Usage	0.977	167	0.007
Age Usage	0.965	167	0.000

The Shapiro Wilk test was used to test normality of the data. The outcome showed that all the study variables had p-values which were less than 0.05

and this proved that the data were not normally distributed.



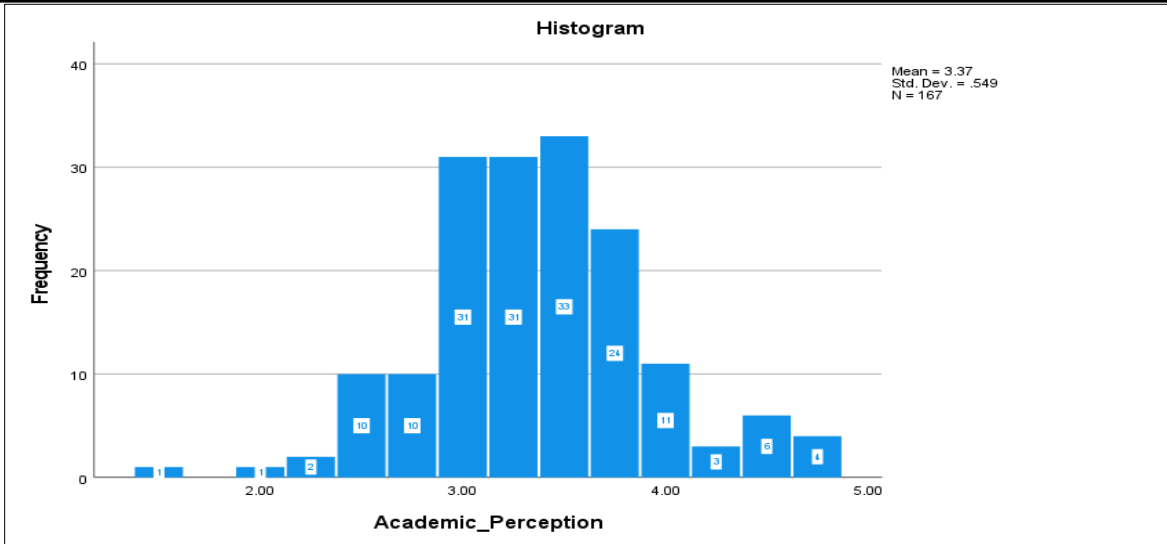


Figure 5: Histogram for Normality Testing

The further analysis based on non-parametric statistics was carried out because of the breach of the normality assumptions. In particular, instead

of Pearson correlation, the relationship between variables was investigated by means of Spearman correlation.

5.6: Correlation Analysis

Table 9: Spearman Correlation Matrix

Variables	Addiction Score	Academic Perception	Gender Usage	Age Usage
Addiction Score	1.000	0.234**	0.157*	0.216**
Academic Perception	0.234**	1.000	0.196*	0.288**
Gender Usage	0.157*	0.196*	1.000	0.255**
Age Usage	0.216**	0.288**	0.255**	1.000

* p < 0.05, ** p < 0.01

The correlation analysis by Spearman was done to determine the relationship between the social media addiction and academic performance, and the other variables related to it.

The findings showed that there was a positive albeit weak correlation between academic performance and social media addiction (r = 0.234, p = 0.002). This implies that the rise in the social media addiction is correlated with a minor improvement in the perception of academic performance in students.

Also, a positive correlation was found as a weak positive association between social media addiction and usage based on gender (r = 0.157, p = 0.043) indicating that there is a slight influence of gender differences on the level of social media addiction.

In the same way, there was weak, yet significant positive correlation between social media addiction and age-based usage (r = 0.216, p = 0.005) showing that age is also a factor in social media usage.

In addition, the academic performance revealed a positive significance (p = 0.011) but weakly related to gender usage (r = 0.196) and age usage (r = 0.288), indicating that the demographic factors have some effects on academic performance.

Generally, the correlation analysis shows that even though there are relationships between variables, they are, as a rule, weak.

5.7 Regression Analysis

A linear regression was carried out to investigate the impact of social media addiction on academic performance.

Table 10: Linear Regression Model Summary

R	R Square	Adjusted R Square	Std. Error
0.253	0.064	0.058	0.532

The findings showed that the regression model was statistically significant ($F = 11.286, p = 0.001$)

implying that social media addiction is an important predictor of academic performance.

Table 11: ANOVA for Regression Model

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.200	1	3.200	11.286	0.001
Residual	46.777	165	0.283		
Total	49.977	166			

The coefficient analysis revealed that the positive and significant impact on academic performance was affected through social media addiction ($=0.253, p=0.001$). This means that the more a

person is addicted to social media, the more he/she perceives academic performance to be better.

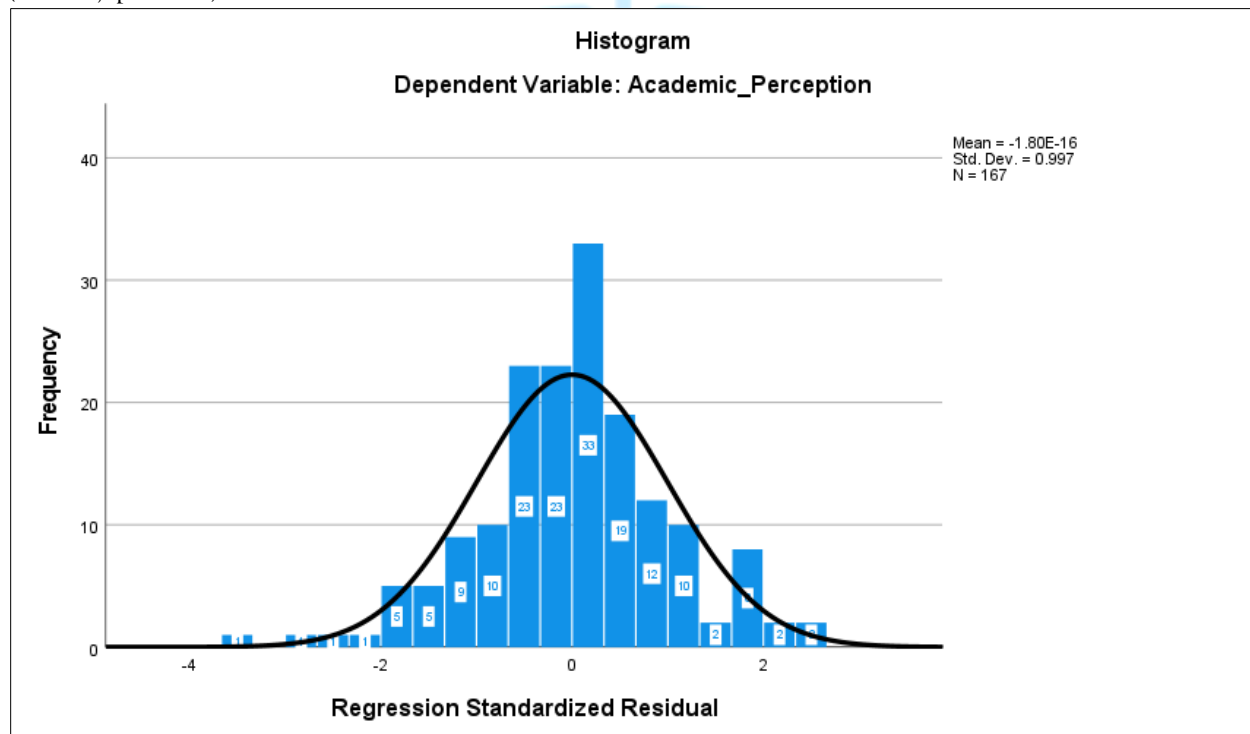


Figure 6: Regression Analysis

The model explained 6.4% of the variance in academic performance ($R^2 = 0.064$) meaning that, although the effect of social media addiction is

statistically significant, its overall impact is rather minor, and other variables might also affect academic performance.

5.8: Gender and Addiction Level

Table 12: Gender and Addiction Level

Gender	Low	Moderate	High	Total
Male	11	37	20	68
Female	10	50	39	99
Total	21	87	59	167

Interpretation

The distribution of the levels of addiction according to gender is presented in the cross tabulation. The number of moderate category of addicts (n=87), high (n=59), and low (n=21) categories are nearly equal. Among males, most (37 out of 68) are in the moderate category with fewer in the high (20) and low (11) categories.

Conversely, females have more participants either in the moderate (50) or high (39) categories of addiction than males.

It shows that the female participants are more likely to be highly addicted than the male participants, although the most prevalent level of addiction is moderate addiction, which is common among both males and females.

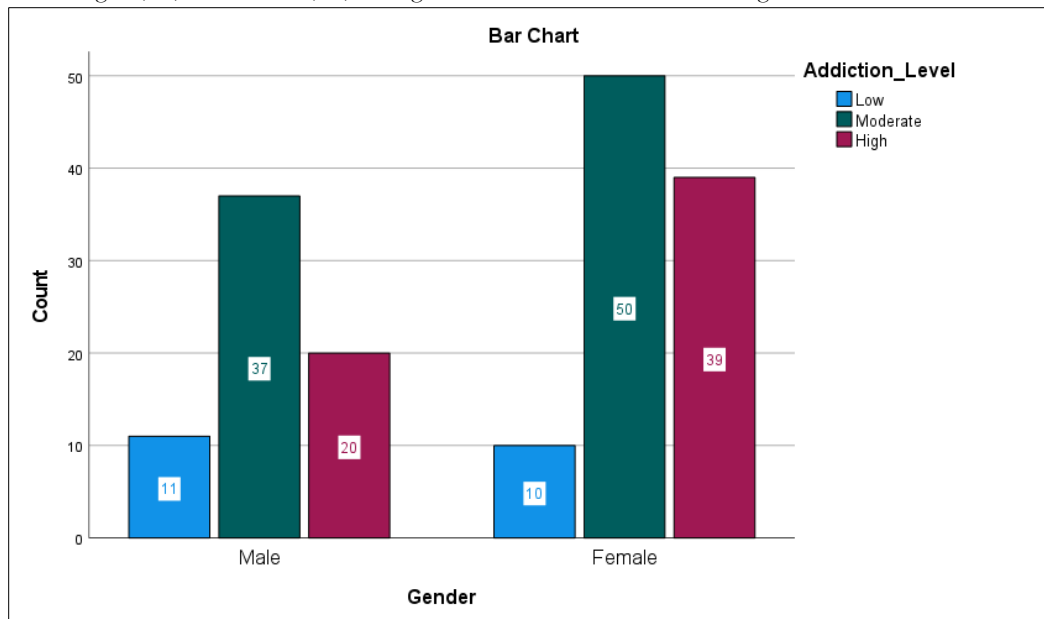


Figure 7: Gender and Addiction Level

5.9: Hypothesis Testing

Correlation and regression were the tests of the hypothesis of the study.

iii. **Null Hypothesis (H_0):** There is no influence of social media addiction on academic performance of undergraduate nursing students.

iv. **Alternative Hypothesis (H_1):** There is an influence of social media addiction on academic performance of undergraduate nursing students.

Given that the p-value of the results of the correlation ($p = 0.002$) and regression analysis ($p = 0.001$) is smaller than 0.05, the null hypothesis (H_0) is rejected.

Therefore, alternative hypothesis (H_1) was accepted which means that social media addiction is significant factor that affects the academic performance of nursing students.

5.10: Summary of Findings

This chapter unveiled that nursing students are very active users of social media platforms, as a majority of them use more than one platform and devote several hours a day to the Internet. The degree of social media addiction was also moderate and statistically significant yet weakly related to academic performance.

The regression analysis also supported the fact that social media addiction is a significant predictor of academic performance, but its impact is not very large. These results indicate that though social media has an influence on the academic life of students, it is not the only factor that determines the academic success of students.

6-DISCUSSION

In the last decades, innovation of digital technology and widespread accessibility of smartphones and internet services, has become an important part of students' daily lives (31). The present study was conducted to assess the impact of social media addiction on the academic performance of undergraduate nursing students. Nursing students also frequently use social platforms for various purposes. However, excessive use of these platforms may influence students' study habits, concentration, academic productivity, and overall learning outcomes (26). The findings of this study provide insight about the relationship between social media addiction and academic performance among nursing students.

The study found significant positive relationship between social media addiction and academic performance. This may suggest that students use social media not only for recreational purposes but also for academic support, such as accessing study materials and communication. Demographic analysis shows that 167 nursing students participated in this study, among that 68 (40.7%) were males and 99(59.3%) were females, which is similar with the previous study finding in which female participants (87.2%) ratio is also more than the male participants (12.8%). Because nursing is professional field in which females are more as compare to male.

The study results reveal that majority of Students belong to age 16-20 contributing about (62.9%) which show young nursing students, while 21-25 consist of 56 (35.3%) and only a small proportion fall in age 26 and above 3 (1.8%). However, this contradict with the study finding which show 16-20 age group consist of (23.3%), while majority of social media users were the age group 21-25 (54.1%) and 26+ were (22.6%) which show that

adults are more prone to social platforms as compare to youth (17). The respondents from different academic years of BS nursing with proportion allocation were included, with significant proportion of 1st semester 82(49.1%) followed by 2nd semester 39(23.4%).

Furthermore, the CGPA ranged between (1-2) as the lowest and (4) as the highest. The majority of the respondents 94 (56.3%) having CGPA ranged in (2.8-3.3) or (70-79%), whereas 24.6% fall in range 80-89% and 16.2% falling in 61-69% and they are also regular users of social media. The results align with the study, that showed that average number of students generally score 60- 80 % and used social networking sites for entertainment (39). Regarding social media usage, most students reported using more than 3 social networking sites (70.1%) for more than 4 hours (38.3%) on a daily basis, which corresponds with the previous study (40). The study findings showed Instagram (38.9%) as being the most preferred platform used nursing students, while only (4.2%) of respondents chose Facebook, which is similar to a previous study that shown Instagram (91.1%) while Facebook (12.1%) contain less users (40) . Another study shown the contrast findings where Facebook become the highest preferred platform of choice with 80.2%, while Instagram become the second least platform with only 3.16% users (41). Moreover, the findings show that majority of the students access to social media via their smart phone, that is similar to the findings of previous study (37). In addition, the study also reveals that equal proportion (33.5%) of respondents use social networking sites for academic and recreational purposes, while (32.9%) use for social purposes like communicating with family, friends and teachers, also to interact with people of their interests. Similarly shown in the previous study that students habitually used social media to communicate between friends and families, which become a prime source of changing in their learning habits (42). About (88.6%) study participants also reported a change in their habits, speaking and writing occurred due to frequent use of slang and inappropriate language while using social network sites, which affect their

communication skills. The results align with the previous study (14).

The correlation analysis showed positive relationship between social media addiction and academic performance ($r = 0.253$, $p < 0.01$). The result was statistically significant, indicating that there is a measurable association between social media usage and academic performance among the students. These findings suggest variability in both social media use and academic outcomes among the participants. Additionally, slight variations such as moderate positive correlation were observed in social media usage patterns across both genders and different age groups. However, these variables were not the primary focus of the study. These study findings are similar with previous study conducted in Pakistan which reported that social media usage has positive effects on students' academic outcomes (17). The result finding were also consistent with the study conducted in Malaysia that give results that social media do not give negative impacts on academic performance of nursing students, even after having addiction students CGPA remain high (26). The study results were contradictory with another study conducted in Iran that present there was a negative and significant relationship between students' addiction to social networking and their academic performance ($r = -0.210$, $p < 0.01$), with male students having high level of addiction as compare to female (29).

7.1: CONCLUSION

On the basis of results, the study concluded that social media addiction is significantly associated with the academic performance of undergraduate nursing students. The majority of students demonstrated moderate levels of social media addiction and spent considerable time on multiple social platforms. Social media is now considered as a part of daily life activities, even though students agree that it does effect the major portion of daily life activities. The findings reveal excessive use can affect students' habits, focus and learning outcomes, but social media also provide them with opportunities to get varies kind of information, which enable them to improve their performance academically. Therefore, need of adequate

strategies to regulate social media usage, along with time management for study and promoting institutional E-learning environment and policies for encouraging students to maximize its educational advantages while minimizing its negative effects on academic achievement.

7.2: RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed:

- 1. Management and Training program:** Educational institutions should organize structured training program for awareness and to improve students' digital literacy, time management skills and also encourage them to adopt disciplined study habits with limited time spent on unnecessary online activities.
- 2. Promote Educational Applications:** Institutions should regularly assess the impact of social media on students' academic performance. Although social media may negatively affect concentration, it can also serve as an effective educational tool. Universities and colleges should encourage the use of platforms such as YouTube for academic learning of complex topic.
- 3. Provide Guidance:** Parents and teachers are essential to ensure regulatory use of social networking sites through continuous monitoring and guidance. Extra guidance should be given to younger students for better social media habits.
- 4. Online Peer Learning Communities:** Students should encourage to maintain a healthy balance between social interactions and academic activities. Online study groups should be developed to enhance collaborative learning.
- 5. Develop Specific Strategies:** Junior students may require guidance on balancing academic and social life, while senior students may benefit from professional and research-oriented use of digital platforms. So strategies should be customized according to students' demographic differences such as age, marital status, and academic level.
- 6. Conduct Continuous Monitoring:** Periodic surveys and follow-up studies can help institutions identify changing trends and develop improved intervention strategies. It may help educational institutes to evaluate student's health status that might impacting study and focus.

7. Encourage healthy Digital Practices: Students should be encouraged to adopt healthy digital habits limiting screen time, taking regular study breaks, and prioritizing face-to-face communication and physical activities to maintain overall well-being.

8. Awareness Regarding Negative Consequences: Comprehensive awareness campaigns should be organized to educate students about the potential consequences regarding excessive social media use, including academic performance decline, psychological stress, sleep deterioration, and reduced interpersonal interaction.

9. Reward Productive Use: Institutions can encourage and motivate students by recognizing innovative use of social media, such as educational content creation, collaborative projects, and online peer tutoring activities.

10. Provide Counseling Services: Services about mental health counseling should be available for students experiencing stress, anxiety, or academic difficulties and problems associated with excessive social media use. Mental health awareness sessions can further support students' emotional and social well-being.

7.3: LIMITATIONS

1. Limited Sample Size and Generalizability: The relatively small sample of 167 nursing students, which may not adequately represent students from other academic disciplines or regions; therefore, the findings cannot be generalized to the wider student population.

2. Cross-Sectional Design: The study uses analytic analytical cross-sectional design assessed social media usage and academic performance at a single point in time, limiting the ability to establish causal inferences between variables, so further future studies should both qualitative and quantitative methods in order to obtain better insight about issue over a period of time.

3. Self-Reported Responses: Study based on self-reported data obtained from participants through questionnaire also serve as potential biases and disadvantage for collecting reliable data. Also the participants may not give the right assessment about performance and social media use or may

not be able fully understood and respond the questionnaire in intended manner.

4. Gender Imbalance: Unequal gender representation may affect the overall study outcomes, the sample consisted predominantly of female participants, which may have influenced the findings.

5. Limited Social Platforms Coverage: The research mainly emphasized commonly used platforms and may not have fully captured the influence of emerging applications such advance AI tools used frequently for various purposes.

6. Geographical Limitation: Since the research study was conducted in a single institute of nursing, which limit the capacity to capture diverse effects. The findings may not be applicable to students from other geographical or cultural settings.

7. Possible Cultural Influence: Cultural and social norms within the study area may have affected participants' attitudes, usage pattern and behaviors regarding social media use.

8. Focus only on Nursing Students: The study focused only on nursing students, whose academic workload, learning ability and profession environment may differ from students in other professional fields.

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