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Correlation of Smart Phone Addiction and Academic Performance among Nursing Students of Private Nursing Colleges in Swat

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ABSTRACT

Smartphone addiction has become a growing concern among students, negatively impacting their academic performance. **Objective:** To examine the correlation of smartphone addiction among nursing students with academic performance. **Methods:** A cross-sectional study was conducted from August 2024 to November 2024 in five private nursing colleges in Swat. The study included 249 nursing students from the 4th, 5th, and 8th semesters, selected through convenience sampling. Data were collected using a self-administered questionnaire, incorporating the Academic Performance Scale (APS) and the Smartphone Addiction Scale-Short Version (SAS-SV) (Cronbach's alpha=0.911). **Results:** Findings revealed that 67.9% of students were addicted to smartphones, while 32.1% were not addicted. Academic performance assessment showed that a majority of students exhibited poor performance, with only a small proportion achieving good or excellent results. A strong negative correlation ($r=-0.934$, $p<0.01$) was observed between smartphone addiction and academic performance, confirming that excessive smartphone use significantly hampers academic success. **Conclusions:** It was concluded that smartphone addiction is a major factor contributing to poor academic performance among nursing students. To address this issue, awareness programs, time management strategies, and institutional policies should be implemented to promote responsible smartphone use.

INTRODUCTION

A smartphone is an improved mobile device designed to solve common accessibility problems. Beyond simply sending and receiving text messages and having phone conversations, smartphones are capable of much more. Moreover, it become a very popular device due to its capacity to perform both basic and sophisticated computing activities. These days, a single touch can solve any issue. As a result, they are now necessary for modern life and are necessary for human survival. Due to the widespread use of cell phones in our society, addiction and overuse have become major worldwide issues. Numerous research looking into the connection between academic success and cell phone use have produced inconsistent results. The majority of students' self-reported course grades have been used in research [1]. Furthermore, younger students are more likely to become addicted to smartphones, according to the majority of research on college students. For example, a survey of 198 college students in Austria revealed that smartphone addiction was more common among younger students. This is because younger generations are more prone to accept new technology than older generations, which increases

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their susceptibility to smartphone addiction [2]. In addition, people who use smartphones for a variety of purposes may grow less conscious of their limitations and, as a result, be more prone to misuse them. As a result, academic performance could decline [3]. In addition to the detrimental effects that cell phones have on college students' overall academic performance, the increasing use of smartphones poses additional challenges for higher education institutions. In addition, young people are becoming more distracted and worried by this "online connectivity" phenomenon that lasts around the clock, as demonstrated by poorer test scores associated with excessive usage of portable devices like cell phones [4]. Besides, overuse of smartphones in class may potentially affect concentration and learning. When students use their smartphones for social media, messaging, and internet access during class, they run the risk of being distracted and putting learning last [5]. Despite its potential benefits, people are becoming more and more dependent on cell phones for everyday chores, which raises questions about the potential harm they may cause to people's health. Numerous studies have connected excessive smartphone use to negative impacts on body weight, exercise, eating habits, sleep patterns, energy levels, and academic performance [6]. On the light of this study found that cell phone use among Kenyan nursing students may hurt their academic performance [7]. Moreover, in December 2019, three universities in Jeddah, Saudi Arabia, took part in a descriptive cross-sectional study. According to research, 32% of people have a smartphone addiction [8]. The population of the study, which was carried out by Turkish researchers, consisted of 940 nursing students from two universities in all grade levels. The study found that over half of nursing students were addicted to their smartphones [9]. In this regard, the survey showed that 68 nursing students, or 69.39%, had a smartphone addiction [10].

This study aimed to assess the correlation between smartphone addiction and the academic performance of private nursing students in Swat.

METHODS

A cross-sectional study was conducted in Private Nursing Colleges in Swat, like the National College of Nursing, Nightingale College of Nursing, Fatima College of Nursing, Pak-Swiss College of Nursing and Swat College of Nursing. The study was conducted from August 2024 to November 2024. The population comprised nursing students from the 4th, 5th, and 8th semesters. The sample size consisted of 249 nursing students from private nursing colleges in Swat, calculated using OpenEpi software. The respondents were selected through convenience sampling, and the data were collected using a self-administered questionnaire. The inclusion criteria were private nursing students enrolled in a Bachelor of Science in Nursing (BSN) program, currently in their fourth semester or above, aged 18-25 years, who own a smartphone (Android or iOS). The exclusion criteria were students without smartphone ownership that were excluded. Additionally, students unable or unwilling to provide informed consent are also excluded. Furthermore, students who have completed less than four semesters in the nursing program are not eligible to participate. Two adopted questionnaires were employed in this study: the Academic Performance Scale (APS) and the Smartphone Addiction Scale-Short Version (SAS-SV). This is a scale of smartphone addiction that has been verified internationally. The Academic Performance Scale scores ranged from 8 to 40. This scale categorizes academic performance into five distinct levels: 8 or below for failing, 9-16 for poor, 17-24 for moderate, 25-32 for good, and 33-40 for excellent performance. The 10 questions in the SAS-SV (Cronbach's alpha=0.911) are scored on a Likert scale from 1 (strongly disagree) to 6 (strongly agree). A higher overall SAS-SV score denotes more problematic smartphone use; the score ranges from 6-60 below 50% considered smartphone addiction. Data were collected through questionnaires after obtaining written informed consent from participants. Confidentiality was maintained, and the data were protected, and accessible only to the researcher. SPSS version 27.0 used for analysis purposes. Descriptive statistics data were presented in frequencies and percentages in tables.

RESULTS

This study analyzed data from 249 undergraduate nursing students in Swat, Khyber Pakhtunkhwa. The participants were predominantly male (93.2%, n=232), with a minority of females (6.8%, n=17). The age distribution showed that 45.4% (n=113) of participants were between 18-21 years old, while 54.6% (n=136) were between 22-25 years old. In terms of academic year, 33.7% (n=84) were in their second year, 42.6% (n=106) in their third year, and 23.7% (n=59) in their fourth year. The demographic data are shown in Table 1.

Table 1: Demographic Data of the Participants n=249

Variables	Categories	Frequency (%)
Gender	Male	232 (93.2%)
	Female	17 (6.8%)
Age Group	18-21 Years	113 (45.4%)
	22-25 Years	136 (54.6%)
Academic Year	Second Year	84 (33.7%)
	Third Year	106 (42.6%)
	Fourth Year	59 (23.7%)

A result of smartphone addiction 32.1% are not addicted and 67.9% are addicted as shown in Table 2.

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Table 2: Levels of Smartphone Addiction

Category	n (%)
Not Addicted	80 (32.1%)
Addicted	169 (67.9%)

Out of 249 participants, the distribution of academic performance was as follows: 14 participants (5.6%) fell into the failing category, 147 participants (59.0%) had poor performance, 27 participants (10.8%) demonstrated moderate performance, 5 participants (2.0%) showed good performance, and 56 participants (22.5%) achieved excellent performance. This study's findings indicate that the academic performance of private nursing students in Swat is alarmingly low, with nearly 60% exhibiting poor performance. Academic Performance of the participants are shown in Table 3

Table 3: Academic Performance Categories

Academic Performance Category	Categories	n (%)
Failing	8 or below	14 (5.6%)
Poor	9–16	147 (59.0%)
Moderate	17–24	27 (10.8%)
Good	25–32	5 (2.0%)
Excellent	33–40	56 (22.5%)
Total	-	249 (100%)

The study shows a strong negative relationship between smartphone addiction and academic performance, emphasizing that as smartphone addiction increases, academic performance decreases and results are shown in Table 4.

Table 4: Correlation Between Smartphone Addiction and Academic Performance

Variable	Correlation Coefficient (r)	p-value	n (%)
Smartphone Addiction and Academic Performance	-0.934	<0.01	Strong Negative Correlation (Significant)

DISCUSSION

Smartphones have become essential and provide instant access to communication, entertainment, and educational resources [11]. Excessive smartphone use has sparked worries about how it may affect pupils' academic performance, as it frequently results in smartphone addiction [12]. An analysis of the participant's gender distribution revealed a significant predominance of male (93%, n=232) compared to female (7%, n=17). In contrast, a study conducted among undergraduate nursing students in the United States found a predominantly female population, with female constituting 87.7% of the participants, and male making up 12.3% [13]. In our study out of the total 249 participants, 45% (n=113) were aged 18-21, while 55% (n=136) were aged 22-25. A study conducted among undergraduate nursing students in India found a similar age distribution, with 48.2% (n=120) of participants between 18-21 years old, and 51.8% (n=130) between 22-25 years old (20). In this regard another study found that ages 18–24 accounted for 31.6% of participants, followed by 25–31 years at 37.6%, 32–38 years at 25.6%, and 39–45 years at 5.3 [14]. In this study, it was found that 33.7% (84) of the students were in their 2nd year, 42.6% (106) of the students were in their 3rd year, and 23.7% (59) were in their 4th year. In this regard, another study found Generic (Semester 3) accounted for 33.1%, Generic (Semester 5) for 16.5%, Generic (Semester 7) for 10.5%, and Post-RN (year 1) for 13.5% [15]. The current findings show that 67.9% are addicted to smartphones. In the same way, another study found that between 15.6% and 81.1% of nursing and medical students suffered from smartphone addiction [16]. In addition, study found that the percentage of participants with addiction was 48% [16]. Moreover, another study found among Asian medical students, smartphone addiction was present in 41.93% of cases [17]. Correspondingly, the findings indicated that the majority of respondents struggled to focus in class and used their smartphones for longer than they anticipated [12]. In connection with this smartphone addiction, several new problematic behaviours have surfaced, including internet gaming, gambling, and sexual behaviour, all of which can result in compulsive engagement. In severe cases, people may feel helpless to stop their behaviours without outside help; these behaviours may be classified as behavioural or non-substance addictions [18]. The smartphone, however, has a detrimental effect on our capacity for thought, memory, focus, and emotional control. As smartphone use has grown in popularity and frequency, there are now more clinical cases of persons exhibiting indications of misuse [18]. The current findings revealed that 22.5% have excellent performance. In this regard, another study found the average academic score was 7.56 out of 10 [19]. Another study shows 46% of the variation in academic performance overall [20]. In addition, a study revealed factors that affect academic performance, four categories of factors were examined: teacher-related factors (with an overall mean of 3.90), school-related factors (3.88) and student-related factors (3.84) [21]. Current findings show a strong negative relationship between smartphone addiction and academic performance, emphasizing that as smartphone addiction increases, academic performance decreases. Likewise, another study revealed that there was a negative and direct correlation between students' academic performance and smartphone addiction (β= -0.2602, t-value=4.201, $p<0.01$) [22]. A different study revealed a distinct relationship between smartphone addiction and sleep quality, with university students' poor sleep quality being linked to excessive smartphone use [12]. According to these data, students' academic performance declines as their smartphone use becomes more compulsive. This is because of variables including procrastination, poor

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attention, and decreased study time.

CONCLUSIONS

According to this study, academic performance and smartphone addiction are significantly correlated negatively among Swat's private nursing students. Many pupils perform poorly academically, and a sizable portion of the student body is addicted to smartphones. The results imply that excessive smartphone use has a detrimental effect on learning outcomes, study habits, and focus. Improving academic performance requires addressing this problem by encouraging safe smartphone use through awareness campaigns, time management techniques, and institutional policies.

Authors Contribution

Conceptualization: SMAS, IZ
Methodology: SMAS, IZ, AB, H, NA, SA, A[1], A[2], MK
Formal analysis: SMAS, IZ, AB, SWA
Writing review and editing: SMAS, IZ, H, NA, SA, A[2]

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

All the authors declare no conflict of interest.

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REFRENCES

[1] Sunday OJ, Adesope OO, Maarhuis PL. The Effects of Smartphone Addiction on Learning: A Meta-Analysis. Computers in Human Behavior Reports.2021 Aug; 4: 100114. doi: 10.1016/j.chbr.2021.100114.

[2] Alotaibi MS, Fox M, Coman R, Ratan ZA, Hosseinzadeh H. Smartphone Addiction Prevalence and its Association on Academic Performance, Physical Health, And Mental Well-Being Among University Students in Umm Al-Qura University (UQU), Saudi Arabia. International Journal of Environmental Research and Public Health.2022 Mar; 19(6):3710. doi: 10.3390/ijerph19063710.

[3] Naeem NI, Naeem ZE, Anwar AY. Smartphone Usage and its Associated Behaviours Among Undergraduate Medical Students in Pakistan. Discover Education.2024Jun;3(1):86.doi:10.1007/s44217-024-00182-y.

[4] Ahmed RR, Salman F, Malik SA, Streimikiene D, Soomro RH, Pahi MH. Smartphone Use And Academic Performance Of University Students: A Mediation And Moderation Analysis. Sustainability.2020 Jan; 12(1): 439. doi: 10.3390/su12010439.

[5] Ramjan LM, Salamonson Y, Batt S, Kong A, Mcgrath B, Richards G *et al*. The Negative Impact of Smartphone Usage on Nursing Students: An Integrative Literature Review. Nurse Education Today.2021 Jul; 102: 104909. doi: 10.1016/j.nedt.2021.104909.

[6] Bajamal E, Timraz SM, Bajbeir E, Binali W. The Relationship Between Smartphone Overuse and Academic Achievement Among Undergraduate Nursing Students. Cureus.2023 Nov;15(11).doi:10.7759/cureus.48340.

[7] Kaniaru D, Karani A, Waithera M. The Effect of Smartphones Use on Altering the Level of Attention And Learning Styles Among Undergraduate Nursing Students in Kenya. Stress.2020; 13(17): 18. doi: 10.36348/sjnhc.2020.v03i10.001 .

[8] Qanash S, Al-Husayni F, Falata H, Halawani O, Jahra E, Murshed B *et al*. Effect of Electronic Device Addiction On Sleep Quality and Academic Performance Among Health Care Students: Cross-Sectional Study. Journal of Medical Internet Research.2021 Oct; 7(4): E25662. doi: 10.2196/25662.

[9] Uzunçakmak T, Ayaz-Alkaya S, Akca A. Prevalence and Predisposing Factors of Smartphone Addiction, Sleep Quality And Daytime Sleepiness of Nursing Students: A Cross-Sectional Design. Nurse Education in Practice.2022 Nov;65:103478.doi:10.1016/j.nepr.2022.103478.

[10] Ali SA, Marshall P, Bashir S. Investigating the Smartphone Addiction among Undergraduate Nursing Students: Smartphone Addiction and Nursing Students.Pakistan BioMedical Journal. 2024 Apr 30:02-6. doi: 10.54393/pbmj.v7i04.1069.

[11] Qodr TS, Efendi A, Musadad AA. Opportunities for Using Smartphones in the Digital Era to Facilitate Students in Learning Sociology in High Schools. Journal of Education Technology. 2021 Jun; 5(2): 263-71. doi: 10.23887/jet.v5i2.34806.

[12] Rathakrishnan B, Bikar Singh SS, Kamaluddin MR, Yahaya A, Mohd Nasir MA, Ibrahim F *et al*. Smartphone Addiction and Sleep Quality on Academic Performance of University Students: An Exploratory Research. International Journal Of Environmental Research and Public Health.2021 Aug; 18(16): 8291.doi :10.3390/ijerph18168291.

[13] Fooladi E, Karim MN, Vance S, Walker L, Zanjani ME, Ilic D *et al*. Factors Associated with Undergraduate Nursing Students' Academic and Clinical Performance: A Mixed-Methods Study. Frontiers in Medicine.2022Feb;9:793591.doi:10.3389/fmed.2022.793591.

[14] Fajar S, Hussain M, Sarwar H, Afzal M, Gilani SA. Factors Affecting Academic Performance of Undergraduate Nursing Students. International Journal of Social Sciences and Management.2019

DOI: https://doi.org/10.54393/nrs.v5i1.134

Jan; 6(1): 7-16. doi: 10.3126/ijssm.v6i1.22561.
[15] Tasijawa FA, Madiuw D, Leutualy V. Smartphone Addiction Among Nursing And Health Students. The Malaysian Journal Of Nursing (MJN).2024 Jan; 15(3): 186-98. doi: 10.31674/MJN.2024.V15I03.021.
[16] Aljomaa SS, Qudah MF, Albursan IS, Bakhiet SF, Abduljabbar AS. Smartphone Addiction Among University Students on ohe Light of Some Variables. Computers in Human Behavior.2016 Aug; 61: 155-64. doi: 10.1016/j.chb.2016.03.041.
[17] Zhong Y, Ma H, Liang YF, Liao CJ, Zhang CC, Jiang WJ. Prevalence of Smartphone Addiction Among Asian Medical Students: A Meta-Analysis of Multinational Observational Studies. International Journal of Social Psychiatry.2022 Sep; 68(6): 1171-83. doi: 10.1177/00207640221089535.
[18] Ratan ZA, Parrish AM, Zaman SB, Alotaibi MS, Hosseinzadeh H. Smartphone Addiction and Associated Health Outcomes in Adult Populations: A Systematic Review. International Journal of Environmental Research and Public Health.2021 Nov; 18(22): 12257. doi: 10.3390/ijerph182212257.
[19] Silva GO, Aredes ND, Galdino-Júnior H. Academic Performance, Adaptation and Mental Health of Nursing Students: A Cross-Sectional Study. Nurse Education in Practice.2021Aug;55:103145.doi:10.1016/j.nepr.2021.103145.
[20] Chacko SB and Huba ME. Academic Achievement Among Undergraduate Nursing Students: The Development and Test of a Causal Model. Journal of Nursing Education.1991Jun;30(6):267-73.doi:10.3928/0148-4834-19910601-08.
[21] Mushtaq K, Hussain M, Afzal M, Gilani SA. Factors Affecting the Academic Performance of Undergraduate Student Nurses. National Journal of Health Sciences. 2019;4(2):71-9. doi:10.210 89/njhs .42.0071.
[22] Alinejad V, Parizad N, Yarmohammadi M, Radfar M. Loneliness and Academic Performance Mediates The Relationship Between Fear of Missing Out and Smartphone Addiction Among Iranian University Students. BioMedical Center Psychiatry.2022 Aug; 22(1): 550. doi: 10.1186/s12888-022-04186-6.