

IMPACT OF MOBILE PHONE USAGE ON ACADEMIC PERFORMANCE
AND MENTAL WELL-BEING AMONG NURSING STUDENTS

Muhammad Ali channa

BSN Scholar The Rising Star Institute of nursing Hyderabad

channamuhammadali308@gmail.com

Ubedullah Samejo

Vice Principal The Rising Star Institute of nursing Hyderabad

ubedullahsamejo786@gmail.com

Muhammad Daud

BSN Scholar The Rising Star Institute of nursing Hyderabad

araindaud890@gmail.com

Muhammad Asad

⁴BSN Scholar The Rising Star Institute of nursing Hyderabad

asadjat605@gmail.com

Suneel kumar

BSN Scholar The Rising Star Institute of nursing Hyderabad

kumarlakhia786@gmail.com

Mudasir bhurt

BSN Scholar The Rising Star Institute of nursing Hyderabad

bhurtbhurt659@gmail.com

Asma kalhoro

BSN Scholar The Rising Star Institute of nursing Hyderabad

kalhoroasma68@gmail.com

Author Details

Keywords:

Mobile Phone Usage, Academic Performance, Mental Well-being, Nursing Students

Received on 06 Jan, 2026

Accepted on 19 Feb, 2026

Published on 06 Mar, 2026

Corresponding E-mails & Authors*:

Muhammad Ali channa

channamuhammadali308@gmail.com

Abstract

Background;

Mobile phone use has become an essential aspect of everyday life, especially for college students, yet excessive use can have detrimental effects on psychological and academic performance

Objective;

The purpose of this study was to investigate the connection between nursing students' use of mobile phones, academic achievement, and mental health.

Methods:

A structured questionnaire comprising a Smartphone Addiction Scale, measures of academic performance (GPA), and a

standardized WHO-5 mental well-being scale was used to gather data from nursing students using a quantitative descriptive cross-sectional methodology.

Result:

Descriptive statistics and inferential tests, such as correlation analysis, were used to evaluate the data. Higher levels of mobile phone usage were linked to worse academic attainment, according to the data, which showed a substantial negative relationship between mobile phone usage and academic performance. Furthermore, there was a strong negative correlation between mobile phone use and mental health, indicating that excessive mobile phone use may be a factor in nursing students' poorer mental health.

Conclusion;

The study's conclusion emphasizes the necessity of awareness campaigns and interventions to encourage appropriate mobile phone use in order to improve nursing students' mental health and academic performance.

INTRODUCTION

Mobile Phone Values is most broadly distribution in the existing era. It has become an crucial part of recent life and is humming a dynamic role in reducing detachment and increasing communication among people (1) mobile phones have been used for many purposes such as to teach, to connect, to stock essential files and facts, to acquire knowledge and skills, anything anywhere and anytime with in a comfort zone that makes the young concentration get dependent effortlessly(2) Smartphones are mobile devices that, in addition to functioning as cellphones, incorporate operating systems, web browsing capabilities, and access to software programs (including social media platforms, games, and banking applications). They are also utilized for educational purposes, such as attending online webinars. (3) furthermore, the use of mobile technology give students access to highly inspired learning atmosphere that is informal, beneficial, current trends/issues, contextual, rich and global allowing them to have control over their learning occasions, such as when they learn, where they learn, and how quickly they learn. (4) Although mobile phones offer numerous advantages and can enhance productivity, studies indicate that excessive or compulsive usage may result in detrimental effects on daily life, work, and education, manifesting in academic decline, behavioral issues, and negative impacts on physical and mental well-being. (5) The scientific literature widely acknowledges the existence of a reverse relationship between mental health issues and academic performance as indicated. Simultaneously, the rise of mental health concerns, especially those linked to digital lifestyles such as smartphone addiction has become a prominent public health issue, with numerous studies investigating the robust correlations between addictions to various mobile phone applications and their co-occurrence. (6) excessive mobile phone usage has been associated with mental health issues and cognitive impairments, including reduced attention, memory, and social cognition. As students are particularly sensitive to social stimuli, they may form emotional dependencies on their devices (7) A meta-analysis of different studies from various countries revealed that mobile phone use by students has a adverse

impact on educational outcomes, such as test scores, grade point average, clinical test performance, and self-rated academic performance as well as the mental well-being . (8) Most students use many media apps, which can lead to addiction. Their poor grades and GPA demonstrate how severely this addiction affects students' academic performance (9) Numerous research have demonstrated that mobile phone addiction substantially impacts both physical and mental health. Mental health encompasses the ability to navigate social realities, accept them, and engage in behavior that aligns with community standards. (10) Despite the widespread and growing utilization of smartphones, apprehensions regarding their effects on well-being are prominent in public discussions. A substantial body of research has examined the direct and indirect relationships between smartphone usage and well-being, indicating that excessive smartphone use correlates with adverse health effects and academic/educational performance. (11) The uses of mobile phones have both good and bad impacts on students' lives. Mobile phone makes it easy for students to connect directly various educational and social places. lot of college students see their phones as a way to relax. They often use them to browse the internet, connect with friends, play games, and watch videos. Students' social behavior and academic performance affected when they don't use their phones effectively. and also affect the students' overall mental well-being(12) . Students often employ various mobile applications, leading to a tendency for addiction. This addiction adversely impacts their academic performance, as demonstrated by their poor grade points (GPs) and mental well-being.(13) This prolonged exposure is linked to various adverse outcomes, including anxiety, depression, academic decline, poor sleep quality, and diminished attention spans in the classroom. (14) The utilization of mobile phone in current era has evolved into an addiction, leading to a decline in various social and healthful activities, including exercise, academic Performance, professional responsibilities, face-to-face interactions with family and friends, and individual mental well-being among the nursing students . (15)Excessive smart phone usage among nursing students may negatively impact on academic performance and mental wellbeing due to distraction, poor sleep and increase stress. Investigating this relationship can help develop strategies to promote healthier technology use and

academic success in future healthier professionals especially in nursing students. Addressing this issue could contribute to the two components of Sustainable Development Goal 3 (Good health and Wellbeing) and Goal4 (Quality Education) (16). This study aims to assess smart phone addiction in nursing students and its relationship with academic performance and mental well-being. To explore the relationship of mobile phone usage on academic performance and mental well-being of nursing students. To examine the relationship between mobile phone usage and mental wellbeing of nursing students. To explore the relationship between mobile phone usage and academic performance of nursing students.

LITERATURE REVIEW

A synthesis of this material is beneficial for both scholars and policymakers. Initially, by concentrating on discrepancies in empirical findings specifically, areas lacking consensus in the literature and the methodological limitations of current studies, we directly offer scholars guidance for productive future study. Secondly, although some countries have implemented initiatives to deter excessive smartphone usage in classrooms, based on the belief that it hinders knowledge acquisition, it remains uncertain if these prevalent attitudes align with a consensus in the pertinent scientific research. Besides the possible effects on personal life, smartphone usage is anticipated to disrupt individuals' educational and professional endeavors. It has been specifically associated with the academic achievement of tertiary students. Smartphone ownership is most prevalent among individuals aged 18-29, a demographic significantly populated by students. Furthermore, numerous theoretical justifications suggest a direct impact of extensive smartphone usage on academic achievement.(17). Studies in Asian nations have repeatedly demonstrated that mobile phone usage influences both academic performance and mental well-being among students, although the intensity and characteristics of these associations may differ according on context, technique, and the population examined. A expanding body of research indicates that problematic smartphone usage and smartphone addiction are widespread among university students in Asia, frequently

associated with academic challenges and psychological concerns. Research conducted in nations including Malaysia, India, China, and various regions of South and Southeast Asia has identified significant levels of smartphone reliance associated with anxiety, sadness, and diminished academic engagement. These adverse effects are exacerbated when smartphone usage becomes excessive, disrupting study time, concentration, or sleep. (18) The research from Asian countries highlights that excessive mobile phone usage poses a considerable threat to both mental health and academic performance among students. The patterns indicate a strong correlation between problematic usage, increased anxiety and depressed symptoms, and interruptions in academic engagement, although not all studies demonstrate direct impacts on academic performance. This body of data substantiates the assertion that smartphone behaviors must be incorporated into pedagogical and psychological support initiatives in higher education across Asia (19). In Pakistan, the growing use of smartphones among youth especially university and college students has raised concerns over its impact on academic performance and mental well-being. Several local studies have explored these associations, revealing a mix of negative and nuanced effects. A study by iqbal & Qureshi (2021) found that excessive mobile phone use was significantly associated with academic procrastination and lower GPA scores among university students in Lahore. Students reported that they often got distracted by social media and entertainment apps, leading to reduced study time and concentration. (20)

METHODOLOGY

This study was conducted at Begum Bilquees college of nursing PUMHS SBA and The Rising star institute of nursing Hyderabad. Quantitative Descriptive cross-sectional study design was used. Data was collected at a single point in time. The duration of the study were five months from November 2025 to March 2026. A total of 187 subjects were recruited for study www.raosoft.com calculator, used to calculate sample size by putting the following parameters:

- Confidence level: 95%

- The margin of error: 5%
- Known enrollment of both colleges' students will be 362
- 10% more samples will be added to account for possible non-response.
- According to this formula, the estimated sample size was 205.

The sampling technique was non-probability purposive and convenient sampling.

Inclusion Criteria

- Undergraduate nursing student's All Semesters enrolled in the selected nursing colleges.
- Students who own and use smartphones.
- Students who provide informed consent to participate in the study.

Exclusion Criteria

- Postgraduate or diploma nursing students.
- Students who are on academic leave, waiting Results or not available at the time of data collection.
- Students unwilling to participate or who withdraw during the study.

Data collection procedure:

Data were collected from participants through the following sections of the questionnaire.

Part 1: Demographics Variable

It encompasses participant details, including, Age, Gender, Residence, Semester and GPA (grade point average)

Part 2: WHO (World Health Organization)-5 well-being Scale: "WHO (World Health Organization)-5 well-being Scale" is a short tool that helps to measure well-being it consists of 05 questions each question has a Likert 0 to 5 score. A higher score represents the best possible quality

of life. This Questionnaire is freely available, has good validity, and is highly reliable with Cronbach's alpha value greater than $\alpha = 0.8$.

Part 3: Smartphone Addiction Scale – Short Version (SAS-SV)

To assess mobile phone usage Smartphone Addiction Scale – Short Version (SAS-SV) was used, which has high validity and reliability in previous studies. This Questionnaire is freely available and has good validity and reliability with Cronbach's alpha value greater than $\alpha = 0.9$.

Data analysis procedure:

- Data analysis were carried out utilizing the Statistical Package for Social Sciences (SPSS) version 25.0 was used.
- Descriptive statistics, including frequency and percentage, were computed for all continuous variables. A comprehensive descriptive analysis of various variables was performed.
- To explore the relationships between variables, the correlation test were applied.
- academic performance: Continuous variable.
- mental wellbeing: Continuous variable

Mobile phone addiction; continuous variable

- The p-value of less than 0.05 was taken as a cut-off for significant relationship.

ETHICAL CONSIDERATIONS

- ❖ Ethical clearance and approval were taken from the Ethical committee of The Rising Star Institute of Nursing Hyderabad.
- ❖ Permission to conduct the study was taken from concerned Principal/HOD
- ❖ Informed written consent was taken from participant.
- ❖ Questionnaire were translated according to local language.
- ❖ Surety guidance was provided.
- ❖ Confidentiality of all information were maintained hence all questionnaires was kept in safe custody, names were kept confidential and coding were applied where needed.

RESULTS

Out of 205 students approximately maximum (72.20%) were aged between 21-23 years, minimum (8.29%) were aged between 24-26 years that makes lowest percentage and remaining were formed between (19.51%) that were aged between 18-20 years.

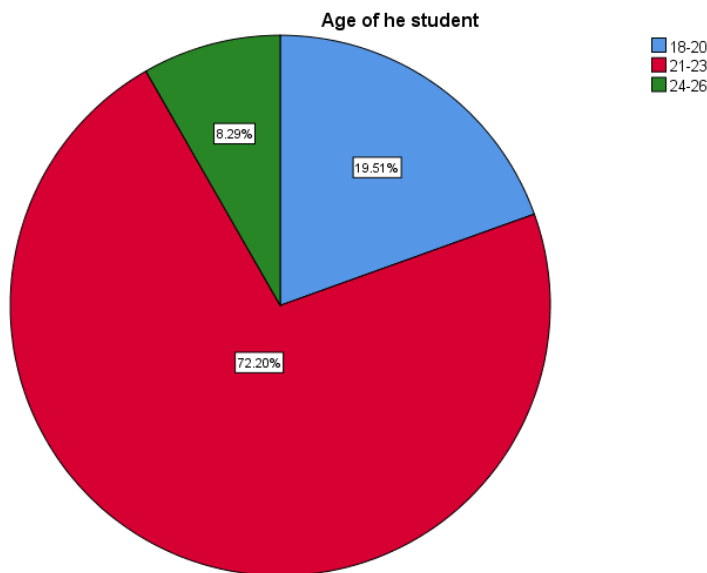
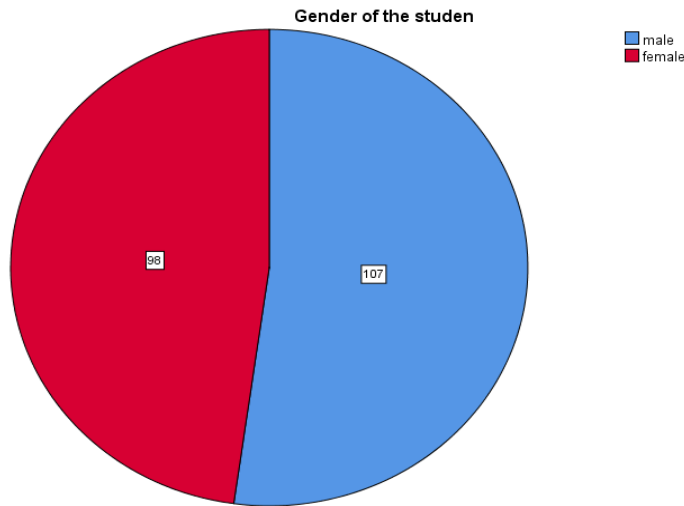


Figure 01;

Among the total 205 participants roundabout (107) were males and while (98) were females indicating that males formed the majority of the study sample.



Finger 02;

The bar chart illustrates the distribution of students according to their semester of study. The findings reveal that the majority of participants were enrolled in the 8th semester, followed by the 5th semester, whereas the 3rd semester had the least number of students. This suggests a higher representation of senior-level students in the study sample

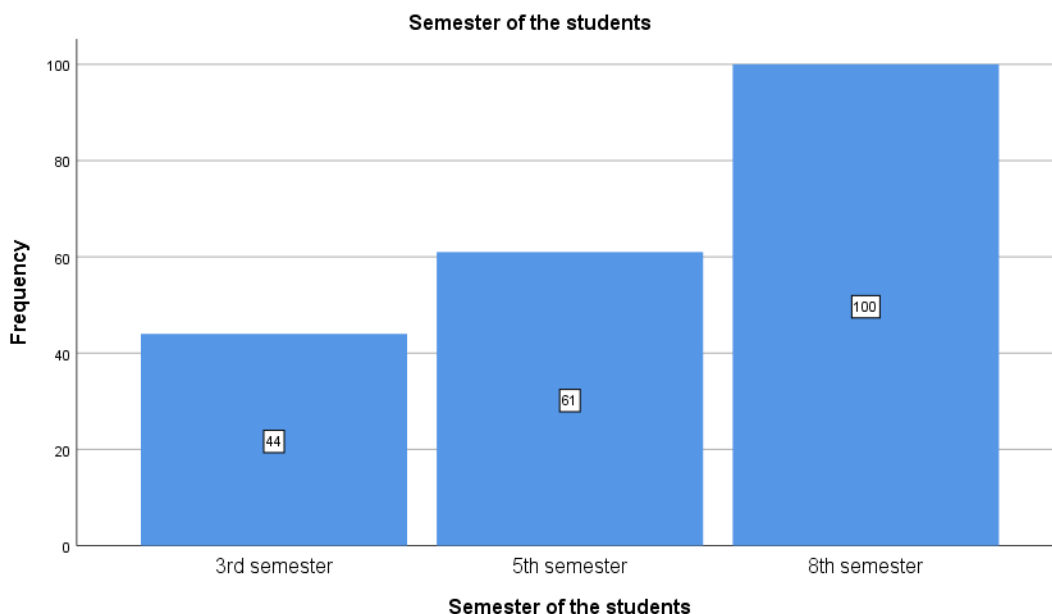


Figure 03

The data indicate a positively skewed academic performance, with the majority of students concentrated in the higher GPA ranges (3.1–4.0). The 3.6–4.0 category represents the modal group, suggesting that high academic achievement is common in the sample. The 3.1–3.5 range also accounts for a substantial proportion of students, further reinforcing the trend toward strong academic outcomes. In contrast, the lower GPA range (2.7–3.0) includes relatively few students, indicating that academic underperformance is limited within the population. Additionally, the 4.00 GPA category shows a very small frequency, implying that while high achievement is widespread, perfect academic performance remains rare, which is typical in most academic settings.

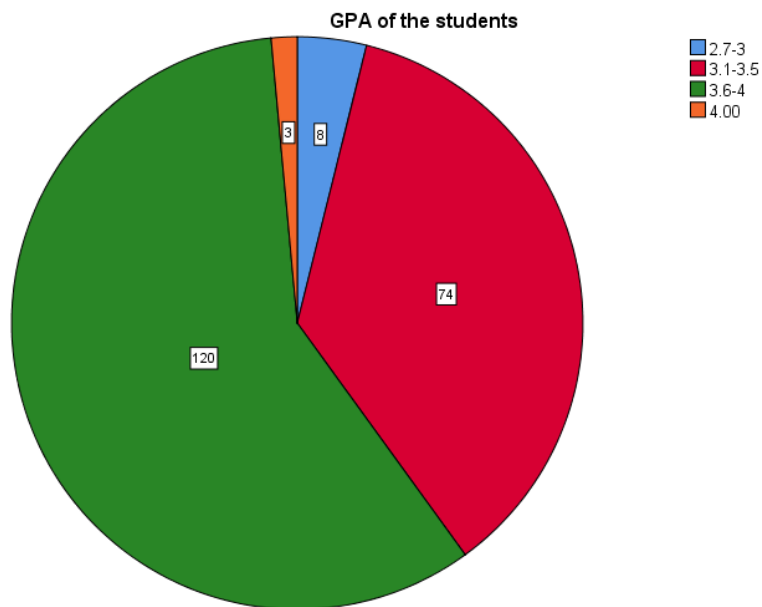


Figure 04;

Table 01;

Out of 205 participants 56.1% were from rural area on other hand 43.9% were from urban areas are included in my study. This indicates rural formed strongest participation in my study'

RESIDENCE	NO OF PARTICIPANTS	PERCENTAGE
RURAL	115	56.1
URBAN	90	43.9
TOTAL	205	100.0

Table ;2

spare man's rank order correlation was conducted to examine the relationship between mobile phone usage and academic performance the results showed a strong negative and statically significant correlation between mobile phone usage and academic performance (rs=-0.85 to 0.93, p= 0.001). this indicates that higher levels of mobile phone usage are associated with lower the academic performance

Relationship between mobile phone usage and academic performance.

Table;02: spearman co relation analysis between mobile phone usage and academic performance

Mobile phone usage	Academic performance	Spearman rho correlation	P- value (<0.05)
Missing planned work due to smartphone use.	GPA of the students	-0.85	0.001
Having a hard time concentrating in class, while doing assignments, or while working due to smartphone use.		-0.88	0.002
Feeling pain in the wrists or at the back of the neck while using a smartphone.		-0.93	0.001
Will not be able to stand not having a smartphone.		-0.89	0.003
Feeling impatient and fretful when not holding a smartphone.		-0.81	0.001
Having my smartphone in my mind even when I am not using it.		-0.89	0.001
I will never give up using my smartphone even when my daily life is greatly affected by		-0.91	0.002

it.			
Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook		-0.92	0.001
Using my smartphone longer than I had intended		-0.86	0.004
People around me tell me that I use my smartphone too much.		-0.87	0.001

Table 03;

Pearson correlation analysis revealed a statically significant relationship between mobile phone usage and mental wellbeing ($r=-0.61$ to -0.79 , $P= 0.02$). The negative value of the correlation coefficient indicates an inversal relationship, it means that as mobile usage increases the mental wellbeing decrease. The magnitude of the correlation suggest negative association between the two variables. Since the P value <0.05 the result is statically significant indicating the observed relationship is unlikely to have occurred by any chance.

Relationship of mobile phone usage on academic performance and mental well-being

Table;03: Pearson co relation analysis between mobile phone usage and mental well being

Mobile phone usage	Mental wellbeing	Pearson co-relation	P-value(<0.05)
Missing planned work due to smartphone use.	I have felt cheerful in good spirits.	-0.62	0.001
Having a hard time concentrating in class, while doing assignments, or while working due to smartphone use.	I have felt calm and relaxed. I have felt active and vigorous. I woke up feeling fresh and rested.	-0.65	0.005
Feeling pain in the wrists or at the back of the neck while using a smartphone.	My daily life has been filled with	-0.75	0.003
Will not be able to stand not having a smartphone.	Things that interest me.	-0.79	0.02
Feeling impatient and fretful when not holding a smartphone.		-0.77	0.02
Having my smartphone in my mind even when I am not using it.		-0.71	0.001
I will never give up using my smartphone even when my daily life is greatly affected		-0.78	0.02

by it.			
Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook		-0.61	0.02
Using my smartphone longer than I had intended		-0.66	0.02
People around me tell me that I use my smartphone too much.		-0.65	0.003

DISCUSSION

Age showed various difference in between age criteria the finding indicate that middle age grouped were more active due to self-maturity, problem solving ability, study habits which generally increase with age .the previous study which was conducted in China that mobile phone usage much more in middle age group due to natural sound and irregular habits...(21)the findings of the present study indicate that gender plays role in influencing academic performance and related behaviors among students . differences were observed between male and female students which may be characteristics to variation in learning style, academic motivation and self-regulatory behaviors. The previous literature suggests that there is no difference between mobile phone usage with gender. (22) GPA (grade point average) was found to be key predictor of academic performance and was significantly associated with student behavior and study pattern, better academic discipline and control mobile phone usage. The previous study that was conduct in Pakistan which suggest that GPA reflect not only academic ability but also effective learning strategies and self-control. (23)the present study analyze that semester reveled that academic performance and behavioral pattern varied across

different semesters. Students in senior semester often showed better academic adjustment compared to these earlier semesters this improvement may be due to increased familiarity with academic demands, enhance coping strategies and better time management skills developed over a time. Existing literature suggest that student academic performance has gradually increased over the years of studies, with first-year students exhibiting lower academic performance compared to the other years of students. (6) In my study

conducted on residency base which is divided into urban and rural in which rural residency have active part may be due to less addiction of mobile phone and good physical activity which promote the physical health as well as the mental health. Previous study highlights to examine the impact of mobile phone usage on the academic performance among students from urban and rural backgrounds in metropolitan areas of Pakistan. These findings suggest that excessive mobile phone use leads students to suffer from poor mental and physical health, ultimately contributing to low academic performance. (24)

The present study found that a statically significant strong negative correlation between mobile phone usage and mental well-being, this indicating that increase mobile phone use is associated lower academic achievement among students. This finding suggests that as the duration are intensity of mobile phone increase, students mental wellbeing tend to decrease. One possible explanation for this negative relationship is that excessive mobile phone use may act as major source of psychological disorders additionally problematic mobile phone usage may impair cognitive and psychological function. The previous study finding that cell phone dependency was negatively associated with mental health indicate that college students who have greater cell phone dependency were more likely to suffer from serious psychological problems.it outline that excessive cell phone dependency could increase the experiences of mental health issues such as depression, anxiety, and stress for students. This study showed that existence evidence of cell phone dependency that is negatively effecting student mental health and also identified group of significant issues of mental health which should be consider to improve psychological resilience of students in China. (25) Higher levels of

mobile phone use are linked to lower academic outcomes among students, according to the study's findings, which showed a strong negative correlation between mobile phone usage and academic performance. According to this research, students who use their phones more frequently typically have worse GPAs or academic results. Additionally, prior research has shown that kids who engage in problematic or addicted mobile phone behaviors are more susceptible to academic deterioration than students who use their phones responsibly. (26)

CONCLUSION

According to the study's findings, nursing students' academic performance and mental health are significantly impacted by cell phone addiction. Mobile phone addiction is a significant factor influencing nursing students' overall academic and mental outcomes, since excessive mobile phone use appears to damage students' study habits, focus, and psychological wellness.

According to the study's findings, nursing students' academic achievement is adversely affected by cell phone addiction. Higher levels of mobile phone addiction have been associated with worse academic results, indicating that excessive mobile phone use may cause students to become distracted from their studies, cut down on study time, and lose focus, all of which could have an impact on their academic performance.

The findings show that among nursing students, mobile phone addiction has a substantial impact on mental health. Excessive mobile phone use may be linked to psychological problems like stress, anxiety, and diminished emotional well-being. Higher levels of mobile phone addiction were linked to lower mental well-being.

RECOMMENDATION;

- ❖ Counselling session about mobile phone usage
- ❖ Awareness about side effect of over use of mobile phone

- ❖ Manual activity or hand on practice to improve mental well being
- ❖ Reduce screen time on electronic device
- ❖ Make habit to read book to improve cognition level and enhance academic performance
- ❖ Further Research(longitudinal study)

Acknowledgement

All praise and thanks to almighty Allah, the most gracious and the most merciful, who granted us strength, patience, and guidance to complete this thesis.

We would like to express our sincere gratitude to our respected supervisor their valuable guidance, support and encouragement throughout our academic journey. Their knowledge and mentorship played a significant role in the completion of this work.

we are deeply thankful to our parents for their love, prayers and constant support. Their sacrifices have been the foundation of my success.

A very special acknowledgement is dedicated to our beloved parents and their dreams sacrifices and unwavering belief on us have been constant source of inspiration.

We are also grateful to all those who directly or indirectly supported us in completing this thesis

REFERENCES;

1. Grewal N, Bajaj JK, Sood M. Impact of mobile phone usage on academic performance and behaviour of medical students. *Int J Med Dent Sci.* 2020;9(1):1841-5.
2. Yadav MS, Kodi SM, Deol R. Impact of mobile phone dependence on behavior and academic performance of adolescents in selected schools of Uttarakhand, India. *Journal of education and health promotion.* 2021;10:327.
3. Gath ME, Monk L, Scott A, Gillon GT. Smartphones at school: A mixed-methods analysis of educators' and students' perspectives on mobile phone use at school. *Education Sciences.* 2024;14(4):351.

4. Tingson MG, Olores AC. Mobile Phones Utilization and Learners' Academic Performance.
5. Hossain MB, Ali N, Al Sabbir A, Imran FA, Shahjahan M. Smartphone use and its association with academic performance among university students in Bangladesh. *Int J Eval & Res Educ* ISSN.2252(8822):4855.
6. Muneer S, Ashraf A, Zafar M, Qamar N. Examining the Nexus between Smartphone Addiction, Academic Performance, and the Mediating Influence of Mental and Physical Health among Upper and Upper Middle Adolescents. *Journal of Social Sciences Advancement*. 2025;6(1):82-93.
7. Ab Latiff DS, Husin LIA, Hussin NZMHM, Said NA, Razali MZM, Yao G. Attachment Theory and Smartphone Addiction Among University Students: Investigating Psychological Dependence, Behavioral Patterns and Well-Being. *Information Management and Business Review*. 2025;17(2):581-92.
8. Böttger T, Zierer K. To ban or not to ban? A rapid review on the impact of smartphone bans in schools on social well-being and academic performance. *Education Sciences*. 2024;14(8):906.
9. Khan S, Ullah S, Abbas MM, Akhtar M, Kaleem MF, Ali R. Effect of social media usage patterns on academic performance and psychological well-being of undergraduate students. *Migration Letters*21 (S3). 2024:1261-74.
10. Jabbar R, Zafar M, Bodla AJ, Jabbar K. Impact of Mobile Phone Use on School-Level Students' Mental Health. *ProScholar Insights*. 2025;4(1):97-106.
11. Ejaz W, Altay S, Naeem G. Smartphone use and well-being in Pakistan: Comparing the effect of self-reported and actual smartphone use. *Digital health*. 2023;9:20552076231186075.
12. Hayat N, Imran M, Ahmad S, Shahzad AA, ur Rehman J. The Effect of Mobile Phone Use on the Students' Budget, Social Behavior and Academic Performance: A Case Study of Bacha Khan University, Charsadda, Pakistan. *Journal of Policy Research (JPR)*. 2022;8(3):122-34.

13. Sindhu ZM, Mushtaq S, Ahmad H, Fayaz T, Riaz T. SMARTPHONE ADDICTION, SELF-ESTEEM AND ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENTS, PUNJAB, PAKISTAN.
14. Javaid S, Bhatti Y, Khan A, Ali A, Anas M, Urooj I, et al. Effects of Smart Phone Dependency On Academic Performance Among BSN Students At Sahara Nursing College Narowal. Pakistan Journal of Medical & Cardiological Review. 2025;4(4):1340-50.
15. Sahitia N, Sahitia S. The Impact Of Social Media On Psychological Well-Being Among University Students Of Karachi, Sindh, Pakistan. Journal of Positive School Psychology <http://journalppw.com>. 2023;7(3):1211-22.
16. Năstase LL. Sustainable Education and University Students' Well-Being in the Digital Age: A Mixed-Methods Study on Problematic Smartphone Use. Sustainability. 2025;17(13):5728.
17. Amez S, Baert S. Smartphone use and academic performance: A literature review. International journal of educational research. 2020;103:101618.
18. Zhang J, Zeng Y. Effect of college students' smartphone addiction on academic achievement: The mediating role of academic anxiety and moderating role of sense of academic control. Psychology Research and Behavior Management. 2024:933-44.
19. Ghazali SE, Subramaniam P, AL-shahrani HF, Rajikan R, Wahab NA, Saad QHM, et al. Smartphone Addiction, Anxiety, Depression, and Academic Performance in University Students: A Cross-Sectional Study. 2025.
20. Iqbal J, Qureshi N, Ashraf MA, Rasool SF, Asghar MZ. The effect of emotional intelligence and academic social networking sites on academic performance during the COVID-19 pandemic. Psychology research and behavior management. 2021:905-20.
21. Luo J, Wang M, Chen L. The effects of using a nature-sound mobile application on psychological well-being and cognitive performance among university students. Frontiers in Psychology. 2021;12:699908.

22. 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;19(6):3710.
23. Deng Y, Cherian J, Khan NUN, Kumari K, Sial MS, Comite U, et al. Family and academic stress and their impact on students' depression level and academic performance. *Frontiers in psychiatry*. 2022;13:869337.
24. Xu T, Sun X, Jiang P, Chen M, Yue Y, Dong E. Effects of cell phone dependence on mental health among college students during the pandemic of COVID-19: a cross-sectional survey of a medical university in Shanghai. *Frontiers in Psychology*. 2022;13:920899.
25. Samaha M, Hawi NS. Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in human behavior*. 2016;57:321-5.
26. Lepp A, Barkley JE, Karpinski AC. The relationship between cell phone use and academic performance in a sample of US college students. *Sage Open*. 2015;5(1):2158244015573169.