

Smart Phone Addiction Among Undergraduate Nursing Students At Public Sector Institutes: A Cross Sectional Analysis

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Abstract

Smartphones have become an essential part of our everyday life in the present era. Because of the rapid pace of people's lives, advances in communication, and the growth of new economic sectors. **Objectives:** To determine the level of smartphone addiction among undergraduate nursing students. **Methods:** A cross-sectional descriptive research study design was used to conduct this study at public and private sector nursing schools. Convenient sampling technique was used and the sample size was calculated by using software open epi. "The calculated sample size was (369)" by considering a previous study prevalence. 95% confidence interval and 5% error of margin. BS nursing students was included in this study. Midwifery and Post RN students was excluded from the study. The Smartphone Addiction Inventory (SPAI) was used, Ethical approval was obtained prior to data

collection from the head of the department. Data was collected using a hard-copy questionnaire, and verbal informed consent was obtained from all participant. Institutional Review Board (IRB) approved the study Written informed consent was obtained from the participants. Data was analyzed by using statistical software package (SPSS) version 26.0. **Results:** Among 369 participants (54%) exhibited a moderate, (39%) fell into the low while (7%) demonstrated a high level of smartphone addiction. Year of the study showed statistically significant association with smartphone addiction.

Conclusion: The findings of the study concludes that smart phone addiction was prevalent among nursing studnets with more exhibiting moderate level of addiction.

Introduction

Smartphones have become an essential part of our everyday life in the present era. Because of the rapid pace of people's lives, advances in communication, and the growth of new economic sectors (1). A smartphone is one of the many devices that have been created as a result of the rapidly expanding technological world. One of the most significant social media tools that everyone uses nowadays is the smartphone. A smartphone is a device that combines cell phone and internet services (2). Our everyday lives have been profoundly altered by smartphones. People may now play games, watch videos, listen to music, and communicate with others thanks to the millions of apps that have been created and loaded on this internet-enabled intelligent device (3). People's professional and academic lives are also anticipated to be impacted by smartphone use (4). Long-term use of smartphones has been shown to have a negative impact on student's academic performance. Student's well-being and life satisfaction decline as smartphone addiction rises (5). The inability to stop or regulate the use of a substance or behavior is known as addiction (6). Smartphone Addiction is a nonchemical behavioral disorder that can also be thought of as a technological addiction (7). The rate of smartphone users is rapidly increasing both worldwide. Smartphones are commonly used by young people, particularly university students. (8). Smartphones addiction interferes with daily living as well as academic performance of the students (9). Smartphones addiction can lead to physical abnormalities, changes in dietary habits, sleep disorders, and issues with memory and attention (11). Smartphone addiction significantly lowered students' academic performance and health-related quality of life due to distraction, using a smartphone while driving increases the likelihood of an accident (11). A survey reported that the smartphones are seen as a sign of status and a way to express oneself (12). Another study conducted in India in 2024, reported that using a smartphone is not only enjoyable and reduces feelings of pain and stress, but it also results in a lack of control over the use, which leads to dependency. Smartphone dependence can cause difficult and unpleasant emotions to isolation. A person with less or no social interaction will be judged negatively and worthless by society (13). The aim of this study is to investigate the smartphone addiction among nursing students.

METHODS

A cross-sectional descriptive research study design was used to conduct this study at a public sector nursing schools among undergraduate nursing studentes. Conveninet sampling technique was used and the sample size was calculated by using software open epi. "The calculated sample size was (369)" by considering a previous study prevalence. 95% confidence interval and 5% error of margin (14).BS nursing students was included in this study. Midwifery and Post RN students was excluded from the study. The Smartphone Addiction Inventory (SPAI) was used, developed by Lin et al., is a standardized self-report instrument designed to assess the level and characteristics of smartphone addiction. The SPAI evaluates smartphone addiction across four key dimensions: compulsive behavior, functional impairment, withdrawal, and tolerance. The scale consists of multiple items rated on a Likert scale, typically ranging from "strongly disagree" to "strongly agree." The SPAI has demonstrated good psychometric properties, including high internal consistency, with reported Cronbach's alpha values exceeding 0.90, and strong construct and concurrent validity when compared with other behavioral addiction measures. Data was collected during the Tea Time. Ethical approval was obtained prior to data collection from the head of the department. Data was collected using a hard-copy questionnaire, and verbal informed consent was obtained from all participant. Institutional Review Board (IRB) approved the study Written informed consent was obtained from the participants. Anonymity was ensured,

and all data was treated with strict confidentiality and privacy was protected throughout the study, and unique identification codes were used instead of personal identifiers. Data was analyzed by using statistical software package (SPSS) version 26.0 and descriptive statistics was summarized by frequency and percentage while continues variables were expressed as mean and standard deviation. Independent t-test was applied to compare mean smartphone addiction scores across dichotomous variables. ANOVA was applied to express the variables having more than two categories. A p-value less than 0.05 was considered statistically significant.

RESULTS

Socio-Demographic Characteristics of the Study Participants (n = 369)

The table presents the socio-demographic characteristics of 369 study participants. Nearly equal proportions of participants were enrolled in public (50.7%) and private (49.3%) institutes, indicating a balanced representation from both sectors. The majority of participants were younger than 25 years (94.0%). Females constituted (91.1%), while males accounted for only 8.9%, suggesting a gender imbalance in the study population. Regarding academic level, more than half of the participants were in their first year of study (54.7%), followed by fourth-year students (19.2%), with relatively smaller proportions in the second (12.7%) and third years (13.3%). Most participants were single (94.9%), while a small percentage were married (5.1%).

Table-1: Demographic Characteristics of the Participants (n=369)

Characteristics		n (%)
Types of Institute	Public	187(50.7)
	Private	182(49.3)
Age	< 25 Years	347 (94.0)
	≥ 25 Years	22 (6.0)
Gender	Male	33 (8.9)
	Female	336 (91.1)
Year of Study	1 st Year	202(54.7)
	2 nd Year	47(12.7)
	3 rd Year	49(13.3)
	4 th Year	71(19.2)
Marital Status	Single	350(94.9)
	Married	19(5.1)
Family Type	Nuclear Family	210(56.9)
	Joint Family	111(30.1)
	Single Parent	48(13.0)

Figure 1: Distribution of Participants According to Level of Smartphone phone Addiction

The figure illustrates the distribution of participants based on their level of smartphone addiction. More than half of the participants (54%) exhibited a moderate level of smartphone addiction, indicating that cellphone use is a common and regular behavior among the majority of the study population. A considerable proportion of participants (39%) fell into the low addiction category, suggesting controlled or minimal dependence on cellphone usage. In contrast, a relatively small percentage of participants (7%) demonstrated a high level of smartphone addiction, indicating that severe addiction was uncommon in the study group.

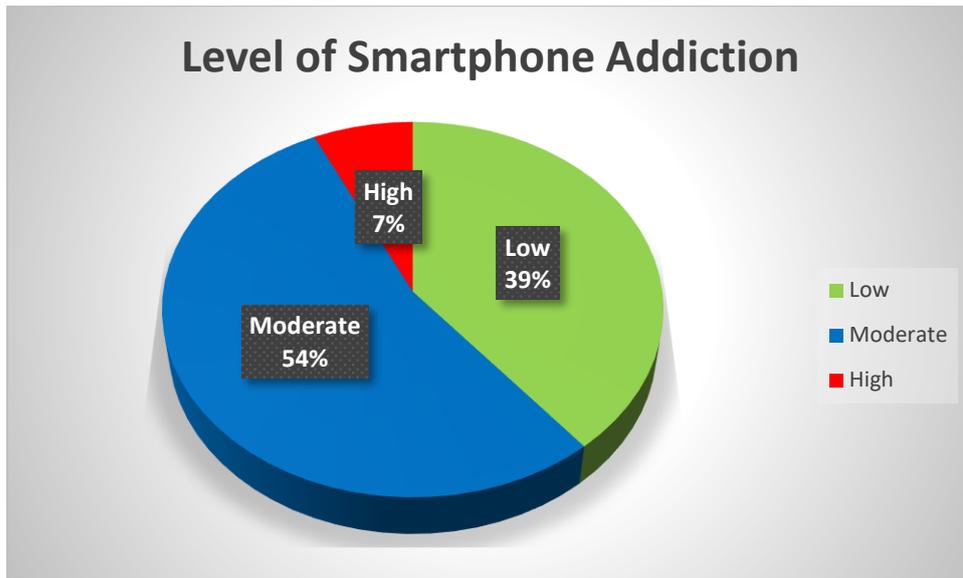


Figure-I: Level of Smartphone Addiction

Table 3: Association between Socio-Demographic Characteristics and Mean Score (Mean \pm SD) of Participants

The table presents the comparison of mean scores (\pm SD) across different socio-demographic characteristics of the participants. There was no statistically significant difference in mean scores based on the type of institute, age group, marital status, or family type, as all corresponding p-values were greater than 0.05. Although participants from public institutes, those aged less than 25 years, single individuals, and those from single-parent families showed slightly higher mean scores, these differences were not statistically meaningful. A statistically significant difference in mean scores was observed according to the year of study ($p < 0.001$).

Characteristics	Mean \pm SD	p-value
Types of Institute		0.127 [~]
Public	84.81 \pm 20.35	
Private	81.26 \pm 23.90	
Age		0.279 [†]
< 25 Years	83.38 \pm 22.40	
\geq 25 Years	78.09 \pm 18.68	
Gender		
Male	86.45 \pm 29.59	
Female	82.73 \pm 21.38	
Year of Study		<0.001 [~]
1 st Year	77.42 \pm 19.72 ^{a,b}	
2 nd Year	83.15 \pm 22.68 ^c	
3 rd Year	90.10 \pm 22.11 ^a	
4 th Year	94.20 \pm 23.51 ^{b,c}	
Marital Status		0.694 [~]
Single	83.17 \pm 22.28	
Married	81.10 \pm 21.51	
Family Type		0.392 [~]
Nuclear Family	82.03 \pm 22.09	
Joint Family	83.36 \pm 22.98	
Single Parent	86.87 \pm 20.92	

Table 3: Association between Socio-Demographic Characteristics and Mean Score (Mean \pm SD) of Participants

DISCUSSION

The present study examined the prevalence of smartphone addiction among nursing students. According to the demographic characteristics of the study subjects (91%) were female, (9%) were male, 56% belong to nuclear families, 94% of the study subjects were below 25 years. This finding is consistent with another study's findings which reported 84.8% were female and majority of them were in younger age (15). This study demonstrates that more than half of the participants (54%) exhibited a moderate level of smartphone addiction, a considerable proportion of participants (39%) fell into the low addiction category, in contrast, a relatively small percentage of participants (7%) demonstrated a high level of smartphone addiction, indicating that severe addiction was uncommon in the study group. Another study found contrary results, 23.1% of prevalence reported, this discrepancy may be due to different sample size (16). Another study found similar results where most of the nursing students demonstrated moderate levels of smartphone addiction (72.7%) (17). There was no statistically significant difference in mean scores based on the type of institute (public vs. private), age group, marital status, or family type, as all corresponding p-values were greater than 0.05. Although participants from public institutes (18). Smartphone addiction was more prevalent among students attending private schools than at public ones. In contrast to your finding that there is no significant correlation between the type of institute and mobile phone addiction, this suggests a significant variation in addiction levels based on the type of institute (19). According to one study, conducted in Pakistan claimed that nursing students are prone to numerous stressors that impact their mental health and when it combined with smartphone addiction then the impact can be more harmful (20-22). Students' Addiction to Smartphones Students in private schools had higher levels of smartphone addiction than those in government schools ($t = 6.296$, $p = 0.000$), suggesting that the type of school had a significant impact on addiction outcomes (23). Smartphone addiction is more prevalent amongst younger participants. This may reflect increased willingness among younger generations to adopt newer users for smartphones (e.g. gaming, social, and media) which may confer greater risk for addiction (24).

CONCLUSION

The findings of the study conclude that smartphone addiction was prevalent among nursing students with more exhibiting moderate level of addiction. However a significant increase over addiction was observed with advancing year of study. This finding highlighted the need for targeted awareness and preventive strategies focusing on students at advanced academic years.

RECOMMENDATIONS

All nursing students must be encouraged to build healthy habit regarding usage of smartphone. Productive activities should be promoted to reduce screen time of smartphone. The negative effects of smartphone addiction can be identified by awareness program among students. All the nursing educators must ensure classroom and clinical policies to limit unnecessary smartphone addiction. All the nursing institutions should organize awareness sessions and workshops on productive usage of smartphone. Future researches are recommended to explore long term effects of smartphone addiction among all the nursing students. Interventional studies could be conducted to determine strategies for minimizing smartphone addiction.

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