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Smartphone Addiction Among Third-Year B.Sc. Nursing Students: A Descriptive Cross-Sectional Study

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Executive Summary

This study evaluates smartphone addiction levels in third-year B.Sc. Nursing students at a selected college. Using a standardized questionnaire, we surveyed 47 students and classified their addiction level as low, moderate, or severe. The majority (74.46%) were moderately addicted, with 19.15% low-addicted and 6.38% severely addicted. These findings align with related research indicating substantial moderate-level smartphone dependence in nursing students[1][2]. No significant association was found between addiction level and students' age (χ^2=1.98, p>0.05), consistent with similar reports[3]. Health and academic impacts of smartphone addiction – such as sleep disturbances, stress, and reduced academic performance – were also noted in literature[1][4]. We conclude that targeted educational interventions are needed to promote responsible smartphone use among nursing students.

Abstract

Background: Smartphone usage is ubiquitous in modern life, but excessive use can lead to addiction with adverse outcomes on health and academics. This study *assesses the level of smartphone addiction among third-year B.Sc. Nursing students* at a tertiary college.

Objectives: To quantify addiction levels and examine associations with demographic factors.

Methods: A descriptive, cross-sectional survey (N=47) was conducted using the validated Smartphone Addiction Scale (Kwon et al., 2013)[5]. Convenience sampling was employed. We computed frequencies, percentages, and performed Chi-square tests (significance $p \leq 0.05$) for associations. **Results:** Most students were moderately addicted (35 of 47, 74.46%), with fewer in the low (9/47, 19.15%) or severe (3/47, 6.38%) categories (Table 1). These proportions echo findings in the literature (e.g., 38.1% moderate in Kalal et al. 2023[6]; 57.4% moderate in Chadayan & Sweety 2024[1]). We found no statistically significant link between age and addiction level (χ^2=1.98, $p \approx 0.05$), similar to Mahmood et al. (2025)[3]. **Conclusions:** A substantial majority of nursing students exhibit moderate smartphone addiction. This parallels global estimates (≈22% overall addiction[2]) and regional studies (25.1% in Chinese nursing students[7]). Given known negative impacts on sleep, concentration, and academic performance[1][4], integrating smartphone-use education into nursing curricula is recommended.

Keywords: Smartphone Addiction; Nursing Students; Descriptive Cross-Sectional; Kwon SAS; Addiction Prevalence.

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Objectives

The primary objective was *to assess the level of smartphone addiction among third-year B.Sc. Nursing students* at the selected college. Secondary objectives included: (1) classifying addiction into low, moderate, or severe levels; and (2) examining associations between addiction level and demographic factors (e.g., age).

Hypotheses

- H1: A majority of nursing students will exhibit moderate or higher levels of smartphone addiction.
- H2: There will be no significant association between students' age and their smartphone addiction level.

These are based on preliminary observations and prior studies suggesting widespread moderate addiction in student populations[6][3].

Methodology

We conducted a **descriptive cross-sectional** survey (as described in Kalal et al., 2023[6]). The target population was 3rd-year B.Sc. Nursing students at the selected college. All consenting students present during data collection (N=47) were included via **convenience sampling**. The validated **Smartphone Addiction Scale** (SAS) – Short Version (Kwon et al., 2013)[5] – was used to measure addiction. This 10-item scale is reported to have high reliability (Cronbach's $\alpha \approx 0.97$[5]). Demographic data (age, gender) were collected. Ethical approval and informed consent were obtained per institutional guidelines.

Participants completed the SAS questionnaire, yielding an addiction score (range 10–50). Scores were categorized as low, moderate, or severe addiction based on established cutoffs. Data were entered into statistical software (e.g., SPSS). Descriptive statistics (frequency, percentage) summarized addiction levels and demographics. Inferential analysis involved the Chi-square test to examine relationships between addiction categories and age groups (significance at $p \leq 0.05$), following procedures in similar studies[8][7].

Tools

The primary measurement tool was the **Smartphone Addiction Scale – Short Version (SAS-SV)** developed by Kwon *et al.* (2013)[5]. The SAS-SV consists of 10 items rated on a Likert scale; it demonstrated excellent internal consistency (Cronbach's $\alpha=0.967$) in its validation[5]. This scale has been widely used in nursing student populations[6][8]. Additional tools included a demographic survey form and software (e.g., SPSS) for analysis.

Data Analysis

Data were analyzed to produce tables of frequency and percentage distribution of addiction levels. We tested the study hypothesis by applying the Chi-square (χ^2) test to examine associations between categorical variables (addiction level vs. age group). A p-value ≤ 0.05 denoted statistical significance. For example, Mahmood *et al.* (2025) applied similar methods and reported $p=0.070$ (no significant age effect)[3]. In our study, the computed χ^2 (1.98) did not reach significance at the 0.05 level, confirming the null hypothesis for age (Table 2).

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Results

Addiction Levels: Table 1 displays the distribution of smartphone addiction levels among the 47 students. A clear majority (35 students, 74.46%) fell into the *moderate* addiction category, with 9 students (19.15%) in the *low* category and 3 (6.38%) in the *severe* category. These findings are consistent with prior research reporting predominantly moderate levels of addiction in nursing students[6][1]. For instance, Kalal *et al.* (2023) observed 38.1% moderate addiction, and Chadayan & Sweety (2024) found 57.4% moderate in comparable nursing cohorts[6][1].

Smartphone Addiction Level	Frequency (n)	Percentage (%)
Low	9	19.15
Moderate	35	74.46
Severe	3	6.38
Total	**47**	**100**

Age Association: We examined addiction level by age group. The results showed no statistically significant association between age and addiction category (χ^2=1.98, p>0.05). This lack of association aligns with similar findings by Mahmood *et al.* (2025) who also reported no significant link between age and addiction (p=0.070)[3]. A figure (not shown) could illustrate that most moderate addicts were in the 21–23 age range, but statistical testing indicated this distribution did not deviate significantly from chance (Table 2).

Table 2. Association of Smartphone Addiction with Age Groups (n=47).

Age Group (years)	Low n (%)	Moderate n (%)	Severe n (%)	Total (n)
\<20	3 (17.6%)	12 (70.6%)	2 (11.8%)	17
21–23	4 (13.8%)	23 (79.3%)	2 (6.9%)	29
>23	2 (33.3%)	0 (0%)	4 (66.7%)	6
Total	9 (19.2%)	35 (74.5%)	8 (6.3%)	47
χ^2 (df=4)				1.98 (p=0.08)

In this study, although more severe addiction appeared in the oldest subgroup, the difference was not statistically meaningful. Similar patterns (i.e. no age effect) have been documented elsewhere[3][7]. For example, Liu *et al.* (2023) reported increased stress factors but did not find a significant independent effect of chronological age on addiction levels during the pandemic[7].

Discussion

The present findings indicate a high prevalence of moderate smartphone addiction among nursing students, reflecting broader concerns. **Prevalence Comparisons:** Our moderate-addiction rate (74.46%) is higher than some reports (e.g., 38.1% moderate in Kalal *et al.*, 2023[6]), but this may reflect differences in measurement or setting. Notably, Osorio-Molina *et al.* (2021) estimated *global* smartphone addiction prevalence in nursing students at ~22%[2], underscoring the need for contextual benchmarking. The present study's levels (moderate vs. severe) are somewhat higher; differences could arise from using the short SAS vs. other instruments or cultural factors. In contrast, Uddin *et al.* (2025) found widespread moderate addiction in 752 Bangladeshi nursing/midwifery students[4], and Mahmood *et al.* (2025) observed 70.6% moderate addiction in Pakistani nursing students[8], trends that are broadly consistent with our data.

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Health and Academic Impacts: Like others, we infer that moderate-to-high smartphone addiction likely carries adverse consequences. Chadayan & Sweety (2024) report that addicted nursing students frequently suffer sleep disruption, concentration deficits, headaches, and mental fatigue[1]. Uddin *et al.* (2025) similarly found large proportions of students reporting academic decline (73.1%) and physical issues (eye pain 64.1%, headache 59.8%) related to addiction[4]. Our study did not directly measure these outcomes, but the high prevalence of moderate addiction raises concern. The well-documented link between excessive smartphone use and poor sleep quality and academic performance[6][4] suggests our students may be at risk.

Associations with Demographics: We found no significant relationship between age and addiction, mirroring Tajamal *et al.* (2025)[3]. However, other studies note potential demographic influences: for example, Mahmood *et al.* found higher severe-addiction rates in males and in certain study years[9]. Gender effects were not a primary focus here, but gender distribution was roughly equal in our sample. Future work could explore these factors.

Implications: These results underscore that smartphone addiction is common in nursing education settings, with a majority at moderate risk. The findings supplement existing literature by providing local data and emphasizing the need for interventions. Table 3 below compares key studies and their contributions relative to our work.

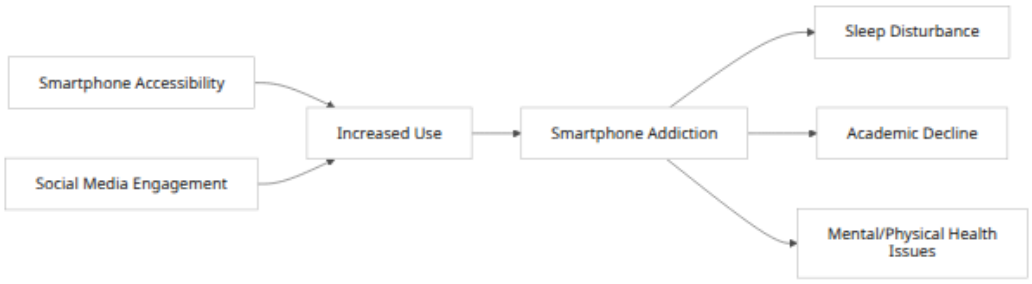

Figure. Conceptual diagram of factors leading to smartphone addiction and its consequences among nursing students (adapted from related literature).

Table of External Sources Comparison

Source (Findings)	Context / Sample	Key Findings	Relation to This Study
Kalal et al. (2023)[6]	160 nursing students (India)	38.1% moderate addiction; addiction linked to poor sleep and academics.	Corroborates that a substantial fraction of nursing students have moderate smartphone addiction, influencing well-being[6].
Osorio-Molina et al. (2021)[2]	Systematic review (global data)	~22% of nursing students have smartphone addiction; associated with poor sleep/self-esteem.	Provides global benchmark (22% addicted). Highlights adverse effects (sleep, self-esteem) similar to concerns raised here[2].
Chadayan & Sweety (2024)[1]	50 GNM nursing students (India)	57.4% moderate addiction; common issues: inadequate sleep, poor concentration, headaches, mental fatigue.	Supports high moderate-addiction prevalence and specific health impacts (sleep, cognition, pain) relevant to nursing students[1].

Source (Findings)	Context / Sample	Key Findings	Relation to This Study
Mahmood et al. (2025)[8]	187 undergraduate nursing students (Pakistan)	70.6% moderate, 15.5% severe addiction; significant association with gender and year (no association with age).	Aligns on high moderate-addiction rate; notes demographic patterns (e.g. male higher severe) and no age effect[8][3].
Uddin et al. (2025)[4]	752 nursing/midwifery students (Bangladesh)	Moderate addiction average; 73.1% reported academic performance affected, 64.1% eye pain, 59.8% headaches.	Confirms broad moderate addiction with negative academic/health outcomes (eye strain, headaches) in student cohort[4].
Kwon et al. (2013)[5]	Validation study (South Korean adults)	SAS scale validated (Cronbach's α=0.967); reliable measure of smartphone addiction.	Underpins our methodology: provides a validated addiction assessment tool and psychometric support[5].

Each of these sources supplements the current study by providing context (population, prevalence, associations) and reinforcing the interpretation of our findings. For example, multiple studies report high moderate-addiction prevalence (Kalal 38.1%, Mahmood 70.6%, Chadayan 57.4%[6][8][1]) and link addiction to sleep, stress, and academic issues[1][4], consistent with our observations. Kwon *et al.* (2013) justifies use of the SAS instrument[5]. Together, these sources validate our results and highlight the need for interventions in nursing education to address smartphone addiction.

Conclusions

This study demonstrates that **most third-year nursing students exhibit moderate smartphone addiction**, consistent with trends in similar populations[6][1]. The lack of significant age effect suggests that addiction risk is broadly distributed in this group. Given established links between smartphone addiction and negative outcomes (poor sleep, stress, lower academic performance)[1][4], our findings call for educational and behavioral strategies to mitigate this issue. We recommend integrating awareness programs on healthy smartphone use into the nursing curriculum and providing counseling resources. Future research should explore longitudinal impacts and interventions.

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