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Smartphone addiction among nursing and midwifery students in Bangladesh: a survey report

Abstract

Smartphones are an essential part of our everyday life. Most students are mostly dependent on Smartphone for various reasons. Smartphone usage has both positive and negative effects. Excessive use of Smartphone negatively affects students' careers as well as their daily lives, including physical and mental health. The main objective of this study was to investigate smartphone addiction among nursing and midwifery students in Bangladesh. This was a descriptive survey study. The participants were 752 (565 nursing and 187 midwifery) students. They were asked about various aspects of smartphone usage. The instrument was Smartphone Addiction Scale (SAS) for Bangladeshi Students. It was a self-reporting questionnaire. Demographic information and responses of students regarding smartphone usage were analyzed through descriptive statistics. The age of the participants ranged from 18 to 30 years, with a mean age of 21.68 years. Out of them, 134 were males and 618 were females. The survey study found that nursing and midwifery students were moderately (M=29.97, SD=14.29) addicted to smartphones. Further investigation revealed that smartphone addiction had a negative impact on students' academic performance (73.1%), daily activities (62.9%), eye pain (64.1%), and headache (59.8%), which is a real concern. The findings of this study provide alarming evidence for students, parents, and relevant authorities. These findings may provide substantial support for expanding awareness and developing preventive strategies such as psychotherapy, game, and multicomponent involvements to reduce smartphone addiction among nursing and midwifery students.

Keywords: smartphone addiction, nursing and midwifery students

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Introduction

Nowadays, we cannot imagine our lives without smartphone. Due to age and other reasons, students are also at risk of smartphone addiction.[1] They use smartphone for various reasons such as communication, studying, connecting with social media, and entertainment. Despite the usefulness of using smartphone, excessive use of smartphone is called smartphone addiction.[2] Smartphone addiction, smartphone dependence, and smartphone overuse have been used interchangeably.[3] Smartphone addiction is also called internet addiction because smartphone devices are used to access and use the internet. Smartphone addiction creates an inability for an individual to normalize their smartphone use, which has negative impacts on daily life,[4] health,[5] and safety.[6] These consequences can be reduced through various preventive strategies. In Bangladesh, a study found that 61.4% of young adults were addicted to smartphone.[7] Another study found that 29% of university students were addicted to smartphone and that they spent about five hours a day on smartphone and mostly used them for social networking (79%), entertainment (64%), and email (61%).[8] Moreover, a study conducted on 140 nursing students found that they were moderately addicted to smartphone.[9] The study also found that most of the students felt uncomfortable without their smartphone, their studies and daily activities were disrupted, and excessive Smartphone use was reported to cause eye strain and headaches. A systematic review and meta-analyses showed that psychotherapy, sports, and multicomponent involvements were effective to reduce smartphone addiction.[10] Nursing and midwifery students are the future workforce of the country's healthcare system. Nursing and midwifery courses are in English medium and the duration of the courses is usually 3 to 4 years, making them vulnerable to smartphone addiction. Due to the nature of the courses and the location of the educational institution, students live in hostels with limited facilities. Students generally become dependent on smartphone for communication with family, searching and retrieving reading materials, and entertainment. The study was conducted among young adults, university students, and nursing students in this country. Very few studies have been conducted on nursing and midwifery students and with a large sample size. The main objective of this study was to investigate smartphone addiction among nursing and midwifery students. The results will serve as evidence in response and can contribute significantly to reducing smartphone addiction among students through awareness and preventive interventions.

Data and methods

This was a descriptive cross-sectional survey study conducted among nursing and midwifery students in Bangladesh. Nursing courses are in two categories (1) Diploma in Nursing and Midwifery which is a three years course, (2) Bachelor of Nursing Science, which is a four years course. The Midwifery course is a Diploma in Midwifery, which is a three years course. Therefore, both nursing and midwifery courses students were considered as study participants. They were informed by a formal order given in the Directorate General of Nursing and Midwifery website (https://dgnm.gov.bd) with survey link (http://forms.gle/8xvBHnMHCVYN65Um9). The survey participation date was between November to 2nd December 2024. Seven Hundred and Fifty (750) participants participated in the survey and completed the questionnaire.

The survey questionnaires were six-item Demographic data and the Smartphone Addiction Scale (SAS) for Bangladeshi Students.[11] Demographic data were age, gender, religion, residence, reasons for using a Smartphone, and internet use. The SAS for Bangladeshi students, which was used to assess the students' level of smartphone addiction across 20 items: 7 items about feelings; 7 items about usage

habits; 1 negative item about tolerance (spending time without a smartphone); 4 items about disturbance to daily life and health; and 1 item about peoples' reactions to smartphone use. Each item was measured via a 5-point, Likert-style scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = always). The negative item was converted into an equivalent positive score. Total possible scores were between 0 and 80. Higher scores reflected greater smartphone addiction. The SAS for Bangladeshi students' content validity was tested by the instrument developer. The internal consistency reliability also revealed0.83 (Cronbach's Alpha Coefficient).To collect data the original English language version SAS for Bangladeshi students questionnaire was translated into the Bengali using back-translation method.[12]

Permission for data collection was obtained from the Director General, Directorate General of Nursing and Midwifery, Dhaka, Bangladesh. Two research assistants were engaged to check the completeness of submitted data through the data collection period. Research assistants were informed about the survey study aims and data collection procedures. Participants were informed about the study aims and their participation was voluntary. Their willingness to participate in the survey was considered as their consent. The Bengali version data were downloaded from Google drive to Microsoft Excel Sheet. This data were translated to English and placed in statistical program (IBM SPSS Statistics 23). The negative question item's score was reversed. Data were analyzed using descriptive statistics (frequency, percentage, mean and standard deviation).

Results

The majority (96.14%) of students was between 18 and 24 years old. 82.2% were female. The highest number (61.4%) of students lived in a hostel and 41.5% studied in BSc in nursing course. Among the students (79.1%) participated from government nursing and midwifery educational organizations. The highest number (33.8.4%) of students studied in 1st year and often (51.9%), always (20.9%), and sometimes (27.3%) had access to an internet connection. They used Smartphone to contact others (40.7%), to study (37.6%), to connect with social media (18.2%) and for recreation (3.5%) (Table 1).

Table 1 Demographic characteristics of nursing and midwifery students (n =752)

Characteristics	Categories	Frequency (%)
Age	18-24 years	723(96.14)
(Min=18. Max=30, Mean= 21.68) years	25-30 years	29(3.86)
Gender	Male	134(17.8)
	Female	618(82.2)
Residence	Hostel	462(61.4)
	Other	290(38.6)
Courses	Diploma in Nursing Science and Midwifery	
	Diploma in Midwifery	253(33.6)
	Bachelor of Nursing Science	187(24.9)
		312(41.5)
Number of response	Government	595(79.1)
	Non-Government	157(20.9)
Study year	1st year	254(33.8)
	2nd year	199(26.5)
	3rd year	252(33.5)
	4th year	47(6.3)
Uses of internet connection	Always	157(20.9)
	Often	390(51.9)
	Sometimes	205(27.3)
	Contact	306(40.7)
Purpose of smartphone use	Study	283(37.6)
	Connect with social media	137(18.2)
	Recreation	26(3.5)

The minimum score for smartphone addiction was 0, the maximum was 76, and the mean was 29.97. (Possible scores were between 0 and 80). This indicates a moderate level of smartphone addiction (Table 2).

Table 2 Smartphone addiction of nursing and midwifery students (n=752)

Variable	Minimum score	Maximum score	Mean	SD	Level
Smartphone addiction	0	76	29.97	14.29	Moderate

The consequences of smartphone use reported by the students were more or less frequently adverse effects on studies (73.1%), daily activities (62.9%), eye pain (64.1%), and headaches (59.8%) (Table 3).

Table 3 Smartphone addiction-related health problems of nursing and midwifery students (n=752)

Item	Frequency (%)
My studies are undermined by my smartphone use	550(73.1%)
My daily activities are undermined by my smartphone use	455(62.9%)
My eyes hurt after using a smartphone	482(64.1%)
I experience headaches because of my smartphone use	432(59.8%)

Discussion

The study found a moderate level of smartphone addiction among nursing and midwifery students. The results are consistent with the findings of a study conducted among nursing students in Bangladesh.[9] Possible reasons include the use of the same questionnaire to measure smartphone addiction in both studies and the fact that the questionnaire used was developed in the context of Bangladesh. The findings of the present study are also consistent with the findings of a study conducted among nursing students in India.[13] In addition, a study in Pakistan also reported a moderate level of internet addiction among nursing and midwifery students.[14] These consistencies may be due to the age of the study participants, nature of the course, smartphone usage, and availability of internet facilities. On the other hand, a study conducted among nursing students in Pakistan found a high level of smartphone addiction.[15] This discrepancy may be due to the sample size and data collection tool. This is because the sample size was only 68 nursing students and the smartphone addiction questionnaire had 10 items.

The present study found that the consequences of smartphone use reported by students had adverse effects on academic performance, daily activities, eye pain, and headache. Studies have shown that excessive smartphone use reduces the tendency to study,[9,16-18] which is consistent with the findings of previous studies. The results of the present study on daily activities are consistent with the findings of

studies that smartphone addiction has a significant impact on the performance of daily activities[17-19] and that physical activity levels were found to be significantly lower among smartphone addicted students.[20] The present study found that a significant number of students reported eye pain. This finding can be supported by the findings of studies that smartphone addiction is significantly associated with eye pain.[17,9] In addition, a significant number of students reported experiencing headaches due to excessive smartphone use. This finding is consistent with the findings of studies that headache is a predictor of smartphone addiction,[21] and that headache frequency is reported to be higher among smartphone addicted individuals.[22]

Conclusion

Participants reported moderate levels of smartphone addiction. Reported symptoms of smartphone addiction were adverse effects on studies, daily activities, eye pain, and headaches. These findings are of concern to students, parents, and relevant authorities and may help develop awareness and prevention strategies such as psychotherapy, sports, and multicomponent involvements to reduce smartphone use among nursing and midwifery students in Bangladesh. This may contribute to improved learning outcomes for nursing students in both academic and clinical contexts, which may help them achieve career success and benefit the healthcare system employing them.

Recommendations

This study found moderate levels of smartphone addiction and its several adverse effects among nursing and midwifery students. The concerned authorities may prepare and implement preventive strategies to reduce smartphone addiction and its adverse effects.

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Conflict of interest

No conflict of interest was declared by the authors.

Ethical Considerations

Permission for data collection was obtained from the Director General of the Department of Nursing and Midwifery. The students' willingness to participate in the study was considered as informed consent.

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