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Research Article

Nomophobia

Prevalence and associated factors of nomophobia among undergraduate students of AIIMS Patna

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Introduction: Nomophobia is the fear of being cut off from one's mobile phone, and it relates to the discomfort, anxiety, tension, uneasiness, and anguish that comes with it. Since the first decade of the twenty-first century, when this social phobia was coined, a growing number of researchers have investigated and reported the prevalence of this technology-related condition. This study aims to assess the prevalence and associated factors of nomophobia and to determine the association of prevalence and associated factors of nomophobia with selected socio-demographic variables among undergraduate students of AIIMS Patna. **Material and Methods:** Undergraduate students of AIIMS, Patna are taken as the target population in which the minimum required sample size was 210 but it was increased to 230 for this study. Data was collected by sending questionnaires via social media. Data analysis was done by using descriptive and inferential statistics. **Results:** It shows that out of the taken 230 samples, a total of 229(99.56%) are having nomophobia which 55(23.913%) are having mild nomophobia, 128(55.652) are having moderate nomophobia, 46(20%) are having severe nomophobia i.e. most of the students are moderately nomophobia. The findings also reveal that there is an association of prevalence and associated factors of nomophobia with selected socio-demographic variables (Duration of using smartphone per day) with a p-value of 0.000 and the Fisher exact value is 22.169 by using SPSS, the p-value for this study is 0.05. **Conclusion:** The study shows that 99.56 % of students are having nomophobia and it is an alarming wake-up.

Keywords: Prevalence, Associated Factors, Nomophobia, Undergraduate

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Introduction

"Loneliness does not come from having no people around you, but from being unable to communicate the things that seem important to you". Wireless communication has emerged as one of the fastest diffusing mediums on the planet, fuelling an emergent "mobile youth culture" that speaks as much with thumbs as it does with tongues [1]. Social media and digital communication have become a part of life. Many things were made easy through online connectivity. Mobile phones not only connect people at anytime, anywhere and with anybody but are also movable and portable [2]. Mobile phone's popularity has risen to such an extent in recent years that it is unimaginable for people to stay away from it for a minute. Information and communication technologies (ICT) have become an indispensable part of our lives. With the proliferation of inexpensive mobile devices, we are now living in a mobile age in which mobile ICTs are vigorously and quickly adopted.

The popularity of smartphones among college students is ascribable to the affordances they provide. Smartphones make it possible to perform a variety of daily tasks in one device, including, but not limited to, calling and texting people, checking and sending email messages, scheduling appointments, surfing the internet, shopping, social networking, searching for information on the internet, gaming, entertainment, etc. Because smartphones are ubiquitous and provide numerous capabilities, propose that smartphones go beyond serving communication, information and entertainment purposes. Smartphones enable people to "fulfil needs such as learning, individual capability, safety and human relationships", which is attributed to the mobility of smartphones [3]. They play such a significant role in our lives that we feel anxious without them. In some cases, the relationship between humans and these communication devices has become problematic [4], one such problem is "Nomophobia" "NO-MObilePHOnephoBIA" is the literal translation [8]. It is considered a modern-age phobia resulting from the interactions between people and ICTs and is used to refer to feelings and anxiety and/or discomfort caused by being out of reach of a smartphone. [5] According to the survey, the younger you are, the more prone you are to nomophobia. The youngest age group (18-24) tops The nomophobia list at 77%, which is 11% more than that of the next group—those aged 25-34. Thus, smartphones are particularly popular among young adults [6].

Background

Mobile phones have infiltrated the lives of teens, with 80 percent of those aged 15 to 24 using mobile phones daily in European countries. Because mobile phones have become more sophisticated as their functionalities have increased, they have become much more convenient and user-friendly for users. In every area such as creativity, security, entertainment, lifestyle, health, education, productivity, and usage such as calls and text messaging, mobile phones are more approachable today, especially to college students or youngsters (McGregor, 2009). As a result, college students and young people have become increasingly reliant on their phones to keep up with the latest trends and information [9]. However, nomophobia has received little attention and has not been thoroughly investigated as a theoretical construct [7].

Nomophobic individuals will just endure psychological agitation. Depression, increased interpersonal anxiety, low self-esteem, mental and physical anguish, panic, confusion, and extreme isolation are only a few instances. When nomophobics are forced to disconnect from their phones for an entire day, these symptoms appear. Addiction to mobile phones is similar to heroin addiction. The intense desires on mobile phones are equivalent to "itching like a crack junkie." Nomophobia sufferers just cannot live without their phones since it causes emotional distress. Worried, confused, anxious, irritable, insecure, uneasy, restless, crazy, addicted, terrified, jealous, furious, lonely, dependant, depressed, twitchy, and paranoid are just some of the words that come to mind [10].

This nomophobia is an emerging behavioural problem which needs attention. Medical students may suffer from nomophobia to varying degrees, as they prefer phones for study materials and a variety of additional reasons that we will discuss. It is necessary to raise public awareness about the dangers of smartphone addiction. Hence this research study is conducted to assess the prevalence and associated factors of nomophobia among medical and nursing students of AIIMS Patna.

Objectives

To assess the prevalence and associated factors of nomophobia and to determine the association of prevalence and associated factors of nomophobia with selected demographic variables among undergraduate students of AIIMS Patna.

Hypothesis

There will be a significant association between the prevalence and associated factors of nomophobia and selected demographic variables among undergraduate students of AIIMS Patna.

Operational definitions

Assess an estimate of nomophobia among undergraduate students of AIIMS Patna.

Prevalence: The percentage of nomophobia among undergraduate students of AIIMS Patna

Nomophobia: The term NOMOPHOBIA or NO MObile PHOne PhoBIA is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity.

Associated factors: The risk factors that predispose the individual to Nomophobia.

Undergraduate students

Those students who are studying for a bachelorette degree of BSc (Hons.) Nursing and MBBS of AIIMS Patna.

Materials & Method

A quantitative research approach and descriptive research design were used**.** The setting of the research study is the Colleges of AIIMS Patna.

Sample selection criteria

Inclusion criteria: Undergraduate students who are studying in AIIMS Patna and willing to participate.

Exclusion criteria: Undergraduate students who are not willing to give their consent for the study and not available at the time of data collection.

Sample size: The total sample size is 230. By using sample size proportions and prevalence formula at the margin of error 6% confidence level of 95%and the calculated sample size is 210.

Description of tool: The tool consists of

Tool 1

Socio-demographic variable Performa comprising of age, gender, course, professional year, monthly income of the family, type of family, the price range of smartphone used, duration of smartphone ownership, frequency of use of a smartphone, frequency of checking of the smartphone, the purpose of use of the smartphone, the purpose of checking of the smartphone, duration of use of smartphone per day, data usage per day.

Tool 2

Nomophobia Questionnaire (NMP-Q) The NMP-Q is a 20-item scale developed by Yildirim and Correia (2015) through a thorough procedure including qualitative and quantitative phases. The NMP-Q comprises four factors (Factor 1: not being able to communicate; Factor 2: losing connectedness; Factor 3: not being able to access information; and Factor 4: giving up convenience). A 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) is applied to each NMP-Q item leading to a summated total score. The higher the score, the greater the severity of nomophobia. In addition, the interpretation of the NMPQ score into the level of nomophobia (out of a total score between 20 and 140) is 20 corresponding to the absence; 21–59 corresponding to a mild level; 60–99 corresponding to a moderate level; and ≥100 corresponding to severe level.

Procedure for data collection

The process of gathering information to address a research problem is called data collection. Data collection was conducted from 12th March 2022 to 11th April 2022 in AIIMS Patna. Formal administrative approval was taken before the conduct of the study. Ethical clearance was obtained from both Department research committees followed by Institutional Ethical Committee. The data was collected from 230 undergraduate students by web-based questionnaire through Google Forms. Samples were given the necessary information and informed consent was taken. Confidentiality of the data was ensured. The purpose of the study was explained, and the selected subjects were required to mark the correct option in the structured questionnaire as well as in a seven-point Likert scale.

The procedure for data collection was found to be satisfactory.

Result

Table 1: Description of frequency of socio-demographic variable according to the level of nomophobia among undergraduate students of AIIMS Patna. N=230

Sociodemographic Variable	Variable		No Nomophobia	Mild Nomophobia	Moderate Nomophobia	Severe Nomophobia
Age(years)	17-19 years	56	0	12	33	11
	20-22 years	137	1	37	72	27
	23-25 years	37	0	6	23	8
Gender	Male	53	1	13	25	14
	Female	176	0	42	102	32
	Other	1	0	0	1	0
Course	MBBS	69	1	15	37	16
	BSc (Hons) Nursing	161	0	40	91	30
Monthly income of family	Below 50,000	82	0	14	50	18
	50,000-100000	81	0	19	46	16
	Above 1 Lakh	67	1	22	32	12
Type of family	Joint	75	0	19	45	11
	Nuclear	155	1	36	83	35
Price range of smartphone used	<10,000	73	0	23	40	10
	>10,000	157	1	32	88	36
Duration of smartphone ownership	<5 year	189	1	45	105	38
	>5 year	41	0	10	23	8
Duration of use of smartphone per day	<3 hour	92	1	34	41	16
	3 hour-6 hours	107	0	20	67	20
	>6 hour	31	0	1	20	10
Data uses per day	<2GB	176	1	47	94	34
	>2GB	54	0	8	34	12

Table 2: Association of nomophobia with selected socio-demographic variable. N=230

Socio-demographic Variable	Variable	Level of Nomophobia					
		No Nomophobia	Mild Nomophobia	Moderate Nomophobia	Severe Nomophobia	Fisher exact Test	p-value
Age(years)	17-19 years	0	12	33	11	3.370	0.815
	20-22 years	1	37	72	27		
	23-25 years	0	6	23	8		
Gender	Male	1	13	25	14	9.846	0.246
	Female	0	42	102	32		
	Other	0	0	1	0		
Course	MBBS	1	15	37	16	2.915	0.413
	BSc (Hons) Nursing	0	40	91	30		
Monthly income of the family	Below 50,000	0	14	50	18	7.353	0.238
	50,000-100000	0	19	46	16		
	Above 1 Lakh	1	22	32	12		
Type of family	Joint	0	19	45	11	2.510	0.405
	Nuclear	1	36	83	35		
The price range of smartphones used	<10,000	0	23	40	10	5.100	0.137
	>10,000	1	32	88	36		
Duration of smartphone ownership	<5 year	1	45	105	38	0.533	1.000
	>5 year	0	10	23	8		
Duration of use of smartphone per day	<3 hour	1	34	41	16	22.169	0.000*
	3 hour-6 hours	0	20	67	20		
	>6 hour	0	1	20	10		
Data uses per day	<2GB	1	47	94	34	3.784	0.296
	>2GB	0	8	34	12		

* table 2 revealed that there is a significant association between selected demographic variables such as duration of use of smartphone and nomophobia with a Fischer exact value score of 22.169 at a P value 0. 000. The more the duration of Use Of A Smartphone, The More Will Be A Score Of Nomophobia

Discussion

Prevalence of nomophobia: In this period of technological growth, technology dependence has developed, with "nomophobia" being one example. The reliance on mobile phones has grown to the point that they have become an addiction. In the present study the prevalence of nomophobia is (99.5%) which is similar to the studies done by Ganesh Shanmugasundaram Anusuya et al., (99%) and by Madhusudan M et al., (99%) [12,13]. Both studies have used the same questionnaire of Yildirim C and Correia A, as tools in their study [11]. When compared to a study conducted by Pavithra MB et al., in the year 2015, among medical students in Bangalore it was found that the prevalence of nomophobia was only 39.5%. The explanation for the disparity in nomophobia prevalence can be related to the different nomophobia questionnaires employed. The questionnaire used in their study was a pretested and validated questionnaire which was modified from the original version of the questionnaire developed by Raines ML [14].

In this study 229(99.56%) are having nomophobia in which 55(23.913%) are having mild nomophobia, 128(55.652) moderate nomophobia, 46(20%) severe nomophobia while 1(0.43%) are having no nomophobia. In a similar study done by Ganesh Shanmugasundaram Anusuya et al., 397(99%) were nomophobic.101(25.3%), 225(56.3%), and 70(17.5%) of the study participants had mild, moderate and severe nomophobia, respectively, while 1% of participants had no nomophobia. The study conducted by Sethia S et al. revealed that 32.15%, 61.5% and 6.15% of the study participants had mild, moderate and severe nomophobia, respectively, while 0.2% of participants are having no nomophobia [15].

Association of nomophobia with selected socio-demographic variables

In this study there is the association of nomophobia with a selected socio-demographic

Variable (i.e. Duration of smartphone used per day) at p= 0.000 and fisher exact value of 22.169, which means that the more will be the duration of smartphone used per day, the more will be the score of nomophobia. This finding was comparable with the study done by Ganesh Shanmugasundaram Anusuya et al., in which the study showed that the important predictor for nomophobia is the use of mobile phones>5 hours in a day (p = 0.013). It was also found in the study by Sethia S et al., that those using mobile phones for 2-4 hours and 4-6 hours per day had a larger proportion of mild and moderate nomophobia.[15]

The results of this research project are also supported by the following related studies:

A cross-sectional study was conducted among undergraduate medical students for the evaluation of nomophobia. A 20-item nomophobia questionnaire was used to assess the prevalence of nomophobia among the students, and the purpose and in which context the smartphone was used was also asked. The result was that the mean age of the 451 students was 20.7 ± 1.72 years, and the majority were females. Mild nomophobia was seen in 15.5% of the students; 67.2% were having moderate nomophobia, while 17.3% were suffering from severe nomophobia [16].

A cross-sectional study was conducted for a period of 3 months (June to September) in 2016 on students of Gandhi Medical College, Bhopal. A total of 473 MBBS students were selected by purposive sampling. The percentage of female participants was 51.6%. The majority (56.1%) of participants belonged to the age group of 20-22 years. More than 57% of participants started using smart mobile phones before attaining the age of 18 years. 291 (61.5%) were having moderate, 6.1% had severe nomophobia and only one participant was not suffering from nomophobia. [15].

A descriptive correlational study design was chosen to describe the prevalence of nomophobia among Sultan Qaboos University students. A convenience sampling technique was used to select 735 students based on defined inclusion criteria. The possible association between nomophobia and academic performance was investigated using descriptive analysis and a Pearson correlation statistical test. The prevalence of nomophobia among students was 99.33%, most with

A moderate level of nomophobia. Students with severe nomophobia reported weak academic performance (p = .706), but this was not statistically significant [17].

A descriptive cross-sectional study was conducted on 221 medical residents in Menoufia University Hospitals in the frame of 13 months. They were assessed through predesigned questionnaires to determine the prevalence and severity of nomophobia and anxiety. The prevalence of both nomophobia and anxiety was 100% among the studied group. More than half of the participants had moderate nomophobia and ~ 73% of the participants had mild anxiety. There was a positive moderate correlation between anxiety and nomophobia (r = 0.51), as increasing the severity of anxiety was associated with an increase in the severity of nomophobia [18].

Sureka, V. et al. (2020). Conducted a study on, "Prevalence of nomophobia and its association with stress, anxiety and depression among students". This study aimed to understand the prevalence of nomophobia and try to find out the association of nomophobia with stress, anxiety and depression. It was a cross-sectional study which was conducted among first-year medical and dental college students. The study's findings revealed a high frequency of nomophobia among students. Nomophobia was found to be strongly linked to stress and sadness. Chronic cell phone users have also reported poor sleep quality, which has led to mental health problems.[19]

Nursing Implications: The study finding implies nursing education, nursing administration and nursing research.

Nursing education: Education is crucial to the advancement of nursing education excellence. The ultimate aim is to decrease the prevalence of nomophobia and its associated factors among undergraduate students and to teach the meaning of nomophobia at the start of the University career to undergraduate students to appropriately handle students' behaviour and to make them aware of mobile phone use and misuse, particularly in clinical setup to avoid the irreversible errors.

Nursing administration: It should initiate measures to decrease the prevalence and associated factors of nomophobia and the responsibility of the nurse administrator is

To set up a timetable for students to learn about nomophobia at the start of their academic careers. It is an alarm to wake up the Administrator by keeping students engaged, organising workshops regarding Nomophobia and its consequences and arranging other technologies as a substitute.

Nursing research: Research facilitates the broadening of the Nursing horizon; the study has provided the base to conduct research in future on the assessment of the prevalence and associated factors of nomophobia among undergraduate students.

Limitations The study was confined to a small number of study subjects and the findings cannot be generalized. And was limited to undergraduate and AIIMS Patna only.

Recommendations The study may be replicated using a large sample size to generalize the findings and conducted all over India to assess the prevalence and associated factors of nomophobia and on other age groups and professionals also.

Conclusion

The findings of the study illustrated that most of the undergraduate students (55.652/%) have a moderate level of nomophobia, 23.91% of undergraduate students have a mild level of nomophobia, 20% of undergraduate students have severe nomophobia and 0.435% of undergraduate students have absent nomophobia. The study also revealed that there is an association between selected demographic variables i.e., duration of use of smartphone and nomophobia among undergraduate students of AIIMS Patna.

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