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Prevalence of Nomophobia-using Nomophobia Questionnaire among health science students

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Abstract

Aim: To find out the prevalence of nomophobia-Using a Nomophobia Questionnaire, among health science students.

Background: Due to the advances in smartphone technology, adolescents find difficult to refrain themselves from these devices. Smartphone usage is almost uncontrollable among the youth. This screen-based activity has become so addictive that youths fail to allocate their leisure time for physical activity. These high-tech tools have become a major contributor to sedentary lifestyle leading to low physical fitness levels.

Methodology: To conduct this study subjects is taken according to inclusion and exclusion criteria. Prior to starting this study the procedure is explained to the subjects and consent form is taken from subjects survey based investigation is carried out by nomophobia questionnaire (NMP-Q).

Results: Total 170 Students comprised of 72.4% females and 27.6% males. Mean age of participants was 22.49 ± 1.47 . Out of 170 students, 18.8% students have mild nomophobia, 68.8% having moderate nomophobia and 12.3% having severe nomophobia.

Conclusion: The prevalence of nomophobia among health science students of 18-27 years, all students have some degree of nomophobia in which 18.8% have mild nomophobia, 68.8% have moderate nomophobia and 12.3% have severe nomophobia.

Keywords: Nomophobia, health science students mobile phone

Introduction

"Nomophobia" is discomfort, anxiety, and nervousness caused by being out of contact with a mobile phone. This disorder, Nomophobia a catchy contraction for "no mobile phone" and mobile phone addiction. It is a result of the development of technologies that enable virtual communication ^[1]. Nomophobia is considered as a disorder of the 21st century ^[2]. Nomophobia affects 18.5–73% of college students. Individuals with nomophobia share certain typical characteristics, such as using multiple mobile phones and chargers, frequently monitoring screens to check for notifications, and keeping mobile phones close to them during sleep. People with nomophobia seem to avoid face-to-face interaction and prefer a world of virtual connection ^[3].

The reasons for increasing cell phone use are an increase in communication, safety, increased status symbol, entertainment etc. Overuse of mobile phones can affect social and psychological well-being and health. It is often defined as a "dependence syndrome," which is the term used by the World Health Organization (WHO Expert Committee, 1964) to replace addiction or habituation. This is categorized under ICD-10, as a behavioral addiction which according to the DSM-5, includes: (1) use in larger quantities or for longer than initially intended, 2. a desire to cut down or control use, 3. spending a great deal of time obtaining, using, or recovering from the substance, 4. craving, 5. use in situations in which it is physically hazardous, 6. continued use of the substance despite adverse physical or psychological consequences associated with use and 7. Withdrawal symptoms. In India, addiction is stated at 39-44% of youth ^[4].

Mobile phones are omnipresent in our day-to-day lives and have transformed from a status symbol to a felt need. Nowadays, the addiction to mobile phones is quite common. Nomophobia is the fright or panic developed among individuals when they are unable to access their mobile and the anxiety they develop when there is no mobile signal or no talk time or a mobile with a low or discharged battery which in turn severely strikes their concentrating intellect. Nomophobia is considered as a disorder of the 21st century. As mobile phones influence and alter the individuals' state of mind, the diagnosis of nomophobia is a mental disorder [2].

It is provoking marked changes in the behaviour and living patterns of the current generation. Medical education has been scientifically proven to be very stressful, and demanding and the additional stressor of spending a long time away from home often comes as the underlying reason to use or overuse a phone [5].

We have named a problem-nomophobia-but we are just beginning to understand why people experience anxiety when being out of touch or why they never want to turn their mobile off, and why our mobiles are the first thing to check in the morning and the latest at night. To answer all these questions, we need to understand this phenomenon better. King and Yildirim were the first scholars to address this task. In the study by King *et al.*, nomophobia was regarded as a 21st century disorder resulting from information and communication technologies [6]. Mobile phones allow us to stay connected with others and provide us with a sense of security. We can work, chat with family and friends, take pictures, buy clothes or books, and even control home appliances. They play such a significant role in our lives that we feel anxious without them. The relationship between humans and these communication devices has become problematic in some cases [6].

One of the major bulks of the subscription base of mobile phone users is comprised of college students. They defend their usage by citing various uses of the mobiles; the most common being searching infotainment sites for their curriculum based works. Mobile phones satisfy the need for individualization and yet also signify being a part of a peer group. The usage of mobile phones is not intended for negative purposes and influence; however, the attitude and time toward these devices have enslaved the students, making them addicts [7].

Apart from the detrimental effects on learning and mental health, excessive mobile phone use can to a large extent disrupt university students' physical activity, as supported by several previous findings. Kim *et al.* found that smartphone addiction in university students may negatively influence physical health by reducing the amount of time spent in physical activity such as walking. Penglee *et al.* revealed that high smartphone use among college students may be a barrier to physical activity and 8 proposed a strategy for physical activity promotion in higher education settings. Similarly, Barkley and Leep pointed out that mobile phones used by college students can be viewed as a sedentary leisure behavior resulting in poor physical activity. Therefore, from these above studies, it is not difficult to surmise that Physical exercise and MPD may be inversely related to each other [8].

Apart from these devices being useful, it has various side effects. Most of the Nomophobics have a habit of using their phones late at night for hours. Our sleep quality is negatively hampered due to the increase in screen time. This is what makes them tired and feel fatigued the whole day. This not

only makes the individual lethargic but minimizes the involvement in physical activities like household chores, leisure- walking, and playing sports [9].

Physical activities have a major influence on social well-being, and self-esteem, maintaining the balance between energy levels and decreasing the likelihood of chronic diseases. Participating in physical activities helps increase the metabolic energy expenditure of an individual. People spending ample time watching videos, playing games, and surfing the web generally contribute to a sedentary lifestyle [9]. Due to low physical activity, behavioural changes like depression and anxiety persist and worsen. Due to this emotional instability, youths are less likely to participate in physical activities and outdoor sports. These negative emotions make an individual more prone to develop screen addictions reducing their level of performance, leading to a rise in weight [9].

Researchers have found that mental fatigue associated with excessive smartphone usage could be related to low levels of physical activity. Moreover, screen time > 2 hours per day was found to be a major risk factor for adolescents being overweight. It has been found that the majority of smartphone use occurred in sitting. In other words, as daily smartphone usage increased, so did the sitting time. Along with reinforcing sitting behavior, it is giving rise to sedentarism. In order to improve one's quality of life, it is necessary for one to adopt a healthy lifestyle by increasing their performance in physical activity. Youths will have a positive impact on their health as they will cultivate this habit in future [9]. For many the smartphone has become an 9 activity that helps increase the metabolic energy expenditure of an individual. People spending ample time watching videos, playing games, and surfing the web generally contribute to a sedentary lifestyle [9].

The increasing utilization of new technological devices and virtual communication involving personal computers, tablets and mobile phones (smartphones) are causing changes in individuals' behaviour and daily habits. Besides providing various advantages these new technologies, can lead to many types of social problems like social isolation, and economic/financial problems like larger debts incurred to buy or use smartphones [1].

Method and Materials

The following study was An Cross-sectional type of study. The sampling population was collected by Purposive sampling method. The minimum sample size of the research was 170. The study was conducted in Dr. Ulhas Patil Medical College Jalgaon. The duration of study was 6 months.

The Criteria of selection of participants was done based on Inclusion Criteria which included Health science undergraduate students of both genders, Age between 18-27 Yrs and participants who are not willing to participate are excluded.

Procedure: The study was conducted among the students of Dr. Ulhas Patil Medical Jalgaon. Ethical clearance was obtained from the institutional ethical committee of Dr. Ulhas Patil Medical College, Jalgaon. As per the inclusion and exclusion criteria, 170 undergraduate students from different batches both day scholars and students staying in the hostel those, using mobile phones were included in the study. The procedure is explained to all the participants prior to the study and after taking written consent students was included in the study.

Results

The nomophobia was assessed using the NMP-Q. The study population of 170 students comprised of 72.4% females and 27.6% males. The study group included was undergraduate healthscience students. The students who participated in the study were in the age group between 18 – 27 years. Mean age of participants was 22.49± 1.47.

When asked about the total duration of time spent on using mobile phone per day, 6 (3.5%) who used it for only half to one hour whereas 26(15.3%) used it for 1-2 hours, majority 63 (37.1%) responded that they use mobile phone for duration of 3-4 hours per day and 59 (34.7%) used it for 5-6 hours and 16(9.4%) used for more than 7 hours in a day (Table-1).

Table 1: Demographic Details

Age (Mean ± SD)		22.49± 1.47			
Gender	Female	(72.4%)			
	Male	(27.6%)			
Screen Time	Frequency (Percentage)				
	Less than 1 hr	(3.5%)			
	to 2 hr	26(15.3%)			
	to 4 hr	(37.1%)			
	to 6 hr	(34.7%)			
	to 8 hr	(9.4%)			
Degree		1 st Yr	2 nd Yr	3 rd yr	4 th yr
	BPTH (n=94)	22	22	27	23
	BHMS (n=36)	6	12	8	23
	MBBS (n=19)	7	5	2	5
	Nursing (n=21)	2	8	6	5

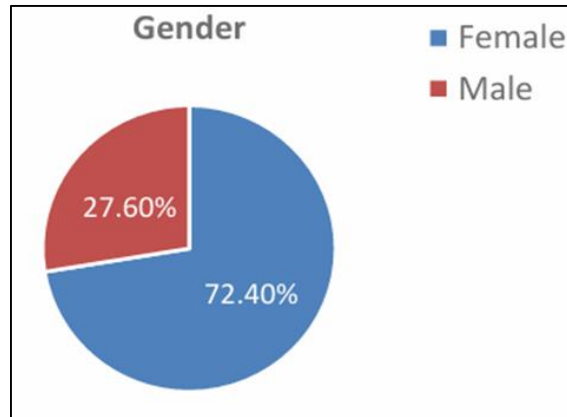


Fig 1: Gender Distribution

Comment: Out of 170 participants 72.4% are female and 27.6% are males.

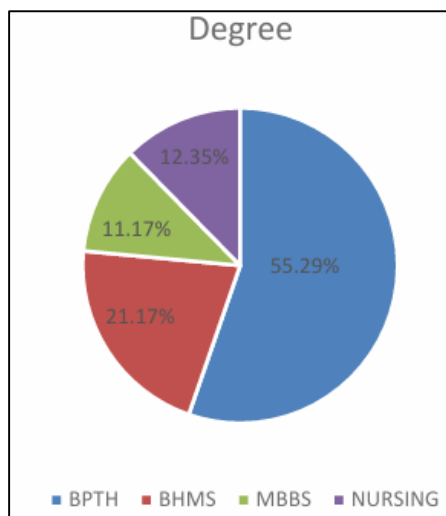


Fig 2: Distribution of subjects in different streams

Comment- Out of 170 participants, 94 (55.29%) are BPTH students, 36 (21.17%) are BHMS students, 19 (11.17%) are MBBS students and 21(12.35%) are NURSING students.

The students having Nomophobia score of >20 were considered as Nomophobics (21-59= mild, 60-99=moderate, 100-140= severe). All students had some degree of

nomophobia. Out of 170 students 32(18.8%) students have mild nomophobia, 117(68.8%) having moderate nomophobia and 72.40% 27.60% Gender Female Male 55.29% 21.17% 11.17% 12.35% Degree BPTH BHMS MBBS NURSING 24 21(12.3%) having severe nomophobia. Out of 123 female,

29(23.6%) have mild nomophobia, 79(64.2%) have moderate nomophobia, 15(12.2%) have severe nomophobia. Out of 47 males, 3(6.4%) were found to have mild nomophobia, 38(80.9%) have moderate nomophobia and 6(12.8%) have severe nomophobia.

Table 2: Distribution of degree of nomophobics

Variables		Frequency	
Total Students (n=170)	Mild	32 (18.8%)	
	Moderate	117 (68.8%)	
	Severe	21 (12.3%)	
Gender	Female	Mild	29(23.6%)
		Moderate	79(64.2%)
		Severe	15(12.2%)
	Male	Mild	3(6.4%)
		Moderate	38(80.9%)
		Severe	6(12.8%)
Bpth (n=94)	Mild	21 (22.3%)	
	Moderate	63 (67.0%)	
	Severe	10 (10.6%)	
Bhms(n=36)	Mild	5 (13.9%)	
	Moderate	26 (72.2%)	
	Severe	5 (13.9%)	
Mbbs (n=19)	Mild	5 (26.3%)	
	Moderate	10 (52.6%)	
	Severe	4 (21.1%)	
Nursing (n=21)	Mild	8 (38.1%)	
	Moderate	10 (47.6%)	
	Severe	3 (14.3%)	

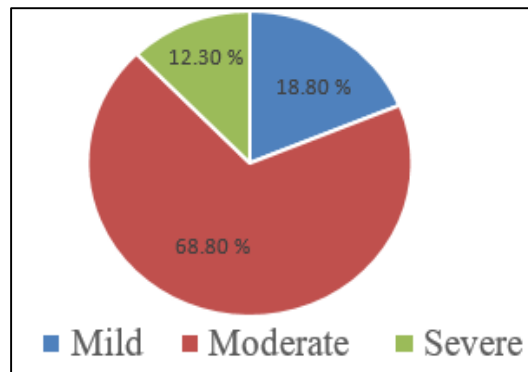


Fig 3: Distribution of degree of nomophobia in all students

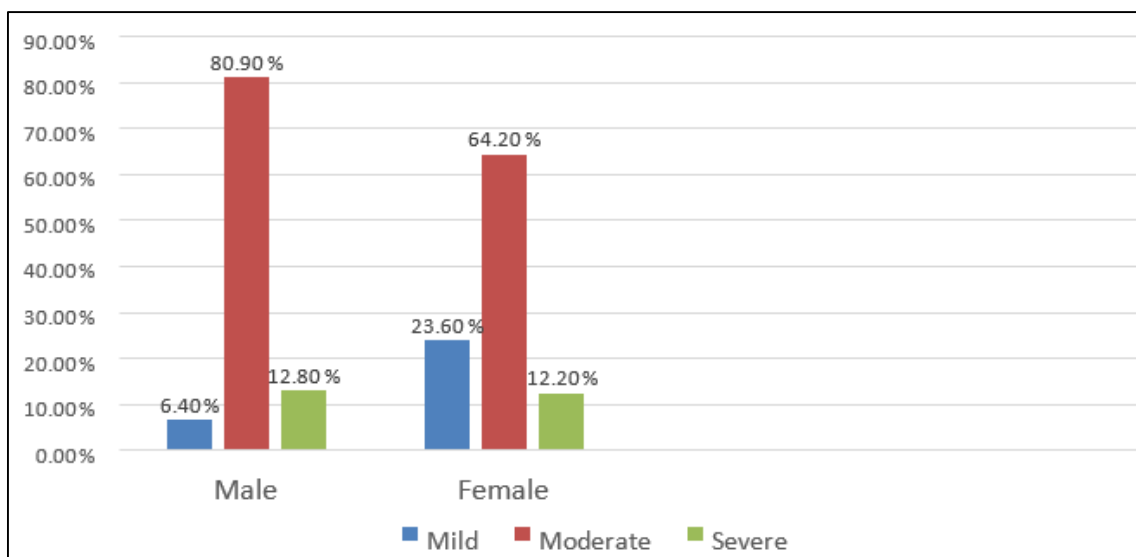


Fig 4: Distribution of degree of nomophobia in male and females

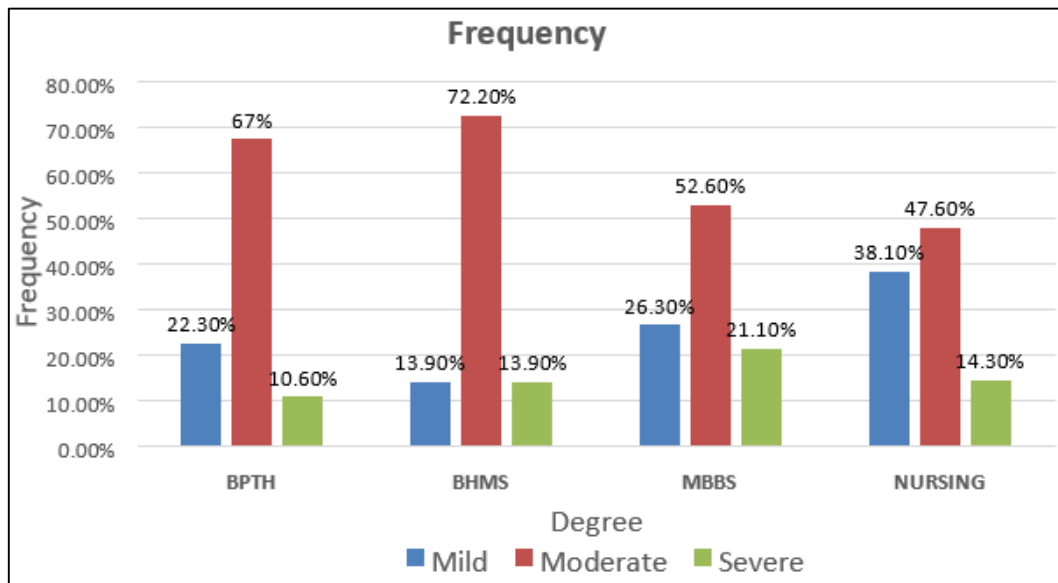


Fig 5: Distribution of degree of nomophobics in different streams

Discussion

Nomophobia, also known as no mobile phobia, is characterized by a variety of clinical traits, such as frequent use and extended use of a cell phone, carrying a charger with oneself at all times, experiencing anxiety and nervousness at the thought of misplacing a cell phone or when it is unusable due to a dead battery, network, or balance. Some characteristics of mobile phone dependence and nomophobia include having few social face-to-face interactions with people and preferring to connect via new technologies. Other characteristics include incurring debt or significant expenses from using a cell phone. The aim of the study was to find out the Prevalence of nomophobia – using a nomophobia questionnaire, among 18-27 years of health science students. Out of 170 students, 18.8% students have mild nomophobia, 68.8% having moderate nomophobia and 12.3% having severe nomophobia

The study conducted by Pavitra MB at al in 2015 to assess the prevalence of nomophobia The among medical students revealed that 200 students studied 39.5% were nomophobic. They found that the number of Nomophobes were certainly higher among males (44.8%) compared to females (33.7%). In our study frequency of male and female subjects of severe nomophobia are almost equal, whereas the frequency shows that more male students are in moderate nomophobia and more female students are in mild category [7].

Similarly, In a study on problematic internet and mobile phone use by the university students conducted by Beranuy *et al*, problematic mobile phone use was found to be lower in the female students compared to the males [9]. The study conducted by Sonal Kar at al in 2017 to assess the prevalence of nomophobia among medical students in private college revealed that 284 students participated in the study mean age 21.08 yrs; between 2nd to 8th semester; female: male being 5:4, score for nomophobia as found in the study same gender wise. Severe nomophobia was seen more in males ie 23.7% and 18.6% in females and total in the sample was 21.1% 78.6% of the females were seen to be moderately afflicted which means unless controlled, they have a propensity to go on to severe grade [5].

The study conducted by Marcos Kubrusly at al in 2021 to assess the effect of nomophobia on medical students at a

private institution and its association with depression, anxiety, stress and academic performance. This is a cross sectional observational study carried out in medical students at Center University Christus. Virtually all students (n=292, 99.7%) had some degree of nomophobia, and 64.5% had a moderate or severe level of nomophobia. More than 50% of the students had higher than mild degrees of stress, and 19.5% and 11.2% of the students had severe or very severe levels of anxiety and depression. They suggested that nomophobia is likely to increase anxiety, stress and depression and, as a result, leads to a decrease in academic performance [8].

The study conducted by Sarada Vadlamani at al in 2017. To assess mobile phone dependence and self-perceived effects among medical students. A descriptive cross-sectional study was done among 200 MBBS students during May 2016. Modified Mobile Phone Dependence Questionnaire (MPDQ). Among 200 MBBS students aged 17 to 24 years, 38.5% were males, 61.5% were females and 38% day scholars, 62% hostellers. Mean score for mobile phone dependence was 19.62 ± 7.84 and high dependence was seen in 26% subjects. Self- attribution of mobile phone dependence was seen in 51%. Self-perceived effects observed were eyestrain (51%), headache (38.5%), sleep disturbances (33%), anxiety (25.5%) academic disturbances (27.5%), problems in relationships (7%), accidents [6].

Conclusions

The prevalence of Nomophobia among health science students of 18-27 years is as follows

1. All students have some degree of nomophobia
2. 18.8% - mild nomophobia
3. 68.8% - moderate nomophobia
4. 12.3% - severe nomophobia

Future Scope

Future study can correlate degree of nomophobia with neck pain, muscle imbalance, text neck syndrome, De Quervain tenosynovitis, etc.

Clinical Implication

Awareness of complications of nomophobia should be

created. E.g- development of sedentary life style, psychological issues like anxiety, depression, muscle imbalance, postural disturbance, musculoskeletal pain, etc.

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