



Nomophobia among Students of Healthcare Colleges and Institutions: A Cross-Sectional Study

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INTRODUCTION: The Covid-19 pandemic has made a student dependent on their phones as a result of which, these students were glued to their phones for various tasks.

AIM: To assess the level of mobile phone dependence (nomophobia) on students of healthcare colleges and institutions in and around a South Indian city.

MATERIALS AND METHOD: The study was cross-sectional in nature. Mobile phone dependence was obtained from Raines ML et al. and modified accordingly. Score obtained below 20, 20–24, and above 24 were labelled as participants not at risk, at risk, and nomophobia, respectively. Students aged 17 years or higher and using mobile phones on a regular basis (atleast for 4 months) for at least 1–2 hours per day we included and those reporting a history of alcohol or substance abuse and any psychiatric or sleep disorder were excluded. Data was entered into SPSS version 24.0 and statistical test used were the student's t-test and logistic regression and Pearson's correlation keeping p value significant at ≤ 0.5 .

RESULTS: Most of the students were males (53.9%) and most students were ≥ 20 years in age (43.5%). 46% of the students reported using their smartphone for more than 2 hours a day and 59.9% of them reported having a poor sleep quality index of >5 (59.9%). Most of the students (40%) reported a nomophobic score of >24 , With 53.2% and 51.3% females. Analysis of the logistic regression revealed a positive, linear and significant association with higher nomophobic scores and poor sleep quality index scores ($r=+0.69$, $p=0.02$ for nomophobic score >24).

CONCLUSION: The present study revealed a high on nomophobia prevalence among students of healthcare colleges and institutions, which needs urgent intervention as these students are becoming addicted to smartphone usage.

KEYWORDS: Nomophobia, Depression, Quality of Life

INTRODUCTION

It is now practically impossible for a person to stay away from their mobile phone as they have been handling various tasks for the person. Especially during the Covid-19 pandemic, smartphones made the student dependent on their phones. As a result of these lockdowns, these students were glued to their phones after attending their online classes for browsing social media, watching videos, playing games and many more tasks.

However, this has led to a new condition among such mobile phone users, which is termed as "nomophobia". Literally put, it is the addition of the words "no", "mobile" and "phobia", that is a fear of not having mobile phones and psychological symptoms that arise due to fear of loneliness as virtual communication becomes indispensable part of our life.¹

A research in Mumbai reported that 58% of their respondents could not manage even one day without a mobile phone.² These nomophobics have also been reported to have mood swings and try to remain

connected hold on to a mobile; they have also been reported to have hallucinations of false mobile sounds and ring tones even while sleeping and this tends to affect performance in daily life.

The Indian market has been reported as the second-largest market after China for mobile phone handsets, this demand being driven by the booming population and an increase in mobile related apps and the need to stay connected as well as for safety reasons.^{3,4} Since the younger generation is technology savvy, and depends on their mobile phone for their day to day uses, the present study was conducted to assess the level of mobile phone dependence (nomophobia) on students of healthcare colleges and institutions.

MATERIALS AND METHOD

The present study was conducted over a period of two months and was cross-sectional in nature. The study participants included 432 students and interns belonging to various healthcare colleges and institutions in and around Nagercoil, Tamil Nadu using convenience sampling and after obtaining proper



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approval from the concerned authorities.

Students aged 17 years or higher and using mobile phones on a regular basis (atleast for 4 months) for at least 1–2 hours per day we included. Students reporting a history of alcohol or substance abuse and any psychiatric or sleep disorder requested to decline answering the questionnaire. Data was collected using a pre-tested and a pre-validated questionnaire and was distributed via online medium. To maintain data confidentiality, no personal data was collected from the students. The language of the questionnaire was English and all the questions were objective and multiple-choice type. The questionnaire included demographic details including age, gender, socioeconomic status, and residence; mobile phone, Sleep Quality Index (PSQI) details.

Mobile phone dependence was obtained from Raines ML et al. and modified accordingly. Every question was compulsory and consisted of three responses depicting maximum to minimum mobile phone association. Scoring was done on the basis of response to each of the question. Score obtained below 20, 20–24, and above 24 were labelled as participants not at risk, at risk, and nomophobia, respectively.

Data was entered into SPSS version 24.0 and statistical test used were the student's t-test and logistic regression and Pearson's correlation keeping p value significant at ≤ 0.5 .

RESULTS

The demographic details as well as the smartphone usage, sleep quality index and the nomophobic scores are described in table 1. It was observed that most of the students were males (53.9%) and most students were ≥ 20 years in age (43.5%). 46% of the students reported using their smartphone for more than 2 hours a day and 59.9% of them reported having a poor sleep quality index of >5 (59.9%). Most of the students (40%) reported a nomophobic score of >24 .

The gender wise distribution with respect to the nomophobic score and the year of study is depicted in table 2. The highest percentage of males (53.2%) as well as females (51.3%) reported having a nomophobic score of >24 and the difference was found to be statistically significant (0.02) along with a positive correlation ($r=+0.76$). Most males (43.3%) belonged to the 2nd year of their study while most females (43.3%) were

CHARACTERISTICS	N,%
Gender	
Male	233 (53.9)
Female	199 (46.1)
Age (in years)	
≤ 17	105(24.3)
18	86(19.9)
19	53(12.3)
≥ 20	188(43.5)
Smartphone use duration (except calling)	
>1 hour/day	85(19.7)
$>1-2$ hours/day	148(34.3)
>2 hours/day	199(46)
Sleep Quality Index	
<5 (Normal)	177 (40.1)
>5 (Poor)	255 (59.9)
Nomophobic score	
<20 (No Risk)	145(33.6)
20-24 (At Risk)	114(26.4)
>24 (Nomphobia)	173 (40)

Table 1. Demographic details as well as the smartphone usage, sleep quality index and the nomophobic scores

studying in courses having more than 3 years of study/were interns.

Analysis of the logistic regression revealed a positive, linear and significant association with higher nomophobic scores and poor sleep quality index scores ($r=+0.69$, $p=0.02$ for nomophobic score >24).

DISCUSSION

The present study revealed a high on nomophobia prevalence among students of healthcare colleges and institutions, which needs urgent intervention as these students are becoming addicted to smartphone usage. This addiction can lead to serious health consequences along them and affect their quality of life as it may lead to serious psychiatric(5) and psychological problems among them.⁵

It was observed that 46% of the students reported using their smartphone for more than 2 hours a day. These findings are similar to Mallya et al. who, among medical students reported that 33.8% of students frequently used smartphone while at work, and 57.9% expressed anger over not being able to use the smartphone when desired.⁶

Nomophobia among students was reported to be 53.2% among males and 51.3% among females (score of >24). This is higher as compared to the results of Mengi A et

	Males	Females	p value	r value
Nomophobic score				
<20 (No Risk)	43(18.5)	55(27.6)	0.07	+0.76
20-24 (At Risk)	66(28.3)	42(21.1)	0.45	
>24 (Nomphobia)	124(53.2)	102(51.3)	0.02*	
Year of Study				
1 st year	57 (24.5)	13(6.5)	-	-
2 nd Year	101 (43.3)	32(16.1)		
3 rd year	36(15.5)	68(34.1)		
> 3 rd Year/Internship	39(16.7)	86(43.3)		

Table 2. Gender wise distribution with respect to the nomophobic score and the year of study of the students

al.(40%)⁷, Choudhury et al. (14.6%)⁸, and lower in comparison to the 75% reported by Dasgupta et al.⁹ A difference in methodological approach due to the use of different questionnaires used for assessment of nomophobia precludes an accurate comparison with the results of our present study.

In the present study, a direct, significant relationship (($r=+0.69$, $p=0.02$ for nomophobic score >24) between nomophobia score and sleep quality index (PSQI) was observed. It is well documented that disturbed sleep patterns has the potential to have serious impacts on health, which can cause waking time tiredness has been observed with mobile phone overuse and a tendency toward addiction was also reported in the studies.^{7,10}

Since this study was exploratory in nature, further studies are warranted to either support or refute our findings. However, keeping the limitations in mind (small sample size and city based sample), it can be safely stated that the results of the present study can be generalized for all healthcare college and university going students.

CONCLUSION

Based on the results, urgent health interventions and proper screening of nomophobes in a college setting is required to reduce the incidence of this disease. In a

post-pandemic world, colleges are advised to resume with extra-co-curricular activities no involving the use of smartphones as well as encouraging students to take up physical activities to stay from their smartphones as much as possible.

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	Sleep Quality Score		p value	r value
	<5	>5		
Nomophobic score				
<20 (No Risk)	39	54	0.88	+0.69
20-24 (At Risk)	38	63	0.72	
>24 (Nomphobia)	100	138	0.02*	

Table 3. Logistic Regression and Correlation analysis if Sleep Quality Scores and Nomophobia among students

details.

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