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Original Research Article

A study on the prevalence of nomophobia and its associated factors among the medical students of a medical college in central Kerala

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ABSTRACT

Background: Nomophobia is considered as the disorder of the 21st century. It can have various consequences on mental health, affecting work and school performance and generating little social interaction outside of the virtual one. The aim of the study was to assess the prevalence and determinants of nomophobia among medical students.
Methods: A cross-sectional study was conducted among 294 students of a medical college of Kerala during the period December 2022-February 2023. The prevalence of nomophobia was assessed using the nomophobia questionnaire (NMP-Q). Severity of insomnia was assessed using Insomnia index questionnaire.
Results: The prevalence of nomophobia among the participants was 99.6%. The grades of nomophobia showed no significant association between gender, age, year of study, average screen time and severity of insomnia.
Conclusions: The high prevalence of nomophobia addresses the need for an urgent intervention.

Keywords: Insomnia, Medical students, Mobile phones, Nomophobia

INTRODUCTION

Mobile phone has its omnipresence in our day to day life and have transformed from being a symbol of status to a felt need. Nowadays, the addiction for mobile phones is quite common and the terminology identified for this addiction is nomophobia.[1]

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.[2] The term nomophobia is constructed on definitions described in the DSM-IV, it has been labelled as a "phobia for a particular/specific thing".[3]

Based on the definition of nomophobia, this phenomenon is a consequence of anxiety, stress, and fear due to lack of access to mobile phones and related issues.[4] This fear is followed by a feeling of frustration, insistence, expectation, persistence, and obsessive thoughts and imaginations. Researches have shown that the effects of nomophobia are more obvious in people with underlying diseases (such as depression, anxiety, fear, dependency, low self-confidence and social issues).[3]

Nomophobia is considered as the disorder of the 21st century.[5] It can have various consequences on mental health, affecting work and school performance and generating little social interaction outside of the virtual one.[3,6-8] These consequences are significantly negative for medical students and future doctors, who require constant updating of knowledge, which could be diminished in cases of nomophobia.[8] Likewise, in physicians with nomophobia, it could increase the occurrence of medical errors, as has been reported in nursing professionals.[9-14]

In this sense, the objective of the study was to evaluate the prevalence and determinants of nomophobia among the medical students.

METHODS

A cross-sectional study was conducted for a period of 3 months, from December 2022 to February 2023. Study participants were under graduate medical students using smartphones from all academic years of Amala institute of medical sciences, above the age of 18 years. Students who were not willing to participate and not willing to give informed consent were excluded from the study. There were a total of 294 study subjects.

Ethical clearance was obtained from the institutional ethics committee.

A self-administered nomophobia questionnaire (NMP-Q) was used to assess the prevalence of nomophobia. It is a validated scale developed by Yildrim et al.[15] Data regarding basic sociodemographic details were obtained. The severity of insomnia was assessed using Insomnia Index questionnaire.[16] Confidentiality was maintained throughout the study.

Data were entered in MS Excel spread sheet. Analysis of the data was done using appropriate software. Appropriate statistical method such as Chi-square, t test were used.

RESULTS

There were a total of 294 participants in the study. Out of the total 294 participants, 203 (69%) were females and 91 (30.3%) were males as shown in Table 1. According to the year of study, 89 subjects (30.3%) belonged to 1st year, 76 subjects (25.9%) belonged to 2nd year, 60 subjects (20.4%) belonged to 3rd year and 69 subjects (23.5%) belonged to 4th year (Table 1). In the study, the participants belonged to the age category between 18-29 years. The mean age of the study participants was 21.45 with a standard deviation of 1.945. The maximum age of the study participants was 29 and minimum was 18. The median age was 21.

Table 1: Medical students participated according to gender and year of study (n=294).

Characteristics	N (%)
Gender	
Females	203 (69)
Males	91 (30.3)
Year of study	
1st year	89 (30.3)
2nd year	76 (25.9)
3rd year	60 (20.4)
4th year	69 (23.4)

The prevalence of nomophobia among the participants was 99.6%. All students except 1 (0.3%) reported some level of nomophobia with 25.5% (75) reporting mild levels, 57.5% (169) reporting moderate levels and 16.7% (49) severe levels (Table 2). Table 4 shows the insomnia severity index among the 294 participants. 138 students (46.9%) have no clinically significant insomnia, 136 students (46.2%) have sub-threshold insomnia, 19 students (6.5%) have clinical insomnia of moderate severity and 1 student has severe clinical insomnia.

Table 2: Distribution of grades of nomophobia (n=294).

Nomophobia level	N (%)
Absent	1 (0.3)
Mild	75 (25.5)
Moderate	169 (57.5)
Severe	49 (16.7)

Table 3: Reason for spending maximum time on smartphone (n=294).

Reason for spending maximum time on smartphone	N (%)
Watching videos and movies	113 (38.4)
Listening music	30 (10.2)
Calling family and friends	17 (5.8)
Gaming	4 (1.4)
Internet for academic purposes	19 (6.5)
Social media	108 (36.7)
Reading	2 (0.7)
Pinterest	1 (0.3)

About 38.4% of students (113) spent maximum time on smartphones for watching movies and videos, 36.7% of students (108) for social media and the remaining for other purposes as shown in Table 3.

Table 4: Severity of insomnia (n=294).

Category	N (%)
No clinically significant insomnia	138 (46.9)
Subthreshold insomnia	136 (46.2)
Clinical insomnia (moderate severity)	19 (6.5)
Clinical insomnia (severe)	1 (0.3)

The association between nomophobia and its associated factors were carried out. Chi square test was computed to find association between gender and year of study. There was no significant association (Table 5). T test was carried out to compare age, average screen time and severity of insomnia with that of nomophobia, it also showed no association.

Table 5: Chi square test.

Variables	Nomophobia category			
	No nomophobia	Nomophobia	Total	P value
Gender				
Male	0 (0)	91 (30.3)	91 (30.3)	0.92
Female	1 (0.3)	202 (68.7)	203 (69)	
Year of study				
1st year	1 (0.3)	88 (29.9)	89 (30.3)	0.63
2nd year	0 (0)	76 (25.9)	76 (25.9)	
3rd year	0 (0)	60 (20.4)	60 (20.4)	
4th year	0 (0)	69 (23.4)	69 (23.4)	

DISCUSSION

In the current study 99.6% of students reported some levels of nomophobia. This is in correspondence with the study conducted by Sethia et al, where 99.8% had some or other degree of nomophobia.[17] A similar study conducted by Veerapu et al, all the undergraduate medical students have some or other degree of nomophobia.[18] Considering the age group in which the study was conducted, the higher levels of nomophobia could be attributed to the increased availability and accessibility of mobile phones for all.

The results of this study shows that 19.2% of females and 11% of males have severe nomophobia which is less compared to the study conducted by Farooqui et al in Pune where 22.1% of females and 24.2% of the males had severe nomophobia.[19] In our study grades of nomophobia showed no significant association with gender. This is consistent with the study conducted by Madhusudan et al in the year 2016-2017 and Harish et al in the year 2018.[12,20]

Similarly, no significant association was found between nomophobia and year of study. This finding is similar to study done by Veerapu et al and sethia et al.[17,18] In the study conducted by Madhusudan et al, significant association was found between nomophobia and phase of study.[12] This difference might be due to the usage of mobile phones for educational purposes in the post covid era.

In our study 38.4% of students spent maximum time on smartphones for watching movies and videos and 36.7% of students for social media. In the study conducted by Madhusudan et al and Harish et al most common reason for using smartphones was to communicate with family.[12,20] This difference might be due to the availability of internet access and other OTT platforms.

The study found no association between nomophobia and insomnia. In the study conducted by Veerapu et al, a weak positive correlation was found between nomophobia and sleeping difficulty.[18] However, Athens insomnia scale was used to grade insomnia in that study. In a study conducted in Japan, the hours of usage of phone was significantly associated with insomnia.[21]

There are several limitations to the current study. Only students from a private medical college in Kerala were included in this study. So generalizations cannot be made to other groups or other areas of the country. Also, it is necessary to consider other determinants to understand better, the risks of nomophobia.

CONCLUSION

In summary, the prevalence of nomophobia is very high among the medical students. It adversely affects the social, physical and mental wellbeing of students. This necessitates the need for spreading awareness and evolving methods to reduce nomophobia.

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