Research Article

Nomophobia and its determinants among the students of a medical college in Kerala

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Received: January 28, 2017; **Accepted:** February 15, 2017

ABSTRACT

Background: Smartphones today have become an important part of our technoculture, especially among the younger population. Discomfort, anxiety, nervousness, or anguish caused by being out of contact with a mobile phone is termed as "Nomophobia"- no mobile phobia. Nomophobia is on the rise across the globe. **Objectives:** To find out the prevalence of nomophobia and its determinants among students of a medical college. **Materials and Methods:** This was a cross-sectional study conducted among the students of a medical college of Wayanad. The prevalence of nomophobia was assessed using the new nomophobia questionnaire (NMP-Q). **Results:** The prevalence of nomophobia was 97%. The grades of nomophobia showed no statistically significant association with sex, admission quota, and residence ($P = 0.909$, 0.399, 0.56) whereas statistically significant association with phase of the MBBS ($P = 0.001$) with highest prevalence among phase II students. 99.06% students were using smart phones for calling family members, 91.84% for calling friends and 88.57% for listening to music. **Conclusions:** There was high prevalence of nomophobia among the students of the medical college. Nomophobia was not found to be associated with sex, quota of admission, place of origin, and place of stay. The most common reasons for smartphone use were calling of family members.

KEY WORDS: Nomophobia; Medical Students; Smartphones; Wayanad District

INTRODUCTION

In today's contemporary digital and virtual society, anxiety is the affliction of life. New addition to the stress list is "nomophobia," the fear of being out of mobile phone contact. This disorder, nomophobia is an acronym for "no mobile phone phobia." It is a result of the development of technologies that enable virtual communication. Nomophobia refers to discomfort, anxiety, nervousness, or anguish caused by being out of contact with a mobile phone.[1]

Access this article online	
Website: http://www.ijmsph.com	**Quick** Response code
DOI: 10.5455/ijmsph.2017.0203115022017	

For many, the smart phone has become an extension of their ear, from the moment they wake up until the second they fall asleep. This love affair with the mobile phone is both enabling and crippling at the same time. The increasing utilization of new technological devices and virtual communication involving personal computers, tablets, and mobile phones (smartphones) is causing changes in individuals' behavior and daily habits. Besides providing various advantages these new technologies, can lead to many type of social problems like social isolation, economic/financial problems such as larger debts incurred to buy or use smart phones. It can also cause both physical and psychological pathologies such as damages related to electromagnetic field radiation, car accidents, distress linked to the fear of not being able to use new technological devices.[2]

Mobile phones were introduced in few markets in the 1980s, and their use spread only in the mid-1990s. Subscribers have

increased from 12.4 million in 1990 to 500 million in 2000, 3.3 billion in 2008, and 7 billion by 2014 with a penetration rate of 95%.[3-5] The use of mobile phones is now so extensive that in some countries the number of phone subscriptions outnumbers the population. Indian market is one of the largest in the world for mobile phones.[6]

Smartphones have today become an important part of our techno-culture, especially among the younger population, whose primary need is to socialize, join in and to be liked. Research shows that Nomophobia is on the rise across the globe and more and more people fear of being without or losing their mobile device. Different studies in India have shown the prevalence of nomophobia among medical students in the range of 18.5-39.5%.[6-8]

The current study employs the new Nomophobia questionnaire (NMP-Q) which in addition to finding out the prevalence of nomophobia helps us in assessing the severity of nomophobia also.[4] Currently, there are no studies available in India which have employed the new NMP-Q. Hence, in this background, the present study was conducted to find out the prevalence of nomophobia and its determinants among the students of a medical college in Kerala. Medical students were chosen because the younger generation is the largest consumer of the mobile phones and use phones more frequently.[6]

MATERIALS AND METHODS

This was a cross-sectional study done in DM Wayanad Institute of Medical Sciences, Wayanad District, Kerala, between August 2016 and January 2017. All undergraduate medical students of the college who were present on the day of study and willing to give informed consent were selected, making a total of 429 study subjects. Ethical clearance was obtained from the Institutional Ethics Committee, and data obtained were kept confidential. A pre-designed and pre-tested (NMP-Q) were used to obtain information regarding nomophobia.[4] In addition, basic sociodemographic details and also other details related to mobile phone usage were obtained. Data were entered in MS Excel and analyzed using Statistical Package for Social Sciences 21.0. Descriptive statistics such as mean and percentage and also inferential statistics like Chi-square test to find out association were used.

RESULTS

The total number of students selected were 429, of which 122 (28.4%) were male and 307 (71.6%) female. 232 (54.1%), 167 (38.9%), and 30 (7%) were from government, management, and NRI quotas respectively. 206 (48%) and 223 (52%) were from urban and rural background respectively. 424 (98.8%) were hostellites and 5 (1.2%) day scholars.

Overall, 416 (97%) of the students were nomophobic and 13 (3%) non nomophobic. 143 (33.3%) showed mild, 241 (56.2%) moderate, and 32 (7.5%) severe nomophobia, respectively (Figure 1). The grades of nomophobia showed a no statistically significant association with sex, admission quota, and residence (P = 0.909, 0.399, 0.56) whereas statistically significant association with phase of the MBBS (P = 0.001) with no nomophobia and mild nomophobia categories more among phase I, moderate nomophobia among phase II, and severe among phase III, part II students (Table 1).

About 99.06% students were using smartphones for calling family members, 91.84% for calling friends and 88.57% for listening to music which were the most common reasons for using smartphones (Table 2). Average amount spent on recharge was Rs. 188.4 ± 17.6/month and average duration of smartphone usage was for the past 26.8 ± 1.96 months.

DISCUSSION

Our study showed that 97% of the students of the medical college were nomophobic. In contrast, other studies reported 39.5%[6] and 18.5%[8], the reason for which could be different questionnaires used. Also of late more advanced smartphones with newer features are available which could be attributed to the increased prevalence of nomophobia. Another possible reason could be lack of recreation facilities in the vicinity of the medical college which could have lead them to be more dependent on mobile phones. Grades of nomophobia showed no statistically significant association with sex and place of stay which was similar to the findings of other studies.[6,8]

Grades of nomophobia showed statistically significant association with phase of study with highest prevalence of nomophobia in phase II and least in phase I. The reasons for this could be long duration of phase II where exams are at the end of 18 months where as in others it is at the

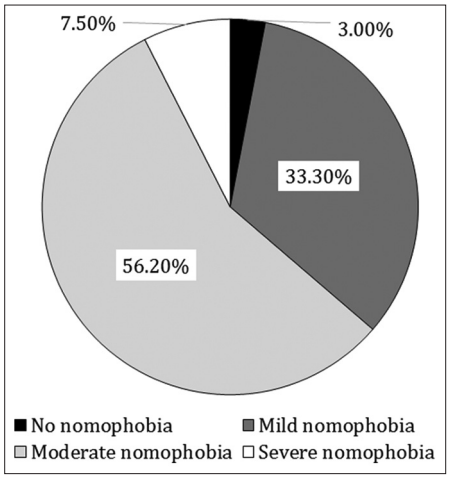

Figure 1: Distribution of grades of nomophobia

Table 1: Distribution of grades of nomophobia across sexes, phase of study, admission quota, place of origin, and place of stay

Variables	Nomophobia category					*P*
	No nomophobia	Mild nomophobia	Moderate nomophobia	Severe nomophobia	Total	
Gender						
Male	4 (3.3)	**48 (39.3)**	63 (51.6)	7 (5.7)	122 (100)	0.909
Female	9 (2.9)	95 (30.9)	**178 (58)**	**25 (8.1)**	307 (100)	
Quota of admission						
Government	7 (3)	76 (32.8)	133 (57.3)	**16 (6.9)**	232 (100)	0.399
Management	6 **(3.6)**	**58 (34.7)**	87 (52.1)	16 (9.6)	167 (100)	
NRI	0 (0)	9 (30)	**21 (70)**	0 (0)	30 (100)	
Phase of MBBS						
I	**8 (5.7)**	**60 (42.6)**	69 (48.9)	4 (2.8)	141 (100)	**0.001**
II	2 (1.2)	39 (23.4)	**112 (67.1)**	**14 (8.4)**	167 (100)	
III (part 1)	3 (2.5)	44 (36.4)	60 (49.6)	14 (11.6)	121 (100)	
Place of origin						
Urban	6 (2.9)	62 (30.1)	**121 (58.7)**	**17 (8.3)**	206 (100)	0.56
Rural	**7 (3.1)**	**81 (36.3)**	120 (53.8)	15 (6.7)	223 (100)	
Place of stay						
Hostellites	**13 (3.1)**	**142 (33.5)**	237 (55.9)	**32 (7.5)**	424 (100)	0.802
Day scholars	0 (0)	1 (20)	**4 (80)**	0 (0)	5 (100)	

*Fischer's exact test was used as more than 20% of expected frequencies were less than 5

Table 2: Reasons for mobile phone use

Reasons for mobile phone use	Percentage of students using
Calling family members	**99.06**
Calling friends	**91.84**
Listening music	**88.57**
Using internet for academics	88.34
Social networking	85.31
Taking photos	81.35
Texting	74.36
Playing game	57.58

end of 12 months. In contrast, Dixit et al. observed that the prevalence of nomophobia was highest in phase III part I and least in internship.[8] The reason for this difference could be differences in the questionnaires used in the two studies as well as non-availability of phase III, part II students, and interns in the current study.

The most common reason for the use of smartphones in our study was calling of family members which was similar to the findings of other studies.[6,9] Average amount spent on recharge was Rs. 188 month which was lower compared to other studies.[6,8] The possible reason for this could be launching of free 4G services by a private provider during this time.

The limitations of the study are that it is based on medical students of one particular college only and hence it cannot be used to generalize the prevalence of nomophobia to the entire country or world.

CONCLUSIONS

There was high prevalence of nomophobia among the medical students of the college. Nomophobia was not found to be associated with sex, quota of admission, place of origin, and place of stay. The most common reasons for smartphone use were calling of family members followed by friends and listening to music.

ACKNOWLEDGEMENTS

The authors would like to sincerely acknowledge the support provided by HOD, other staff of the Department of Community Medicine and Management of the DMWIMS in conducting the study

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How to cite this article: Madhusudan M, Sudarshan BP, Sanjay TV, Gopi A, Fernandes SDA. Nomophobia and determinants among the students of a medical college in Kerala. Int J Med Sci Public Health 2017;6(6):1046-1049.

Source of Support: Nil, **Conflict of Interest:** None declared.