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PREVALENCE OF NOMOPHOBIA: MOBILE PHONE DEPENDENCE AMONG MEDICAL AND DENTAL STUDENTS OF PAKISTAN

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ABSTRACT

Introduction: Mobile technology is an integrated part of today's life style. Nomophobia is described as fear and anxiety feelings that an individual feels while he/she cannot access or reach to mobile devices. **Objective:** To find out the prevalence of Nomophobia and to determine the factors associated with Nomophobia among medical & dental students. **Methodology:** A cross sectional, institutional based study was done during January to April 2019 among medical and dental students of Bahawalpur. Using systemic sampling technique, Nomophobia Scale (NMP Q) questionnaire was administered to undergraduate students. Data was analyzed by SPSS version 22. Descriptive statistics was used to calculate the score of Nomophobia and its severity. Frequency of all dependent variables was determined. Chi-square was used to identify the determinants of Nomophobia among medical and dental students. P-value less than 0.05 was considered as statistically significant. **Results:** Out of 35o students, female were 200 (57%) and 230 (65.7%) from faculty of medicine. Majority of medical and dental students 371 (97%) are experiencing Nomophobia and 214 (61.0%) using mobile phone for social networking. Statistically significant difference was observed between Nomophobia and time spent on mobile phone per day. (P-value <0.05). **Conclusion:** Findings reveal a high level of Nomophobia prevalence among medical and dental students. We suggest to conduct further studies to investigate the impact of Nomophobia and changes imposed by mobile devices and to establish the protection strategies.

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INTRODUCTION

A new era has been started with the existence of mobile phones especially smart phones. Previously, computers were in the center of our lives and in the following year's internet usage was widened, however the focus has been changing dramatically over years after existence of tremendous number of mobile phones.[1] With recent developments, mobile phones not only provide voice and/or text communications among others, but also provide multidimensional communication opportunities due to smart phone capabilities.[2]

Just as their functionality and capabilities are incessantly increasing, so are the problems associated with mobile phones and their negative effects on individuals.[3] These new technologies, can lead to many type of social problems like social isolation, economic and financial problems like larger debts incurred to buy or use smart phones. It can also cause both physical and psychological pathologies like damages related to electromagnetic field radiation, car accidents, distress linked to the fear of not being able to use new technological devices.[4] Smart phones have become today an important part of our techno-culture especially among the younger population,

whose primary need is to socialize, join in and to be liked. Younger generation is the largest consumer of the mobile phones, and they use mobile phones more frequently. The rising use of mobile phones is adversely affecting the daily activities as well studies of medical students. “No mobile phobia” or „the fear of being out of mobile phone contact "is the literal meaning of “Nomophobia."[3] Nomophobia refers to discomfort, anxiety, nervousness or anguish caused by being out of contact with a mobile phone.[5] 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.[6]

Various problems emanating from mobile phone use has been recognized, including excessive use of mobile phones,[7] mobile phone dependence,[8] mobile phone addiction[9] and so on. Studies reported that, in United Kingdom, medical students 66% are afraid of either losing or being separated from their phones while 41% own more than one phone.[10]A few studies from India conducted among college students have identified mobile phone behavioral addiction as ranging from 33.5% to 39.6%.[11, 12]Another study among medical students showed that 23% students felt that they lose concentration and become stressed when they do not have their mobile around, 39.5% students were Nomophobia and another 27% were at risk of developing Nomophobia.[13]

There is a lacuna of research work in Pakistan regarding the use of mobile phone and its dependence among medical & dental students. This study was intended to find the prevalence of Nomophobia and to determine the factors associated with Nomophobia among medical & dental students.

METHODOLOGY

This descriptive cross-sectional study was conducted from January to April 2019 at Medical and Dental College, Bahawalpur. A total of 350 students from faculty of medicine and faculty of dentistry were selected by using systemic sampling technique. Students from first to final year who agreed to participate and gave verbal inform consent were included. Participants who were not physically or mentally fit on the day of data collection were excluded. After taking ethical approval, a validated and pre tested Nomophobia Scale (NMP-Q) questionnaire[14] was administered to undergraduate students of medicine and dentistry on day and time of their choice. A 10-min briefing regarding the objectives of the study was given and the students were asked to provide their own views in unbiased manner. The responses from each class was taken separately and 15 minutes free time was given to respond to the provided questionnaire in their dedicated session. It was emphasized that confidentiality of the participants will be maintained.

The questionnaire contains the demographic data of the participants and 20 statements about Nomophobia. A Likert-type scale was used provided each item score between 1 to 7(disagree to agree). Scores on NMP-Q classified as “Absence of Nomophobia” if score was 20, “Mild level of Nomophobia” if score was 21 to 59, “Moderate level of Nomophobia” if score was 60 to 99 and “Severe Nomophobia” if score was 100 to 140.

The data was entered and analyzed using software SPSS version 22. Descriptive statistics was used to calculate the score of Nomophobia and its severity.Frequency of all dependent variables was determined. Chi-square was used to identify the determinants of Nomophobia among medical and dental students. P-value less than 0.05 was considered as statistically significant.

RESULTS

A total of 350 students completed the NMP-Q, female students were 200 (57%) and 150 (43%) were males. Participants from faculty of medicine

were 230 (65.7%) and from faculty of dentistry were 120 (34.3%).

Table 1 shows the results for Nomophobia. We were surprised to see that 70 (20.0%) students have severe Nomophobia, moderate level of Nomophobia was experienced by 234 (66.9%), and mild level of Nomophobia was present in 37 (10.6%) students, whereas Nomophobia was absent in only 9 (2.5%) students.

The reason for the most frequent use of mobile phone among students were social networking 214 (61.0%), texting 42 (12.0%), followed by talking family and friends 36 (10.3%) and taking photos were 31 (8.9%). (Table 2)

Among students who were experience Nomophobia, 193 (56.6%) were females, 226 (66.3%) from MBBS, 216 (63.3%) using mobile phones for more than 3 years, 312 (91.5%) were using mobile data for internet and 210 (61.6%) spent more than 5 hours on mobile phones per day as shown in Table 3.

Statistically significant difference was observed between Nomophobia and time spent on mobile phone per day. (P-value <0.05).

Table 1. Frequency of Nomophobia

Nomophobia	Frequency (n)	Percentage (%)
Absent	9	2.5
Mild	37	10.6
Moderate	234	66.9
Severe	70	20.0
Total	350	100.0

Table 2. Reasons for the most frequent use of mobile phone

Reasons	Frequency (n)	Percentage (%)
Talking with family & friends	36	10.3
Texting	42	12.0
Using internet for academics	10	2.9
Social networking	214	61.0
Listening music	8	2.3
Gaming	9	2.6
Taking photos	31	8.9
Total	350	100.0

Table 3: Determinants of Nomophobia among medical & dental students

Characteristics	Nomophobia		TOTAL n = 350	P-value
	YES (n=341)	NO (n=9)		
Gender Male Female	148 (43.4) 193 (56.6)	2 (22.2) 7 (77.8)	150 (42.9) 200 (57.1)	0.179
Faculty MBBS BDS	226 (66.3) 115 (33.7)	4 (44.4) 5 (55.6)	230 (65.7) 120 (34.3)	0.157
Using mobile phone (years) ≤ 3 > 3	125 (36.7) 216 (63.3)	4 (44.4) 5 (55.6)	129 (36.9) 221 (63.1)	0.438
Mobile data (Internet) Yes No	312 (91.5) 29 (8.5)	8 (88.9) 1(11.1)	320 (91.4) 30 (8.6)	0.558
Time spent on mobile phone per day (hours) 1 2 – 4 5 or more	13 (3.8) 118 (34.6) 210 (61.6)	0 7 (77.8) 2 (22.2)	13 (3.7) 125 (35.7) 212 (60.6)	0.028

DISCUSSION

Nomophobia has presented among students with different features like, consistent use of mobile phones and spending significant time on calling, texting, social networking and using its other applications, feeling anxious and nervous at the thought of losing mobile phone and its accessories like handset, charger, power bank, network and balance. Looking screen of mobile phone every time for calls, messages and updates, always keeping mobile phone very close even during sleep, interaction with other peoples using new applications and to spent lot of money in up gradation of mobile phone and uploading balance are also considered as features of mobile phone dependence and Nomophobia.[15]

Our study revealed that the prevalence of Nomophobia among medical and dental students is 97% which is much higher from other studies conducted in different countries. Study conducted by Sharma N in India found the prevalence of Nomophobia in 73% of study population which shows its rising trends among of medical students.[16]Another study from India reported 39.5% Nomophobia among medical students.[13]Study conducted by Dixit et al in Indore

shown that 8.5% of the study participants have symptoms of Nomophobia.[17]A survey conducted by Secur Envoy on 100 people in the UK concluded that the students of today are experiencing Nomophobia; that is, feeling anxious and afraid when not with their cell phone. The survey results showed 66% of respondents admitted they could not live without their cell phone.[18]This percentage is increasingly bloated in respondents aged 18 and 24 years.

In our study 61% students stated that they use their mobile phones for social networking, while 23% that they want to keep in touch with family and friends. Study from India reported that 67% of the students purchased mobile phone to call n keep in touch with family members.[13] Sahin S et al also found same reason for using mobile phone was given by more than half of the students in their study.[19]

The results of this study also found that Nomophobia is more among females 56.6% as compare to males. There are plenty of studies support this argument and stating that females tent to be more Nomophobic than males.[14, 20, 21]In contrary to this, study conducted by Pavithra MB reported that Nomophobia was certainly higher among males 44.8% as compared to females 33.7%.[13]Several other studies claim that there is no significant difference in terms of gender.[2,17,10].

A significant difference was observed between Nomophobia and time spent on mobile phone per day. Participants spending 5 hours or more on using mobile phone are Nomophobic. Another study revealed that Nomophobia were higher in students who used mobile phones for more than three hours compared to students using for less than three hours in a day.[13] Kalaskar P Bstated that 90% of the participant students have been using smart phones for more than 5 to 6 hours a day are indefensible to variety of situation caused by Nomophobia such as anxiety, sleeplessness, stress, distractibility etc.[22] There are both pros and cons of mobile phone usage during student life. It helps us to connect with our family and friends, but on the other hand, there is clinching evidence of its increasing subjective symptoms due to its overuse amongst Nomophobics.

CONCLUSION

Findings reveal a high level of Nomophobia prevalence among medical and dental students. It is crucial to raise awareness about Nomophobia not only amongst medical students, but general population also. We suggest to conduct further studies to investigate the impact of Nomophobia and changes imposed by mobile devicesand to establish the protection strategies.

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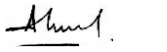
1	Muhammad Ahmad	Study designing, Writing of manuscript and editing	
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