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Research Article

Frequency of Nomophobia Among Medical Students of Hayatabad, Peshawar, Pakistan: A Cross-Sectional Survey

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Abstract

Nomophobia is a new medical term coined in 2008 by a UK-based health organization. It is an acronym for the term "No mobile phone phobia" and refers to people's anxiety and fear of being unable to use their smartphones due to their battery running out or being out of coverage area. In some cases, it can become a serious mental problem for those affected. This study was conducted to determine the frequency of nomophobia in medical students of Hayatabad, Peshawar, Pakistan. A cross-sectional study was conducted for a period of 6 months from Feb 2021-July 2021 on medical students of Hayatabad and included all 5-year MBBS students in the survey. Participants who did not own their smartphones were excluded from the study. The total sample size was 325 participants. The convenient sampling method was used for data collection. Demographic data was obtained initially, and nomophobia was assessed using the Nomophobia Questionnaire which is a 7-point Likert scale, and performed scoring and minimum score was 20, whereas the maximum possible score was 140. Data was analyzed using SPSS version 21. A total of 130 (40%) males and 195 (60%) females participated in the study. The mean age of the participants was 21.72±3.043 (years). Out of the total 325 participants, a majority (168; 51.7%) reported having moderate levels of nomophobia followed by severe levels. Only 42 (12.9%) participants reported to have mild levels of nomophobia. The current study findings showed that nomophobia is quite common in medical students. Nomophobia is a serious mental health issue and raising awareness is essential to help reduce its impact.

Keywords: Anxiety, fear, mental health, phobia, smartphone, nomophobia

1. Introduction

Lower With the advancement in technology, the use of smartphones is rising significantly (Farooqui, Pore, and Gothankar 2018). While modern information technology is quite useful, its excessive usage may lead to numerous problems in the younger population such as social isolation and withdrawal, low self-esteem, economic burden from the desire to buy the latest gadgets, and health-related risks (Pavithra, Madhukumar, and Mahadeva 2015). Nomophobia is the abbreviation for "no mobile phone phobia" which describes the anxiety that is experienced by some mobile phone users when their phone is not with them (Shaheen, Alkorma, and Alkalash 2020). Nomophobia is considered a disorder of the 21st-century (Betoncu and Ozdamli 2019).

Nomophobia is characterized by a wide range of feelings and behaviors including general discomfort, anxiety, nervousness, or anguish that is felt just because a person is out of reach of their smartphone or computer for a considerable amount of time (Gonçalves, Dias, and Correia 2020). All of this has a significant impact on health, which has negative repercussions on

other aspects of life as well such as study and work. In addition, it is influencing the relationships and interactions between individuals, producing a distance and isolation from the physical world (Jahrami *et al*. 2024, Erdurmazlı *et al*. 2024).

The number of active mobile subscriptions has now exceeded 7.5 billion (Sharma *et al*. 2015). A study in India revealed that 67.2% of the young population suffered from nomophobia (Safdar, Khan, and Qureshi 2020). Another study done by UK researchers observed an increase in nomophobia in 2012 when the figures went from 53% to 66% (Sharma *et al*. 2015). A French survey revealed that 31.3% of students going to college felt anxiety just because they did not have mobile phones with them. (Safdar, Khan, and Qureshi 2020, Gezgin and Çakır 2016) A study conducted in Rawalpindi, Pakistan showed that 61% of the residents were suffering from anxieties that could be termed as nomophobia (Safdar, Khan, and Qureshi 2020).

As nomophobia continues to be an emerging medical condition, it needs increased attention and is of serious concern that most of the students are suffering from it (Bartwal and Nath 2020). Students become disturbed without their mobile phones in case of no network coverage or drained-out battery. Studies have shown that an indirect relationship exists between students' academic performance and the time they spend on their mobile phones. This is because those using mobile phones more are often distracted and less attentive (Berdida and Grande 2023).

Nomophobia has a significant impact on everyday life, and it is a major health concern for everyone. This condition is associated with several complicated syndromes like hearing fake sounds of ring tones and constant checking of phones (Darvishi et al. 2019b). Moreover, it is also strongly correlated with sleep disturbances and insomnia (Jahrami et al. 2021). Studies reveal that addiction to cell phones and social media might lead to memory loss (Prathap 2020).

Nomophobia is considered a significant concern in today's digital world, particularly among young adults who rely heavily on their smartphones. Medical students are especially vulnerable to this problem due to the demanding nature of their studies, which often necessitates constant access to online resources and communication tools. The intense academic pressure and the need to stay connected lead to increased dependency on mobile phones, potentially resulting in anxiety, distractions, and sleep disturbances. Investigating the frequency of nomophobia among medical students is essential, as it could impact their mental well-being and academic performance. This study was conducted to determine the frequency of nomophobia in medical students in Peshawar, Pakistan. By understanding the prevalence of nomophobia, educators and healthcare professionals can develop targeted interventions to promote healthier digital habits and ensure that students are prepared to manage their mobile phone usage effectively, supporting their academic success and future.

2. Materials & Methods

A cross-sectional survey was conducted for a period of 6 months from February 2021 to July 2021. The total sample size of the study was 325 medical students calculated through Raosoft software using a 95% confidence interval and 5% margin of error and the estimated population was 2100. Data was collected from different medical colleges including Khyber Girls' Medical College, Rehman Medical College, North-West School of Medicine, and Pak International Medical College. A convenient sampling technique was used to collect the data. Inclusion criteria were both genders (male and female) and medical students having access to smartphones and internet. According to exclusion criteria, participants who were diagnosed with any psychological illness and those who did not have their smartphones were excluded from the study.

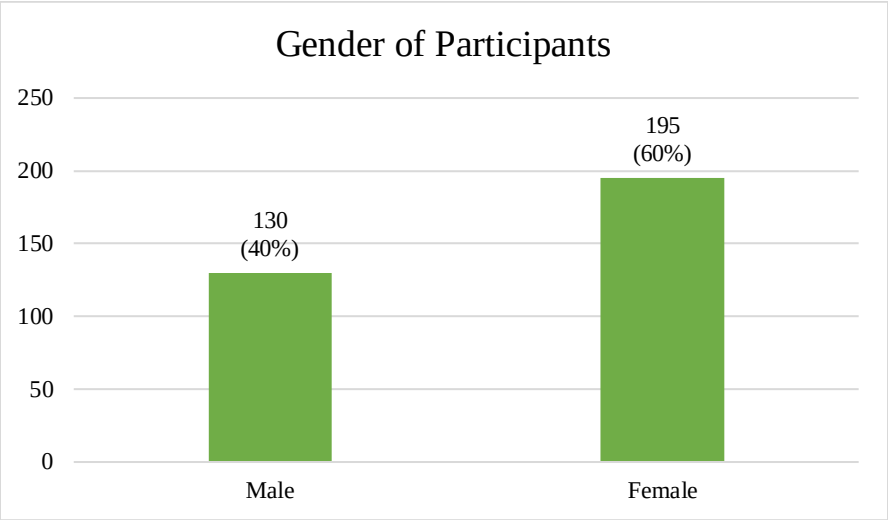

Figure 1: Gender distribution of the participants

Approval letters were obtained from each institute before collecting data. The nature and purpose of the study were explained and informed consent was obtained via signatures from each subject participating in the study. The initial question segment consisted of questions regarding the demographic data. NMP-Q Questionnaire was used to collect data regarding nomophobia as it is a standard tool with high validity and reliability values (Jahrami *et al*. 2023). It comprises 20 questions in total and each response ranges from 1 to 7 (Likert scale) where 1 indicates strongly disagree and 7 indicates strongly agree. The final score was obtained by summing up all the responses. A higher score indicated increased nomophobia. The level of nomophobia was determined using the following ranges where an NMP-Q score equal to 20 indicated no nomophobia, 21 ≤ NMP-Q Score < 60 indicated mild nomophobia, a score of 60 ≤ NMP-Q Score < 100 indicated moderate nomophobia and 100 ≤ NMP-Q Score ≤ 140 represented severe nomophobia. The data was analyzed through Statistical Package of Social Sciences (SPSS) version 21. Qualitative variables were expressed as frequency and percentages, and quantitative variables were presented as mean ± SD.

3. Results

Out of 325 participants, male and female distribution is shown in Figure 1. The mean age of the participants was 21.72 ± 3.043 (years). The majority 81 (24.9%) of the participants were from the fourth year followed by the fifth year. Questions regarding internet access were included in the demographic data where the majority (82.2%) of the participants reported having proper internet access and only 58 (17.8%) participants reported no access (Table 1). Moreover, about 51.7% of the participants reported having moderate levels of nomophobia followed by severe levels. Only 42 (12.9%) participants reported to have mild levels of nomophobia (Table 2).

4. Discussion

The current study aimed to determine the frequency of nomophobia among medical students and results revealed that the majority of the participants had moderate levels of nomophobia followed by severe and mild levels. A study conducted on the medical students at Rawalpindi Medical University showed similar findings as 17.4% of the respondents had mild symptoms of nomophobia, 61.7% had moderate symptoms whereas 20.9% had severe symptoms (Safdar, Khan, and Qureshi 2020).

Table 1: Frequency (%), year of study, and the internet access of the participants.

Variables	Frequency (%)
Year of Study	
1st year	63 (19.4%)
2nd year	40 (12.3%)
3rd year	67 (20.6%)
4th year	81 (24.9%)
5th year	74 (22.8%)
Internet access	
Yes	267 (82.2%)
No	58 (17.8%)

Table 2: Levels of nomophobia observed in the participants.

Severity of disease	Frequency (%)
Mild level of nomophobia	42 (12.9%)
Moderate level of nomophobia	168 (51.7%)
Severe nomophobia	115 (35.4%)

Another study conducted in Pune, India, showed similar results where 17.9% of respondents had mild symptoms, 60% had moderate symptoms and 22% had severe symptoms (Farooqui, Pore, and Gothankar 2018). Similar results were reported in another study conducted by Mohammad Darvishi *et al* in Tehran where an increased prevalence of nomophobia was reported in medical students (Darvishi *et al*. 2019a).

The probable reason for such prominent levels of nomophobia might be that acquiring a mobile phone and even modern smartphones is quite easy. Smartphones are seen as a convenient and accessible means of entertainment that students use to keep themselves busy and entertained.

The current study has some limitations first, it was a cross-sectional survey, and data was collected at a single point it was difficult to establish causality or observe changes in nomophobia over time. Other factors such as exam periods, academic deadlines, or specific events such as a pandemic at the time of the survey may influenced the levels of nomophobia, making the findings less applicable to other times or settings.

5. Conclusions

The study concluded that nomophobia is quite common, especially in medical students. It is recommended to spread awareness among people especially students regarding the excessive usage of smartphones and extended screen time. People need to train themselves to spend their leisure time in healthy activities to minimize the chances of developing symptoms of nomophobia.

Conflict of Interest

All the authors declare no conflicts of interest.

Funding

There were no funding contributions for this research from any source.

Study Approval

This study was approved by the Institute Research Committee of the Khyber Medical University, Peshawar, Pakistan.

Consent Forms

Every participant signed a consent form before participating in the research.

Authors Contributions

RS conceptualized the study, KA, and HG did the data collection, and NA, II, and AS did data analysis and final version approval.

Data Availability

All the data relevant to this study is with the authors.

Acknowledgments

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