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## THE PREVALENCE OF NOMOPHOBIA AMONG MEDICAL STUDENTS IN INDIA: A REVIEW-BASED STUDY

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### Abstract

A review-based study is carried out with the objective of getting information about the prevalence of nomophobia among undergraduate medical students in India. The use of mobile phones, mostly smartphones is rigorously increasing and has an impact on various aspects of the individual's life most people have the availability of a smartphone including students, students have online classes, assignments, and other activities through their phones aside from these students are attached to their phones an inappropriate manner. The study is carried out descriptively and review based, the secondary data was collected through the search engines Google Scholar, and PubMed search by using the keywords nomophobia, no-mobile phone-phobia, mobile phone addiction, and medical students, we found various articles, research papers, and abstract from them we selected some full-length paper for the study according to inclusion criteria. We found that almost all of the medical college students from India had some degree of nomophobia. Most of the students, almost 55 to 60% fall under the moderate level of nomophobia.

**Keywords; nomophobia, no-mobile phone-phobia, medical students.**

### Introduction

Nowadays, mobile phones are a crucial part of life for almost all ages. Mobile phones provide various advantages like connecting with others, online payment, shopping, social networking, gathering information, etc. Besides these advantages, the excessive use of mobile phones can lead to various types of problems, like problems related to their social life, physical problems, and emotional and psychological pathologies. Psychological pathologies involve problems like loneliness, fatigue, interpersonal issues, etc. and they can lead to low self-esteem and concentration problems. Apart from this, excessive use of mobile phones can lead to problems like mobile phone addiction and nomophobia.

In this study, we want to focus on the concept of nomophobia. Nomophobia means no mobile phone phobia. It can be defined as a fear of not being able to communicate. Through mobile phones or fear of being away from their phones. Before this term was described in DSM IV (Diagnostic and Statistical Manual of Mental Disorder) as the phobia of particular or specific things that comes under the domain of the anxiety spectrum, but this term is not yet included in the DSM V. Nomophobia had an effect on the person's mind as well as the interpersonal and social life because a person with nomophobia are present physically with others but they are mentally absent

from the moment, they are preoccupied with their mobile phone, notifications, checking their phones various times, they have urged to take a call or to reply to the messages these type of behaviours can hamper their personal life as well as their relationships with others.

Uses of mobile phones are rapidly increasing day by day. According to the article published in the Times of India, the average hours spent on a mobile per day, per user searched by, around 4.5% from 3.7 hours in 2019 to 4.7 hours in 2021. The number shows a 37% increase since 2019. Now India stands at 5th place globally in terms of time spent on mobile as per the number shown in this article.

We can see that during the COVID-19 pandemic, timing has increased, as well as the number of mobile phone users has also increased. In 2021, India recorded 1.2 billion mobile subscribers, of which 750 million were smartphone users. (Amisha Agarwal, 20 February 2022).

Almost every person from every sector is involved in mobile phone use. Here we are going to focus on students, specifically medical students. For the present study because of the online learning mode, students have phones and besides learning, students use their phones for other purposes like entertainment, and gaming and they are much attached to their smartphones. This study is conducted to gain knowledge about the prevalence of nomophobia among undergraduate medical students in India.

### **The objective of this study**

To find out the prevalence of nomophobia among undergraduate medical students in India. By using previous studies.

### **Material and Methods**

It is a descriptive type of review study. The data used in this study is secondary data, it was collected through the search engines Google Scholar, and PubMed search. The keywords for the search are nomophobia, mobile phone addiction, medical students, and no mobile phone phobia. With these keywords, we found some articles, full-length research papers, and abstracts and studied them. From all these materials full-length papers are selected for this study. The inclusion criteria of this study are the researchers conducted between 2017 to 2022, with medical students, and all the study participants are from India. The exclusion criteria for this study are to study outside of India and other faculties are excluded from this study.

### **Review of the literature.**

Studies related to nomophobia and its effects on medical students done after 2017 are mentioned here.

**Bartwal J. & Nath B. (2020).** Conducted a study on "Evaluation of Normal phobia among medical students using smartphones in North India." This study aimed to evaluate nomophobia among medical students who are using smartphones. For these, a cross-sectional study was conducted among undergraduate medical students. A total of 451 participants are included in the study. This study was taken from a government Medical College in North India from August 2017 to December 2017. The nomophobia questionnaire developed by Yildirim Was used for data collection. The data were analyzed by using the software SPSS version 16. The result shows that 15.5% of students had mild nomophobia, 62.2% had moderate nomophobia, and 17.3. Offering from severe nomophobia, the overall highest main score used for not being able to communicate dimension on nomophobia and the lowest for giving up convenience.

**Veerapu n. Et al. (2019).** Conducted a study on "Nomophobia and its correlation with sleeping difficulties, and anxiety among medical students in a Medical College, Telangana." A cross-sectional study was conducted for a duration of six months to study the grading of Nomophobia and to find out if any correlation exists between nomophobia and sleeping difficulty and anxiety among medical students. 364 MBBS students were taken as participants for collecting data; a semi-structured questionnaire, nomophobia questionnaire, Athen's insomnia scale, and general anxiety disorder-7 items scale were used. Data were analyzed by IBM SPSS version 21. The study showed that out of 364 students 62(17%) have mild, 234(64.3%) have moderate, and 68(18.7%) have severe nomophobia. There is a weak positive correlation between nomophobia, sleep difficulties and anxiety.

**Anusuya G. S. et al. (2021).** “A cross-sectional study on nomophobia among undergraduate medical students in Chennai, India.” The study aimed to determine the prevalence of nomophobia and patterns of mobile phone users among medical students in Chennai. A total of 400 undergraduate medical students, 100 from each study year were taken from Tagore Medical College and Hospital, Chennai, Tamil Nadu, India for selecting students from the first year to 4th year. Stratified simple random sampling was used for collecting the data. A structured questionnaire developed by Yildirim C and Correia A P was used. The data was analyzed using SPSS version 20. Results showed that the overall prevalence of nomophobia is 99%. (396 from 400); 17.5 % (70) showed severe nomophobia, 56.3% (225) moderate nomophobia, and 25.3% (101) had mild nomophobia severe nomophobia was associated with mobile usage for more than 5 hours in a day the top three reasons for using mobile internet were WhatsApp (95%), YouTube (81.3%), and Instagram (74.3%).

**Madhusudan M. et al. (2017).** Conducted a study on “Nomophobia and its determinants among students at Medical College in Kerala.” The objective of this study is to find out the prevalence of nomophobia and its determinants among students at Medical College. This is a cross-sectional study conducted among students at the Medical College of Wayanad between August 2016 and January 2017 on 429 students. The subject’s prevalence of Nomophobia was assessed using the nomophobia questionnaire, the results showed that the prevalence of NOMOPHOBIA was 97% and 3% were non-nomophobia. 33.3% showed mild, 56.2% moderate, and 7.5% showed severe nomophobia respectively.

**Basu M. et al. (2022).** Conducted a Study on “Predictors of nomophobia among undergraduate medical students at tertiary care teaching institute in Kolkata, West Bengal.” An observational study cross-sectional in design was conducted at a territory Teaching Institute in Kolkata among 395 undergraduate medical students for a period of eight weeks. The objective of this study is to estimate the proportion of nomophobia among undergraduate medical students and to find the factors associated with it. The participants of the study are undergraduate MBBS medical students who are selected by using the stratified random sampling method. An NMP-Q questionnaire, socio-demographic and background characteristics, and mobile phones use these three as study tools. The data of the study were analyzed by using SPSS version 25. The results of this study show that all the medical students had some degree of nomophobia, about 26.8% of them had severe nomophobia, 61.3% had moderate nomophobia and 11.9% had mild nomophobia. Age up to 20 years and the presence of addiction had statistically significantly higher odds of nomophobia.

**Sasidhara A. (2022).** Conducted a study on the “Severity of nomophobia and its association with anxiety, stress, and depression among medical students during the COVID-19 pandemic.” This is a cross-sectional analytical study carried out to determine the severity of nomophobia and its association with stress, anxiety, and depression in medical students in a territory care Medical College, hospital. 307 students were included in this study. The method for sampling was random sampling using a computer-generated randomization table, a questionnaire used for data collection are socio-demographic details, details related to mobile phone use, a Nomophobia questionnaire, and the DASS-21 scale. These questionnaires were administered using Google Forms. The results of this study found that most students 45%. Spent 3.5 hours daily on average on their mobile phone use. The most common use was the online streaming of movies (24.8%), followed by social networking (23.1%). The statistical analysis revealed that 100% of the students had some degree of nomophobia. Severe Nomophobia was present in 19.2% of the students. It also showed that there was a strong association between the severity of nomophobia and the severity of stress, anxiety, and depression.

**Kundu A et al. (2022).** Conducted a study on “Prevalence of nomophobia and use of mobile social networking sites, and application across sectional study among undergraduate students in the medical college of Eastern India.” The objective of this study is to know the prevalence of nomophobia and to study the pattern of dependence on the most popular social networking sites and applications among medical undergraduates, it involved 338 students as participants for the study a pre-designed and pretested questionnaire was used for the study which involves socio-demographic characteristics, the patterns of use of internet social networking sites and messaging applications and nomophobia questionnaire with the help of these questionnaires, the data was collected and analyzed by the software SPSS. The results of the study revealed that among 338 students, most of the time in the day, about 56.6% of them student like to come back to get their smartphones if they had forgotten while going out, the study results also showed that almost all students had nomophobia and among them 22.1%

had mild, 61.5% had moderate and 16.4% had severe nomophobia. Some common symptoms among them were loss of contact with their smartphones where loneliness (40.6%) panic attacks (10.4%) depression (5.7%) etc.

**Kiran E. P., Vijaya K., and Ashwini M. (2020).** Conducted a study on Nomophobia in the students at medical college using smartphones- A cross-sectional study. The cross-sectional study was carried out to assess smartphone users among medical students to estimate the prevalence of nomophobia, its gradation, and its association of different variables with grades of nomophobia. This was a community-based analytical cross-sectional study conducted in a private medical college in north Andhra Pradesh in August to October 2021. A total of 103 students who possessed and used a smartphone for at least one year were included in the sample of the study. These participants were selected by using the systematic random sampling technique. For assessing nomophobia, the nomophobia questionnaire was used. For analyzing the data software SPSS version 22 was used. The result found that almost all the participants had nomophobia with different ranges of it. 23.3% had mild, 63.1% had moderate and 13.6% had severe nomophobia.

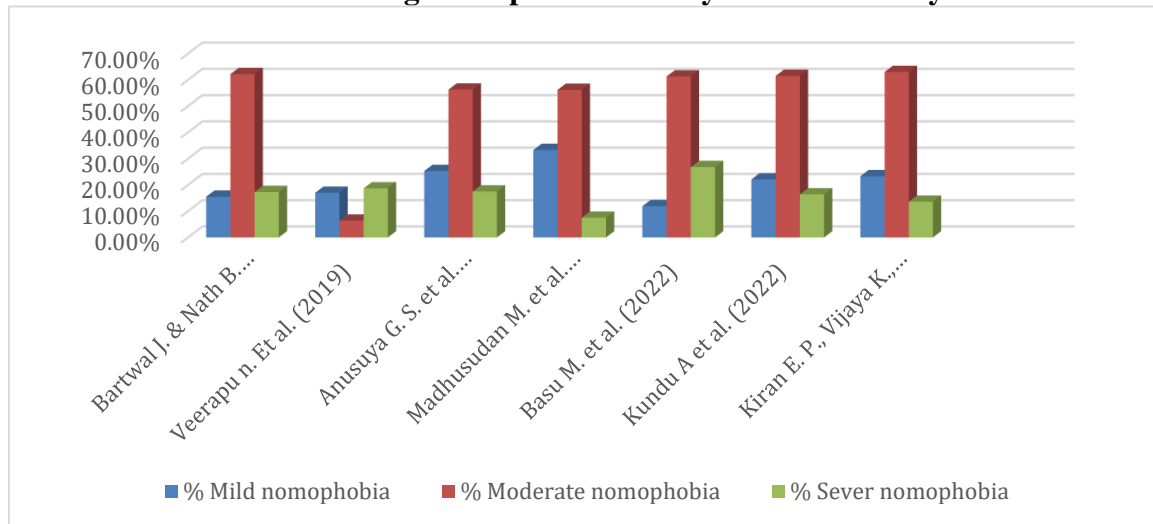
## Results and Discussion

This review study showed that almost all undergraduate students are suffering from some level/degree of nomophobia, most of them almost 50 to 60% of the students come under the moderate level of nomophobia. Below is a table showing the number of participants in each study and the level of nomophobia among them.

**Table: showing the percentage of nomophobia.**

Author	No of Participants	% Mild nomophobia	% Moderate nomophobia	% Severe nomophobia
Bartwal J. & Nath B. (2020)	451	15.5%	62.2%	17.3%
Veerapu n. Et al. (2019)	364	17%	6.4%	18.7%
Anusuya G. S. et al. (2021)	400	25.3%	56.3%	17.5%
Madhusudan M. et al. (2017)	429	33.3%	56.2%	7.5%
Basu M. et al. (2022)	395	11.9%	61.3%	26.8%
Kundu A et al. (2022)	338	22.1%	61.5%	16.4%
Kiran E. P., Vijaya K., and Ashwini M. (2020)	103	23.3%	63%	13.6%

Chart showing Nomophobia severity across the study.



As per the number related to nomophobia among undergraduate medical students, nomophobia is going to be a growing public health problem for a developing country like India, where the number of the youth population is high. Nomophobia can affect the various aspects of an individual's life including the physical and psychological health of the person. In the current scenario availability of mobile phones, or smartphones has increased and almost all students also have access to handle, to use smartphones because of the covid-19, and pandemic educational sector adapting the mobile phone or smartphone-based activity, and they are still going after the end of the pandemic and after those students are really attached to their mobile phones and they uses their phones for educational as well as the entertainment purpose too. Not only college students but the school-going students have mobile phones, so there is a high chance of developing nomophobia among them too. Because of the disadvantages, and cost of using the mobile phone or smartphone, there is a need to identify the students' phone use patterns, if they are executively involved with phones then, what kind of struggles they are facing and the other negative consequences must be investigated, for the further betterment and intervention program. There is a need to plan strategic interventions for students who are suffering from problems like nomophobia, mobile phone addiction, and other issues related to excessive use of mobile phones. Awareness programs, assessments to know the problems connected to mobile phone use, counselling programs, activity scheduling, etc. can be involved in the intervention program.

### Limitation

This study is based on secondary data, and only undergraduate medical students are the participants of the study, for that reason the results of the study are only applicable to medical students. This study only focuses on the prevalence of nomophobia among medical students. It does not elaborate on the reason and effect of nomophobia.

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