

Nomophobia Among Wah Medical College Students: A Cross-Sectional Study

Khola Waheed, Sadia Nadeem, Mahnoor Nadeem*, Musarat Ramzan, Shezadi Sabah Imran, Robina Mushtaq

Department of Community Medicine, Wah Medical College/National University of Medical Sciences, Rawalpindi Pakistan, *Department of Pathology, Wah Medical College/National University of Medical Sciences, Rawalpindi Pakistan

ABSTRACT

Objective: To find the frequency of nomophobia among medical students, and to determine the difference in level of nomophobia among male and female medical students.

Study Design: Cross-sectional study.

Place and Duration of the Study: Wah Medical College, Wah Cantt, Pakistan, from Jan to Jun 2022.

Methodology: Fifty students each were taken from five years of MBBS using non-probability convenience sampling. A structured Nomophobia Questionnaire (NMP-Q) was used for collecting the data which was filled by the students themselves. The questionnaire comprised of two parts. The first part was about demographic profile of the students including age, year of study and gender. The second part was for assessing nomophobia. To assess the differences in outcomes across the categories like gender and academic year with nomophobia, Chi Square test was applied, and a p -value ≤ 0.05 was considered as statistically significant.

Results: From 250 medical students, there were 122(49%) male students and 128(51%) female students. Level of nomophobia came out to be 74(29%) having mild nomophobia, 149(60%) with moderate and 27(11%) were found to have severe nomophobia. The level of nomophobia differed significantly ($p < 0.05$) among different academic years, but not across male and female genders.

Conclusion: Sixty percent of the medical students in our study showed moderate nomophobia. There was a significant difference in nomophobia across academic years, but there was no statistically significant difference across genders.

Keywords: Addiction, Anxiety, Fear, Medical, Nomophobia.

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INTRODUCTION

Human beings have invented countless tools to enhance and elevate their lives, with communication being one of the most significant advancements.¹ Over time, communication has evolved from simple methods to more complex forms, with smartphones playing a pivotal role in this transformation.² Smartphones have become a significant mode of communication with a user rate of 103.5 per 100 people.² Despite their numerous advantages, recent research has highlighted several psychological, emotional, social, and physical drawbacks associated with smartphones.³⁻⁵

One such issue is nomophobia, the abbreviated term used for 'no mobile phone phobia' which means fear of being away from one's mobile device.⁶ Studies have shown that 53% of mobile phone users in the United Kingdom experience anxiety when they are without their device, have a low battery, or lose network connectivity.⁷ Nomophobia is a growing

concern, particularly in today's digital age, where people fear being disconnected from their mobile devices and the communication they facilitate.⁷

A study conducted at Rawalpindi Medical University found that 61.7% of the students had moderate nomophobia, with no difference being observed between the male and female students.⁸

In another study, most of the students reported moderate nomophobia, with a significant difference being observed between the genders, and females reporting greater level of nomophobia.⁹

Given the rise in smartphone usage among college and university students, and the potential negative impact on their well-being, therefore we conducted this study to assess the levels of nomophobia among students at Wah Medical College. Our study also sought to find the difference in levels of nomophobia between female and male students.

METHODOLOGY

This cross-sectional study was carried out at Wah Medical College, Wah Cantt, Pakistan, from Jan to June 2022, after obtaining the approval of synopsis by

Correspondence: Dr Khola Waheed, Department of Community Medicine, Wah Medical College, Wah Rawalpindi Pakistan
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the Institutional Ethical Review Board (via letter no: WMC/ERC/IRB/045).

Inclusion Criteria: First year to Final year undergraduate medical (MBBS) students of either gender who were using smartphones were included.

Exclusion Criteria: Students diagnosed with psychiatric illness were excluded.

Sample size was calculated using the online WHO sample size calculator, taking reported prevalence of nomophobia at 60%.⁸ The estimated sample size came out to be 216 students. We enrolled 50 students from each of the five years of MBBS, thereby including a total of 250 students. Data was collected after obtaining informed consent, using non-probability convenience sampling.

NMP-Q standard questionnaire was used to collect data. The questionnaire comprised of two parts. The first part was about demographic profile of the students including age, year of study and gender. The second part was for assessing nomophobia. NMP-Q is a 20-item structured questionnaire with each scored from 1-7 on a Likert scale; we reduced the score from 7 to 5-points. One depicts strong disagreement and 5 depict strong agreement. An individual can get a score of 20 to 100 which is then divided into three categories i.e., mild, moderate, and severe. Scoring of the range for nomophobia category is as follows: 20 – 50 = Mild Nomophobia, 51-80 = Moderate Nomophobia, and 81-100 = Severe Nomophobia.

Questionnaires were given to the students for completion, and were taken back after two days. The responses were compiled using Statistical Package for Social Sciences (SPSS) version 20. Descriptive analysis was done for age, gender, levels of nomophobia. To assess the differences in outcomes across the categories like gender and academic year with nomophobia, Chi Square test was applied, and a p -value ≤ 0.05 was considered as statistically significant.

RESULTS

The response rate was 100%. The mean age of the students in the study was 21.34+1.94 years. There were 122(49%) male and 128(51%) are female students. Sixty percent of the students had moderate nomophobia.

The levels of nomophobia, and its relationships with gender and academic year are given in Table-I. These levels differed significantly among different academic years, but not across genders, i.e. male and female students.

DISCUSSION

Two hundred and fifty medical students responded to the questionnaire. The mean age was 21.34+1.94 years. There were 122(49%) male and 128(51%) are female students. Out of 250 medical students, mean nomophobia score was 59.76+17.498. In our study, the mean age of the participants was 21.34+1.94 years. A similar study carried out in Portugal also found out that among 495 individuals the mean age of the participants was 20.65+1.99 years.¹⁰

Table-I: Relationship of Nomophobia with Gender and Academic year (n = 250)

Academic year (n = 236)		Nomophobia			p-value
Gender		Mild (n=74) n(%)	Moderate (n=149) n(%)	Severe (n=27) n(%)	
Male (n=122)		42(57%)	70 (47%)	10(37%)	0.16
Female (n=128)		32(43%)	79 (53%)	17(63%)	
Academic year					
First year (n=50)		19(26%)	29(19%)	2(7%)	0.01
Second year (n=50)		10(13%)	36(24%)	4(15%)	
Third year (n=50)		16(22%)	22(15%)	12(45%)	
Fourth year (n=50)		17(23%)	28(19%)	5(18%)	
Final year (n=50)		12(16%)	34(23%)	4(15%)	

In our study, which was conducted among students of Wah Medical College, all sampled students had some degree of nomophobia i.e. 74(29.6 %) had mild, 149(59.60%) had moderate and 27(10.9%) had severe nomophobia. The results are supported by studies carried out in India, Pakistan, Christus and Greece where most students showed a moderate degree of nomophobia i.e. 60%, 61.7%, 59.4% and 64.5% respectively.^{8,9,11-13} One of these studies showed a mean score of nomophobia as 71.2+24.1, correlating with the results of our study which found out a mean nomophobia score of 59.76+ 17.49.¹¹

There were 48.8% males and 51.2% females in our study and level of nomophobia was more among females as compared to males, although no significant difference was found between gender and nomophobia after application of test of significance ($p=0.16$). Similar results were obtained in the studies carried out in Mandya Institute of Medical Sciences, SRTR Government Medical College, and Bursa province Turkey where there no significant difference was seen in the nomophobia between men and women.¹⁴⁻¹⁶ A study carried in Tehran found out that the levels of nomophobia was lower in women, as compared to men and a prevalence of nomophobia

which was slightly higher among males (52.2%) than females (50.5%), though not statistically significant, was seen in a study carried out in Malaysia.^{17,18}

Our study showed significant relation of nomophobia with the academic years in which our students were currently enrolled ($p=0.01$). A greater number of nomophobics were present among the 2nd year of MBBS, followed by the 4th year of the same program. A statistically significant difference was found among preclinical, clinical, interns and postgraduates regarding the usage and effect of mobile phone in these cohorts in a study carried out by Prasad *et al.*¹⁹

The widespread occurrence of nomophobia is an alarming trend that is a concern for the generations to come. As this phenomenon continues to spread, it is essential that all educators, health professionals and policymakers prioritize addressing its impact. Raising awareness through targeted sessions and implementing effective management strategies are crucial steps toward combating this issue.

LIMITATIONS OF STUDY

The primary limitations of this study stem from its methodological and sampling design. Its cross-sectional nature captures data at only a single point in time, making it impossible to establish causality. Furthermore, the reliance on non-probability convenience sampling from a single institution introduces significant selection bias and restricts the generalizability of the findings to broader student populations. The use of self-administered questionnaires leaves the results vulnerable to social desirability and recall biases. Additionally, modifying a standardized tool—reducing the NMP-Q from a 7-point to a 5-point Likert scale—without mentioning re-validation risks compromising the instrument's established psychometric reliability. Finally, explicitly excluding students with diagnosed psychiatric illnesses may skew the results, as it removes a demographic where behavioral dependencies and anxiety-related issues like nomophobia frequently co-occur.

CONCLUSION

Sixty percent of the medical students in our study showed moderate nomophobia. There was a significant difference in nomophobia across academic years, but there was no statistically significant difference across genders.

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Authors Contribution

Following authors have made substantial contributions to the manuscript as under:

KW & SN: Conception, study design, drafting the manuscript, approval of the final version to be published.

MN & MR: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

SSI & RM: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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