Prevalence of Nomophobia and Effectiveness of Planned Teaching Program on Prevention and Management of Nomophobia among Undergraduate Students

Namita Batra Guin[1], Shreya Sharma[2], Sangeeta Yadav[2], Deepanshi Patel[2], Sana Khatoon[2], Saumya[2], Savita[2]

[1]Associate Professor, [2]Final Year B.Sc Nursing Student, Rama College of Nursing, Rama University, Kanpur, Uttar Pradesh

Abstract

Background: Mobile phone makes life convenient and comfortable, at the same time the pose a threat in terms of psychological dependence. Nomo- phobia is a catchy contraction for "no mobile phone" and mobile phone addiction. Nomo- phobia refers to discomfort, anxiety, nervousness or anguish caused by being out of contact with a mobile phone. The feeling of panic and desperation is observed in people who lost their phones. The problem is prevalent among young mobile users, as they use mobile phone for various purposes. Studies have found that the students with stronger addiction to mobile phones have higher possibility of decreased learning and concentration problems. **Objectives:** 1. To determine the prevalence of Nomo- phobic undergraduate students. 2. To assess the level of knowledge of undergraduate students regarding prevention and management of Nomo- phobia. 3. To evaluate the effectiveness of planned teaching programme on the level of knowledge among undergraduate students regarding prevention and management of Nomo- phobia. 4. To find association between the level of knowledge of undergraduate students and the selected demographic variables. 5. To find the association between the prevalence of nomophobia among undergraduate students and the selected demographic variables. **Methods and Materials:** An experimental research approach with quasi-experimental design was adopted for the study. The study was conducted on 200 undergraduate students studying and residing in a selected university campus in Kanpur. The prevalence of nomophobia was determined by using NMP-Q scale developed by Yildrin and Correia, while knowledge level was assessed by using structured knowledge questionnaire regarding prevention and management of nomophobia. **Result:** The study reveals that 57% undergraduate students had moderate nomophobia, while 21.5% had mild and 21.5% had severe nomophobia. The knowledge levels of the undergraduate students ranged between poor to moderate. 85% of the undergraduate in both the groups had poor knowledge and 15% had moderate knowledge regarding prevention and management of nomophobia. The planned teaching program was effective in increasing knowledge of undergraduate students. **Conclusion:** Nomophobia is prevalent in undergraduate students. Planned teaching program is effective strategy in increasing the knowledge levels of undergraduate students.

Keywords: *Nomophobia, undergraduate students, prevalence, PTP, effectiveness*

Introduction

Mobile phones have become an important tool of communication and also an integral part of our life. They have become a basic requirement as they provide innumerable benefits like internet, social networking, personal diary and e-mail dispatcher etc.[1] Mobile phone makes life convenient and comfortable, at the same time, extreme mobile phone usage lead to poor health which includes tiredness, stress, headache and concentration difficulties.[2] New operating systems like android are helpful, but on the flipside, mobile phones pose a threat in terms of psychological dependence.[3]

Corresponding Author:
Namita Batra Guin
email: namitabatra86@gmail.com

India is the largest market for mobile phone users in the world. There are about 980.81 million mobile phone subscribers in India.[4] According to Cisco's 13th annual Visual Networking Index (VNI), by the year 2022, there will be 829 million smartphone users in India, accounting for 60% of the population.[5] The younger generation is the latest consumer of the mobile phones, and a majority of college students, from varied socioeconomic background use mobile phones more frequently for different purposes.

Many disorders have been associated with excessive use of mobile phones that affects young adults. Nomophobia (no mobile phobia), is the fear, an individual gets if he is out of mobile phone contact due to no network; has run out of balance or run out of battery; the persons gets anxious, which adversely affects the concentration level of the person.[6] The term was coined during a 2010 study by the UK Post Office who commissioned YouGov, a UK-based research organization that sampled 2163 people to look at anxieties suffered by mobile phone users.[7] Prevalence of nomophobia is high among university students with varying levels of nomophobia.[8] It is found that students having stronger addiction to mobile phone tend to have higher possibility of decreased learning ability and academic performance.[9,10,11] The present study was done with the objectives of finding out the prevalence of Nomo- phobia among undergraduates and determine the effectiveness of planned teaching programme on knowledge regarding prevention and management of Nomo-phobia among undergraduates.

Material and Methods

An experimental research approach with quasi-experimental design was adopted for the study. A total of 200 undergraduate students residing in girl's hostel of university campus were selected from two hostels, designated as experimental and control group respectively. The girls available and those willing to be part of the study were selected as subjects under their respective groups. The research tool consisted of three sections: A,B and C. Section A included items related to socio-demographic profile of the subjects. Part B included a standardised tool -NMP-Q scale developed by Yildrin and Correia[12], to determine the prevalence of nomophobia among undergraduate students. Part C included structured questionnaire to collect data regarding knowledge regarding prevention and management of nomophobia.

Interpretation of the NMP-Q scale was done as no nomophobia with score < 20, Mild nomophobia with score 21-59, Moderate nomophobia with score 60-99 and severe nomophobia with score 100-140 respectively. The knowledge level were interpreted as Good (>75%), Moderate(50%-75%) and Poor (<50%). Before the data collection an informed consent was taken from the subjects. The confidentiality and privacy of the subjects was maintained throughout the study. The data was analysed by using descriptive and inferential statistics.

Results

The study was conducted on 200 undergraduate students residing in selected girl's hostel in university campus. The study data revealed that 64.5% subjects were 18-23 years old. 62% subjects were in their first year of their graduation. 89% undergraduate students started using mobile phones after 15 years of age. While 2% undergraduate students started much earlier i.e. before 10 years of age. The data revealed that, 52% had more than Rs. 20,000 monthly family income. 52.5% undergraduates spent below Rs.200 to Rs.400 per month on their mobile phones. It was found that around 27.5% undergraduate students used two mobile phones. 65% undergraduates had one mobile phone with smart features.

Table No:-1 Prevalence of Nomophobia among undergraduate students n=200

Sr. No	Prevalence/level of nomophobia	Frequency (f)	Percentage (%)
1.	No nomophobia	0	0
2	Mild nomophobia	43	21.5%
3.	Moderate nomophobia	114	57%
4.	Severe nomophobia	43	21.5%

The prevalence of nomophobia has been calculated on the basis of scores obtained by the undergraduate students through NMP- Q scale. According to the data in table No.1, approximately 21.50% of undergraduate students had Mild level of Nomo- phobia, 57% of undergraduate students had Moderate level of Nomo-phobia and 21.5% of the undergraduate students had Severe level of Nomo- phobia.

The findings of the study revealed that approximately 22.5% of undergraduate students "feel uncomfortable without constant access to their phone". Approximately 35% undergraduate "feel scared if the phone battery runs out. 40% "feel desire to check mobile phone constantly". 26.5% undergraduate students "feel nervous if they get disconnected from their online identity". 30% undergraduate "feel anxious if they are not able to check email or messages". 44.5% undergraduates "feel anxious if they are not able to communicate to their loved ones, instantly."

Table No:- 2 Level of Knowledge among undergraduate students under experimental and control group

n=200

S No.	Level of Knowledge	Experimental Group		Control Group	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Poor Knowledge	97	97%	73	73%
2.	Moderate Knowledge	3	3%	27	27%
3.	Good Knowledge	0	0%	0	0%

The knowledge level has been calculated on the basis of pre-test marks obtained by the undergraduate students in structured knowledge questionnaire. Table No. 2 reveals that about 73% of the undergraduate students of control group have 'Poor Knowledge' and 27% of the undergraduate students have 'Moderate Knowledge'. In experimental group,93% of the undergraduate students have 'Poor Knowledge' and 3% of the undergraduate students have 'Moderate Knowledge'. None of the undergraduate students in both the groups have 'Good Knowledge', regarding prevention and management of Nomo- phobia.

Table No.-3 Effectiveness of Planned teaching program regarding prevention and management of nomophobia

n=200

Knowledge Scores				
	Pre test (Mean score)	Post test (Mean score)	t-value	p-Value
Experimental Group	7.91±3.12	13.09±2.45	1.26	0.1
Control Group	11.67±4.23	10.99±3.48		

To determine the effectiveness of planned teaching program, t-value was computed. The data in the table no. 3 revealed that the mean post test knowledge scores of experimental group (13.09±2.45) was significantly higher than the mean post test knowledge scores of control group (10.99±3.48) at ($p< 0.1$). Thus, the planned teaching program was effective in increasing the knowledge of the undergraduate students in experimental group.

The study data also revealed that none of the variables were found to have significant relationship with the level of knowledge regarding prevention and management of nomophobia. However, it has been found that variables like age, course year, age at which subject started using mobile phone and monthly family income had significant relationship with the prevalence of nomophobia among undergraduate students.

Discussion

The study was aimed at determining the prevalence of nomophobia and effectiveness of planned teaching program regarding prevention and management of nomophobia among undergraduate students. The present study revealed that 21.5% university students had mild nomophobia, 57% had moderate nomophobia and 21.5% had severe nomophobia; when measured by using NMP-Q scale. It means that all the subjects under the study had some level of nomophobia present.

The result are consistent with the findings of another study conducted on MBBS students where it was found that approximately 19% had nomophobia while others were at risk of developing nomophobia as 73% students responded that they keep their mobile phones with them while sleeping. 39% responded that they keep checking their phones frequently for messages and mails. Moreover 20% said that they lose their concentration and become stressed when they do not have their mobile phones with them.[13] In another study conducted on students, it was found that 61.5% were having moderate, 6.1% having severe nomophobia and only one participant was not suffering from nomophobia.[14] In another study conducted on medical students of Western Gujarat, it was found that 36.2% had mild nomophobia, 51.6% had moderate nomophobia and 11.4% had severe nomophobia. The study also revealed that severity of nomophobia was higher in male students while overall prevalence of nomophobia was higher in female students.[15]

The present study revealed that 22.5% undergraduate students "feel uncomfortable without constant access to their phone". Approximately 35% undergraduate "feel scared if the phone battery runs out. 40% undergraduate students "feel desire to check mobile phone constantly". 26.5% undergraduate "feel nervous if they get disconnected from their online identity". 30% undergraduate "feel anxious if they are not able to check email or messages". 44.5% undergraduates "feel anxious if they are not able to communicate to their loved ones, instantly." Significant higher means was observed among engineering students for the factor "giving up convenience" and individual variables like "scared due to running out of battery," "nervous due to disconnection from online identity," "uncomfortable when unable stay up-to-date with social media" and "anxious when unable to check E-mails."[16] Another study revealed that 83% students responded that mobile phone is a necessary tool to help them keep connected with their family members. The study highlighted that 56% students kept their mobile phones either in the pocket of shirt or jeans close to their body so that they can have a feel of constant touch with their mobile phone.[13]

The present study revealed that the knowledge level of undergraduate students ranged between poor to moderate level. None was found to have good knowledge regarding prevention and management of nomophobia. A study conducted on college students revealed similar findings where majority i.e. 89.5% of the degree college students had poor knowledge regarding nomophobia. The study emphasized on sensitization of the young adults regarding nomophobia to prevent further risks from nomophobia.[17] A study conducted on student nurses also revealed similar findings where majority of the subjects had poor knowledge regarding nomophobia.[18]

There was no significant association found between level of knowledge regarding nomophobia and selected demographic variables. While a significant relationship was found between prevalence of nomophobia and demographic variables like: age, course year, monthly family income and age at which undergraduates started using mobile phones. In a study done on medical students in West Bengal a Higher proportion of nomophobics were females who had been using smartphone beyond 2 years and had their monthly phone bill was above Rs.200.[16] However many studies have found no relationship between gender, place of residence, amount of money spent on mobile phones, academic sessions, place of origin and prevalence of nomophobia.[8,13,19] In a study conducted on dental students, a statistically significant difference among preclinical, clinical, interns and postgraduates regarding the usage and effect of mobile phone on them was found.[20]

The study found that planned teaching program is an effective strategy in increasing the knowledge of undergraduates regarding prevention and management of nomophobia.[21] However individual counselling, group counselling, awareness programs, psycho- behavioural therapy may be some of the other strategies suggested to increase knowledge and reduce prevalence respectively among young adult. [16,17,18,22]

Conclusion and Recommendations

The present study concludes that the mild to severe form of nomophobia is prevalent among undergraduate students. Age, course year, age of student at which they started using mobile phone and monthly family income can affect the prevalence of nomophobia among undergraduate students. Undergraduate students have poor to moderate knowledge regarding prevention and management of nomophobia. However this knowledge level can be increased by planned teaching program developed for prevention and management of nomophobia. The study recommends guidelines for prevention against nomophobia and promotion of de-addiction centres equipped with multi-therapy approach; in order to reduce the burden of nomophobia among young adults.

Acknowledgement: We would express our sincere thanks to all the participants for giving their consent for being part of this study.

Source of Support: None

Conflict of Interest: Nil

Ethical Clearance: Obtained from the Institutional Ethical Committee.

References

1. Katharine B. Phone reliant Britons in the grip of Nomo- phobia. The independent. March 31; 2008. Available from: http://www.independent.co.uk/news/uk//life-style/gadgets-and-tech/news/survey-suggests-half-of-britons-fear-being-without-their-mobile-8784706.html
2. Shankar V., Singh K., Jangir M. NOMO- PHOBIA: Detection and Analysis of Smartphone Addiction in Indian Perspective. Int J Appl Eng. and Res; 2018; 13(14): 11593-11599.
3. Rupani MP, Parikh KD, Trivedi AV, Singh MP, Patel A, Vadodariya B, Bhagora B, Sharma B. Cross-sectional study on mobile phone involvement among medical students of a tertiary care teaching hospital of western India. Natl J Community Med 2016; 7(6):609- 613.
4. Telecom Regulatory Authority of India (2016). Retrieved from http://www.trai.gov.in/WriteReadData/WhatsNew/Documents/PR-No=47.pdf
5. Bhattacharya A. The number of smartphone users in India will more than double in four years. Quartz India; 4th Dec 2018
6. Chandak P, Singh D, Faye A, Gawande S, Tadke R, Kirpekar V, Bhave S . An Exploratory Study of Nomophobia in Post Graduate Residents of a Teaching Hospital in Central India, International J Indian Psychol. 2017; 4(3)
7. Charlie D'Agata. Nomo- phobia: Fear of being without your cell phone. CBS News; April 3, 2008.
8. Harish BR., Bharath J. Prevalence of nomophobia among the undergraduate medical students of Mandya Institute of Medical Sciences, Mandya. Int J Community Med Public Health 2018;5: 5455-9. Available at: <https://www.ijcmph.com/index.php/ijcmph/article/view/3932
9. Lee S, Kim MW, McDonough IM, Mendoza JS, Kim MS. The effects of cell phone use and emotion-regulation style on college students' learning; Appl Cognitive Psych. 2017;31(3):360–366.
10. Junco R; In-class multitasking and academic performance; Comput Hum Behav; 2012;28(6):2236–2243.
11. Cho S, Lee E; Development of a brief instrument to measure smartphone addiction among nursing students; CIN-Comput Inform Nu. 2015;33: 216–224. pmid:25636040.
12. Yildirim C, Correia A. Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. Computers in Human Behavior. 2015;49:130-7.
13. Dixit S, Shukla H, Bhagwat A, et al; A study to evaluate mobile phone dependence among students of a medical college and associated hospital of central India; Indian J Community Med;

2010;35(2):339–341.

14. Soumitra S, Veena M, Satish M, Angelin P, Gupta M, Khan A. A study to assess the degree of Nomo-phobia among the undergraduate students of a medical college in Bhopal; Int J Community Med Public Health 2018;5: 2442-5.
15. Khilnani AK, Thaddanee R, Khilnani G. Prevalence of nomophobia and factors associated with it: a cross-sectional study. Int J Res Med Sci 2019;7: 468-72.
16. Dasgupta P, Bhattacherjee S, Dasgupta S, Roy JK, Mukherjee A, Biswas R. Nomo- phobicbehaviors among smartphone using medical and engineering students in two colleges of West Bengal; Indian J Public Health 2017;61:199-204.
17. Nidhi Abraham, Janet Mathias, Sheela Williams. A Study to Assess the Knowledge and Effect of Nomophobia Among Students of Selected Degree Colleges in Mysore. Asian J. Nur. Edu. and Research 4(4): Oct.- Dec., 2014: 421-428.
18. Saraswathi K N, Sheela Williams. A Study to Assess the Knowledge and Effect of Nomophobia among Nursing Students of selected Nursing Colleges in Mysore. Int. J. Nur. Edu. and Research. 2019; 7(3):330-332.
19. Madhusudan M, Sudarshan B P, Sanjay T V, Gopi A, Fernandes S.;Nomo- phobia and determinants among the students of a medical college in Kerala; International J Med Sci Public Health; 2017;6(6):1046-1049.
20. Prasad M, Patthi B, Singla A, et al. Nomophobia: A Cross-sectional Study to Assess Mobile Phone Usage Among Dental Students. J Clin Diagn Res. 2017;11(2): ZC34-ZC39. doi:10.7860/JCDR/2017/20858.9341
21. Thakur Priyanka and Kishanth Olive. A quasi experimental study to assess the effect of structured teaching program on knowledge regarding nomophobia among students of selected colleges in District Jalandhar, Punjab. Int. J. Nur. Edu. 2016; 8(2):119-121
22. Sonali Kar, Nibir Nath Sarma, Chitra Mistry, Rahul Pal; Prevalence of Nomo- phobia among Medical students in a private college of Bhubaneswar, Odisha; J.Bio.Innov 2017 6(6),: 914-920