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"STUDY OF PREVALENCE OF NOMOPHOBIA AND ITS ASSOCIATED FACTORS AMONG MEDICAL STUDENTS OF GOVT. BUNDELKHAND MEDICAL COLLEGE, SAGAR (M.P.): A CROSS-SECTIONAL STUDY".

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ABSTRACT

INTRODUCTION

The term NOMOPHOBIA or NO MObile PHone PhoBIA is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity. This study was conducted to find out the prevalence of nomophobia & its associated risk factors among medical students in Bundelkhand Medical College, Sagar.

METHODOLOGY

Since 125 students were admitted in each academic session in the institute, and considering complete enumeration, 500 was considered as the sample size for this study. Of the total 500 students, 403 students were present on the day the study was conducted. 3 students were

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excluded as they did not use smart mobile phones, so finally 400 questionnaires were analysed. A self-administered 20 item tested nomophobia questionnaire (NMP-Q) was used. The NMP-Q is a validated questionnaire, specifically developed by Yildirim and Correiain in 2015, to measure the nomophobic behavior of college students.

RESULTS

The study was conducted on a total of 400 undergraduate students. The percentage of female participants was 51%. Majority (62%) of participants belonged to less than 25 years of age group. Out of 400 participants, 22% were having severe, 58% participants were having moderate, 15% were having mild nomophobia and only 5% participants were not suffering from nomophobia.

CONCLUSION

The results of the study are suggestive of mobile phone dependence among students of Bundelkhand Medical College, Sagar. The data is indicative of nomophobia to be an emerging problem of the modern era.

KEYWORDS

Nomophobia, Prevalence, Risk factors, Medical students, Sagar

MAIN ARTICLE

INTRODUCTION

The term NOMOPHOBIA or NO MObile PHone PhoBIA is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity. The term NOMOPHOBIA is constructed on definitions described in the DSM-IV, it has been labelled as a “phobia for a particular/specific things". Various psychological factors are involved when a person overuses the mobile phone, e.g., low self-esteem, extrovert personality. The burden of this problem is now increasing globally. [1] Smartphones are not just becoming a part of our daily lives – but a part of each and every one of us. The presence of this handy device that holds the world just a touch away has been greatly significant and unavoidable in

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our standard of living. [2] We have to stay in the real world more than virtual world. We have to re-establish the human-human interactions, face to face connections. So, we need to limit our use of mobile phones rather than banning it because we cannot escape the force of technological advancement. [3] New research has shown excessive use of mobile phones leading to development of symptoms suggestive of dependence syndrome. [4] It seems that the excessive use of the smartphone is an emerging public health problem which demands effective public health strategies. [5] If a person is in an area of no network, has run out of balance or even worse run out of battery, the persons get anxious, which adversely affects the concentration level of the person. [6] Nomophobia is a situational phobia related to agoraphobia and includes the fear of becoming ill and not receiving immediate assistance. [7] Nomophobia ('no mobile phone phobia') has been growing issue worldwide in recent years and has been associated with a number of psychological and behavioural health-related problems. [8] In today's world, cell phone technology introduces new senses of speed and connectivity to social life. Since the younger generation is the latest consumer of the mobile phones, and the under 25 years age group in professional colleges like medical colleges use mobile phones quite frequently. [9] This study was conducted to find out the prevalence of nomophobia & its associated risk factors among medical students in Bundelkhand Medical College, Sagar.

MATERIALS AND METHODS

Study design, study duration, study population and study area

A cross-sectional study was conducted from October 2023 to November 2023 among Under graduate medical students of Govt. Bundelkhand Medical college, Sagar (M.P.).

Sample Size and Sampling Method:

Since 125 students were admitted in each academic session in the institute, and considering complete enumeration, 500 was considered as the sample size for this study. Of the total 500 students, 403 students were present on the day the study was conducted. 3 students were

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excluded as they did not use smart mobile phones, so finally 400 questionnaires were analysed.

Inclusion Criteria

All undergraduate Medical Students willing to give consent to participate in the study.

Exclusion Criteria

Those undergraduate Medical Students who don't give consent to participate in the study.
Study participants who do not have smart mobile phones.

Ethical Consideration

The ethical clearance for the study was taken from the institutional ethical committee, Bundelkhand medical college, Sagar (M.P.) Certificate number IECBMC/DHR/2023/26

Study Tool

A self-administered pretested nomophobia questionnaire (NMP-Q) was used. The NMP-Q is a validated questionnaire, specifically developed by Yildirim and Correiain in 2015, to measure the nomophobic behavior of college students.

Steps of data collection

Since 125 students were admitted in each academic session in the institute, and considering complete enumeration, 500 was considered as the sample size for this study. Of the total 500 students, 403 students were present on the day the study was conducted. 3 students were excluded as they did not use smart mobile phones, so finally 400 questionnaires were analysed. A self-administered 20 item tested nomophobia questionnaire (NMP-Q) was used. The NMP-Q is a validated questionnaire, specifically developed by Yildirim and Correiain in 2015, to measure the nomophobic behavior of college students. Informed consent from each and every participant was taken in their own understandable language. The data was collected, analyzed and interpreted. There were 20 questions in Yildirim and Correiain nomophobia questionnaire (NMP-Q) & for each question there were 7 grades of satisfaction ranging from Strongly disagree(score-1) to Strongly agree(score-7). Total scores were calculated by summing up responses to each item, resulting in a nomophobia score ranging from 20 to 140, with higher scores corresponding to greater nomophobia severity. NMP-Q scores were

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interpreted as follows: NMP-Q score of 20 indicating the absence of nomophobia; an NMP-Q score of >20 to <60 considered as mild; an NMP-Q score of 60 to <100 as moderate and an NMP-Q score100 to ≤ 140 as severe nomophobia. The 20 items were grouped under four factors or dimensions of nomophobia, namely, not being able to access information, losing connectedness, not being able to communicate and giving up convenience. The students were explained the purpose of the study, were told that their participation was voluntary and they can quit any time also ensuring them that confidentiality will be maintained.

Statistical Analysis Plan

Data was compiled using MS-Excel and analysis was done with the help of IBM SPSS 26.0. Data was expressed as frequency, proportion or mean. Chi square test was used. Level of significance was kept at P-value of <0.05.

RESULTS

The study was conducted on a total of 400 undergraduate students. The percentage of female participants was 51%. Majority (62%) of participants belonged to less than 25 years of age group. Out of 400 participants, 22% were having severe, 58% participants were having moderate, 15% were having mild nomophobia and only 5% participants were not suffering from nomophobia. **(Figure-1)**

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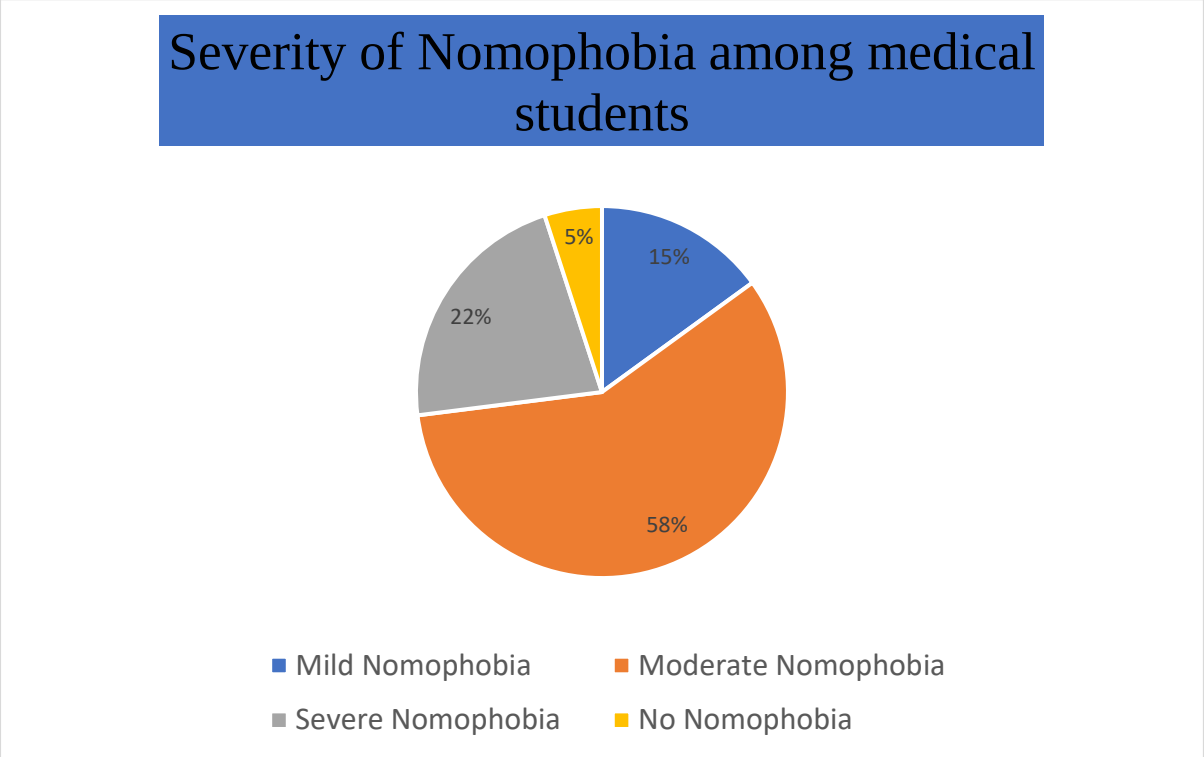

Figure-1: Severity of Nomophobia among medical students

Out of 400 study participants, majority (54%) of participants were spending time on mobile phones for more than 2 hours in a day, 54.8% participants were checking their phones more than 10 times in a day & 44% of them started using mobile phones before 15 years of age. 395 (98.8%) study participants had mobile data plans in their mobile phones & 229 (57.3%) were making or receiving calls more than 10 times in a day. 224 (56%) study participants having more than 25 apps in their mobile phones. **(Table-1)**

Among the study participants, factors such as age ($\chi2=15.763$, $P<0.05$), age at which started using mobile phones for <15 years ($\chi2=11.073$, $P=0.001$), average time participant spent on mobile phones for >2 hours ($\chi2=5.729$, $P=0.017$), average frequency of checking of mobile phones for >10 times in a day ($\chi2=5.418$, $P=0.020$), having mobile data plans ($\chi2=59.960$, $P<0.05$), ≥10 Calls made or received per day ($\chi2=4.452$, $P=0.035$) & ≥25 applications downloaded in their mobile phones ($\chi2=4.921$, $P=0.027$) were found to have a statistically significant association with Nomophobia in this study. **(Table-1)**

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Table-1: Association between nomophobia and variables.

S. No.	Variables	Categories	Nomophobia Present	Nomophobia Absent	Total	Statistical tests
1.	Age-group (Years)	18 to 24	244 (64.2%)	4 (1.6%)	248 (100%)	χ2=15.763 (df=1) P<0.05
		25 to 30	136 (89.5%)	16 (10.5%)	152 (100%)	
2.	Gender	Male	184 (93.9%)	12 (6.1%)	196 (100%)	χ2=1.019 (df=1) p =0.313
		Female	196 (96.1%)	8 (3.9%)	204 (100%)	
3.	Age at which started using mobile phones (Years)	<15	160 (90.9%)	16 (9.1%)	176 (100%)	χ2=11.073 (df=1) P =0.001
		≥15	220 (14.7%)	4 (85.3%)	224 (100%)	
4.	Average time spent on mobile phones per day (Hours)	≤2	180 (97.8%)	4 (2.2%)	184 (100%)	χ2=5.729 (df=1) P=0.017
		>2	200 (92.6%)	16 (7.4%)	216 (100%)	
5.	Average frequency of checking mobile per day	≤10	177 (97.8%)	4 (2.2%)	181 (100%)	χ2=5.418 (df=1) P =0.020
		>10	203 (92.7%)	16 (7.3%)	219 (100%)	
6.	Mobile data Plans	Yes	379 (95.9%)	16 (4.1%)	395 (100%)	χ2=59.960 (df=1) P<0.05
		No	1 (20%)	4 (80%)	5 (100%)	
7.	Calls made or received per day	<10	167 (97.7%)	4 (2.3%)	171 (100%)	χ2=4.452 (df=1) P=0.035
		≥10	213 (93%)	16 (7%)	229 (100%)	
8.	Number of applications downloaded	<25	172 (21.7%)	4 (78.3%)	176 (100%)	χ2=4.921 (df=1) P=0.027
		≥25	208 (92.9%)	16 (7.1%)	224 (100%)	

Considering the 20 items of nomophobia, medical students showed the overall highest mean score (4.58) for item 'I would feel weird because I would not know what to do' and lowest

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mean score (4.11) for item 'I would feel uncomfortable without constant access to information through my smartphone'. **(Table-2)**

Table-2: Factors of nomophobia and mean score among medical students.

Factor	Item	Mean	Standard Deviation
Factor 1: Not being able to access information	I would feel uncomfortable without constant access to information through my smartphone	4.11	1.68
	I would be annoyed if I could not look information up on my smartphone when I wanted to do so.	4.34	1.71
	Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous	4.44	1.65
	I would be annoyed if I could not use my smartphone and/or its capabilities when I wanted to do so.	4.51	1.70
Factor 2: Losing connectedness	Running out of battery in my smartphone would scare me.	4.43	1.67
	If I were to run out of credits or hit my monthly data limit, I would panic.	4.42	1.65
	If I did not have a data signal or could not connect to Wi-Fi, then I would constantly check to see if I had a signal or could find a Wi-Fi network.	4.54	1.73
	If I could not use my smartphone, I would be afraid of getting stranded somewhere.	4.37	1.62
	If I could not check my smartphone for a while, I would feel a desire to check it.	4.42	1.65
Factor 3: Not being able to communicate	I would feel anxious because I could not instantly communicate with my family and/or friends.	4.45	1.64
	I would be worried because my family and/or friends could not reach me.	4.47	1.69
	I would feel nervous because I would not be able to receive text messages and calls.	4.50	1.70
	I would be anxious because I could not keep in touch with my family and/or friends.	4.42	1.62
	I would be nervous because I could not know if someone had tried to get a hold of me.	4.44	1.72
	I would feel anxious because my constant connection to my family and friends would be broken.	4.50	1.62
Factor 4: Giving up convenience	I would be nervous because I would be disconnected from my online identity.	4.47	1.60
	I would be uncomfortable because I could not stay up-to-date with social media and online networks.	4.49	1.61

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	I would feel awkward because I could not check my notifications for updates from my connections and online networks.	4.49	1.61
	I would feel anxious because I could not check my email messages.	4.43	1.62
	I would feel weird because I would not know what to do.	4.58	1.65

DISCUSSION

In previous studies conducted among medical students in India, the prevalence of nomophobia was observed to be ranging from 18.5% by Dixit et al. [10] to 73% by Sharma et al. [11] This may be because of the varied method of assessment of nomophobia among researchers. In the present study, 15% of the study participants were having mild, 58% moderate and 22% severe nomophobia. Ramudu et al. [12] found in their study that 46.4% of the students were normal, 31.3% were at risk of nomophobia and 22.3% were nomophobes while Kanmani et al. [13] reported that 1.2% students were normal, 41.6% were having mild, 42% moderate and 15.2% severe nomophobia.

In the present study, majority (54%) of participants were spending time on mobile phones for more than 2 hours in a day, while Gupta et al. [14] reported only 17.8% of the medical students spending more than 3 hours on mobile phones.

In this study, 52.8% students check their mobile phones more than 10 times per day, while in the study by Subba et al. [15] it was 85.3%.

In our study, statistically significant difference was observed between different age groups and nomophobia, while Alosaimi et al. [16] Dasgupta et al. [17] found no statistically significant difference. No statistically significant association was found between the two genders in our study similar to Alosaimi et al. [16] while Dasgupta et al.[17] observed a statistically significant association between female sex and nomophobic nature.

Limitation of the study

Data were collected from the medical students of only one government medical college of the state. Self-administered questionnaires may not exactly represent the true picture.

CONCLUSION

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The results of the study are suggestive of mobile phone dependence among students of Bundelkhand Medical College, Sagar. The data is indicative of nomophobia to be an emerging problem of the modern era. Multicentric studies are required to assess the real problem and thereby take appropriate steps to tackle the growing problem.

FUTURE SCOPE OF THE STUDY

The study can be performed on various other groups such as adolescents, elderly and so forth. Other aspect, such as the impact of mobile phones on academic achievement, can be elicited.

CONFLICTS OF INTEREST

None

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