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PREVALENCE OF MOBILE PHONE DEPENDENCE AND ITS IMPACT AMONG MEDICAL STUDENTS IN CHENNAI-A CROSS SECTIONAL STUDY

Community Medicine

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ABSTRACT

Background: Students read with mobiles, revise with mobiles, romance with mobiles, rejuvenate with mobiles and thus getting restricted to mobiles. It is integrated into the core activities of daily living. College students use internet for social communication as much as they use for education. Medical students need to study throughout their course for longer hours compared to other streams. This study was conducted with an objective to assess the prevalence of phone dependence, associated disturbances and its awareness among medical students in Chennai.

Aim and objective: To estimate the prevalence of mobile phone dependence, and its impact among medical students in Chennai.

Materials and methods: A cross sectional study conducted among 621 medical students in government colleges of Chennai from August 2017 to January 2018.Data were collected through a semi structured questionnaire and analysed using SPSS version 16.

Results: The prevalence of mobile phone dependence among medical students in Chennai was 66.66%.68.14% of male were dependent on mobile phones.64.84% of females were dependent on mobile phones. The prevalence of nomophobia among study participants was 15.62%.

Conclusion: Health education about the harmful aspects of mobile phones should be promoted. Encouraging students and providing opportunities for participating in physical activities and other recreations rather than spending their leisure hours in mobile phones. Awareness to parents about the psychological effects of mobile phones so that parental supervision increases.

KEYWORDS

Medical students, mobile phone dependence, Nomophobia

INTRODUCTION:

Mobile phone provides a medium of communication that has found enthusiastic and also it has been accepted globally in developed as well as in developing nations. India has the second highest mobile connections in the world after China, with more than 90 connections per 100 people.[1] Social networks such as Facebook, WhatsApp, Instagram, twitter attracts people via smart phones. The reasons for increasing cell phone use are increase in communication, safety, increased status symbol, entertainment etc. Use of internet has become a part and parcel of life among the college students. Students read with mobiles, revise with mobiles, romance with mobiles, rejuvenate with mobiles and thus getting restricted to mobiles. It is integrated into the core activities of daily living. College students use internet for social communication as much as they use for education.[2] Mobile phone usage has both advantages and disadvantages. Medical students need to study throughout their course for longer hours compared to other streams. Availability of smartphones very easily can impede their attentiveness and learning process. But on the other side, availability of e-text books, access to power points of their study materials through smartphone also facilitates learning.[3] In recent past, there has been increasing concern regarding problematic use of mobile phones, and accordingly, it has been publicized extensively as an emerging social problem.[4] Over-use of mobile phones can affect social and psychological well-being of human health. For instance, the individual becomes anxious when there is low battery or proper network. Most of the college students hallucinate ringtones or vibrations and often check their mobile phones even when they are not receiving calls or messages. Hence with this background, this study was conducted with an objective to assess the prevalence of phone dependence, associated disturbances and its awareness among medical students in Chennai.

AIM AND OBJECTIVE

To estimate the prevalence of mobile phone dependence, and its impact among medical students in Chennai.

MATERIALS AND METHODS

A Cross sectional study was done among government medical college students of Chennai in the age group of 17 to 21 years. The study was done over a period of 6 months from August 2017 to January 2018.The sample size was calculated as 621 based on the previous study prevalence on mobile phone dependence was 39.6%(4) at a relative precision of 10%.Government medical college students in Chennai who were using mobile phones for a minimum of 1 year were included in the study. The final year exam going students were excluded from the study. Students studying MBBS in government medical colleges (4 government medical colleges in Chennai. Madras medical college, Government Stanley medical college, Kilpauk medical college, Government Omandura medical college) were randomly selected through simple random sampling. Line listing of the students were obtained from the medical college and they were randomly selected through a computer-generated random number. A predesigned semi structured validated questionnaire was developed based on the validated scales of mobile phone dependence. It consists of a) general information b) extent of mobile phone usage c) duration, place and purpose of using mobile phones d) feelings of individuals while not using mobile phones e) level of awareness about phone dependence. The cut off of 24 was considered as Nomophobe.10 to 24 were at risk of developing nomophobia. Data were entered in MS excel sheet and analysis done using SPSS version 16. For categorical variables Chi-square test was used. P value <0.05 was considered as statistically significant.

RESULTS

Table 1. General information of the study participants

S.no	PARAMETERS		Frequency N=621	Percent %
1.	Age In Years	17	190	30.60
		18	147	23.67
		19	150	24.15
		20	96	15.46
		21	38	6.12
2.	Sex	MALE	336	54.11
		FEMALE	285	45.89
3.	Year Of Study	FIRST YEAR	235	37.84
		SECOND YEAR-PART 1	209	33.66
		SECOND YEAR-PART 2	112	18.04
		THIRD YEAR	65	10.47
4.	Residence	HOSTEL	544	87.60
		DAY SCHOLAR	77	12.40

Among the 621 study participants 190(30.60%) were in 17 years of age, 147(23.67%) were in 18 years of age,150(24.15%) were in 19 years of age,96(15.46%) were in 20 years of age.38(6.12%) belonged to 21 years of age 336(54.11%) were males,285(45.89%) were females.

235 (37.84%) were in their first year,209(33.66%) were in the Part 1 of Second year,112(18.04%) were in the Part 2 of second year, 65 (10.47%) were belonged to third year of MBBS Around 544 (87.60%) were hostellers,77(12.40%) were day scholars

Table 2. Mobile phone usage among study participants

S.no	Parameters		Frequency N=621	Percent %	P value
1.	Type of phones used by the students	Smart phone users	554	89.18	0.004
		Non-smart phone users	67	10.82	
2.	Duration of usage of mobile phones in a day by the students	<2 hours/day	123	19.81	0.003
		2 to 5 hours/day	234	37.68	
		5 to 10 hours/day	233	37.52	
		>10 hours	31	4.99	
3.	Time of maximum usage of mobile phones in a 24-hour period	Day	25	4	0.002
		Night	490	78.88	
		Always	106	17.12	
4.	Place of usage of mobile phones	Play ground	68	10.99	0.642
		Residence	224	36.11	
		Lecture class	143	22.95	
		Clinical/posting	66	10.63	
		Roadside	120	19.32	

Among the 621 study participants 554(89.18%) were using smart phones,67(10.82%) were using non-smart phones. Regarding the duration of usage of mobile phones around 123(19.81%) were using <2 hours/day,234(37.68%) were using 2 to 5 hours/day, 233(37.52%) were using 5 to 10 hours/day,31(4.99%) were using >10 hours/day.

The maximum usage of mobile phones in a 24-hour period was in the night time.490(78.88%) were using in night time,25(4%) were using in the day time,106(17.12%) were using it always.

Among the study participants the place of usage of mobile phones was maximum in their residence.68(10.99%) were using in the playground, 224 (36.11%) were using in the residential area, 143 (22.95%) were using in the lecture class, 66(10.63%) were using in the morning postings or clinicals,120(19.32%) were using in the roadside area

There is a statistically significant association found between type of mobile and mobile phone dependence. It is more among smart phone users. There is also statistically significant association found between duration of mobile phone usage and mobile phone dependence. There is also a statistically significant association found between Timing of usage of mobile phones and mobile phone dependence.

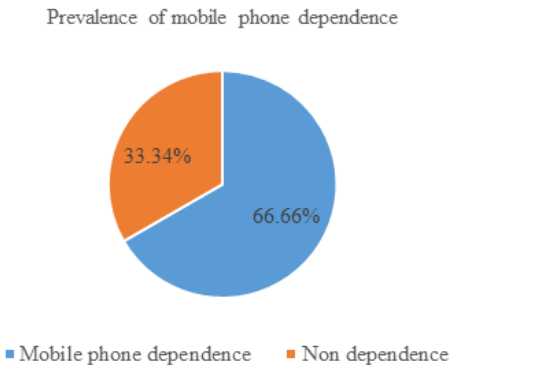

Figure 1. Prevalence of mobile phone dependence among study participants

Table 3. Gender wise distribution of mobile phone usage and its impact

S.no	Variables		Gender wise distribution		Chi square test	df	P value
			Males N=336	Females N=285			
1.	Purpose of usage of mobile phones	Communication	138(40.97)	163(57.33)	16.046	1	0.001
		Entertainment	198(59.03)	122(42.67)			
2.	Reaction to relatives/friends visit when using mobile phones	Continue to use	320(95.23)	276(96.84)	1.027	1	0.3109
		Stopping usage	16(4.77)	9(3.16)			
3.	Mobile phone dependence	Dependent	229(68.12)	185(64.81)	0.730	1	0.3930
		Not dependent	107(31.88)	100(35.19)			
4.	Disturbances due to mobile phone usage	Physical/mental/social disturbances	257(76.46)	195(68.35)	5.066	1	0.0244
		No disturbances	79(23.54)	90(31.65)			

On comparing the mobile phone usage between males and females. Among the 336 males 138(40.97%) were using for communication, 198 (59.03%) were using it for entertainment purpose. Among the females 163(57.33%) were using for communication, 122 (42.67%) were using it for entertainment purpose. There is a statistically significant difference found between males and females on the purpose of using mobile phones.

Around 320(95.23%) males continued to use their mobile during relatives/friend's interaction or visit whereas 276(96.84%) females continued to use during relatives visit. There is no statistically significant difference found between males and females on their response to relatives/friend's visit.

Around 229(68.12%) males were mobile phone dependent,185 (64.81%) females were mobile phone dependent. There is no statistically significant difference found between males and females on mobile phone dependence.

Around 257(76.46%) males had physical/mental/social disturbances during mobile phone usage,195(68.35%) females had disturbances on mobile phone usage. There is a statistically significant difference found between males and females on disturbances due to mobile phone usage.

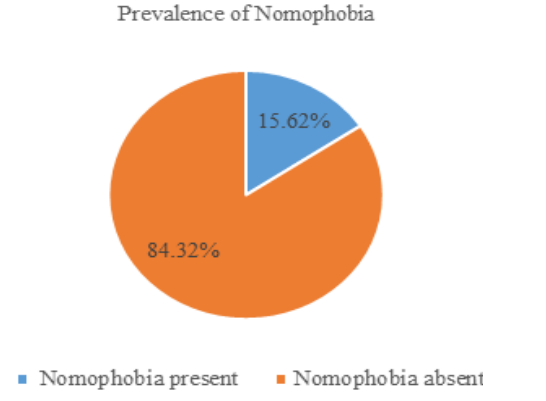

Figure 2.Prevalence of Nomophobia among study participants

The prevalence of nomophobia was 15.62%. Nomophobia means 'phobia developed when there is no mobile phone. Awareness among study participants about physical and mental disturbances caused by mobile usage was 84.06%.

DISCUSSION

The findings of the present study were prevalence of mobile phone

dependence among medical students was 66.66%. The prevalence of mobile phone dependence among adolescents as per ICD-10 by Nikhita et al was 31.33%. The difference was due to the study participants as medical students uses mobile phones as a part of their study in the modern era. Several studies have found similar results. Nehru et al found 33.5% Aggarwal et al found 39.6% had mobile phone dependence.

The present study found prevalence of mobile dependence among males was 68.12% whereas in case of females was 64.81%. whereas in the previous studies male students were found to have almost twice the risk of mobile phone dependence compared to females. This is due to the equal participation of females in a medical school. Bianchi et al suggested that genders embrace mobile phone equally. Females use that more for communication whereas males use that for entertainment.

The prevalence of Nomophobia in the present study was 15.62%. A study done by Monika prasad et al found a prevalence of 24.12%The difference is due to the study participants who were dental students. The present study showed significant difference between the disturbances among males and females on not using mobile phones. This is similar to the study done by Aman et al. In the present study 55.34% agreed that they got disturbed if they are not able to access the mobile phone. The result is similar to the study done by Katherin et al.

Limitations

Socio economic status, income, expenditure was not assessed in this study. The results relied upon the presumption that students gave real responses to the questionnaire. Despite knowing the negative effects of mobile phones the students continue to use mobile phones and they were encouraged to use it judiciously.

CONCLUSION AND RECOMMENDATIONS

The long-term usage of mobile phone leads to addictive behaviour. The result of this study clearly has shown mobile phone dependence among medical students and is indicative of increasing Nomophobia among younger generation. Further research and multicentric studies are required to assess the real problem and to investigate more in depth of the psychological aspects and solution for Nomophobia.

Health education about the harmful aspects of mobile phones should be promoted. Encouraging students and providing opportunities for participating in physical activities and other recreations rather than spending their leisure hours in mobile phones. Awareness to parents about the psychological effects of mobile phones so that parental supervision increases.

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