Assess Mobile Phone Dependency and Nomophobia among Undergraduate College Students

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Abstract

Background: One of the important technological advancements in the last three decades or so has been the advent of the mobile phone. Mobile phone addiction is becoming one of the biggest behavioral addictions. Nomophobia is the fear of being out of mobile phone contact. *Objectives:* (1) To assess the level of mobile phone dependency among undergraduate college students. (2) To assess the level of Nomophobia among undergraduate college students. (3) To find association between mobile phone dependency and Nomophobia with the selected variables. (4)To find correlation between Mobile phone dependency and Nomophobia. *Material and Methods:* A Non-experimental, descriptive explorative survey approach was used for the study. Data was collected from 200 undergraduate college students who were studying at selected institute at Abu Road by non-probability Consecutive sampling technique. Standardized Test of Mobile Phone Dependence (TMD) and Standardized Nomophobia Questionnaire (NMP-Q) was used for data collection. *Results:* 41% students were found to be less dependent, 28.5% of students moderately dependent and 10.5% were found to be severely dependent on mobile phone. 36% of students were having low risk of Nomophobia, whereas 27.5% of students were of high risk for nomophobia and 18% were found to be Nomophobes. Significant association was found between checking of mobile phone, looking information on internet and mobile phone dependency. There was highly significant association between purposes of using mobile phone (talking/texting with family or friends) and mobile phone dependency. Significant association was found between access of internet through smart phones, and nomophobia. *Conclusion:* The result of present study clearly show mobile phone dependence among students and is indicative of increasing Nomophobia among younger generation.

Keywords: Mobile Phone Dependency; Nomophobia; Undergraduate College Students.

Introduction

Mankind has made tremendous technological advancement over thousands of years from "Stone Age" technology to the present day information technology. With the advent of newer technologies, the lives of humans have become progressively easier. When a new technology comes to the market, people have curiosity to use that. In that curiosity some people tend to explore for more and more benefits and end up using the same excessively and resultantly exposing the negative consequences. One of the important technological advancements in the last three decades or so has been the advent of the mobile phone (also known as cell phone) [1].

It is believed that mobile phones have the potential of occupying a central place in the daily lives of undergraduates. Maurya et al(2014) conducted a study on impact of mobile phone usage on psychosocial wellbeing of student nurses which showed that there is a impact on students' performance and commitment to academics in lecture rooms, from those who use mobile phones during lecture, inattentiveness, and non- participation in academic assignments or field works is these who use mobile phones during lectures [2].

According to the DSM, a specific phobia is an

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anxiety disorder that represents unreasonable and irrational fear prompted by a specific stimulus (an object or a situation). Initially termed as 'simple phobia' in DSM-III and DSM-III-TR, the name was later changed to 'specific phobia' Beginning with the DSM-IV version, five types of specific phobia were included: blood/injection/injury (B-I-I), animal, natural environment, situational, and other. Nomophobia is the fear of being out of mobile phone contact. Although nomophobia does not appear in the current DSM-V, it has been proposed as a "specific phobia", based on definitions given in the DSM-IV [3].

The global cellular phone market estimates that there are 1.8 billion subscribers now. The constant connections afforded by cell phones undoubtedly have implications on an adolescent's present decisions and explorations. The increased popularity of cell phones in recent years has attracted research attention [4].

Nehra et al. (2012) conducted a study on excessive use of mobile phones in young adults and its behavioural addictions, which suggests that majority of the mobile addicts are teenagers, who are shy and have low self-esteem. Authors have also described disorders like textaphrenia(thinking that they have heard a message come in or felt the device vibrate when it actually has not), textiety(feeling anxious of not receiving any texts or not being able to send any), post-traumatic text disorder (physical and mental injuries related to texting) and binge texting(sending multiple texts to feel good about themselves and to attract responses) [5].

Considering the increasing interest in behavioral addiction and lack of data from India, the present preliminary study attempted to assess dependency of mobile phone among college students. This study was undertaken to find out the risk of developing Nomophobia in the Indian scenario considering the tremendous increase in the number of mobile phone users in the past decade. The researcher decided to conduct the study among undergraduate college students, since the younger generation is the latest consumer of the mobile phones, and the under 25 year age group in professional colleges use mobile phones quite frequently. Students staying in hostel and day scholar students too want to be in constant touch with their family members and friends since they are out of their homes for the whole day and at nights while studying in colleges.

Methodology

Non-experimental, descriptive design with exploratory survey approach was used for present study. The present study was conducted in selected colleges of Abu Road, Rajasthan. The sample for the present study was 200 undergraduate college students studying in selected institutes. Non-probability consecutive sampling method was used for collecting data. The samples included were students pursuing BSc Nursing, BA, BSc, Engineering and IT courses and those who were using personal mobile phone. Those student who were not using personal mobile phones were excluded from the study.

The data collection tool consisted of *Section A*- eliciting socio demographic information of undergraduate college students. It included age, sex, course of study, residence, income, type of family, siblings, working member in the family etc. *Section B*- consisted of Mobile Phone Dependency Assessment. It included information on mobile phone usage and Test of Mobile Phone Dependence (TMD) Questionnaire, which consisted of 20 items. These items were constructed according to the criteria contained in DSM-IV-TR for dependence disorder [6]. *Section C*- Standardized Nomophobia Questionnaire (NMP-Q), which consisted of 20 items [7]. The collected data was analyzed by using descriptive and inferential statistics.

Results

Findings Related to Socio-Demographic Variables of Undergraduate College Students

Percentage wise distribution of demographic variables of undergraduate students showed that more than one-third (36.5%) of the students belonged to 19-20 years of age. Out of 200 students, 69.5% were male. Pertaining to the course of the study, 63.5% were BSc Nursing students, 20% were engineering students, 12% were IT students and only 4.5% were science students. 42.5% of students belonged to urban area. Regarding monthly family income, little over half (53.5%) of students were having monthly family income of more than Rs.15000. Nearly two-third (67%) of them were belonged to nuclear type of family. With regards to number of siblings in family, 31% students had two siblings and 29.5% were having three siblings.

Findings Related to Information on Pattern of Mobile Phone usage among Undergraduate College Students

Percentage wise distribution of information on pattern of mobile phone usage among undergraduate students showed that 77% of the students were having one mobile phone. 38% of students were using mobile

phone since 1-2 years. With regards to type of mobile phone, 80% of students had smart phone compared to basic mobile (17.5%) and java mobiles (2.5%). 82.5% of students reported that their staying place had good mobile network connection. Pertaining to average time spent on mobile phone, 63.5% of students spent 1-3 hours whereas 20.5% spent 4-6 hours on mobile phone daily. 35.5% students used to check their mobile every 5-10 minutes and only 5% students checked in more than 1 hour. 81% of students reported that they had access to internet in mobile phone. 23% students used mobile phones for checking social media, 22% used

for seeking information on internet, 20.3% used for talking/ texting to family or friends and only 7% used mobile for other purposes.

Findings Related to Assessment of Level of Mobile Phone Dependency among Undergraduate College Students

Figure 1 shows that 41% of students were less dependent whereas 28.5% of students were moderately dependent and 10.5% were severely dependent on mobile phone.
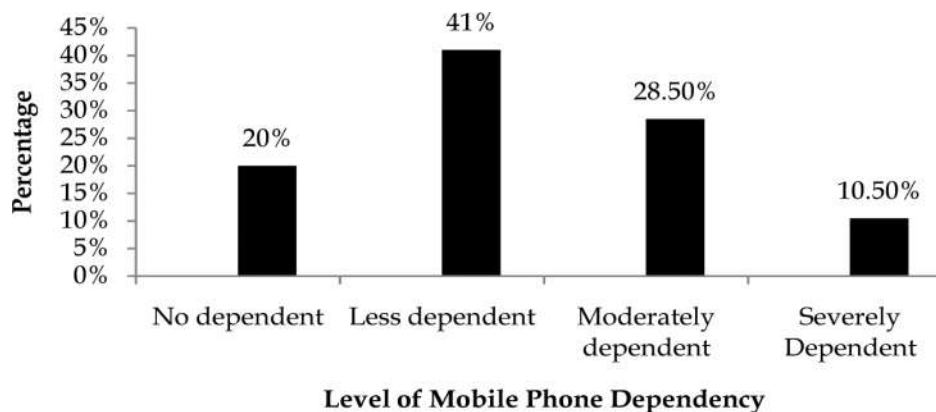

Fig. 1: Bar diagram showing percentage wise distribution of undergraduate students as per their level of dependence on mobile phones

Findings related to assessment of level of Nomophobia among undergraduate college students

Figure 2 shows that 36% of students were having

low risk of Nomophobia whereas 27.5% of students were at high risk for Nomophobia and 18% were found to be Nomophobes.
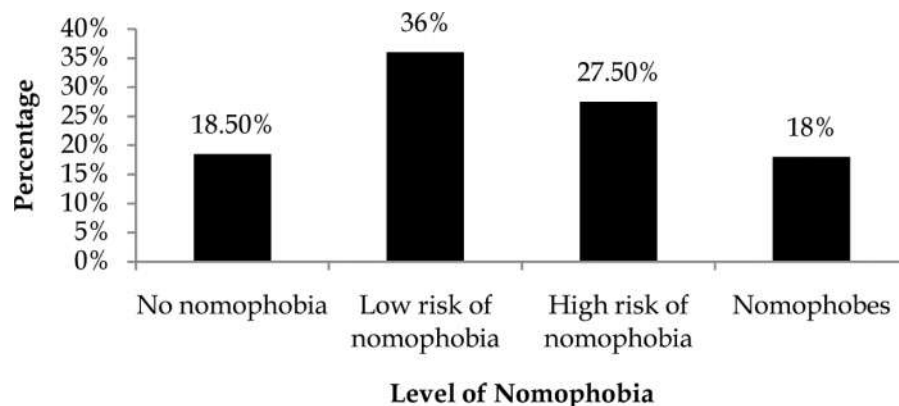

Fig. 2: Bar diagram showing percentage wise distribution of undergraduate students as per level of Nomophobia.

Findings related to association of mobile phone dependency with selected variables on mobile phone usage of undergraduate college students

Table1 findings revealed that there was significant association between checking of mobile phone, purposes of using mobile phone(looking for

information on internet) and mobile phone dependency, as the calculated χ^2 value was found to be more than the table value at P<0.01. There was high significant association between purposes of using mobile phone (talking/ texting with family or friends) and mobile phone dependency, as the calculated χ^2

value was found to be more than the table value at P<0.01.

Findings Related to Association of Nomophobia with Selected Demographic Variables

Table 2 findings revealed that there was significant association between access of internet through smart phones and Nomophobia, as the calculated χ^2 value was more than the table value at P<0.01. There was high significant association between purposes of using mobile phone (talking/texting with family or friends) and Nomophobia, as the calculated χ^2 value was more than the table value at P<0.01.

Table 1: Association of mobile phone dependency with selected variables on mobile phone usage of undergraduate college students   n=200

Sr. No	Mobile phone uses variables	Level of mobile phone dependency				χ^2 Value	Table value	DF	Level of significance
		Not dependent	Less dependent	Moderately dependent	Severely dependent				
1.	Number of Mobile phone								
	a. One	32	60	48	14				
	b. Two	6	18	5	5	5.77	10.65	6	NS
	c. More than two	2	4	4	2				
2.	Type of mobile Phone								
	a. Basic Mobile	8	20	6	1				
	b. Java Mobile	0	3	2	0	9.623	10.65	6	NS
	c. Smart Phone	32	59	49	20				
3.	Mobile Network Connection								
	a. Yes	32	67	50	16	1.863	6.25	3	NS
	b. No	8	15	7	5				
4.	Checking of mobile phone								
	a. Every 5-10 min	13	37	17	4				
	b. Every11-15 min	10	11	4	2				
	c. Every16-20 min	4	7	8	0				
	d. Every21-30 min	5	12	13	9	25.09	22.31	15	S
	e. Every31-60 min	7	12	10	5				
	f. More than 60 min	1	3	5	1				
5.	Purpose of using mobile phone Checking email								
	a. Yes	14	29	16	3	4.001	6.25	3	NS
	b. No	26	53	41	18				
	Looking for information on internet								
	a. Yes	26	65	35	13	6.408	6.25	3	S
	b. No	14	17	22	8				
	Listening to Music								
	a. Yes	17	51	35	10	5.504	6.25	3	NS
	b. No	23	31	22	11				
	Checking social media								
	a. Yes	25	61	46	13	5.259	6.25	3	NS
	b. No	15	21	11	8				
	Talking/ texting with family or friends								
	a. Yes	22	46	39	21	15.92	6.25	3	HS
	b. No	18	36	18	0				

By chi-square test; P=0.10 ; NS- Not Significant, S- Significant, HS- Highly Significant

Table 2: Association of Nomophobia with selected demographic variables of undergraduate college students   N=200

Sr. No	Demographic variables	Level of Nomophobia				χ² Value	Table value	Df	Level of significance
		No Nomophobia	Low risk of Nomophobia	High risk of Nomophobia	Nomophobes				
1.	Number of Mobile phone								
	a. One	34	52	40	28				
	b. Two	2	16	11	5	7.159	10.65	6	NS
	c. More than two	1	4	4	3				
2.	Type of mobile Phone								
	a. Basic Mobile	7	16	10	2				
	b. Java Mobile	1	1	2	1	5.331	10.65	6	NS
	c. Smart Phone	29	55	43	33				
3.	Checking of mobile phone								
	a. Every 5-10 min	13	29	22	7				
	b. Every11-15 min	7	10	7	3				
	c. Every16-20 min	6	6	3	4	19.62	22.31	15	NS
	d. Every21-30 min	7	9	9	14				
	e. Every31-60 min	3	14	11	6				
	f. More than 60 min	1	4	3	2				
4.	Access of internet through smartphone								
	a.Yes	29	60	38	35	11.64	6.25	3	S
	b. No	8	12	17	1				
5.	Purpose of using mobile phone Checking email								
	a. Yes	12	22	22	6	5.583	6.25	3	NS
	b. No	25	50	33	30				
	Looking for information on internet	22	51	44	22	5.876	6.25	3	S
	a. Yes	15	21	11	14				
	b. No								
	Listening to Music								
	a. Yes	21	38	36	18	2.820	6.25	3	NS
	b. No	16	34	19	18				
	Checking social media								
	a. Yes	27	55	36	27	2.032	6.25	3	NS
	b. No	10	17	19	9				
	Talking/texting with family or friends	21	37	40	30	13.47	6.25	3	HS
	a. Yes	16	35	15	6				
	b. No								
	Other purposes								
	a. Yes	10	8	15	11	7.946	6.25	3	S
	b. No	27	64	40	25				

By chi-square test; P=0.10 ; NS- Not Significant, S- Significant, HS- Highly Significant

Table 3: Correlation between mobile phone dependency and Nomophobia among undergraduate college students   N=200

Variables	Karl Pearson correlation (r)	P value	Level of significance
Mobile phone dependency and Nomophobia	0.716	0.01	Significant

Findings Related to Correlation between Mobile Phone Dependency and Nomophobia among Undergraduate College Students

Table 3 reveals that that there was significant relationship (r=0.71), between mobile phone dependency and Nomophobia. Hence it can be interpreted that mobile phone dependency has influence on Nomophobia.

Discussion

The present study revealed that 41% of students were less dependent, 28.5% of students were moderately dependent and 10.5% were severely dependent on mobile phone. These findings are supported by study conducted by Sato, Sekine (2010) on cell phones dependency among Japanese college students. It found that 20% of the students used cell phones more than 30 times a day and for more than 3 hours in average per day. A decisive point concerning the users' dependency on cell phones seemed to exist between the daily use of 30 times and 40 times [8].

In the present study, 36% students were found to be having low risk of Nomophobia whereas 27.5% of students were at high risk for Nomophobia and 18% were found to be Nomophobes. These findings are consistent with a study conducted by Kaur, Pawan S, Manu (2015) who found that that majority of Nursing students (79%) were at risk of developing Nomophobia, followed by normal (15%) and remaining (6%) were found to be nomophobic [9].

There was significant association between checking of mobile phone(χ^2- 25.09, p<0.01), looking information on internet and mobile phone dependency(χ^2- 6.408, p<0.01). There was highly significant association between purposes of using mobile phone (talking/texting with family or friends) and mobile phone dependency (χ^2- 15.92, p<0.01). The present study is also consistent with the study conducted by Mohankumar P, Udayshankar P, Sivagurunathan C(2016) who found that 60.6% of students said they checked their mobile phones at certain time intervals. Nearly one third, 72%, of the students said that they used their phones for internet surfing and for accessing the social media. 18.6% of the students talked between one and two hours on their phones. 6.6%, 3.3% and 6.6% of the students who reportedly talked for two to 3 hours, 3 to 4 hours and more than 5 hours on their mobile phones every day respectively [10].

The findings of the present study showed that there was significant relationship (r=0.71), between mobile phone dependency and Nomophobia. These findings are supported with a study conducted by Bivin, Mathew, Thulasi, Philip (2013) who also found that there is significant positive correlation (r: 0.67) between the overall scores on pattern of mobile usage to the overall scores on Nomophobia severity [11].

Conclusion

Mobile phone dependence has been found to be an emerging public health problem. There is need to identify it early so as to generate adequate awareness and plan educational/treatment interventions. Precautionary measures to prevent unnecessary excessive exposure to mobile phones are needed. There is also a need to identify vulnerable groups, for example children and adolescents, who can be targeted for any interventional campaigns. Mobile phones and new technologies have both positive and negative aspects. They have not only helped improve worldwide communication, newer technology through new social media, social network sites, social informatics, and "social software" enable us to perform many jobs quickly and efficiently. On the other hand, the long-term usage leads to addictive behavior. The result of present study clearly showed mobile phone dependence among students, indicative of increasing Nomophobia among younger generation. Further research and multi-centric studies are required to assess the real problem and to investigate more in depth the psychological aspects and solutions for Nomophobia.

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Special Note!