

A Descriptive Study to Assess the Prevalence of Nomophobia and Knowledge and Effect of Using Smart Phone among College Students in Selected Colleges of Fatehabad, Haryana, with a View to Develop an Information Booklet

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ABSTRACT

BACKGROUND

Nomophobia an abbreviation for “no-mobile phone phobia” is a fear of being out of mobile phone contact. We wanted to assess the prevalence of nomophobia, knowledge regarding smartphone use, and effect of using smart phones among college students.

METHODS

A descriptive study was conducted among 250 college students who were perceiving bachelor's degree in arts in selected colleges of district Fatehabad, Haryana. Nomophobia scale, structured knowledge questionnaire, and checklist were used to collect data. The collected data was statistically analysed by using SPSS Ver. 23.

RESULTS

The study findings reveal that majority, 140 (56.0 %) of samples have moderate levels of nomophobia. 203 (81.2 %) samples have good knowledge level regarding smartphone. Majority, 188 (75.2 %) of samples had moderate level of effect on their life due to smartphone use. There is significant association between level of nomophobia of samples with years of using mobile phone and frequent reason of using mobile phone. There is significant association between level of knowledge of samples with their age and their education level. There is positive correlation between level of nomophobia and effects of using smart phone among college students. There is negative correlation between level of knowledge and effects of using smart phone.

CONCLUSIONS

The study findings provide statistical evidence which clearly indicates that there is prevalence of nomophobia and adverse effects of using smartphone on their life.

KEYWORDS

Nomophobia, Knowledge, Prevalence, Adverse Effect, Smartphone

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BACKGROUND

Today, technology has become an irreplaceable part of our lives. Technological inventions have been carried out by people in easing their life to be more flexible and reasonable in order to be able to overcome upcoming challenges and compatible to the globe.¹

From the times of pigeons, letters, Morse codes, telegraphs and telephones, communication has been an integral part of human social life. Marching along with the digitally transforming world, today we live in an era of wireless communication. As soon as the Smartphone set its foot into the garden of electronic gadgets, it exerted its spell on the conscious and intelligent part of human brain.²

In the last 20 years, worldwide mobile phone subscriptions have grown from 12.4 million to over 5.6 billion, penetrating about 70 % of the global population. Its usage has also become an important public health problem as there have been reports of plenty of health hazards, both mental and physical, in people of all age groups.³

The Orissa government (September 16, 2008) announced that it has banned the use of mobile phones in college campuses. "The mobile phones are found to be a disturbing element in college campus. Therefore, we have banned it in the campus," said higher education minister Samir Dey. In the first instance of its kind in the country, Gujarat Government has banned use of mobile phones in schools and colleges, saying it was affecting educational activities in the institutes.⁴

It is difficult to say mobile phone use as problematic like addictions to alcohol, drugs or gambling. Almost every person has a mobile phone and use it regularly, but there are people who can't take their dinner without texting or furiously typing on a personal digital assistant during a meeting. These types of users become anxious when they are separated from the phone, they can't enjoy whatever they are doing without their mobile phones and they often check their phones for voice mails and text messages.⁵ This type of behaviour may lead to nomophobia.

The term is an abbreviation for "no-mobile-phone phobia," which was during a 2010 study by the UK Post Office. The post office commissioned YouGov, a research organisation, to look at anxieties suffered by mobile phone users. The study found that nearly 53 % of mobile phone users in Britain tend to be anxious when they "lose their mobile phone, run out of battery or credit, or have no network coverage."⁶

It is a fact that, millions of people suffer from nomophobia around the globe. The most affected are from 18 - 24 years of age. A typical nomophobia can be identified by some characteristics such as never turning off the phone, obsessively checking missed texts and calls, bringing the phone everywhere, using phones at inappropriate times and missing opportunities for face-to-face interaction while preferring over the phone contact. In some severe cases, people may also face physical side effects such as panic attacks, shortness of breath, trembling, sweating, accelerated heart rate, pain in the hand joints, neck and

back pain, etc. when their phone dies or is otherwise unusable.²

Nomophobia can have adverse effects on a person's health as well as his / her social life. Studies from United Kingdom revealed that 53 % tend to be anxious and a study from Mumbai reports 58 % could not manage without a mobile phone even for a day.⁷

As a situation-specific phobia, nomophobia has recently been suggested to lead to strong perceptions of anxiety and distress. In fact, some suggested that nomophobia could be so stressful that it warrants to be considered a psychopathology.⁸

Researchers from Korea University in Seoul used brain imaging to study the brains of 19 teenage boys who were diagnosed with Internet or smartphone addiction. Compared with 19 teenagers who were not addicted, the brains of the addicted boys had significantly higher levels of GABA, a neurotransmitter in the cortex that inhibits neurons, than levels of glutamate-glutamine, a neurotransmitter that energizes brain signals.⁹

A study conducted in Philadelphia found that since 2008 to 2012, the amount of people who fear of being without a mobile phone has grown from 53 % to 66 %. Study surveyed 1000 people and found that people not only fear being without a cell phone, but almost half of respondents said they would be upset if their partner looked through their messages. The study also found that 18 - 24 age group ranks first in nomophobia.¹⁰

We wanted to assess the prevalence of nomophobia, to assess the knowledge regarding smartphone use, to assess effect of using smart phones among college students.

METHODS

This was a descriptive research study conducted among 250 college students perceiving bachelor's degree in arts in selected colleges of district Fatehabad, Haryana. A structured nomophobia scale was used to assess nomophobia, structured knowledge questionnaire was used to assess knowledge level, and a structured checklist was used to assess effect of using smart phone.

Statistical Analysis

The collected data was statistically analysed using SPSS 23 vs. programme. Frequencies, percentage, mean, median, standard deviation was used to assess prevalence of nomophobia, level of knowledge regarding smart phone, effect of using smart phone. Chi square was used to find the association between variables and Karl Pearson's correlation was used to find correlation between variables.

RESULTS

The collected data were analysed, tabulated and presented under the following sections -

Section I - Description of Variables

Variable	Opts.	Frequency	Percentage
Age	18 - 19 years	81	32.4 %
	20 - 21 years	115	46.0 %
	22 - 23 years	48	19.2 %
	24 years and above	6	2.4 %
Gender	Male	114	45.6 %
	Female	136	54.4 %
Educational level	B.A. 1 st year	43	17.2 %
	B.A. 2 nd year	115	46.0 %
	B.A. 3 rd year	92	36.8 %
Marital status	Single	241	96.4 %
	Married	9	3.6 %
	Widow / widower	0	0
	Divorced	0	0
Residential area	Rural	181	72.4 %
	Urban	69	27.6 %
Number of mobile phones	One	215	86.0 %
	Two	28	11.2 %
	More than 2	7	2.8 %
Years of mobile usage	From 1 year	98	39.2 %
	2 - 3 years	94	37.6 %
	4 - 5 years	35	14.0 %
	More than 5 years	23	9.2 %
Most frequent reason for using your mobile	Calling	84	33.6 %
	Surfing	34	13.6 %
	Gaming	12	4.8 %
	Social networking site	120	48.0 %

Table 1. Frequency and Percentage Distribution of Samples According to Their Demographic Variables

Criteria Measure of Nomophobia Score		
Level of Scores	Frequency	Percentage
Severe level (41 - 60)	15	6.0 %
Moderate level (21 - 40)	140	56.0 %
Mild level (1 - 20)	92	36.8 %
No nomophobia (0 - 0)	3	1.2 %

Table 2. Frequency and Percentage Distribution of Samples According to Their Level of Nomophobia

Maximum score = 60, Minimum score = 0

Criteria Measure of Knowledge Score		
Level of Scores	Frequency	Percentage
Very good (19 - 27)	18	7.2 %
Good (10 - 18)	203	81.2 %
Poor (0 - 9)	29	11.6 %

Table 3. Frequency and Percentage Distribution of Samples According to Their Level of Knowledge Score

Maximum score = 27, Minimum score = 0

Criteria Measure of Score of Effect of Using Smart Phone		
Level of Scores	Frequency	Percentage
Severe (14 - 20)	13	5.2 %
Moderate (7 - 13)	188	75.2 %
Mild (0 - 6)	49	19.6 %

Table 4. Frequency and Percentage Distribution of Samples According to Their Level of Effect of Using Smart Phone

Maximum score = 20, Minimum score = 0

Sl. No.	Statements	Yes	No
1	Do you feel that use of smartphone in class interfere with your learning?	72.0 %	28.0 %
2	Do the calls / messages received just before class impact on your ability to concentrate?	51.2 %	48.8 %
3	Do the smartphone during study time distract you?	64.4 %	35.6 %
4	Do you feel that smartphone usage causes disruption in your career or life's goal?	49.2 %	50.8 %
5	Do you find yourself spending more time texting, tweeting, or emailing as opposed to talking to real-time people?	48.4 %	51.6 %
6	Do you think that you are not able to give time to your parents / family just because you are using your leisure time by chatting with your friends?	46.0 %	54.0 %
7	Does cell phone usage has caused problems in your relationships?	38.0 %	62.0 %
8	Do you get agitated when your parents interrupt you while you are using phone?	56.4 %	43.6 %
9	Do you sometimes go out of time when on your smartphone?	64.4 %	35.6 %
10	Do you spend more money on your phone than anything else?	33.2 %	66.8 %
11	Do you feel your use of cell phone actually decreases your productivity at times?	52.4 %	47.8 %
12	Do you text, email, tweet, or surf the Internet while driving or doing other similar activities that require your focused attention and concentration?	34.0 %	66.0 %
13	Does excessive usage of mobile cause itching or heaviness in your eyes?	80.4 %	19.6 %

14	Do you feel that you are unable to get adequate amount of sleep i.e. 6 - 7 hours in night due to excessive use of mobile?	43.2 %	56.8 %
15	Do you often feel headache or stiffness in neck while excessively using smartphone?	63.2 %	36.8 %
16	Is giving up your smart phone emotionally difficult for you?	53.2 %	46.8 %
17	Is the amount of time you spend on your cell phone been increasing day by day?	46.8 %	53.2 %
18	Is your smart phone always part of the table place setting, when you eat meals?	29.6 %	70.4 %
19	Have you ever met / caused an accident because of smart phone use?	19.6 %	80.4 %
20	Can you spend a day without using a smart phone?	49.6 %	50.4 %

Table 5. Percentage Distribution for Individual Effects of Using Smart Phone

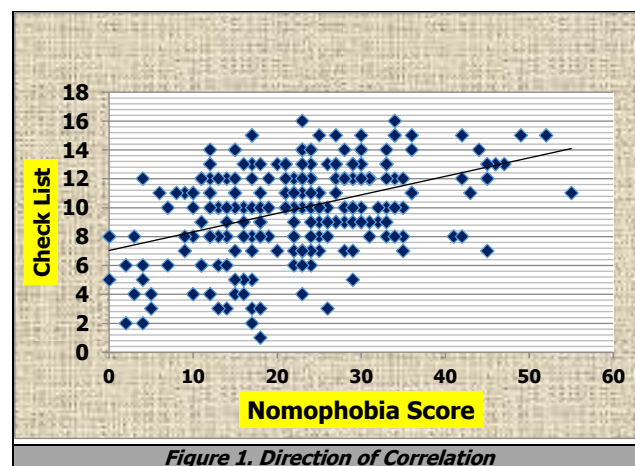


Figure 1. Direction of Correlation

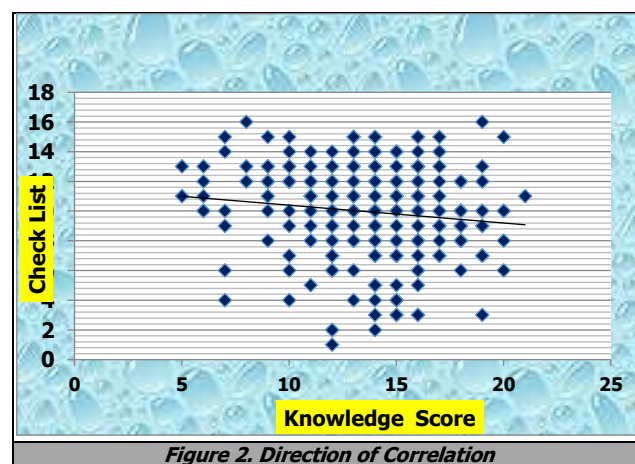


Figure 2. Direction of Correlation

Section II: Association between Variables

Section IIA: Association between levels of nomophobia with selected demographic variables

In order to determine association between variables chi square test is used. There is significant association between years of using mobile phone and level of nomophobia among college students as P-value is (0.034) and the calculated chi square value (18.063) is more than the table value (0.034). There is significant association between most frequent reason for using mobile phone with levels of nomophobia among college students as P value is (0.029) and the calculated chi square value (18.564) is more than the table value (16.919). There is no significance association between other demographic variables with level of nomophobia as the calculated chi square value is less than the table value.

Section IIB: Association between levels of knowledge with selected demographic variables.

There is significant association between age and level of knowledge among college students as P-value is (0.003) and the calculated chi square value (20.045) is more than the table value (12.592). There is significant association between educational level with levels of knowledge among college students as P-value is (0.001) and the calculated chi square value (17.761) is more than the table value (9.488). There is no significance association between other demographic variables with level of nomophobia as the calculated chi-square value is less than the table value.

Section III: Correlation between Variables

In order to determine the correlation, Karl Pearson's Correlation Coefficient was used.

Section IIIA: Correlation between levels of nomophobia with effect of using smart phone among college students.

There is positive correlation between level of nomophobia and effect of using smart phone among college students. This positive correlation depicts that the person having nomophobia also has other effects of using smart phone i.e., as the level of nomophobia increases the effects of using smart phone also increases.

Section IIIB: Correlation between level of knowledge and effect of using smart phone. There is a negative correlation between levels of knowledge and effects of using smart phone among college students. This negative correlation states that with the increase in knowledge level regarding smart phone there will be decrease in effect of using smart phone i.e. more the knowledge lesser the effect of using smart phone.

DISCUSSION

In the present study prevalence of nomophobia was 98.8 % which is similar to the study conducted by Madhusudan M, et al. (2017) where the prevalence of nomophobia was 97 %. Among those who had nomophobia 36.8 %, 56.0 %, 6 % had mild, moderate and severe nomophobia respectively which is similar to the study conducted by Madhusudan M, et al. in 2017 where the mild, moderate and severe nomophobia was 33.3 %, 6.2 %, 7.5 % respectively.¹¹

The study findings show that majority, 188 (75.2 %) of samples had moderate level of effect on their life due to smart phone use, 49 (19.6 %) have mild level of effect and 13 (5.2 %) have very severe level of effect.

80.4 % samples feels that excessive usage of mobile cause itching or heaviness in their eyes, 72.0 % feels that use of smartphone in class interfere with their learning, 64.4 % feels that they sometimes go out of time when on their smartphone, 50.4 % says that they can't spend a day without using a smart phone, 19.6 % says that they have met / caused an accident because of smartphone use.

This was supported by a study conducted by Prerna Utam Bagare, et al. (2017), the study findings shows that a

whooping number of 68.1 % students responded that they use their mobile at night with 26.3 % and 23 % students using mobile phone during lectures and while driving 58.9 % of the students also got anxious when the mobile showed low battery while 39.6 % thought that they would not be able to survive a single day without mobile. 159 out of 270 were aware of the documented increased risk of cancer with high mobile usage. Out of the 270 responders, 143 had experienced eye strain and headache was noted by 122. It was significant that 33 % of the responders perceived themselves as nomophobic.¹²

CONCLUSIONS

The study findings provide statistical evidence which clearly indicates that there is prevalence of nomophobia among college students and they are having less knowledge regarding smart phones and hence, having more adverse effect of using smart phone in their life. To avoid ill effects of smart phone use, everyone in the society as a whole should take some precautions of reducing excessive use of smartphones and avoid possessing multiple gadgets. It is better to develop dos and don'ts for smartphones usage. For this an information booklet was given to the study samples to improve their knowledge regarding smart phone use.

Limitations of the Study

- Study was limited to BA students only.
- Extraneous variables were beyond researcher's control.

Recommendations

- Similar study can be replicated with larger sample with different mobile usage pattern.
- An extensive teaching programme may be conducted to reduce the prevalence of nomophobia and to improve the knowledge regarding smart phone use.
- Comparative study can be conducted between students residing in rural area and urban area.

Data sharing statement provided by the authors is available with the full text of this article at jebmh.com.

Financial or other competing interests: None.

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