



**MOBILE PHONE DEPENDENCY AND ITS IMPLICATIONS AMONG
ARTS AND SCIENCE COLLEGE STUDENTS**

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ABSTRACT

This study aims to address possible association between over usage of mobile phones and their effect on health, psychology and social participation of individuals and groups. We have tried to find out how arts and science students use their mobile phones during college hours and off college hours and what effect this has left on their health. The method of the study focuses on mobile phone dependency of 150 arts and science students who use mobile phones for calls, messaging and for internet surfing and using the social media on their mobile phones. Statistical analysis shows that there is acute dependency of the students on mobile phones with symptoms of sleeplessness and stress disorders, distraction and decrease in social interaction. The study has made an association between the critical aspects of health, psychology and social stress and over use of mobile phones. Further studies would be needed to find out the use of mobile phone by students which minimize the ill effects.

KEY WORDS: mobile phone, dependency, social effects.



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INTRODUCTION

People's interaction with the world, their interaction with time and space and their perception of reality is modified by communication technologies¹. Mobile phones enable reaching users at any time anywhere, providing a degree of mobility and facilitates interpersonal communication. Mobile phones also allow users to be connected to the wireless forms of communication without any physical local network. Extensive amount of personalization, mobility and flexibility is facilitated by mobile phones. The use of mobile phones and smart phones has rapidly increased in the society. Every aspect of our lives are now associated with smart and mobile phones in one way or the other. Smart phones has allowed access to the internet through the mobile phone and hence the access to the social media. This has increased dependency on mobile phones to the extent that many now suffer from nomophobia. Nomophobia is term that is used to describe the fear of individuals being unable to communicate through a mobile phone or the internet. The term is considered to be an abbreviation of 'no-mobile-phone phobia'². The quick development of mobile phones and the widespread use, their cast effect on our social life and it's impact on inter-personal communication has made it necessary to study the use of mobile phones and their dependency on users. In recent studies, we found that mobile phone dependency is associated with unhealthy lifestyle^{3,4}. This study will analyse the effects on people with regards to the psychological, health and social effects of mobile dependency¹.

MATERIALS & METHODS

Sample

The study has a total of 150 students in the age group of 18 to 25 years in a arts and science college and in the habit of attending classes regularly. The students were chosen at random. They were first briefed about the study and its aims and then asked to volunteer. Every student who agreed to volunteer for the survey had to agree to the terms of the survey and declare in writing about their willingness to participate. The data was collected to bring out the demographic, health and psychographic aspects of the volunteers.

Subject

Though the arts and science college has a large number of students, only a random sample was taken. This was done to ensure that the final assessment was as precise as possible reflecting the trends of mobile usage among the students.

Study Design

The study design was a cross sectional. Demographic variables included details of the students like age, sex, family details, residence and family income. The psychographic and health variables included attitude towards usage of mobile phones, nomophobia and associated anxiety.

Process of Obtaining Data and Analysis

The volunteers were given a list of 31 questions with tick answers choices. The questions were divided into three categories, mobile phone using and spending habits, physical health, mental health and social health. The questionnaire targeted to know about their mobile usage included type of phone, how long they have been using it(1 year to more than 10 years), purpose of maximum usage of mobile phone in a day calling, sms (short message service), internet, playing games, use of mobile during lecture and practical, frequency of checking mobile phone for sms or missed calls, how long mobile phone is kept with the volunteer during the day, how much is spend per month on mobile phone recharge from Rs 100 to Rs 500, social media surfing duration per day, what type of social media used most. On the physical health aspect the respondents were asked about whether they have headaches, eye strain after, hearing problems, sleep disorder or finger pains after using mobile phones. On the mental and psychological health issues, respondents were asked about their opinion about their academic performance before and after they began using mobile phones, concentration problems if phone rings or vibrates, getting anxious when they hear about friends and family talking about faulty connections and battery discharge, fear of being out of cell and fear of your phone getting checked out by others. The social aspect questions included use of mobile phone while driving, walking or crossing roads and time spend with friends and family and relatives per week. The responses received from individual volunteers were then compiled, processed and analysed to arrive at results on the various issues. The students were handed over the questionnaire and asked to reply to the questions during their free time. Information confidentiality was emphasized. After data collection, it was systemized and summarised for analysis.

RESULTS

The study was carried out on 62 male and 88 female students. 41.3% of the students were males and 58.7% females. Among them 25.3 % stays in the college hostel and 74.7% are day-scholars. This means that most of the respondents stay with their family and friends. The students were in the age group of 18 to 25 years in college.

Table 1
Phone usage

	Number	%
Sms	46	30.6%
Net surfing	37	24.6%
Receive calls	31	20.6%
Playing games	28	28%
Outgoing calls	7	5.3%
Use mobile for net surfing	108	72%
Smart phone	122	82%
Ordinary phone	8	4.7%
Both type	20	13.3%

Table 2
Keeping phones with themselves

	Number	%
check of phone in-between class	100	66.7%
checking phones at fixed intervals	91	60.6%
Keep phone for 24 hours/day	65	44%
Keep phone for 15-20 hours/day	23	15.3%
Keep phone for 10-15 hours/day	35	23.3%

82% of the students interviewed had smart phones, only 4.7% of the volunteers had ordinary phones while 13.3 % of the respondents used both types of phones. This means that the majority of the students had access to the internet and opportunities of internet and social media surfing from their smart phones. The Next important finding is what the students were use their mobile phones for during most part of the day. Students use their phones mostly to send sms, 30.6% of the students interviewed use their mobiles to send sms to their friends and family. The nest usage that students do most is surfing the internet from their phones, 24.6% of the respondents said they mostly use their phone to surf the internet and social media. Using the phone to receive incoming calls comes next, 20.6% of the total usage of the phone during the day is done to receive incoming calls. Also students spend more than one fourth of their mobile usage time to play games (28%). The students said that they use just 5.3% of the total mobile usage during the day to make outgoing calls. This data analysis shows that the students use the mobile phones for four major activities, sending sms, internet surfing, playing games and receiving incoming calls. Analysis of the data reveals that half of the students use their mobile phones during class or practical or while doing work in hospital wards. This means that for these students mobile phone is indispensable as they do atleast one of the five activities, sms-ing, surfing, phone calls or games, even during classes or other professional work. But while using the mobile phones during class hours or during other work, majority of the students keep their mobile phones on the silent mode. 67.3% of the students claimed that they keep their mobile phones on the silent mode during class. Just 5.3 % of the students keep their mobile phones switched off during class hours. 24 % of the volunteers said that they kept their mobiles on the vibrate mode during class hours. Very few of the students, just 3.3 %, keep their mobile phone on the ringing mode even during class hours and work. While talking about the

mobile phone dependency, students were asked whether they check their mobile phones as soon as a lecture or class is over. 66.6% of the arts and science students interviewed said that they have the habit of checking on their mobile phones for sms or missed calls and internet surfing, as between two lectures or class. The rest, 33.4% of the students are not in that habit Taking the issue of mobile dependency and nomophobia a step further, the study asked students whether they were in the habit of periodical checking of their mobile phones for sms or missed calls. 60.6% of students said they checked their mobile phones at certain time intervals. The rest, 39.4% were not in this habit. Associated closely with the issue of mobile usage is the cost that these students incur to keep their mobile services running. The study asked the students how much they spent every month for recharging of their mobile services. Most of the students (23.3) said that they spent almost Rs500 per month to recharge their mobile services. 14% spent Rs 100 per month, 13.3% students spend Rs 200 per month, 13.3% students spend Rs 400 per month, while 14.6% of the students spent more than Rs 500 per month for recharging of their mobile services. To find out how attached the students were to their mobile phones, the study asked the students how long they kept their mobile phones with them during an average day. A majority of the students (44%) said that they keep the mobile phones with them all throughout the day and night (24 hours). 23.3 % of the students kept their mobile phones with them for 10 to 15 hours each day. Just 17% of the students keep their mobile phones the least with them during the day, less than 10 hours every day while 15.3 % of the students have the phone with them for 15 to 20 hours every day. Nearly one third, 72%, of the students said that they used their phones for internet surfing and for accessing the social media. The rest do not used their phones for internet surfing. Here it must be kept in mind that 4.7% of the students used ordinary phones and this could be a hindrance to the students for using their

mobile phones for internet surfing. The majority of the students (31.3%) said that they talked less than 1 hour everyday on their mobile phones. 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 volunteered talked for two to 3 hours, 3 to 4 hours and more than 5 hours on their mobile phones every day respectively.

Table 3
Health effects

	Number	%
Headaches	16	10.6%
Eye strain	48	32%
Hearing difficulty	56	37.3%
Sleep disorder	36	24%
Finger pain	32	21.3%

Table 4
Psychological effects

	Number	Percentage
Bad academics	68	45.3%
Distracted by calls & sms	82	54.6%
Fear of being left out of cell	123	82%
Fear of phone poaching	81	54%

The study also aims to find out the association between mobile phone dependency and health effects. When asked whether they had any headache after prolonged use of mobile phones, just 24% of the students choose to answer. 10.6% of the students said they experienced headaches after prolonged use of mobile phones while 13.3 % denied having any headache even after prolonged use of their mobile phone. 76% of the students did not answer the question. Other previous studies have also suggested that excessive mobile phone use may be associated with poor lifestyle habits, such as smoking or daily alcohol consumption.^{5,6} 32% of the respondents said that they experienced eye strain after prolonged use of mobile phone while the rest did not. A large number, 37.3% of the students complained of hearing difficulty after prolonged use of mobiles. Just 24% of the respondents admitted to having sleep disorder after prolonged use of mobile phones. The rest had no difficulty in sleep even after prolonged mobile usage.

21.3% of the students said that they experienced pain in their fingers after they used mobile phone for long hours. The rest, 79.7% had no such complaints. The study intended to find out what psychological effect due to excessive dependency of students on mobile phones can have on them. The research asked the students whether their academics were affected after they started using mobile phones. Nearly half, 45.3%, of the students admitted that their academic performance had deteriorated since they started using mobile phones. The rest said otherwise. More than half, 54.6%, of the students too admitted that calls and messages affect their concentration on their studies and practical work. The rest claimed not to be affected by calls and messages with regards to concentration. However a vast majority, 82% of the students were fearful of being left out of the cell. 54% of the respondents suffered from the fear that someone else might check on their mobiles. The rest did not have such fear.

Table 5
Social effect

	Number	Percentage
No time for family	20	13.3%
Less than 6 hrs/week for family	92	61.4%
More than 6 hrs/week for family	38	25.3%
No time for friends	12	8%
Less than 6 hrs/week for friends	35	23.3%
More than 6 hrs/week for friends	103	68.7%

The students were asked questions about how much time they spent with their family and friends on an average week. This was to find out whether mobile dependency and excessive mobile phone usage had, in any way, affected the social life of the students. One must remember here that most of the respondents were day scholar and hence have the opportunity of spending time and interacting directly with their family and friends.

A good number, 27.3%, of the respondents used their mobile phones while cycling or riding a bike. 61.4% of the students said that they spent less than 6 hours a week with their family, while 13.3 % said they spent no time with their family. 25.3% of the respondents said they spent more than 6 hours a week with their family. On the contrary, a vast majority, 68.7% of the volunteers said that they spent more than 6 hours a week with their

friends. Just 8% had no time for their friends and 23.3 percent spent less than 6 hours a week with friends.

DISCUSSION

Most of the respondents belonged to the urban back ground. The study included 58.7% females and while males accounted for 41.3%. All the students had a cell phone with them. 82% of the students interviewed had smart phones, only 4.7% of the volunteers had ordinary phones while 13.3 % of the respondents used both and had both types of phones similar to results of a study "Gadget Dependency among college Students in Delhi" published in the Indian Journal of Community Health⁷

Mental health effects

The study clearly shows that a majority of the students were dependent on their phones. Most of them kept their phones with them for 24 hours in a day while a big number kept their mobile phones with them for a majority time during the day. Overall 61% of the students kept their phones with them for more than 15 hours a day. This shows that the students do not want to part with their phones. Half of the students said that they do use their mobile phones during class but 66.6% of them keep the phones on either the silent or the vibration mode. Most of the students get busy with messaging on their mobile phones, while many surf the net and play games. The time spent on making outgoing calls form the mobile is the least of the usages. Yet most of the students, 37.6%, spend either Rs 500 or more per month to recharge their mobile services. The study finds that 72 percent of the students use their phone to access the internet. More than 60 % of the students are in the habit of checking their phones periodically for sms or missed calls while 66.6% of the students interviewed check on their phone between classes. So it is evident that most of the students are obsessed with their mobile phones and cannot part with them. Even while 49.9% of the students talk less than two hours on their phone a day, and just 5.3% of the total mobile usage is for outgoing calls, yet 37.6% of the students spend Rs 400 or more per months to recharge their mobiles. This shows that they students spend most of the money to send messages and surf the internet. , 82% of the students were fearful of being left out of the cell. 54% of the respondents suffered from the fear that someone else might check on their mobiles. Most of the students would not part with their mobile phones even while they are sleeping, they keep checking on their phones whenever possible and even in between class and practical work. They were fearful that of losing their mobile and being left out of the cell. These symptoms are similar to symptoms found in a similar study by King, Valencia Silva et al in 2014 published in a journal⁸

Physical Health effects

The study revealed that 24% of the respondents admitted to having sleep disorder, 10.6% of the students said they experienced headaches, 24% of the respondents admitted to having sleep disorder, 37.3% of the students complained of hearing difficulty and 21.3% of the students said that they experienced pain their fingers after they used mobile phone for long hours. Though such physical discomfort needs to be clinically to be linked with mobile phone usage, the study gives ample scope for doubt about the association.

Psychological health effect and social life effects

The fact that mobile dependency does have an impact on the centration was evident from the facts that 54.6% of the students admitted to getting distracted due to messages and calls. This fact has a strong chance of a correlation with another fact which says that 45.3% of the students had a negative impact on their academic performance since they began using mobile phones. This would suggest that mobile dependency leads to poor academics. The dependency on mobile phones results in less social interaction. This is evident form the fact that 61.4% of the students spend less than 6 hours a week with their family. But at the same time, nearly 69% of the students spend more than 6 hours a week with friends. It is important to remember that most of the students are day scholars and have ample opportunity for social interaction.

CONCLUSION

The results of the study are suggests the mobile phone dependency of the arts and science students. The data is indicative of nomophobia among the young generation and an emerging problem. Further study is required to suggest appropriate steps that need to be taken to arrest this problem.

Suggestions

A recent study in the US on the same issue made some suggestions for the students, most of whom were found to be over attached to their mobile phones. Such suggestions would also hold good for the students in our study (5). The suggestions coming from the analysis of the study are:

- Students should take time to switch off the mobile phones at a particular time every day and engage in face to face conversation or solitude
- Strike a balance between on screen conversation and face to face conversation every week
- Students should give a try to stay away from technology for atleast a day every month, i.e. non-use of computers, tablets or phones.
- Students should try and keep the phone away from their body while they sleep at night
- Students should try and make blocks of time during the day where they use mobile phones and then stay away from mobile phones

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