

A Study of Pattern of Mobile Use among Urban Indian Students

Santhoshi Kashyap¹, Hemendra Singh²

Abstract

Introduction: Mobile phones are now an important part of everyone's life. Every person has it as it can function in terms of technology, communication, social media and many other ways. Unfortunately, the younger population are those who may be more inclined to use them, so the study looks at the prevalence of mobile use in students. *Methods and Materials:* Three hundred students were approached to participate in this study. A mobile use questionnaire was prepared and administered to the participants and comparison was done between males and females and age groups. *Results:* There were 150 males and 150 females, 100 each from school, Pre-university and undergraduate college. There was no significant gender difference among school students, as compared to PUC and college student for being uncomfortable without their phone. Both male and female students were reported of sometimes checking their phones before doing any other work. *Conclusions:* The pattern of mobile use among the Indian school and college students is not uncommon. Hence, there is a need for awareness programme regarding pattern of mobile use so that future mobile addiction can be prevented.

Keywords: Mobile Use; Pattern; Students.

Introduction

Mobile phones or smart phones are now considered an important aspect of one's life in the modern day. Parents even provide their young children with phones to keep an eye on them, but it may have adverse effects [1]. Mobile phones in this day and age have many features, from communication to internet and other applications to entertain the masses [2]. Many studies have been made which show the prevalence of mobile use in the younger population and the effects that can occur.

One study looked at mobile phone use in Malaysian students. The students had to answer questions about personal and family factors and their mental health. The results show that they spent an average of six hours on the phone daily and that there were gender differences in how the

mobile phone was used. The results also showed that there was a relationship between phone use and psychological disturbances [3].

Another study looked at 415 high school students to see if they were dependent on their mobile phones, using cross sectional and observational methods. The results showed that mobile phone dependence was found in 31% of the students, which showed that this type of addiction may be a growing health problem and there may be a need to recognize signs of addiction and treat them [4].

A review talked about how even though a mobile phone is a great invention, it is something that can adversely affect everyone, because everyone is affected by it on a day to day basis. Mobiles phones, used by adolescents, can be a source of stress, depression, sleep disturbances, aggression and impulsive and risky behaviour [5]. A second review [2] also shows the growth of mobile phone use among

Author's Affiliation: ¹Trainee in Psychology ²Assistant Professor, Department of Psychiatry, M.S. Ramaiah Medical College, Bengaluru, Karnataka 560054, India.

Correspondence and Reprint Requests: Hemendra Singh, Assistant Professor, Department of Psychiatry, M.S. Ramaiah Medical College and Hospitals, Bengaluru, Karnataka 560054, India.
E-mail: hemendradoc2010@gmail.com

adolescents. This use can result in negative health risks, harmful psychological effects and damage to interpersonal skills among these adolescents.

Three hundred thirty-six students were studied through cross-sectional method to see if they were dependent on their phones. The result showed that more than half used their phones to talk to their parents, less than half would talk on the phone for less than half an hour a day, and that many students would think that their phone was ringing, even if it was not. Most of the students also used their phones in restricted places, like a classroom and they would complain that it was negatively affecting their studies [1].

In another study, fifteen college students were administered a questionnaire about the merits and demerits of smartphones and their impact on their health. The results show that most of the students complained about health problems after years of using the phones. The study showed that there should be awareness about the health hazards of using mobile phones [6].

There is a link between mobile use and the applications usage in college students. This study looked at 395 students and the various apps they use, as well as how often they use them. The results show that the students use their phones and apps many times in a day and that it can have an impact on their education and psychological well-being [7].

Objective

- To understand the pattern of mobile use among different student age groups in Bengaluru.

Methodology

Three hundred students, which included one hundred high school students, one hundred Pre-University students and one hundred degree students, were approached for voluntary participation in this study to see the pattern of mobile use. Every student was in the habit of using mobile phones. A mobile use check list was designed and was distributed to these students, which made up of one hundred and fifty males and one hundred and fifty females. The mobile checklist is a 15 item, self-rated, 5 points Likert Scale.

Statistical Analysis

The Statistical software namely SPSS 18.0, and R environment ver.3.2.2 were used for the analysis of the data and Microsoft word and Excel have been

used to generate graphs, tables etc. Descriptive (mean and standard deviation) and inferential statistical analysis has been carried out in the present study. Descriptive and inferential statistical analysis has been carried out in the present study. The following assumptions on data are made:

1. Dependent variables should be normally distributed,
2. Samples drawn from the population should be random.

Result

The sample size of the study was 300 students from Bangalore city. There were 150 females and 150 males. The sample was chosen from High School students, Pre-university students and Undergraduate students. The age range of the participants ranged from 12 to 21.

Table 1 shows the demographic data of the sample, which is 150 males and 150 females, as well as, 100 from High school, 100 from Pre-University and 100 from Under graduation.

Table 2 represents the mean and standard deviation for the age groups of males and females. For both males and females, degree age group has the highest mean while school age group has the highest standard deviation.

Among both male and female school students (13-15 years), there were significant findings which showed that most students do not constantly charge their phones no matter their battery power. There were no other significant findings in school age students. Among male and female PUC students (16-17 years), there were significant findings which show that they sometimes feel uncomfortable without their phones. Among male

Table 1: Demographic Details

Gender	Education Level		
	High School	Pre- University	Undergraduate
Male	50	50	50
Female	50	50	50

Table 2: Comparison of mean and standard deviation between age distribution of males and age distribution of females

	Males			Females		
	School	PUC	Degree	School	PUC	Degree
Total	50	50	50	50	50	50
Mean	13.94	16.66	18.6	14.06	17.06	18.32
SD	1.02	0.66	0.98	1.12	0.57	0.59

Table 3: Attitudinal Statements from Males and Females from School, PUC and Degree

Items	School		PUC		Degree	
	Male N (%)	Female N (%)	Male N (%)	Female N (%)	Male N (%)	Female N (%)
Q1 Do you feel uncomfortable without access to your phone?						
• Rarely	12(24%)	19(38%)	5(10%)	18(36%)	9(18%)	8(16%)
• Seldom	2(4%)	4(8%)	7(14%)	1(2%)	2(4%)	3(6%)
• Sometimes	22(44%)	17(34%)	25(50%)	19(38%)	22(44%)	19(38%)
• Often	6(12%)	5(10%)	8(16%)	8(16%)	10(20%)	10(20%)
• Always	8(16%)	5(10%)	5(10%)	3(6%)	7(14%)	10(20%)
Q2 Do you delay / neglect your class assignments due to phone use?						
• Rarely	26(52%)	34(68%)	15(30%)	28(56%)	21(42%)	20(40%)
• Seldom	5(10%)	2(4%)	11(22%)	6(12%)	11(22%)	11(22%)
• Sometimes	9(18%)	10(20%)	15(30%)	10(20%)	16(32%)	14(28%)
• Often	7(14%)	3(6%)	7(14%)	3(6%)	1(2%)	5(10%)
• Always	3(6%)	0(0%)	2(4%)	3(6%)	1(2%)	0(0%)
Q3 Do you spend most of your money on your phone?						
• Rarely	28(56%)	36(72%)	15(30%)	18(36%)	20(40%)	26(52%)
• Seldom	8(16%)	6(12%)	16(32%)	15(30%)	9(18%)	13(26%)
• Sometimes	9(18%)	3(6%)	10(20%)	5(10%)	9(18%)	8(16%)
• Often	3(6%)	2(4%)	5(10%)	7(14%)	7(14%)	2(4%)
• Always	1(2%)	3(6%)	3(6%)	4(8%)	5(10%)	1(2%)
Q4 Do you constantly charge your phone no matter how much battery is in it?						
• Rarely	23(46%)	23(46%)	22(44%)	12(24%)	23(46%)	19(38%)
• Seldom	10(20%)	8(16%)	4(8%)	10(20%)	5(10%)	9(18%)
• Sometimes	1(2%)	12(24%)	9(18%)	13(26%)	11(22%)	8(16%)
• Often	7(14%)	2(4%)	8(16%)	10(20%)	6(12%)	11(22%)
• Always	9(18%)	5(10%)	6(12%)	3(6%)	5(10%)	3(6%)
Q5 Has spending time with your phone become a habit for you?						
• Rarely	15(30%)	19(38%)	6(12%)	14(28%)	11(22%)	6(12%)
• Seldom	7(14%)	7(14%)	4(8%)	6(12%)	8(16%)	4(8%)
• Sometimes	12(24%)	11(22%)	12(24%)	9(18%)	18(36%)	21(42%)
• Often	9(18%)	7(14%)	16(32%)	12(24%)	9(18%)	13(26%)
• Always	7(14%)	4(8%)	12(24%)	9(18%)	4(8%)	5(10%)
Q6 Do you feel anxious, restless and annoyed without your phone?						
• Rarely	19(38%)	21(42%)	15(30%)	21(42%)	17(34%)	17(34%)
• Seldom	9(18%)	7(14%)	10(20%)	7(14%)	9(18%)	8(16%)
• Sometimes	6(12%)	9(18%)	13(26%)	14(28%)	13(26%)	13(26%)
• Often	9(18%)	8(16%)	7(14%)	4(8%)	8(16%)	4(8%)
• Always	6(12%)	5(10%)	5(10%)	3(6%)	3(6%)	6(12%)
Q7 Do others complain about the amount of time you spend on your phone?						
• Rarely	18(36%)	22(44%)	8(16%)	18(36%)	22(44%)	15(30%)
• Seldom	6(12%)	8(16%)	4(8%)	7(14%)	8(16%)	9(18%)
• Sometimes	7(14%)	6(12%)	10(20%)	9(18%)	10(20%)	11(22%)
• Often	6(12%)	7(14%)	12(24%)	8(16%)	3(6%)	10(20%)
• Always	12(24%)	7(14%)	16(32%)	8(16%)	7(14%)	4(8%)
Q8 Do you prefer spending time on your phone than with people?						
• Rarely	26(52%)	30(60%)	18(36%)	18(36%)	22(44%)	22(44%)
• Seldom	7(14%)	1(2%)	10(20%)	9(18%)	9(18%)	11(22%)
• Sometimes	10(20%)	9(18%)	14(28%)	13(26%)	13(26%)	13(26%)
• Often	2(4%)	7(14%)	6(12%)	6(12%)	3(6%)	3(6%)
• Always	4(8%)	3(6%)	2(4%)	3(6%)	3(6%)	0(0%)

Q9Have you tried to cut down the amount of time you spend with your phone?						
• Rarely	17(34%)	19(38%)	4(8%)	5(10%)	17(34%)	10(20%)
• Seldom	3(6%)	3(6%)	12(24%)	10(20%)	3(6%)	4(8%)
• Sometimes	13(26%)	7(14%)	16(32%)	16(32%)	16(32%)	18(36%)
• Often	9(18%)	6(12%)	12(24%)	13(26%)	11(22%)	14(28%)
• Always	8(16%)	15(30%)	6(12%)	4(8%)	3(6%)	4(8%)
Q10Is your phone always within reaching distance, i.e. in your hand, bag, etc.?						
• Rarely	21(42%)	25(50%)	12(24%)	17(34%)	4(8%)	3(6%)
• Seldom	10(20%)	7(14%)	10(20%)	4(8%)	3(6%)	3(6%)
• Sometimes	5(10%)	7(14%)	10(20%)	11(22%)	13(26%)	7(14%)
• Often	9(18%)	6(12%)	9(18%)	8(16%)	10(20%)	10(20%)
• Always	5(10%)	5(10%)	9(18%)	9(18%)	20(40%)	27(54%)
Q11Do you lose track of time when you are on your phone?						
• Rarely	15(30%)	18(36%)	11(22%)	13(26%)	16(32%)	7(14%)
• Seldom	5(10%)	9(18%)	5(10%)	6(12%)	6(12%)	7(14%)
• Sometimes	15(30%)	11(22%)	11(22%)	11(22%)	13(26%)	16(32%)
• Often	7(14%)	6(12%)	11(22%)	9(18%)	11(22%)	13(26%)
• Always	8(16%)	6(12%)	12(24%)	10(20%)	4(8%)	7(14%)
Q12Do you lose sleep due to late night phone use?						
• Rarely	34(68%)	30(60%)	21(42%)	19(38%)	20(40%)	17(34%)
• Seldom	7(14%)	8(16%)	6(12%)	6(12%)	6(12%)	5(10%)
• Sometimes	1(2%)	8(16%)	5(10%)	12(24%)	12(24%)	14(28%)
• Often	4(8%)	1(2%)	7(14%)	8(16%)	6(12%)	9(18%)
• Always	3(6%)	3(6%)	11(22%)	5(10%)	6(12%)	4(8%)
Q13Do you check your phone before doing any other work?						
• Rarely	23(46%)	24(48%)	8(16%)	14(28%)	12(24%)	6(12%)
• Seldom	6(12%)	8(16%)	5(10%)	5(10%)	5(10%)	5(10%)
• Sometimes	8(16%)	7(14%)	12(24%)	13(26%)	18(36%)	12(24%)
• Often	8(16%)	6(12%)	10(20%)	10(20%)	4(8%)	18(36%)
• Always	4(8%)	5(10%)	15(30%)	8(16%)	11(22%)	9(18%)
Q14Do you check your phone more often than required?						
• Rarely	20(40%)	26(52%)	12(24%)	13(26%)	16(32%)	12(24%)
• Seldom	8(16%)	4(8%)	9(18%)	8(16%)	4(8%)	3(6%)
• Sometimes	12(24%)	13(26%)	18(36%)	14(28%)	19(38%)	14(28%)
• Often	8(16%)	4(8%)	7(14%)	10(20%)	6(12%)	16(32%)
• Always	1(2%)	3(6%)	4(8%)	4(8%)	5(10%)	5(10%)
Q15Do you check your phone, even if you do not have any messages?						
• Rarely	17(34%)	23(46%)	15(30%)	16(32%)	11(22%)	9(18%)
• Seldom	6(12%)	3(6%)	6(12%)	7(14%)	4(8%)	3(6%)
• Sometimes	11(22%)	11(22%)	11(22%)	10(20%)	19(38%)	14(28%)
• Often	3(6%)	7(14%)	7(14%)	9(18%)	11(22%)	13(26%)
• Always	13(26%)	6(12%)	11(22%)	8(16%)	5(10%)	11(22%)

and female Degree students (18- 21 years), there were significant findings which show that they mainly check their phone before doing any other work. For 150 male school, PUC and degree students, there were significant findings which show that others around them rarely complain about their use of their phones; they tried to cut down the time they spent on their phones; their phones are usually within reaching distance; they rarely lose sleep over phone use; and they sometimes check their phones before doing any other work.

For 150 female school, PUC and degree students, there were significant findings which show that they rarely neglect their work due to phone use and they rarely spend most of their money on their phones; they sometimes use their phone out of habit; they rarely spend more time with their phone than with people; they sometimes tried to cut down the amount of time they spent on their phones; their phone is always within reaching distance; they rarely check their phone before doing any other work; and they sometimes check their phone more than it is required (Table 3).

Discussion

The study has looked at whether there was a pattern of mobile use in students studying in Bangalore. There was a sample of 300 students, 150 males and 150 females. There were 100 students studying in high school, 100 students in Pre-university and 100 students in undergraduate studies. A questionnaire was made and distributed to each student who had a mobile phone. The results of the study show that students do not neglect their education or other work when using their phone, but they do feel uncomfortable without their phones and they always check their phones before anything else and always keep them within reach.

There are a few studies which corroborate the results of this study. One study showed that there is a pattern of mobile phone use in adolescents and that it can be linked to risky behaviour like stress, aggression, depression and ignorance of education and work. While phones are important types of technology which can be used to access information, it can also be used to distract students and affect their psychological and emotional well-being [5].

Still corroborating the present study, another study showed that there is a pattern of mobile use in many adolescents. The results showed that, like this study, the students tried to control the amount of times they use their phones and that they are uncomfortable without their phones in reaching distance. They frequently lose track of time when they are on their phones and they use their phones to distract themselves from bad moods. They also feel guilty when they spend lots of money on their phones [4].

Continuing the corroboration, there are gender differences in the pattern of mobile phones in students. In this study, females used text messages more than the males when talking to their peers. Older students were more interested in communication while younger students were interested in the other applications in the phone. The present study showed that while females did not neglect their work, but they are uncomfortable without their phones. Males checked their phones before doing any other work most of the time and their phone is in reaching distance [3].

There are more studies which showed that there is a pattern of mobile phone use in students because of the increased communication between people. One study looked at the idea that as the use of mobile

phones increased, so did the many ways of communicating with peers, teachers and family. This study, as well, as the present study, showed that the use of mobile phones increased as the age of the students increased. School students used the phones less, while undergraduate students used their mobile phones almost everyday. Because of the new ways to use the mobile phone, for education or through the different applications, there is an increase in mobile phone use in students [8].

A final study showed that there is a pattern of mobile use in students because of the increase of different applications which use internet and Wi-Fi. In this study, as well as for the present study, there is an increase of mobile phone use because of the increase in internet connectivity, which can result in more use of applications, like social media sites. There is a relationship between phone use and internet connectivity [9].

Limitations

Our study has come up with interesting findings, however it also has few limitations such as; the sample size was not as per the scientific methods so results from our study may be biased. Since it was not a case and control study, we had no control over how we selected the sample. The sample came from one school and college. Though we have attempted to cover various issues related to mobile use through the questionnaire that was prepared, it was not the standard questionnaire. Thus the finding of this study cannot be generalized.

Conclusion

There is a pattern of mobile phone use in school, Pre-university and undergraduate male and female students. This study also showed that there is a need to create awareness on increased mobile use and the affect it can have on physical, emotional and psychological health; as well as the causes of increased mobile use and how to prevent increased use into something more serious, like addiction. Future studies are required with rigorous methodology to address few limitations of our study.

References

1. Subba, S., Mandelia, C., Pathak, V., Reddy, D., Goel, A., Tayal, A., Nair, S. Ringxiety and the Mobile Phone Usage Pattern among the Students of

- a Medical College in South India. *Journal of clinical and diagnostic research*. 2013, doi:10.7860/JCDR/2013/4652.2729.
2. Davey, S. & Davey, A. Assessment of Smartphone Addiction in Indian Adolescents: A Mixed Method Study by Systematic-review and Meta-analysis Approach. *International Journal of Preventive Medicine*. 2014;5(12):1500-1511.
 3. Zulkefly, S. N., & Baharudin, R. Mobile Phone use Amongst Students in a University in Malaysia: Its Correlates and Relationship to Psychological Health. *European Journal of Scientific Research*, 2009;37:206-218.
 4. Nikhita, C.S., Jadhav, P., & Ajinkya, S.A. Prevalence of Mobile Phone Dependence in Secondary School Adolescents. *Journal of Clinical and Diagnostic Research*, 2015;9(11). doi:10.7860/JCDR/2015/14396.6803Original.
 5. Sumesh Kumar, S. Mobile phone and adolescents-addiction a mindful check in! *International Journal of Advanced Nursing Studies*, 2014;3(1). doi:10.14419/ijans.v3i1.2109.
 6. Subramanian, S.S., & Rajesh, S.M. Impact of Smart Phone Usage among College Students - An Analytical Study. *International Journal of Science and Research*, 2017;6(9):588-590.
 7. Jesse, G.R. Smartphone and App Usage Among College Students: Using Smartphones Effectively for Social and Educational Needs. *Information Systems & Computing Academic Professionals*. 2015.
 8. Qadri, M., Abubaka, Y., & Ibrahim, J. Prevalence of Mobile Usage among University Students: A Case Study of International Islamic University Malaysia. *International Journal of Scientific and Research Publications*, 2015;5(12):2250-3153.
 9. Carbonell, X., Chamarro, A., Oberst, U., Rodrigo, B., & Prades, M. Problematic Use of the Internet and Smartphones in University Students: 2006-2017. *International Journal of Environmental Research and Public Health*, 2018;15(3):475. doi:10.3390/ijerph 15030475.
-