

Addiction of Mobile Phone Usage and Health Hazards Caused among the College Going Students of Kolkata

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Abstract: *In the modern world or present era, advent and spread of technology has proved diverse communication tools, techniques and resources that enable connectivity in a virtual environment at any point of time. Wireless communication has emerged as one of the fastest diffusing media on the planet, fuelling an emergent “mobile youth culture”. In India too, we note that the scenario is similar with people from both rural and urban areas, educated or illiterate, and belonging to almost all ages; now dependent on a cellular phone. The effect of mobile phone radiation has on human health is the subject of recent interest & study, as a result of the enormous increase in mobile phone usage throughout the world. The objectives of the present study was the pattern and dependence on mobile phones and to find out the awareness about health hazards of it among the college going students of Kolkata. The present study was conducted among the 100 (50 boys and 50 girls) enrolled students of Bangabasi College (aged between 18- 21 years) situated at 19, Raj Kumar Chakraborty Sarani, Kolkata- 700009 with in Ward No. 49 of Kolkata Municipal Corporation. Pre-tested questionnaire was used for the present study. The most of the students (70%) irrespective of the sex, are habituated by using the Android smart phone. the students are using either one (38%) or two (34%) SIM cards. More number of girls is using two SIM cards than the boys. 38% of the students use the phone for 4 to 5 hours a day and the situation among the boys and girls are more or less same. 30% among the girl students use phone for 6– 7 hours a day, while boys use less (24%) in this regard. They also use it as their learning resources. 81% of the students are aware about the negative consequences of it. 75% students face headache problems and it is more or less equal among the boys and girls, followed by lack of concentration (59.5%). 51% of the students become irritated and 43.5% feel anxiety during their daily life.*

Keywords: Mobile phone addiction, health hazard, College students, Kolkata.

1. Introduction

Not too long ago, and up to mid 1900s, the primary means to communicate and acquire knowledge were limited to reading and writing. However, in the modern world or present era, advent and spread of technology has proved diverse communication tools, techniques and resources that enable connectivity in a virtual environment at any point of time (Pranshuta et al., 2017). Wireless communication has emerged as one of the fastest diffusing media on the planet, fuelling an emergent “mobile youth culture” (Castellset al., 2007). 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 (WHO, 2011a). In India too, we note that the scenario is similar with people from both rural and urban areas, educated or illiterate, and belonging to almost all ages; now dependent on a cellular phone (Acharya et al., 2013).

Mobile telecommunication systems have grown significantly. Mobile phones are used for a variety of purposes, including keeping in touch with family members, conducting business, & having access to a telephone in the event of an emergency. Some people carry more than one cell phone for different purposes, such as business & personal use. Digital transmission started in 1991 & includes such new developments as data & image transmission. Third generation mobile phones currently in the market offer additional services to the users such as e-mail & internet access. The effect of mobile phone radiation has on human health is the subject of recent interest & study, as a result of the enormous increase in mobile phone usage throughout the

world. Mobile phones use electromagnetic radiation in the microwave range, which some believe may be harmful to human health (Horst et al., 2010). Constant usage and sort of addiction to cell phones has affected the people physically and psychologically by making them have aches and pains and in some a disability too; lose their required number of hours of sleep; get angry and scrap over trivial matters, and so on and so forth (Francisca,2007). Cell phones are seen as a mixed blessing. Teens say phones make their lives safer and more convenient. Yet they also cite new tensions connected to cell phone use (Pew Research Center, 2010). In a study among the Polish and Belarusian students done by Krajewska-Kulak and others (2012) stated that, 35.2 per cent from Poland and 68.8 per cent from Belarus were convinced about the harmful effects of mobile phone. Bhutia and Tariang (2016) studied on the mobile addiction among the college going students from Shilong and found that the college going students of Shillong are moderately addicted to mobile phone and gender and stream has no impact on the mobile phone addiction. Subramanian and Rajesh (2015) conducted an analytical study on impact of smart phone usage among the college going students Chennai, TN. Their study revealed that near about 80% of the student frequently use phone and 66% had habit of checking the smart phone while sleeping, 72% of the participants use for the academic purpose also. In a study in Nigeria on The usage and impact of Internet enabled phones on academic concentration among students of tertiary institutions done by Ezemenaka (2013) stated that, the internet enabled phone usage does not affect the academic performance of the students but distractions by the usage of phone were notably admitted. In a study among the medical students of a college of Kerala,

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George and others (2017) found that, dependency on mobile phones is increasing and 41% commented that life without mobile will be boring and 25% said that they will feel alone or unsafe. They also commented that, as dependence is increasing with the excessive use of mobile phones, some interventions are required to motivate the youth against it. Aoki and Downes (2003) focused on the behavioral and psychological aspects of cell phone usage among college students. They tried to find the reasons behind why a technology is adopted in a particular way.

Objectives

Effects of overuse of cell phone devices in the general population have been carried out by many, but few on specific groups like the teenagers, younger generation or say college-students (Amanda, 2010).

The objectives of the present study will be the pattern and dependence on mobile phones and to find out the awareness & consciousness about health hazards of it among the college going students of Kolkata.

2. Methodology

Study area: The present study was conducted among the enrolled students of Bangabasi College (aged between 18-21 years) situated at 19, Raj Kumar Chakraborty Sarani, Kolkata- 700009 with in Ward No. 49 of Kolkata Municipal Corporation. The College is located at the heart of the city and well connected by buses and trains. The nearest railway station is Sealdah station which is located 500 meters away from the College.

Study participants: For the present study about 100 under graduate college students, apparently healthy, were considered. In this study students of both sexes within the age group of 18-23 years, using cell phones, enrolled in the College named Bangabasi College, Kolkata were questioned. A random sampling was done on the day of data collection. All the students, available in a particular class were requested to answer the questionnaire. This was conducted during the recess so that teaching sessions were not disturbed.

Questionnaire: The respondents were first explained about the rationale of this study. Pre-tested questionnaire was used for the present study. Questions like the model of cell phone, number of SIM using by an individual, hour of using the phone, purpose of the use, use of blue tooth device, suffering from health problems will be asked. They were also asked whether they are aware about the harmful effect of frequently using of cell phone.

Analysis : Data has been analysed using Excel and SPSS (7.5) and represented through tables and diagrams.

3. Results

Table 1: Kind of model the individuals are using

Participants	Ordinary	Android smart phone	Total
Girls	14 28%	36 72%	50
Boys	16 32%	34 68%	50
Total	30 30%	70 70%	100

Table 1 depicts the kind of model the students are using. The most of the students (70%) irrespective of the sex, are habituated by using the Android smart phone. The girls are slightly more in number, who are using the smart phone.

Table 2: Number of SIM card used by an individual

Participants	One SIM	Two SIM	Three SIM	More than three SIM	Total
Girls	16 32%	18 36%	10 20%	6 12%	50
Boys	22 44%	16 32%	8 16%	4 8%	50
Total	38 38%	34 34%	18 18%	10 10%	100

The number of SIM card they are using is presented through the Table 2. The table shows that, generally the students are using either one (38%) or two (34%) SIM cards. More number of girls are using two SIM cards than the boys. Three or four SIM cards are being used by the students also but in less numbers i.e. 18% and 10% respectively.

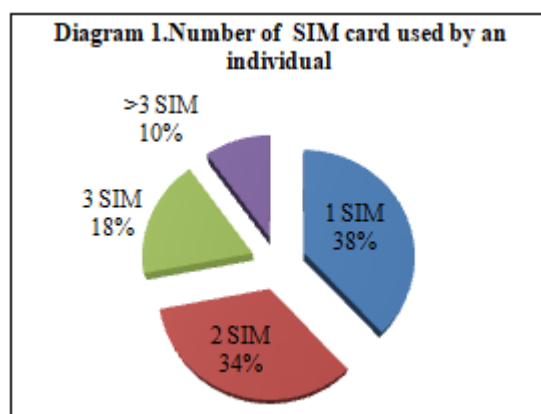


Table 3: Use of mobile phones in hours per day by the student participants

Participants	-3 hrs	4-5 hrs	6-7 hrs	8 hrs & more	Total
Girls	11 22%	18 36%	15 30%	6 12%	50
Boys	14 28%	20 40%	12 24%	4 8%	50
Total	25 25%	38 38%	27 27%	10 10%	100

Use of mobile phones in hours per day by the student participants is presented through the Table 3. From this table it is shown that, 38% of the students use the phone for 4 to 5 hours a day and the situation among the boys and girls are more or less same. 30% among the girl students use phone for 6-7 hours a day, while boys use less (24%) in this regard. 25% of the students use phone for at least 3 hours whereas, 10% of them use it for more than 8 hours a day.

Table 4: Use of internet connection in the phone by the participants

Participants	Used	Not used	Total
Girls	46 92%	4 8%	50
Boys	45 90%	5 10%	50
Total	91 91%	9 9%	100

Use of internet connection in the phone by the participants is represented through the Table 4. It is evidenced from the table that, most of the students (91%) use internet connection and it is same among the boys and girls as well.

Table 5: How often they use their phone in class for learning

Participants	Never	Seldom	Sometimes	Frequent	Total
Girls	14 28%	16 32%	15 30%	5 10%	50
Boys	13 26%	18 36%	12 24%	7 14%	50
Total	27 27%	34 34%	27 27%	12 12%	100

Not only they use mobiles for other purposes, they also use it as their learning resources. 12% of the students use frequently for learning, whereas, 27% students including boys and girls use it as a resource. In this case girls (30%) are more active than their boys (24%) counter part. 34% of them use it seldomly, out which boys are more in number than the girls. On the other hand more or less one third of the students never use mobiles for learning. All these is being depicted through Table 5.

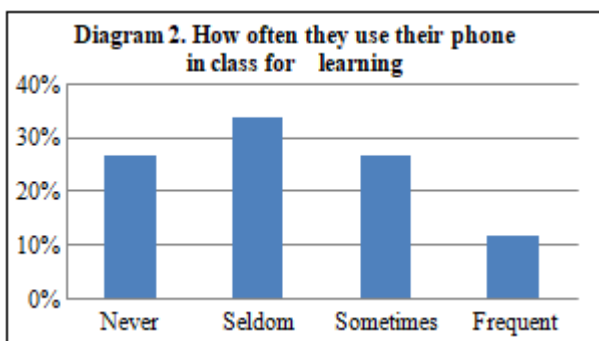


Table 6: Awareness about the health problems related to use of mobile for long time a day

Participants	Aware	Not aware	Total
Girls	39 78%	11 22%	50
Boys	42 84%	8 16%	50
Total	81 81%	19 19%	100

Table 6 shows the awareness about the problems related to the use of mobile for long period of time. Here, it is noticed that, 81% of the students are aware about the negative consequences of it among these, 84% are boys and 78% among the girls know very well about it. 22% of the girl students don't have any idea about the negative effect of the prolonged use of it. It is comparative 16%.

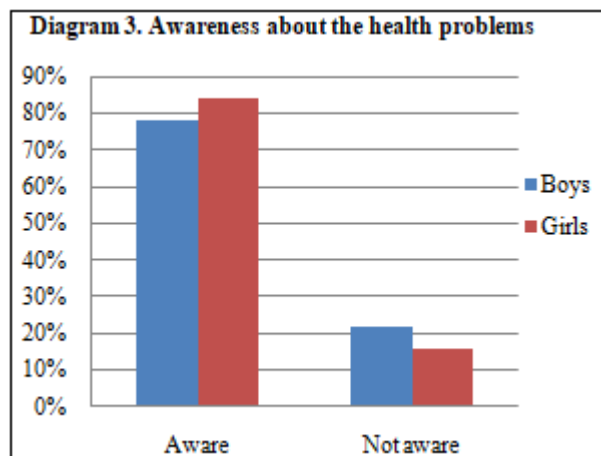


Table 7: Types of health problems (%) they usually faced

Participants	Headache	Irritability	Lack of concentration	Anxiety	Eye pain	Lack of sleep	Neck and arm pain
Boys	74%	54%	62%	44%	31%	28%	32%
Girls	76%	48%	57%	43%	38%	31%	26%
Total	75%	51%	59.5%	43.5%	34.5%	29.5%	29%

Table 7 reflects the types of health problems usually they face. From this table, it is found that, 75% students face headache problems and it is more or less equal among the boys and girls, followed by lack of concentration (59.5%). 51% of the students become irritated and 43.5% feel anxiety during their daily life. Lack of sleep as well as neck and arm pain also caused by using of mobiles. Most of the students go through a number of problems simultaneously.

4. Discussions

With advent of communication technology, smart phone usage has become a necessity for various purposes such as personal, academic, social networking and making financial payments (Subramanian and Rajesh, 2017). Excessive use of mobile is being made these days as it is becoming a multifunctional gadget which is hampering the social interactions of people (Nishad and Rana, 2016). Advanced mobile technology will be globally ubiquitous by 2020 with 70 percent of using smart phones and 90 percent covered by mobile broadband network (Uichin Lee et al., 2014). In a study done by Acharya and others (2013) among the college going students from almost all the subjects (96.1 %) possessed cell phones, and used the device for a greater part of the day. In the present study, it was also noticed that all the students have mobile phones and 70% of them have

android smart phones for their use. In a study done by Acharya and others (2013) among the college going students from almost all the subjects (96.1 %) possessed cell phones, and used the device for a greater part of the day.

Wood (2014) studied college students and reported that, of the students surveyed 74% (n=85/115) are females and 26% (n=30/115) are males students, out of which, women students spend from out of 10 hours a day had 8 hours with their smart phone usage than male counterparts). In a study done by Subramanian and Rajesh (2017) reflected that, the smart phone usage majority of students have used Smartphone for 3-5 yrs (65%), 2-3 yrs (45%), while, duration of smart phone usage of students per day more than 5 hours (77%) and 2 hours (27%). Savio (2016) studied among Goa UG students have 95% for wats app: 81% for games and facebook 76% online videos 63% per day). Few (25.4 %) of the subjects had been using the cell phone for less than a year while the rest (74.6%) had been using it for more than a year was evidenced in a study done by Acharya others (2013). The present study shows that, 38% of the students use phone for 4 to 5 hours a day and the situation among the boys and girls are more or less same. 30% among the girl students use phone for 6- 7 hours a day, while boys use less (24%) in this regard. 25% of the students use phone

for at least 3 hours whereas, 10% of them use it for more than 8 hours a day, which is not far from the other studies.

There are several theoretical mechanisms that support a causal effect of smart phone use on educational performance. On the one hand, the use of a smart phone may improve the efficiency of students' study activities by allowing them to continuously search for (study-related) information and by facilitating teamwork (Chen and Yan, 2016; Hawi and Samaha, 2016). On the other hand, research has shown that students see their smartphones primarily as sources of entertainment, rather than as study tools (Barkley and Lepp, 2013; Lepp et al., 2013). Usage of smart phones towards the course related downloading class materials to academic and assignments (72%) and to download advanced techniques (27%) (Jayanthi, 2013). Normal usage and usage of learning among students found the most apt to update for knowledge (50%) & education (32%). An US based study claims 83% of health care providers use smart phone to access, 50% use for drug references, 28% for clinical decision 72% use to write notes and memos) (Dr.Gayle, 2015). The impact of mobile phone on student learning is examined by Sundari (2015). Majority (42.1%) of respondents revealed that the frequent use of mobile phone sometimes interferes their learning whereas 36.4% are of the agreement that it also assists them in learning sometimes. 31.6% of the respondents are of the opinion that the calls/messages received just before class impact on their ability to concentrate sometimes and 11.2% said it happens to them always. 33.9% said that the use of mobile during their study time distract them sometimes and 37.4% said it also assists them in learning. The results give a balanced opinion for or against the use of mobile phone on learning and their study. Majority (53.7%) agreed that they can easily contact the teachers for study purposes. 19.6% strongly agreed that they contact the teachers for this purpose. 47.3% of respondents agreed that they can easily contact their classmates for help in studies. 39.3% agreed that their academic performance has been increased due to mobile technology whereas 31.1% disagreed. 38.2% agreed that mobile phone has helped to increase the level of quality of education whereas 33.1% disagreed. Results of the present study resemble that, 12% of the students use mobile frequently for learning, whereas, 27% students including boys and girls use it as a resource. In this case girls (30%) are more active than their boys (24%) counter part. 34% of them use it seldomly, out which boys are more in number than the girls. On the other hand more or less one third of the students never use mobiles for learning. As a whole they are in favour of using mobile phones for better learning and exchange of knowledge.

In a study among the Polish and Belarusian students done by Krajewska-Kulak and others (2012) stated that, 35.2 per cent from Poland and 68.8 per cent from Belarus were convinced about the harmful effects of mobile phone. Acharya others (2013) carried on a study on some of the common health effects of cell-phones amongst college students. This study focused on the health effects of cell phone usage amongst students pursuing professional courses in colleges in an urban setting. College students of both sexes in the age group 17-23 years from urban and rural backgrounds were selected at random. Headache was found to be the

commonest symptom (51.47 %) followed by irritability/anger (50.79 %). Other common mental symptoms included lack of concentration and poor academic performance, insomnia, anxiety etc. Among physical symptoms – body aches (32.19 %), eye strain (36.51 %), Acharya and others (2013). In another study conducted by Subramanian and Rajesh (2017) among 115 subjects of both sexes in the age group 17- 25 years professional college students of Chennai. They pointed out that, 79% had headache due to continued mobile usage, and 51% gets anxiety after 47% lack of concentration, 35% had sleeplessness, 43% had neck& arm pain, 54% eye pain while using phone. Similar results are also noticed among the college students of the present study.

Study done among the medical students of a college of Kerala, George and others (2017) found that, dependency on mobile phones is increasing and 41% commented that life without mobile will be boring and 25% said that they will feel alone or unsafe. Here, in the present study, same tendency is noticed. When asked whether they can spend a whole day without using mobile phone, 90% of the students irrespective of sexes said that, they couldn't and it is more or less equal in case of both boys and girls.

5. Conclusion

From the present study, it can be concluded that, the college students are day by day gradually depending on mobile phones. They not only use phone for other purposes like using internet, chatting, hearing songs, but also use for academic purposes. Although, they are aware about the negative effect of using mobile for long time and causes various health problems, but they are reluctant to reduce the using of it. Headache, lack of concentration, irritability are very common health problems among the students. They could not spend a day without the mobile phone.

6. Acknowledgements

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7. Conflict of Interest

None

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