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Pattern of smartphone use among MBBS students in an Indian Medical College

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Abstract

Background: Smartphones nowadays have become a very important tool in daily life with multiple purposes including social networking, acquiring knowledge. But college students often misuse them due to over indulgence, which may affect their study performance and social life. Pattern of smartphone use among medical students of India are lacking.

Methods: Total 257 students of 1st, 2nd and 3rd Prof part 1 MBBS students of a medical college in west Bengal were given a questionnaire to assess the pattern of smartphone use after taking their consent and ensuring to keep their response confidential. The response to different questions were then assessed by percentage.

Results: Above 94% students possessed smartphone, some even possess two. Average daily use among them was 6 hours. Majority of them were using this mainly for social networking, followed by playing games, listening to music and for academic purpose. Majority of them regularly use smartphone at late night. Some felt lack of concentration during study hours due to urge for using phones very often. 1/3rd of users even felt that overuse of smartphones are degrading their academic performance, though 1/5th felt that smartphones are helpful in improving their academic performance.

Conclusion: Proper utilization of smartphones among medical students should be ensured to make these devices very useful tools for learning medicine. Large scale studies are required to assess the impact of smartphone use among medical students of other parts of India.

Keywords: smartphone, medical students, social network, academic purpose

1. Introduction

Smartphones are the new generation of mobile phones, they have emerged over the last few years and already have conquered the market. Smartphones with their mini keyboards are not just phones, but have computer functions as email, calendar and address book, and office programs for reading and editing. The multimedia phone features such as camera, video, sound recordings or podcasting is advanced and can compete with specialized equipment. These functions allow users not only to communicate with others face to-face or instantly, which is a perfect way for shy students to communicate with others, but also to enjoy different kinds of entertainment like games. Users can also get information while surfing on the Internet which helps them to escape from uncomfortable situations. As a result, it seems that many students tend to rely heavily on their phones, which will inevitably lead to even heavier use [1].

These devices have many features which can be successfully harnessed in healthcare, including rapid access to information, instant communication and improved organisation. In a study [2] done in University of Birmingham, UK, from 361 participants, Fifty-nine per cent of students owned a smartphone; 37% of these reported using the device to support their learning. Generally students were positive towards the concept of smartphones as future educational aids, with 84% believing the devices would be useful or very useful. students also mentioned issues such as potential for unprofessional behaviour and dependence upon smartphone.

Smartphone abuse to addiction is becoming more problematic nowadays because most students whether higher learning students or low level students are more addicted to applications found on smartphones.

A study in Tanzania showed the impact of smartphones on academic performance of higher learning students in the Ruaha Catholic University [3] and it revealed why the academic performance of students were degrading day to day.

Medical students need to study throughout their MBBS syllabus for longer hours compared to other streams. But availability of smartphones very easily can hamper their concentration and learning process. But availability of e-text books, powerpoints of their study materials by smartphone also help a lot in study.

In another study from sub Saharan Africa [4], all the 123 participants owned smartphones and the greatest use among majority (>63%) was for routine functions such as receiving or making calls, sending or receiving SMS and e-mails. Less frequent usage (41% to 59%) was to access and take lecture notes, access medical videos, electronic textbook and for medical research. They were rarely used (<32%) as clinical tools in patient management, for course evaluation and as log book. Battery life, small size screen, slow speed, limited memory and cost were the major barriers to mobile learning while the greatest advantages were mobility of the device, ease of use, access to current information and ease of access to resources.

There is lack of studies on medical students about the pattern of smartphone use. So our study will look into the matter and will evaluate the pattern of smartphone use among medical students of an Indian medical college and whether smartphones are affecting their academic performance.

2. Methodology

2.1 Primary objective: To find out the pattern of smartphone use among 1st, 2nd and 3rd Prof (part 1) MBBS students of College of Medicine & JNM hospital, Kalyani, Nadia, West Bengal.

2.2 Secondary objectives: To assess most frequent activity on smartphones among students and whether their study performance is affected by smartphone use.

This study was a cross sectional observational questionnaire based study, done among students of 1st, 2nd, 3rd Prof (part 1) MBBS students of a medical college in West Bengal. The study began after getting clearance from Institutional Ethics Committee. Detailed informed consent was provided to medical students. Then the response from the willing students were collected and analyzed.

A well-structured and administered questionnaire were prepared and distributed to the 257 willing students of 1st, 2nd and 3rd Prof (part 1) MBBS students of the medical college for data collection. The data collected were analyzed through percentages and frequencies.

Following questions were asked

1. Whether students possess smartphone.
2. How many have more than one?
3. Their ages when the 1st smartphone was bought.
4. Average number of hours spent on phone daily?
5. Frequency of checking facebook updates
6. Frequency of checking whatsapp messages.
7. Whether using phone as a source of academic information
8. Whether spend time by playing games in smartphone?
9. The most frequent activity on phone.
10. Whether they go to bed with smartphone?
11. Whether they use it regularly in late night?
12. Whether they feel lack of concentration during class or self study for an urge to use the phone?
13. What do they feel about effect of smartphone on their study?

Confidentiality of the students were strictly maintained. Necessary Statistical analysis were done after obtaining the results. Answers of the survey questions were described in percentage and pie diagram, bar chart.

3. Results

Total 257 medical students participated in the study. Out of which, 243 (94.56%) had smartphone and 14 students (5.44%) had not use a smartphone yet.

Out of 243 smartphone users, 38 students (14.79% of total students) had even two smartphones.

Average age of buying the first smartphone was 18 years among all users, but the range varied from 12 years to 22 years.

Average daily duration of smartphone use was 6 hours, but it also varied from 30 minutes a day to 24 hours a day in some students.

While asking about the frequency of checking facebook updates, 16.05% students told that they checked facebook every hour or less, 30.04% used it every 2-3 hours, 8.23% used it every 6 hours or so, 39.92% used it once/twice per day, 2.47% used it less than once per day. 8 students (3.29%) don't use facebook by smartphone. (Figure 1)

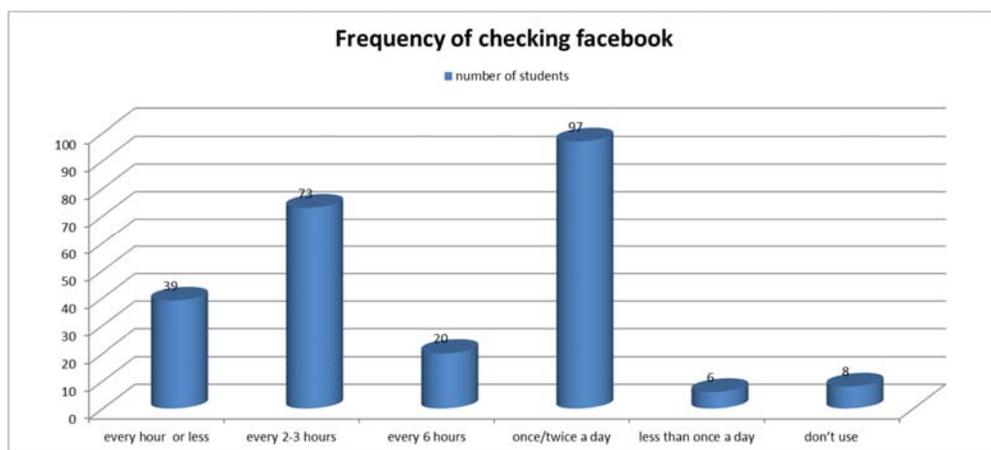


Fig 1: Frequency of checking facebook by smartphone among medical students

While asking about frequency of whatsapp checking from their smartphones, 9.89% students told that they remained online in whatsapp always 32.51% students used it every

hour or less, 27.98% used it every 2-3 hours, 24.69% used it every 6 hours or so. 11 students didn't use whatsapp. (Figure 2)

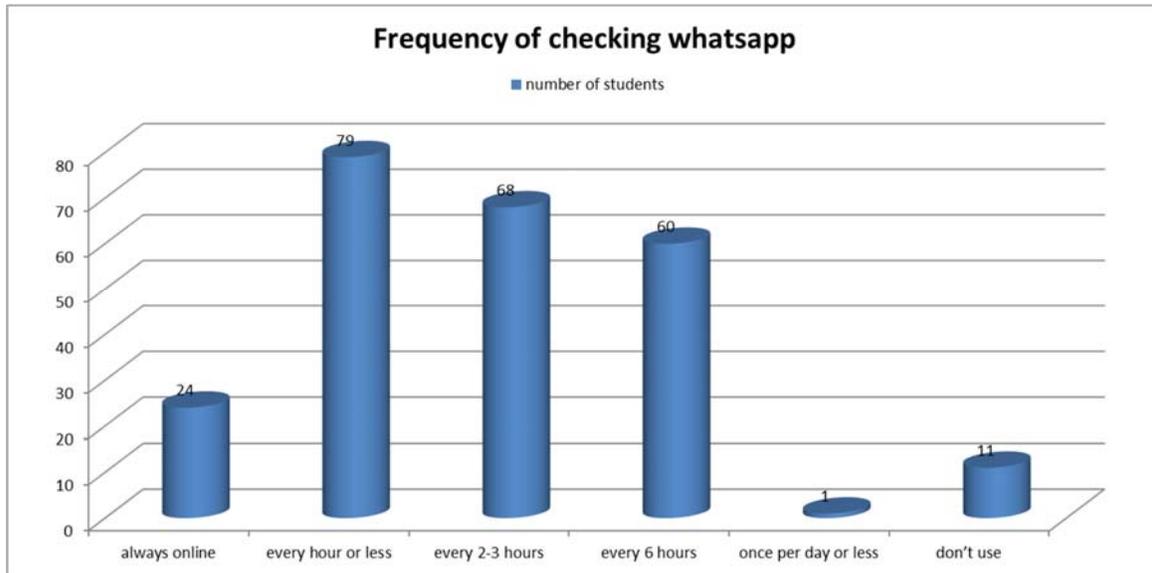


Fig 2: Frequency of checking whatsapp from smartphone by medical students

Out of 243 smartphone users, 224 students (92.18%) told that they used their smartphone for academic purpose also. Among the users, 147 students (60.49%) also spent time by playing games in smartphone, rest 39.51% didn't like to play games in smartphone.

While asking about the most frequent activities on smartphone by students, 124 students (51.02%) responded social networking as their most frequent activity. 35 students (14.4%) used smartphone mostly for gaming, listening songs was most favorite activity for 53 students (21.81%). 4 students (1.64%) liked to watch and download videos most. 27 students (11.11%) mostly used their phones for academic purpose and ebook reading. (Figure 3)

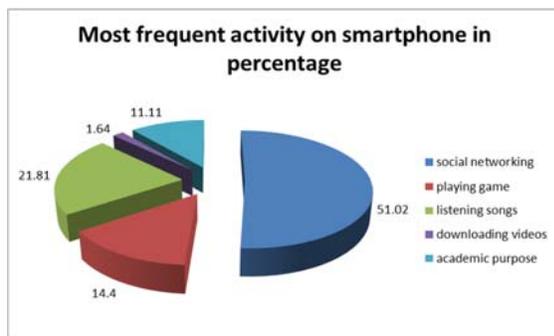


Fig 3: most frequent activities on smartphone (responses in percentage)

While asking about whether they went to bed with their smartphone, 183 students (75.3%) responded yes. 60 students (24.7%) did not take smartphone while going to bed. 125 students (51.44%) told that they used their smartphones regularly at late night, 118 students did not use it at late night.

While asking about whether they felt lack of concentration due to smartphone use either during lecture classes or during self study, 91 students (37.44%) responded yes. Rest 152 students did not feel about lack of concentration during study.

Regarding the question what is the effect of smartphone on their academic performance, 87 students (35.81%) told that they felt their performance might be deteriorating due to overuse of smartphone, whereas 48 students (19.75%) responded that smartphones might actually improve their performance. 108 students (44.44%) told that smartphones had no effect on their academic performance. (Figure 4)

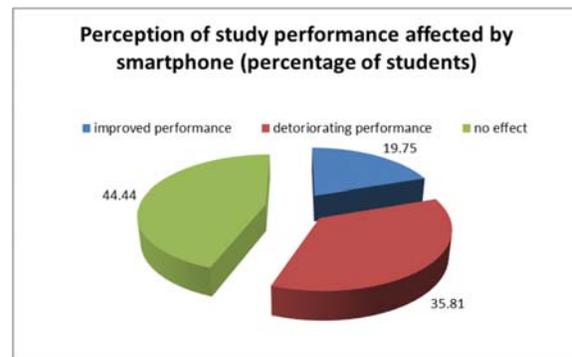


Fig 4: Effect of smartphone on academic performance, what students felt (response in percentage)

4. Discussion

From the study done among 257 medical students, it is evident that smartphones have now reached to almost every medical students. This is because of drastic reduction of cost of present smartphones and also many students want to flaunt attractive smartphones. Even many of the students had 2 smartphones.

Average age of first buying of smartphone was 18 years, showing that most of the students bought it just after entrance into medical college.

Approximate daily use varied significantly among smartphone users, from 30 minutes to 24 hours a day. But the average use was 6 hours, which is quite high as that means students might waste important times by smartphone overuse.

Many previous studies showed effect of facebook or addiction of social network on their academic performance. A research was conducted to study the relationship between academic performance and Facebook usage [5]. Sample were taken from population of 219 university students and they found that Facebook users had lower Grade Point Averages and they were online most of the time and utilized very less time for their studies in comparison with students who did not use Social Networking Services. Grosbeck *et al.* in their study [6] found that the majority of students spend significant time on Facebook more for social uses and less for academic purposes. In their research concerning Online Social networking (OSN) Paul *et al.* [7] their results revealed a statistically significant negative relationship between time spent by students on OSN and their academic performance. The time spent on OSN was found to be heavily influenced by the attention span of the students.

In another study [8], a regression analysis showed that there is negative relationship between facebook addiction and Academic performance [6]. Smartphone's addiction is a major impact on academic and social life.

In our study, we found that students use facebook heavily, nearly half of the students use it every 1-3 hours. Only 8 students didn't use facebook from smartphone.

Also, they were using whatsapp significantly, 103 students use it continuously or every hour. Total 117 students used it every 2-3 hours or every 6 hours. Only 11 students didn't use whatsapp.

A good fact is that, a great majority (over 90%) of students use their smartphone for academic purpose also. Majority of students (over 60%), mostly boys, play games in smartphone regularly.

Among the users, more than half of the students use their smartphones mostly for social networking, like other studies. Next in response was playing games and listening music.

Our study found that the students who are indulged in gaming and social networking heavily, they tend to use the smartphone for longer, may be, more than 10 hours per day, which is a serious concern.

Though many use their smartphone for academic purpose, only 11% use predominantly for academic purpose, which should be higher especially among medical students since smartphone is very helpful in learning and storing many medical facts also.

In a survey by Sarwar *et al.* [9] Smartphone addiction was found to be interfering with the subject's night's sleep. According to the survey, 33% of mobile workers admitted that they check their phones for email and message throughout the night. Nearly 50% of those surveyed said, they wouldn't even think of going to bed without have their Smartphone's tucked under their pillows. In our study also, a great majority confessed that about going to bed with smartphone and most of them used it regularly in late night. This habit should be discouraged.

In our study, 1/3rd of all smartphone user students felt lack of concentration while studying or in class due to overindulgence of study. Rest 152 students did not felt about lack of concentration during study. But this indicates that smartphone is affecting their concentration level significantly.

Variable response was obtained while asking about effect of smartphone on academic performance. More than 1/3rd of all students told that they felt their performance might be deteriorating due to overuse of smartphone, whereas only

1/5th of students responded that smartphones might actually improve their performance. Nearly half of the students told that smartphones had no effect on their academic performance. Academic performance is dependent on many other factors. So the response was variable. Proper utilization of smartphones among medical students should be ensured to make these devices very useful tools for learning medicine.

Study on smartphone use in medical students are lacking, so few large scale studies are needed to know the actual impact of smartphone use among medical students in India.

5. Conclusions

Smartphones have reached to almost all medical students in this study group. Average daily use was 6 hours. More than half of the smarphone users use it predominantly for social networking. More than 90% students also use it for academic information. Most of them used smartphone regularly at late night, which may hamper their sleep. As a result, many students felt lack of concentration in study hours. Also many students felt that smartphone overuse might be responsible for deterioration of their academic performance, but some told that it was improving their performance.

Proper utilization of smartphones among medical students should be ensured to make these devices very useful tools for learning medicine. Large scale studies are required to assess the impact of smartphone use among medical students of other parts of India

6. References

1. Al-Barashdi. Smartphone Addiction among University Undergraduates: A Literature Review, Journal of Scientific Research & Reports. 2015; 4(3):210-225.
2. Robinson T, Cronin T, Ibrahim H, Jinks M, Molitor T, Newman J *et al.* Smartphone Use and Acceptability Among Clinical Medical Students: A Questionnaire-Based Study, Journal Of Medical Systems. 2013; 37:9936.
3. Kibona L, Mgaya G. Smartphones' Effects on Academic Performance of Higher Learning Students. A Case of Ruaha Catholic University – Iringa, Tanzania, Journal of Multidisciplinary Engineering Science and Technology (JMEST) ISSN: 3159-0040 2015; 2(4):777-784.
4. Ibrahim NA, Salisu M, Poppula AA, Ibrahim TI. Use of smartphones among medical students in The clinical years at a medical school in sub-Sahara africa:a Pilot study. Journal of mobile technology in Medicine, volume. 2014; 3(2):28-34.
5. Kirschner PA, Karpinski AC. Facebook® and academic performance, Computers in human behavior, 2010; 26:1237-1245.
6. Grosbeck G, Bran R, Tiru L. Dear teacher, what should I write on my wall? A case study on academic uses of Facebook, Procedia-Social and Behavioral Sciences 2011; 15:1425-1430.
7. Paul JA, Baker HM, Cochran JD. Effect of online social networking on student academic performance, Computers in Human Behavior 2012; 28:2117-2127.
8. Mahmood UF. Facebook Addiction: A Study of Big-Five Factors and Academic Performance amongst Students of IUB, Global Journal of Management and Business Research. 2014, 14.
9. Sarwar M, Soomro TR. Impact of smartphone's on society, European Journal of Scientific Research. 2013.