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Original Article

Smart phone use and its impact on behavior pattern of school students and academic performance

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ABSTRACT:

Background: Smartphone are minicomputer as the features and functions provided are like computer in its mini form and its handy. The present study was conducted to determine smart phone use and its impact on behaviour pattern of school students. **Materials & Methods:** The present study was conducted on 1200 school children age ranged 12-18 years of age of both genders. A self-administrated, pretested, questionnaire that comprised details of their frequency and pattern of using mobile phone and its effects on their psychological health, sleep-related behavioral issues, and academic performance was distributed among school children and were asked to respond. **Results:** Out of 1200 students, boys were 750 and girls were 450. 850 had own phone, 200 had dual sim phone and 150 had two phones. 910 had his phone on ringing, 50 had at vibration and 40 had silent. 840 used at home, 150 at school and 210 at public place. 240 use at morning, 120 at afternoon, 650 at evening and 190 at night. The difference was significant ($P < 0.05$). 840 had difficulty in waking, 930 had waking tiredness, 1020 had decline in grades, 752 had decrease concentration, 490 had increase missed classes and 535 were late for class. **Conclusion:** Authors found strong impact of smartphones on sleep as well as academic performance of school children.

Key words: Academic, Smart phones, Students.

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INTRODUCTION

The fast growth of technology has developed electronic device such as smartphone that the function do not limited only for messaging but this device allow long distance communication. Smartphone can be called as mini computer as the features and functions provided are like computer in its mini form and its handy.¹

The smartphone era began in 1993 with the introduction of Simon smartphone from IBM. Smart phone revolution era began with introduction of blackberry smart phone in mass communication market equipped with many features such as web browsing, camera, email and internet. Apple entered the market in 2007 and became a major breakthrough in the market as the company introduced its first smart phone. By the end of 2007, android operating system by Google was

revealed to public in aim to approach smartphone consumer with advanced technology.²

Mobile phones have become a ubiquitous part of our daily lives. Initially, mobile phones were used only as a communication tool; but, these days, mobile phones function as mobile computers that serve us with music player, games, internet, video camera, calculator, alarm clock, and many more other perceived benefits as increased accessibility and social connectivity, reduced loneliness, and security in emergency situations.³

Owing to these countless perks, mobile phones are increasingly adopted and used by teenagers. Moreover, usage of mobile phones has increased dramatically owing to their more affordability and availability all over the world. Fixed telephone lines reached one billion users in 128 years, while mobile networks attained this milestone in

simply over two decades. Worldwide, mobile phone subscriptions have reached six billion. In India, people living in both rural and urban areas, literate or illiterate, and belonging to almost all age groups are now dependent on a mobile phone.⁴ The present study was conducted to determine smart phone use and its impact on behaviour pattern of school students.

MATERIALS & METHODS

The present study was conducted in the selected schools of Faridkot, Punjab. It comprised of 1200 school children age ranged 12-18 years of age of both genders. All were

informed regarding the study and written consent was obtained. Ethical clearance was taken prior to the study. General information such as name, age, gender etc. was recorded. A self-administrated, pretested, questionnaire that comprised details of their frequency and pattern of using mobile phone and its effects on their psychological health, sleep-related behavioral issues, and academic performance was distributed among school children and were asked to respond. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I: Distribution of subjects

Total- 1200		
Gender	Boys	Girls
Number	750	450

Table I shows that out of 1200 students, boys were 750 and girls were 450.

Table II: Pattern of smart phone use

Pattern of smartphone use	Number	P value
Have own phone	850	0.01
Dual sim	200	
Two phones	150	
Mode of use		
Ringing	910	0.02
Vibration	50	
Silent	240	
Use at place		
Home	840	0.01
School	150	
Public place	210	
Time of use		
Morning	240	0.05
Afternoon	120	
Evening	650	
Night	190	

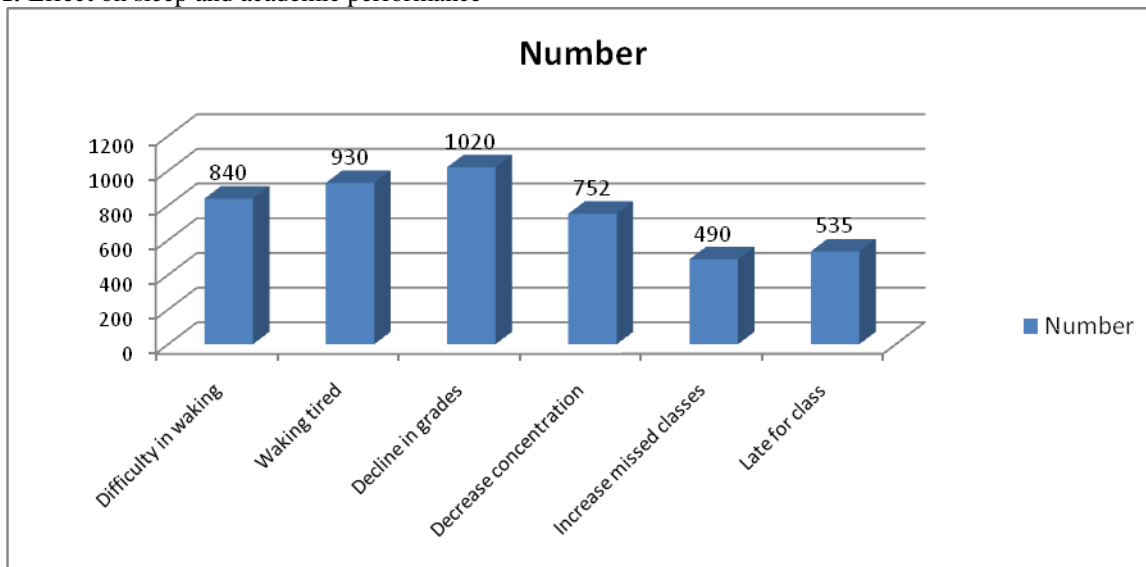
Table II shows that 850 had own phone, 200 had dual sim phone and 150 had two phones. 910 had his phone on ringing, 50 had at vibration and 40 had silent. 840 used at home, 150 at school and 210 at public place. 240 use at morning, 120 at afternoon, 650 at evening and 190 at night. The difference was significant (P< 0.05).

Table III: Effect on sleep and academic performance

Sleep and academic performance	Number
Difficulty in waking	840
Waking tired	930
Decline in grades	1020
Decrease concentration	752
Increase missed classes	490
Late for class	535

Table III, graph I shows that 840 had difficulty in waking, 930 had waking tired ness, 1020 had decline in grades, 752 had decrease concentration, 490 had increase missed classes and 535 were late for class.

Graph I: Effect on sleep and academic performance



DISCUSSION

Smartphone offers many functions but youth are more attracted in chatting and searching for new mates through the medium of social media and even like to exchange pictures which seem to be unrelated to their learning. Smartphone seems to be the first thing users look for in the morning and the last things they look at before they sleep.⁵ Smartphone is a mobile phone that has the ability of a computer. This device provides user with advance communication and computing ability than the traditional mobile phone which equipped with internet access, cameras with high quality, and management tools. Latest smart phones are viewed as handheld computers rather than a normal phone because of its powerful computing ability and large memory.⁶ The capability of running feature-rich application (apps) on smartphones made smartphone a more powerful device replacing many devices such as alarms clocks, calculators, laptops, GPS navigators and digital cameras.⁷ The present study was conducted to determine smart phone use and its impact on behaviour pattern of school students.

In present study, out of 1200 students, boys were 750 and girls were 450. 850 had own phone, 200 had dual sim phone and 150 had two phones. 910 had his phone on ringing, 50 had at vibration and 40 had silent. 840 used at home, 150 at school and 210 at public place. 240 use at morning, 120 at afternoon, 650 at evening and 190 at night. Dixit et al⁸ found that among the total 1,000 students, all of them possessed their own mobile phone, with about 76.4% students having smart phones. Major purpose of using the phone was for communication, coordination of activities, and in emergency situations, while others were also using it for downloading games, music, videos, and for style. Nighttime usage of mobile phone was highly significantly associated with difficulty in waking up, waking time

tiredness, decline in study habits, difficulty in concentration, increase in missed classes, and going late for classes. Total time spent on mobile phones was significantly associated with waking time tiredness and difficulty in waking up and highly significantly with decline in study habits, increase in missed classes, and going late for classes.

We found that 840 had difficulty in waking, 930 had waking tiredness, 1020 had decline in grades, 752 had decrease concentration, 490 had increase missed classes and 535 were late for class.

Bulcket al⁹ found that adolescents who owned a smart phone compared to non-owners slept less and had more sleep problems at baseline. Following up after two years, there were no differences in sleep problems between smart phone owners, new owners, and non-owners, but those who had owned a smartphone since baseline, compared to those who still did not own a smartphone, had shorter sleep duration on week days.

CONCLUSION

Authors found strong impact of smartphones on sleep as well as academic performance of school children's.

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