

## **IMPACT OF USE OF ELECTRONIC DEVICES ON THE LIFESTYLE OF SCHOOL STUDENTS IN NAVI MUMBAI.**

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### **ABSTRACT**

Technological advances have led to many inventions like TV, computers, mobiles, tablet, Ipads, play stations and many more that fascinates both younger and elderly population. This fascination leads to addictive usage of electronic devices which overrides the daily activities especially in young adolescents. This study was done as a cross sectional study during Jan 2015 with the objectives of assessing the over usage of electronic devices and its effects among school going adolescent population from different randomly selected areas in Navi Mumbai. Data collection was done using the preformed predetermined questionnaire by personal interview, after getting informed consent from the participants and ensuring them about strict confidentiality about their identity. This research study aimed to determine and identify all the possible positive and negative effects of using electronic devices to the lifestyle and study habits of school students. The results of this study are interim wherein, total of 551 were studied in which the mean age of the study population was 11 years with the range of 5 to 15 years, majority (64%) of them were males. The gathered data and results confirmed that using electronic device is a factor that distracts or steals away the attention and focus of students. The over usage of electronic devices led to academic hindrance and health problems like headache, sleep disturbances and fatigue, etc. Our study had explored that preventing excessive use of the electronic devices will reduce most of the physical and psychosocial health problems.

**Keywords:** electronic devices, addictive behavior, effects of usage; health problems.

### **INTRODUCTION**

Media technology is an integral part of children's lives in the twenty-first century. The world of electronic media, however, is changing dramatically. Television, which dominated the media world through the mid-1990s, now competes in an arena crowded with cell phones, iPods, video games, instant messaging, interactive multiplayer video games, virtual reality sites, Web social networks, and e-mail (1). All the children in the world are exposed to these electronic devices and technologies at the earliest age. Moreover, many of the children own electronic devices like

mobile phone, Ipad, Funbook, video games etc. which parents also buy and give them without hesitation. A large proportion of children use these devices indiscriminately for hours together. In association with this over use of electronic devices the children and adolescents are spending less time in outdoor playing, leading to less physical activity and also land up in health, social and learning problems (2, 3). This research study aimed to determine and identify all the possible positive and negative effects of using electronic devices to the lifestyle and study habits of school students.

## **MATERIALS AND METHODS**

This study was done as a cross sectional study during Jan 2015 with the objectives of assessing the over usage of electronic devices and its effects among school going adolescent population from different randomly selected areas in Navi Mumbai. The school children of aged 5 to 15 years were included in the study. The data was collected using a preformed predetermined questionnaire prepared by all the investigators. The questionnaire included the detailed usage pattern of electronic devices, like usage hours per day, number of electronic devices they own, health effects faced, addictive behavior towards usage, academic performance hindrance, obsession towards the use, advantages gained etc. The data was collected after explaining about each and every question to all the students and the doubts were cleared then and there. The data were entered in the MS excel sheet and were analyzed using Statistical Package for Social Sciences (SPSS) for Windows v 21.0. The data were expressed in percentages and appropriate test of significance (Chi-square test) was performed.

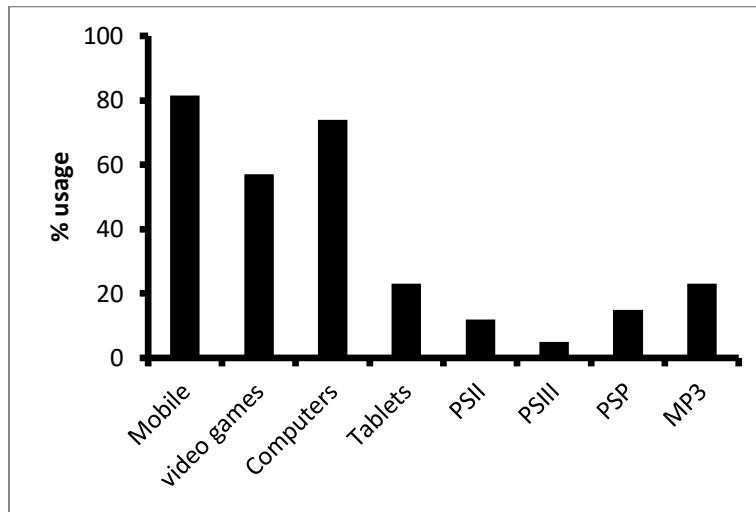
## **RESULTS**

### **Profile of the study participants**

Our study was conducted among a total of 551 school going adolescent boys and girls, of which 97 (64%) were boys and the remaining were girls. Mean age was 11 years with the range of 5 to 15 years and the majority was from 10 years of age. Most of the study participants belonged nuclear family (92%) and they do not have siblings (58%). The time spent by the parents with their children is also less as majority of the mothers are working. The average hours spent with the electronic devices was 4.2 hours per day

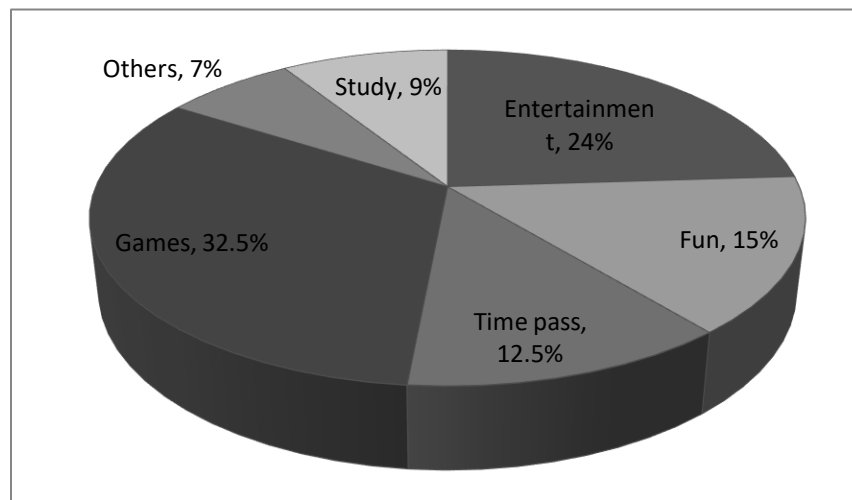
### **Usage of electronic devices**

The average duration of use of electronic devices was 8 years and average hours spent per day was 4.8 hours. The most common electronic device used by the study population was mobile (81.5%) followed by Laptop and computers (74%), video games (57%). The other devices used by them were PSP, PS III, Ipad, and Ipod. (Fig. 1).



**Fig. 1: Usage of different types of electronic devices by the study population.**

The reasons for liking the devices were entertainment (24%), fun (15%), time pass (12.5%), games (32.5%), connecting people (5%), relaxation (2%) and study (9%).(Fig. 2).



**Fig. 2: Reasons for use of different types of electronic devices by the study population.**

### Change in lifestyles after the arrival of electronic devices

A significant number of adolescents (72.7%) accept that the time spent in outdoor playing was reduced after they start using these devices. Invariably (64.4%) of the study participants got scolded by the parents because of frequent use of these devices, so to avoid scolding (28.3%) of them wait till the parents to sleep for using the devices and the academic performance of 24% of

the subjects has gone down or became poor. Many of the study participants get disturbed when their devices were confiscated and the emotions they suffered were sad, depressed, irritable, restless, and angry. Also many of the subjects were reported to become violent at times. As an influence of the electronic media, children also start creating an imaginary world around them and imitate the TV characters.

### **Addictive behaviors**

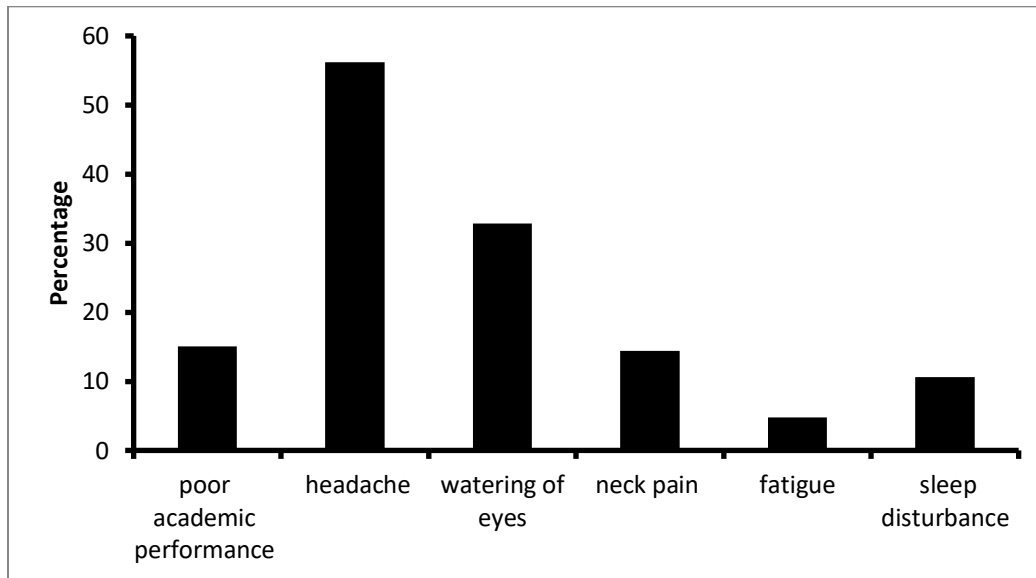
The addictive behaviors of the subjects were studied as given in table 1. The prevalence of overall behavioral addiction towards the electronic devices was present among 43.3% of the study population.

**Table 1: Addictive behavior associated with the electronic device usage**

searching the device in between the sleep	23%
use more than one device at the same time	34%
need counseling to stay away from these devices	12%
unable to survive without the devices	21%

### **Effects of usage of electronic devices**

The health and other effects suffered by the study population owing to usage of electronic devices were poor academic performance (15.1%), headache (56.2%), watering of eyes (32.8%), neck pain (14.4%), fatigue (4.8%) and sleep disturbance (10.6%). (Fig. 3)



**Fig. 3: Effects of uses of electronic devices by the study population.**

## DISCUSSION

Research articles reveal increasing evidence of the impact of electronic media and devices on our children’s cognitive, social, behavioral and physical health. In our study, the results had explored about the behavioral and physical health components and also to the extent that how these electronic media had changed their lifestyle habits. In our study the average hours spent with the electronic devices was 4.2 hours per day which is slightly less than the Australian study and the developed countries. This extent of electronic devices use is unsurprising because of marketing, popularity, accessibility and purchasing capacity of the population. Recent data indicates personal electronic device ownership by youth has increased significantly in the last five years. Even though our study has not explored the exact proportion of ownership of devices, majority of our adolescents own at least any one of the devices by the age of 10 years itself.

Our study has clearly showed that the study population experienced various behavioral and physical health problems owing to the excessive use. The social and behavioral problems they have experienced were poor academic performance, sense of social isolation, compulsive (addictive behaviors), reduced outdoor playing. Studies have suggested that high use of electronic media was associated with lack physical activity which in turn results in increased chance of obesity and cardio-respiratory fitness (4). In addition to these effects our study also has explored that the behavioral addiction towards electronic devices were significantly associated with duration of use and hours spent per day. All these research studies suggest that there is an

alarming increase in trend of usage of electronic devices in the early age group, in spite of better awareness of ill health effects of over usage.

Modern lifestyle and busy schedule of the parents is one of the crucial reason for the overuse of the electronic devices by the children. It is important that the parents take preventive step towards this great problem which may affect the well being of their child. The children may also suffer from loneliness because of the absence of siblings.

## **CONCLUSION**

A healthy balance between use of the electronic devices and outdoor playing can be incorporated in the lifestyles of the youth. Excessive electronic devices use is associated with unfavorable physical, mental and social health characteristics for children and adolescents, whereas outside playing supports health and wellbeing.

## **REFERENCES**

1. Children and electronic media. The Future of Children is a collaboration of the Woodrow Wilson School of Public and International Affairs at Princeton University and the Brookings Institution. Volume 18, Number 1. Spring 2008.
2. Salmon J, Timperio A. Prevalence, trends and environmental influences on child and youth physical activity. In: Tomkinson GR, Olds T, eds. Pediatric Fitness. Secular Trends and Geographic Variability. Med Sports and Sci. Vol 50. Basel, Karger 2007:186-202.
3. Faber - Taylor A, Kuo F. Is contact with nature important for healthy child development? State of the evidence. In: Spencer C., Blades M., eds. Children and Their Environments: Learning, Using and Designing Spaces. Cambridge: Cambridge University Press; 2006:124.
4. Hancox RJ, Milne BJ, Poulton R. Association between child and adolescent television viewing and adult health: a longitudinal birth cohort study. Lancet. 2004;364(9430):257-262.
5. Vincent SD, Pangrazi RP. An examination of the activity patterns of elementary school children. Ped Ex Science. 2002;14(4):432-441.
6. Parashar A, Varma A (April 2007). "Behavior and substance addictions: is the world ready for a new category in the DSM-V?". CNS Spectr 12 (4) : 257; author reply 258-9. PMID 17503551.
7. Granich J, Rosenberg M, Knuiman MW, Timperio A. Individual, social, and physical environment factors associated with electronic media use among children: sedentary behavior at home. J Phy Act Health. 2011;8(5):613.

8. American Academy of Pediatrics. Children, adolescents and television. *Pediatrics* 2001;107:423-426.
9. Rideout VJ, Foehr UG, Roberts DF. Generation M2: Media in the lives of 8-to 18-year-olds. 2010; 54(8010)
10. Johnson JG, Cohen P, Kasen S. Association between television viewing and sleep problems during adolescence and early adulthood. *Archives Pediatrics Adolesc Med.* 2004;158(6):562.