

A Study to Assess the Knowledge Regarding the Effect of Screen Time on Sleep Quality Among Adolescents in Selected Areas of Pune City

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Abstract

Title : “A study to assess the knowledge regarding the effect of screen time on sleep quality among adolescents in selected areas of Pune city”. **Objectives:** 1.To assess the knowledge regarding effect of screen time on sleep quality among adolescents. 2. To associate the research findings with selected demographic variables. **Materials and methodology:** A non-experimental quantitative research design is used in the study. The study was conducted in selected areas of Pune city, Maharashtra, India. Total 250 adolescents was selected for data collection. A non-probability purposive sampling technique was used to collect data from samples. The tool constructed was consisting of demographic variables to identify the samples and a set of 20 self-structured knowledge questionnaires regarding the study. **Result:** The major findings showed that majority 50.8% participants were in the age group of 20 to 21, 52% participants were female and 56.4% were of higher secondary education, 69.6% were from nuclear family and 41.6% participants were the first child according to the birth order. Knowledge regarding effect of screen time on sleep quality among adolescents is around 50% were having average knowledge , 45.6% were having poor knowledge, 3.6 % were having good knowledge. Knowledge mean score is 8.2 with S.D is +-3.3619. Findings related to the relationship between adolescents knowledge score and their demographic characteristics does not shown any association as the p value was larger than 0.05. **Conclusion:** The descriptive study was done to measure the knowledge about effect of screen time on sleep quality which showed that majority of adolescents have average knowledge score. The statistical analysis revealed that there is majority of adolescents were having average knowledge regarding the effect of screen time on sleep quality.

Keywords: Knowledge, Assess, Screen time, Sleep quality, Adolescents.

Introduction

Sleep is one of the essential components that is needed for the body to maintain a proper and strong immune system, along with the regeneration and repair of our cells. It is also required to make an individual feel mentally alert and focused. Insufficient sleep over a long period of time can lead to a range of health issues, including increased stress, depression, and a weakened immune system. As technology advances, adolescents have become increasingly reliant on electronic devices such as laptops, mobile phones, and other gaming consoles. Most adolescent males are more exposed to screen time than adolescent girls. One of the main reasons for the eagerness among males is the excitement to learn about and make use of newly advanced technologies, mainly in the gaming sections. One of the main reasons for the increased usage of screen time is the lack of external or social interaction between people. Because of this, adolescents have less external contact with others. Although the advancements of technology have benefits, they may also have an ultimate impact on sleep quality, mostly among adolescents.

Globally, many studies have shown that there is a negative impact in relationship between screen time and sleep quality. The blue light emitted by screens eventually effects the circadian rhythm of the body, thus leading to difficulty to fall asleep easily. Falling asleep at the desired time is mandatory for all humans especially for the adolescents, but it can get disturbed by the stimulating activities on screens such as video games and other entertaining contents. As adolescents are engaged more in screen activities, it will lead to decreased sleep duration which further leads to inactive during daytime activities and also diminished productivity.

Need of the Study

Influence of screen time has become a part on the altered sleep quality. Due to the over usage of computer, television and other gaming consoles the sleeping pattern of adolescents have been disturbed. The blue light emitted from the screens, suppresses the melatonin which is produced by our body, that leads to disruption in sleeping pattern. The adolescents are unaware about the adverse effect of screen time especially in the physical health. Therefore it is obligatory to make them aware about the effect of screen time on sleep quality. Prolonged use of screen especially before bedtime will lead an individual to be less productive during daytime. The individual may feel tired, anxious and stressed out. For an adolescent this also may lead to lack of attention and easy distraction in their academic performances. The overall balancing of life will get interrupted due to the over use of screen time. As a primary health care worker it is important to know about the effect of screen time on sleep quality among adolescents, as the altered sleep may lead to significant effect on the health and well-being. Collaborative public programs should be organised to spread the awareness on effect of screen time on sleep quality among adolescents. Therefore the need of this study is highly imperative.

The normal sleeping time for an adolescent is 8-10 hours per day. But the recent study has shown that the sleeping hour among adolescents has decreased to 7 hours per day. According to the study conducted in China in 2013, it shows that nearly 10% of the participants (4747) got effected with poor sleep quality due to increased screen time. UDAYA survey conducted in Uttar Pradesh and Bihar shows that those who use smartphone for 2 hours or more than that found to be experiencing higher sleeping problems comparing to that those who didn't used smartphones.

Aim of the Study

A study to assess the knowledge regarding the effect of screen time on sleep quality among adolescents in selected areas of Pune city.

Materials and Method

The study design was non-experimental descriptive research. Total 250 adolescents of age group 18 years to 21 years was selected for data collection. A non-probability purposive sampling technique was used to collect data from the samples. Reliability was done by taking 25 samples from the particular area by following all the criteria and result obtained was 0.95 so the tool is highly reliable and the r value obtained was 0.9. Pilot study was done with 25 samples and it was successful and feasible to conduct the main study. Final data collection was done with 250 samples from the adolescent group and the data was collected by using self-structured questionnaire.

Result

Result was divided into Three sections.

SECTION I - Analysis of Demographic data.

The major findings showed that majority 50.8% participants were in the age group of 20 to 21, 52% participants were female and 56.4% were of higher secondary education, 69.6% were from nuclear family and 41.6% participants were the first child according to the birth order.

SECTION II

Table 1: Finding related to level of knowledge regarding effect of screen time on sleep quality among adolescents in selected areas of Pune city.

n =250

LEVEL OF KNOWLEDGE	f	%	Mean	SD
POOR (0 - 7)	114	45.6	8.2	3.3619
AVERAGE (8-14)	127	50.8		
GOOD (15-20)	9	3.6		

Table no. 1 depicts findings related to the level of knowledge regarding effect of screen time on sleep quality among adolescents. 50% were having average knowledge, 45.6% were having poor knowledge, 3.6 % were having good knowledge. The overall mean is 8.2+-3.3619.

SECTION II

Findings related to association between demographic variables and knowledge.

The association between selected demographic variables Age, gender, education status, type of family and birth order & knowledge screen time on sleep quality among adolescents are not associated with a significant level of 0.05.

Discussion

The study was done to assess the knowledge regarding the effect of screen time on sleep quality among adolescents in selected areas of Pune city. The study started mainly with selecting the setting, selecting samples, validation of the data, reliability of the study, pilot study and then the final study. In the present study, from the data analyzed, it is evident that the demographic variable majority 50.8% participants were in the age group of 20 to 21, 52% participants were female and 56.4% were of higher secondary education, 69.6% were from 5 nuclear family and 41.6% participants were the first child according to the birth order. The second section shows that majority 50.8% of adolescents were having average knowledge with mean score of 8.2 and SD 3.36, 45.6% of adolescents were having poor knowledge and 3.6% of adolescents were having good knowledge regarding the study. In association of knowledge regarding effect of screen time on sleep quality among adolescents with the demographic variables, there is no any relation between score of knowledge and demographic variables. Therefore knowledge regarding the effect of screen time on sleep quality among adolescents with the demographic variables are not showing any association between them, and also they are not significant. The study can be discussed with a similar study by Daneyal Arshad and Usaid Munir (2021) which was like “ A study to assess the adverse impact of excessive smartphone screen-time on sleep quality among young adults.” The findings showed that, the students with more than 2 hours of screen time had 24.15 times higher odds of having poor sleep quality compared to other students. The 95% confidence interval for this odds ratio was 11.192 to 52.11. These findings suggest a significant association between screen time and poor sleep quality among students, with particularly elevated odds on weekends compared to weekdays.

Conclusion

As a late adolescent, it is important to know about the effect of screen time on sleep quality, as the altered sleep may lead to significant effect on the health and well-being. Influence of screen time has become a part on the altered sleep quality. Due to the over usage of computer, television and other gaming consoles the sleeping pattern of adolescents have been disturbed. The adolescents may develop behavioral issues or changes related to the over use of screen time, which will further leads to negative impact on mental health and social relationships. Feeling of social isolation, low self-esteem can occur when spending more time on social media or any other online activities. For the betterment of coming generation this study will be more helpful. Indeed it is the duty of each health worker to make sure that the society is physically, mentally and emotionally healthier. Collaborative public programs should be organized to spread the awareness on effect of screen time on sleep quality among adolescents. Therefore, it can be concluded that, as the adolescent group has a major role in the building of a good and healthy society, it is mandatory to have a good health among them. So, the need of this study is highly imperative.

Recommendation for Future Research:

A similar study can be conducted using a large population of adolescents. A study can also be carried out in different specific and non-specific adolescents or settings.

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