

Attitude and Beliefs Towards Physical Activity and Smart Devices Usage in School Going Children

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ABSTRACT

Background: Smart devices addiction and physical inactivity are a major public health problem across the world. The World Health Organization (WHO) recommends that children and adolescents acquire moderate-to-vigorous intensity Physical Activity (PA) for more than 60 minutes per day. This research aimed to find the attitude and beliefs towards smart devices usage and physical activity of school going children.

Method: An observational study was conducted in schools of Ahmedabad, on children 8-16 years. Assent to participate was taken. Self-administered questionnaire was used.

Result: 528 students participated with mean age(13.38±1.93) years. Travel to school was by walking 33%, cycling 27%. 93.5% children have knowledge of physical activities, among this 96% students believed that they are physically active but 30% think that they are not active enough. 75% children use smart phones a lot, whereas 34% watch television. Among them 60% usage is continuous at least an hour daily and 30% use them for more than 1 hour. 52% students accept they are missing work and physical activities due to usage of these devices and 48% disagree. 28% student have burning in eyes due to these devices' usage; 23% students have headaches and some students complain having neck and wrist pain.

Conclusion: School going students believe that smart devices are an integral part of their life. Smart device use may lead to compromise of physical activity. There is a need to find a way to use smart devices correctly and increase level of physical activity among children.

Keywords: Smart devices, children, physical activity

INTRODUCTION

Inactivity among children and young people in India is a significant public health issue. Spending a lot of time watching TV, watching films, or playing on a computer or mobile device is linked to being overweight and obese. This is partially due to the fact that the time kids spend using small screens takes away from the time they could be

exercising. Children who watch television for longer than two hours a day are more likely to have an unhealthy diet, eat less fruit, and engage in less physical activity. [1]

Childhood and adolescence years are crucial for growth. Encouraging enough physical activity (PA) has been shown to improve children's physical and mental health,

including lowering health risks, preventing obesity, and fostering cognitive development. The World Health Organization (WHO) advises children and adolescents to engage in moderate-to-vigorous intensity PA (MVPA) for more than 60 minutes per day in order to reap the benefits of PA on their health. There is a significant global health concern regarding the rising prevalence of physical inactivity. Worldwide, 70% of children and teenagers do not adhere to the PA recommendations. [2] Children's physical activity is a complex behaviour that is influenced by a wide range of psychological (such as motivation), environmental (such as proximity to facilities), and social (such as the cost of activities) factors.[3]

Physical activity among children and young adults may be affected by a variety of behavioural factors. Lower levels of physical activity among the world's population have been linked to the growing use of technology. This research aimed to find the attitude and beliefs towards smart devices usage and physical activity of school going children in Ahmedabad, Gujarat.

MATERIALS & METHODS

An observational study was conducted in schools in Ahmedabad, India on children aged 8-16 years. Permission to conduct the study was taken from the school principals. Assent was obtained from the participants before administering a self-administered questionnaire. The questionnaire was made by the authors and then circulated among five subject experts including two physiotherapists, two school teachers and one paediatrician. The questionnaire assessed their understanding of physical activity, whether they were physically active or not, how much time they spent engaging

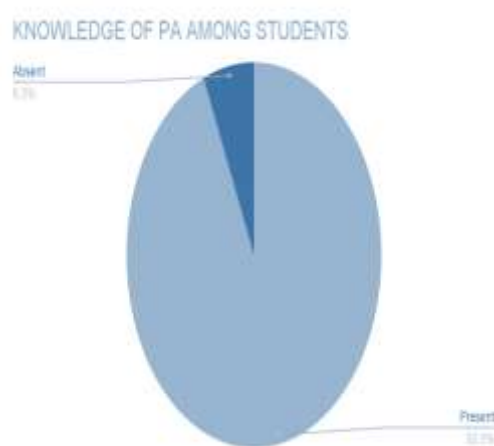
in outdoor or indoor activities, what kind of electronic devices they used and for how long, and whether they had any side effects from prolonged use.

STATISTICAL ANALYSIS

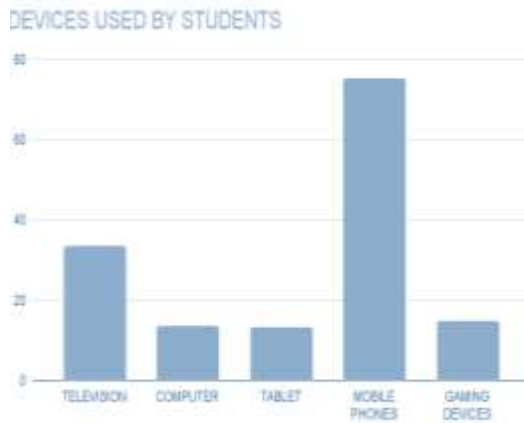
The data collected from the questionnaire was analyzed using Microsoft Excel, and descriptive statistics were used to summarize the results.

RESULT

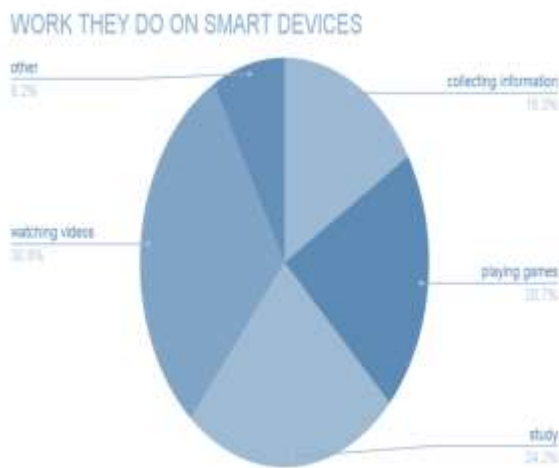
528 students completed the questionnaire. The mean age was (13.38 ± 1.93) years. Among them 46% were female & 54% were male. The children travelled to school by walking 33%, cycling 27% and 40% travelled by other modes. 96% students believed that they should be physically active. 30% know that they are not active enough. Graph 1 shows the perceived knowledge they had of physical activity. Graph 2 shows various smart devices used by students. Graph 3 shows the work the children do on the smart devices. Graph 4 shows the symptoms felt after long term use of smart devices.



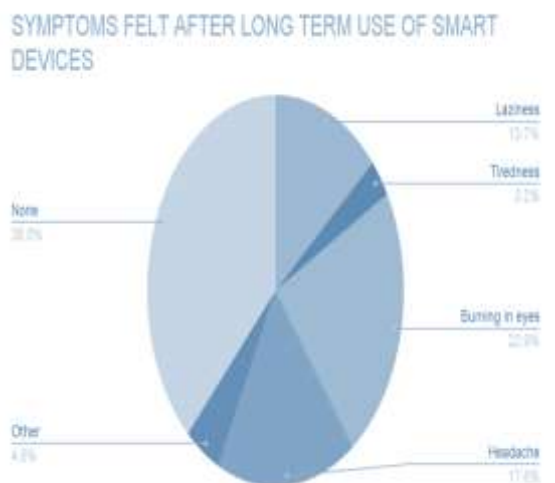
Graph 1: Perceived knowledge of physical activity



Graph 2: Various smart devices used by students



Graph 3: Use of smart devices



Graph 4: Symptoms felt after long term use of smart devices

towards smart devices and physical activity. The study's findings indicate that a sizable percentage of kids use smart devices frequently, which may result in less physical activity among kids. The results are in line with earlier studies that have highlighted the detrimental effects of screen time on children's physical activity.

Travel to school was by walking 33%, cycling 27%. 93.5% children have knowledge of physical activities, among this 96% students believed that they are physically active but 30% think that they are not active enough.

Lydia Emm-Collison and Rosina Cross conducted a systematic review with the aim of synthesising qualitative studies with primary school students in the UK to identify children's perspectives on why physical activity is important, the factors that influence their physical activity, and what they enjoy about physical activity. They found that kids had a thorough understanding of the many advantages of exercise, such as advantages for fitness, health, and skill development. The majority of kids preferred having control over the things they do and the chances they have for imaginative physical play, like making up games they can play. [3]

Among the students using smart devices, 60% usage is continuous at least an hour daily and 30% use them for more than 1 hour. 52% students accept they are missing work and physical activities due to usage of these devices and 48% disagree. Samuel D. Towne and Marcia G. Ory in their study found that the majority of young adults in their study who met the physical activity guidelines used technology for no more than 6 hours per day on average, followed by those who used it for more than 8 hours per day on average and those who did not

DISCUSSION

The present study provides insights into the attitudes and beliefs of school-age children

adhere to the rules used technology for no more than six hours.[4]

Christopher J. Gidlow and Tom Cochrane compared physical activity among a representative sample both inside and outside of school. They came to the conclusion that, particularly among secondary school students, who accumulate a lower percentage of their total weekly moderate-to-vigorous physical activity at school than younger children, physical activity during the school day appeared to be lower than that outside of school. Less than half of children made up for low in-school activity outside of the classroom, so encouraging physical activity during the school day is crucial, especially in secondary schools. [5]

It is important to take note of the reported physical side effects of smart device use, such as headaches, neck pain, and wrist pain. The present study found prevalence of burning eyes, headaches and fatigue after use of smart devices, 28% student have burning in eyes due to these devices' usage, 23% students have headaches and some students complain having neck and wrist pain. Even though these signs may be minor, they could be a sign that children's prolonged use of smart devices may be physically harming them. Future studies might go deeper into the connection between using smart devices and these symptoms and investigate potential treatments to lessen their effects.

Overall, the findings of this study point to the need for interventions that encourage children's physical activity and responsible smartphone use. Incorporating breaks for physical activity into smartphone use, encouraging outdoor activities, and informing kids about the value of physical activity for overall health and wellbeing are

some possible tactics for achieving this goal.

CONCLUSION

The study found that school-going children in Ahmedabad believe that smart devices are an important part of their lives, but their use may compromise their physical activity. A significant proportion of students reported experiencing physical symptoms related to excessive smart device use. These findings highlight the need for interventions to promote healthy use of smart devices and increase physical activity among children.

Limitations

Objective evaluation of physical activity was not done. Diet wasn't evaluated, especially when using smart devices to watch TV.

Declaration by Authors

Ethical Approval: Approved

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Conflict of Interest: The authors declare no conflict of interest.

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