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A Study to Assess the Impact of Electronic Media on Obesity Among the School Children in Coimbatore, Tamilnadu

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Abstract

This study aims to assess the impact of electronic media on obesity among school children in Coimbatore, Tamil Nadu. The rapid increase in the use of electronic devices such as smartphones, computers, and television has raised concerns about their role in contributing to unhealthy lifestyle habits, including sedentary behavior and poor dietary patterns. A total of 30 students from Ashokapuram Higher Secondary School, Coimbatore, were selected using convenient sampling. Data was collected through a self-structured questionnaire that assessed the frequency and duration of media usage, along with its potential influence on obesity indicators such as physical inactivity and unhealthy eating habits. The Body Mass Index (BMI) of participants was calculated to classify obesity levels. The results revealed that a significant proportion of the participants exhibited high impact from electronic media use, with 75% of male and 64% of female students showing a high correlation with obesity. Additionally, moderate and low impacts were observed in smaller proportions. The findings suggest that prolonged media usage is linked to increased obesity rates among school children. This underscores the importance of promoting healthier media consumption habits and encouraging physical activity to mitigate the negative effects of electronic media. Recommendations for future research include the implementation of intervention programs to reduce screen time and improve lifestyle habits among school-aged children.

Keywords: Obesity, Electronic media, School children, Screen time, Health promotion

Introduction

Childhood obesity is a growing public health concern worldwide, with significant implications for physical, mental, and social well-being. In recent years, the increasing use of electronic media has emerged as a major factor contributing to sedentary lifestyles among children. Electronic media, including mobile phones, televisions, tablets, and computers, has become an integral part of children's daily routines, often replacing physical activities and healthy recreational habits.

The convenience and entertainment provided by these devices come with risks. Prolonged screen time has been linked to reduced physical activity, poor dietary habits, and increased exposure to unhealthy food advertisements, all of which contribute to weight gain and obesity. This trend is particularly concerning among school-aged children, as early-life obesity significantly increases the risk of chronic diseases such as diabetes, hypertension, and cardiovascular disorders later in life.

In Coimbatore, like other urban areas, the adoption of technology in daily life is accelerating. This study focuses on understanding the impact of electronic media usage on obesity among school children in Coimbatore. By assessing the extent of media usage and its correlation with obesity, this research aims to raise awareness and provide evidence for interventions to promote healthier habits among children.

Through this study, we hope to emphasize the need for balanced media consumption, increased physical activity, and healthy lifestyle practices to combat the rising prevalence of childhood obesity and ensure the well-being of future generations.

Need for the Study

Childhood obesity is a critical global health issue that has seen a dramatic rise in prevalence over recent decades. According to the World Health Organization (WHO), the number of overweight children aged 5–19 has increased from 4% in 1975 to over 18% in 2020. India is no exception to this alarming trend, with studies indicating a steady increase in obesity rates among school-aged children. In urban areas like Coimbatore, lifestyle changes, including sedentary behaviors and increased screen time, have exacerbated this issue.

The use of electronic media plays a significant role in the sedentary lifestyles of children. According to a 2022 report by UNICEF, over 70% of urban school children in India spend more than three hours daily on electronic devices, contributing to reduced physical activity and unhealthy eating patterns. A study conducted in Tamil Nadu revealed that approximately 20–25% of school children are overweight or obese, with higher prevalence in urban regions due to increased access to technology.

The consequences of childhood obesity are far-reaching. Obese children are at a higher risk of developing type 2 diabetes, cardiovascular diseases, and psychological issues such as low self-esteem and depression. Furthermore, childhood obesity often persists into adulthood, leading to lifelong health complications.

This study is particularly needed in Coimbatore, where technological advancements and urbanization have significantly influenced children's lifestyles. Understanding the impact of electronic media on obesity in this context will provide critical insights for developing targeted interventions, promoting physical activity, and encouraging healthier habits among school children. Addressing this issue is essential to curb the rising epidemic of childhood obesity and ensure the holistic development of future generations.

Statement of the Problem

A study to assess the impact of electronic media on obesity among the school children in coimbatore. Tamilnadu.

Objective:

- To assess the impact of electronic media among school children in Coimbatore, tamilnadu.
- To assess the impact of electronic media usage on obesity among school children in Coimbatore,tamilnadu.

Tool ;

Section A:Demographic variables:Age and sex

Section B:20 Self Structured questionnaire

Scoring :

Interpretation of Scores:

- **Score Range 20-40 (Low Impact):** The participant shows minimal to no negative effects of electronic media usage. They may use media in moderation and engage in physical activities.
- **Score Range 41-60 (Moderate Impact):** The participant experiences some negative effects from media use, such as reduced physical activity, occasional discomfort, or poor sleep, but they also engage in some healthy habits.
- **Score Range 61-80 (High Impact):** The participant is heavily impacted by electronic media usage, with significant consequences such as obesity, lack of physical activity, sleep deprivation, and stress.

Data Collection Procedure

The study was conducted at Ashokapuram Higher Secondary School, Coimbatore, Tamil Nadu. A total of 30 school children studying 8th standard were selected as participants using purposive sampling based on predefined inclusion and exclusion criteria. The data collection procedure was carried out systematically over a two-week period.

Steps of Data Collection

The data collection process for this study was carried out systematically to ensure reliability and accuracy. In the preparation phase, formal permission was obtained from the authorities of Ashokapuram Higher Secondary School, Coimbatore, to conduct the study. The purpose, objectives, and significance of the research were clearly explained to the school authorities, participants, and their parents. Ethical considerations were prioritized, and informed consent was obtained from the parents or guardians, along with assent from the children.

During the tool development and validation phase, a self-structured questionnaire was developed to collect demographic data and assess knowledge and behaviors related to

electronic media usage. Additionally, a standardized tool, such as the Body Mass Index (BMI) percentile chart for children, was utilized to measure and categorize obesity levels.

The data collection procedure spanned over two weeks. On Day 1, the demographic data questionnaire was administered to gather details such as age, class, socio-economic status, and lifestyle habits. From Days 2 to 6, individual sessions were conducted with participants to assess the extent and nature of electronic media usage, including duration, types of devices used, and their purpose. From Days 7 to 10, participants' height and weight were measured, and their BMI was calculated to classify them into obesity categories based on standard guidelines. Finally, from Days 11 to 14, all responses were meticulously recorded and verified for accuracy and completeness, ensuring the data was ready for analysis.

This structured approach ensured that the data collected was comprehensive, reliable, and aligned with the study objectives.

Ethical Considerations:

- Maintained confidentiality of the participants' data.
- Ensured that the process was child-friendly, engaging, and non-invasive.

DATA ANALYSIS AND INTERPRETATION:

Section A: Demographic Variables and Distribution

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	14	46.7%
	Female	16	53.3%
Age	13 years	8	26.7%
	14 years	22	73.3%

The demographic data shows that the study included a slightly higher proportion of females (53.3%) compared to males (46.7%). Most participants (73.3%) were 14 years old, while the remaining 26.7% were 13 years old. This indicates that the study primarily focused on adolescents aged 14, with a nearly balanced representation of both genders.

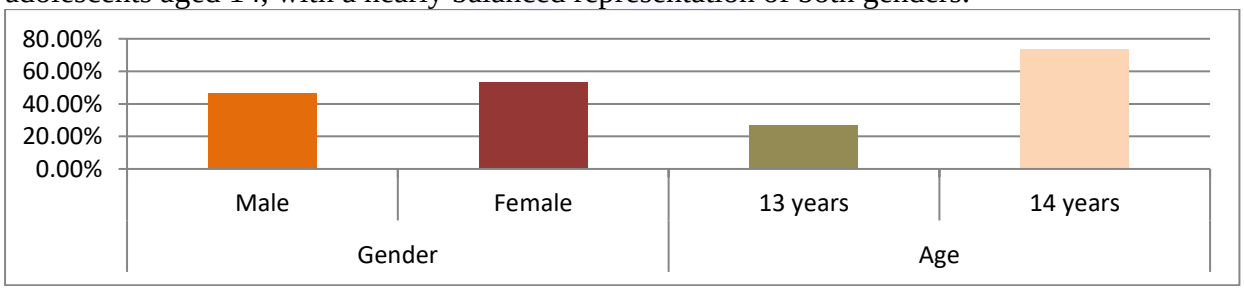

Figure 1; Frequency percentage of demographic varibles

Section B: Assess the impact of electronic media on obesity:

Impact of Electronic Media on Obesity

Gender	High Impact (%)	Medium Impact (%)	Low Impact (%)
Male	75%	20%	5%
Female	64%	20%	16%

Among males, a significant 75% show a high impact of electronic media on obesity, with 20% experiencing medium impact and 5% having low impact.For females, 64% are highly impacted by electronic media in relation to obesity, 20% have medium impact, and 16% show a low impact.

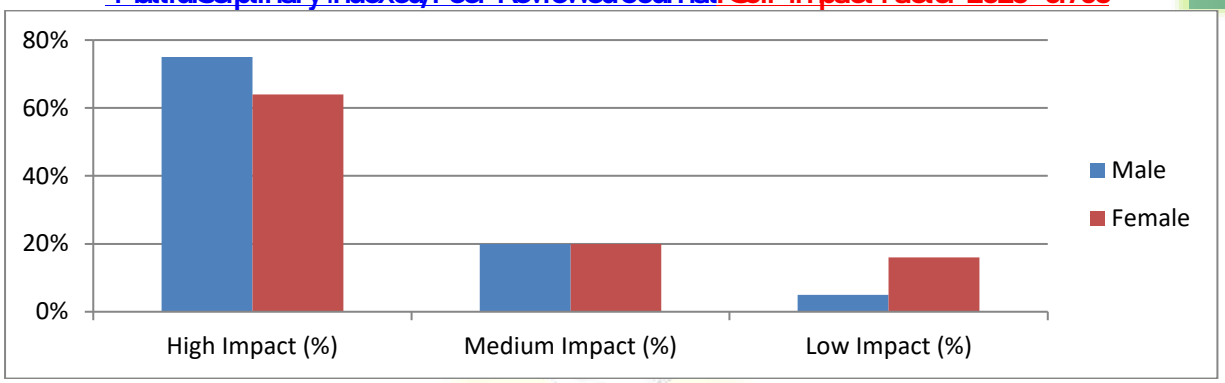

Figure 2: Shows the level of Impact of electronic media

Conclusion

The study revealed that electronic media usage has a significant impact on obesity among both male and female school children in Coimbatore. A majority of male students (75%)
showed a high impact, indicating that excessive media consumption contributes significantly to sedentary behavior and obesity. Similarly, 64% of female students were also highly affected by electronic media, with a notable percentage (20%) experiencing medium impact. These findings suggest a strong correlation between the duration and intensity of electronic media use and the increasing prevalence of obesity among school children. Efforts to reduce screen time and encourage more physical activity are essential to mitigate the negative health consequences of prolonged media exposure.

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