



How does Screen Time Affect Mental Health Among Children?

Hamreet Kaur

	Outline	
ABSTRACT		2
CHAPTER I Introduction		2
Background Information		2
Research Question		2
Hypothesis		2
Importance		2
CHAPTER II Methodology		2
Subjects		2
Data Collection		2
Data Analysis		2
CHAPTER III Results		3
Graphs		3
Findings		3
P value		4
Significance		4
Work Cited		5



Abstract

As technology continues to play an increasingly dominant role in modern society, it is important to know and understand the potential disadvantages and concerns associated with the excessive utilization of electronic devices. In particular, analyzing the impacts of digital media on younger generations is essential for fostering a more informed and conscious society. Investigating this issue allows researchers, educators, and policymakers to identify the limitations of technology dependency and its implications on child development. A valuable way to further explore the impacts of technology is through the research question “how does screen time affect mental health among children?”

To address this question, data collected by Center of Disease Control and Prevention’s (CDC) Youth Risk Behavior Surveillance System can be utilized by specifically focusing on the relationships between screen time and content type of young children and their chances of being diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). The methodology to do so is to analyze the contents of the data set using Python and create graphs, as well as finding the p value (to signify statistical correlation) in order to visualize and interpret the data sets. Based on this analysis, the findings suggest that there is a statistically significant relationship between the use of electronic devices among children aged 4 to 7 and an increased likelihood of being diagnosed with ADHD. These results highlight the importance of monitoring screen time during early developmental years and underscore the need for further research and public awareness regarding the mental health impacts of technology on children.

Introduction

Since 2015, the use of social media, and screen time as a whole has increased significantly among all age groups, especially among young children. Especially due to the affordability of electronic devices, and the rise of the use of them due to COVID-19 for education, communication and entertainment purposes, even children below the age of 7 are reliant on technology. The addictive nature of electronic devices has raised an issue in society regarding potential rises in medical and mental health concerns.

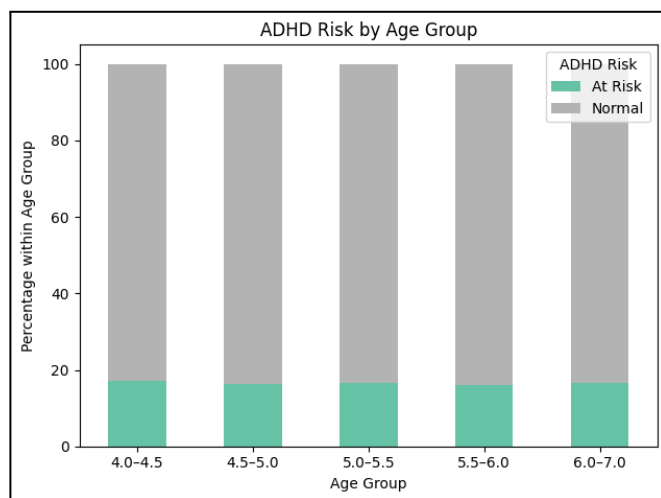
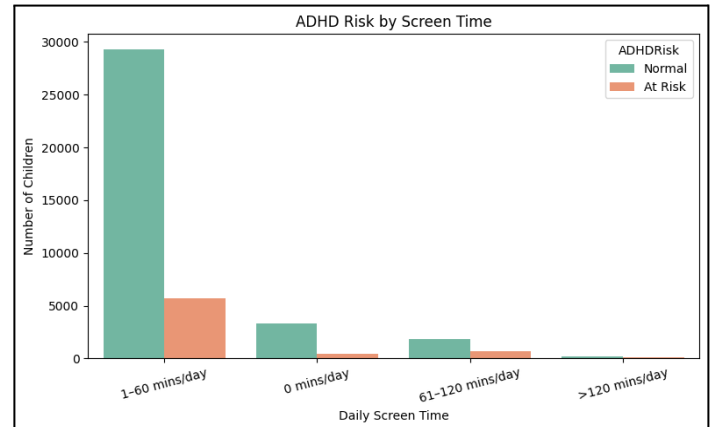
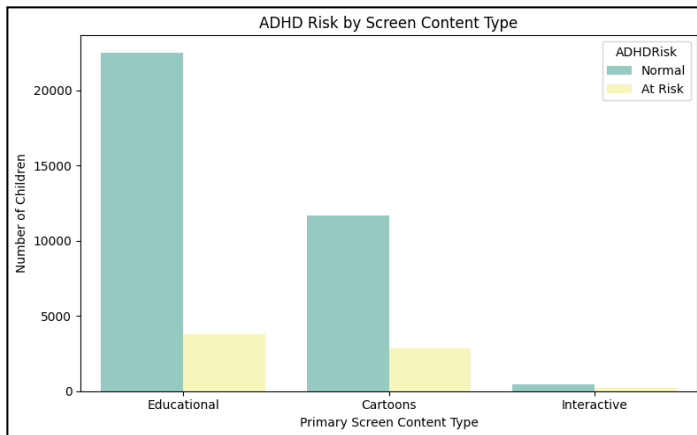
Therefore, a prevalent research question is “how does screen time affect mental health among children?”; the null hypothesis is that there is no correlation between a child’s screen time and their mental health, and the alternative hypothesis is that screen time does lead to higher risk for mental health conditions among children. The first few years of a child are most crucial as they have the most impact on development, academic success, and social well-being. These years are also the time frame where most mental health conditions are developed and diagnosed. Analyzing whether screen time has increased common mental health conditions such as ADHD among children exemplifies the impacts of changing society and potential changes that need to be made to the lifestyle of growing children.

Methodology

In order to analyze the impact of screen time on the mental health of children, I utilized a pre-existing study conducted by the Center of Disease Control and Prevention’s (CDC) Youth Risk Behavior Surveillance System on children up to the age of 7; the study collected data about demographics, screen time, content type, and risk of ADHD among the children. To dig deeper into the data set, and compare different data that was collected, I utilized Python’s functions and

methods. The initial step was to ensure that the data was clean, and to fully comprehend the different columns of data and how they can be beneficial to my research. The next step was to identify variables that had potential correlation, and create graphs and data tables to analyze how one variable affects the other. I used the graphs in order to analyze the data sets and draw my conclusions.

Results



The graphs above illustrate the correlation between ADHD risk and different aspects of screen time. The first graph depicts the relationship between the content type on screens (educational, cartoons, and interactive), and the number of children that are versus are not at risk for ADHD. The data comparison reveals that although 34,645 of the children surveyed are not at risk of ADHD, 3,796 children that watch educational content, 2,859 children that watch creative content, and 194 children that watch interactive content are at risk of ADHD. The p value for this data is 0.000, signifying there is a strong correlation between the content type and risk of ADHD among children. Furthermore, the second graph illustrates the relationship between ADHD risk and total screen time. The data comparison reveals that 34,645 of the children analyzed are not at risk, whereas the same 6,849 children are at risk. The p value for this data is also 0.000 highlighting



a statistical correlation once again. Since the same number of children are affected and unaffected when looking at ADHD risk versus content type and versus screen time, it is likely that those two variables have a strong influence on ADHD risk among children, and high screen times and watching educational or creative content can result in higher chances of being diagnosed with ADHD. The third aspect that is studied is the correlation between age and ADHD risk; the graph reveals that between the ages of 4-7, children have a more or less equal chance of being diagnosed with ADHD. Ultimately, the three data comparisons reject the null hypothesis and support the alternative hypothesis since there evidently is statistical significance of screen time and content type on one's risk at ADHD for children aged 4-7.



Works Cited

- Lynn University. "The Impact of Technology in Early Childhood Education." *Lynn University*, Lynn University, 18 Mar. 2024, online.lynn.edu/resources/education/technology-impact-early-childhood-education. Accessed 20 Sept. 2025.
- Ricci, Raquel Cordeiro. "Impacts of Technology on Children's Health: A Systematic Review." *Revista Paulista de Pediatria*, vol. 41, no. 2020504, 6 July 2022, www.ncbi.nlm.nih.gov/pmc/articles/PMC9273128/, <https://doi.org/10.1590/1984-0462/2023/41/2020504>. Accessed 20 Sept. 2025.
- Woffindin, Louise. "The Impact of Technology on Modern Child Development." *CPD Online College*, 22 Apr. 2024, cpdonline.co.uk/knowledge-base/health-and-safety/impact-technology-modern-child-development/. Accessed 20 Sept. 2025.
- Zablotsky, Benjamin, et al. "Daily Screen Time among Teenagers: United States, July 2021 – December 2023." *Daily Screen Time among Teenagers: United States, July 2021–December 2023*, vol. 513, no. 513, 30 Oct. 2024, www.cdc.gov/nchs/products/databriefs/db513.htm, <https://doi.org/10.15620/cdc/168509>. Accessed 20 Sept. 2025.