



Parents' Perception of Children's Screen Time and Technology Use

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Abstract

Screen time is being highly prevalent in children's development but minimal research focuses on parents' perceptions of screen time use. This paper sought to investigate how parents think technology use affects children's mental health, academic success, relationships, and other vital aspects of childhood. Fifty parents from the greater Los Angeles area were surveyed about parents and their attitudes of how technology use affects their children, as well as children generally. Parents were relatively accurate when estimating screen time use of their children in comparison to that of the average child. Additionally, it was found that parents would like their children to use technology less than they currently do due to the negative effects they perceive technology has. These findings allow parents to formulate more effective screen time limitations for their children while understanding the possible bias they may have.



Introduction

Screen time use among adolescents has become an increasingly debated topic in recent years. As technology becomes more easily accessible and continues to advance, children may become more drawn to it, creating conflict about how much screen time is reasonable. Technology is also extremely diverse for adolescents. It can be used for schoolwork, social media, communication, and more.

According to Pew Research Center (2024), the percentage of teens who say they are online 'almost constantly' has increased from 24% in 2014-2015 to 46% in 2024. Increased screen time use has raised concerns about how it affects adolescents' mental and physical health, and whether it is more beneficial or harmful to them. Santos et al. (2023) discovered that greater mental health concerns occurred with increased use of technology after reviewing 50 studies on adolescent mental health and screen time. Not only have medical professionals become concerned with the increased use of technology across adolescents, but parents, grandparents, and adolescents themselves have as well. Families aren't simply stating that the use of technology has become a bad habit, but rather they are concerned about whether the benefits outweigh the risks.

Additional research has shown that increased use of technology has begun to impact juveniles' social skills, attention spans, as well as neurodevelopment. The more these numbers increase, the stronger the concern for technology use persists. Research has become more interested in studying the potential mental and physical side effects of technology use on adolescents as the percentage of them continues to increase.

The American Academy of Pediatrics conducted a study with 10,588 participants, all of whom were 12 years old. They compared mental health outcomes between the 12 year olds that had received a smartphone between the ages of 9-11, with mental health outcomes for those who had only recently gotten one. With this information, they were able to observe that smartphone ownership was associated with a higher likelihood of depression, obesity, and insufficient sleep. Children require sleep in order to function cognitively at a normal level; however, children with smartphones had 62% higher odds of insufficient sleep (Barzilay et al., 2025).

Although concerns have been raised, not all consequences of increased technology use across teenagers and children have been negative. Technology has allowed adolescents to have additional social connections and educational resources. Haddock et al. (2022) found that technology allows students to be more independent while studying, and technology also makes it possible for students to work with peers to accomplish activities, or simply stay in contact socially. This sense of independence promotes problem solving and strategic thinking. The support system that is created for adolescents through technology allows for mental health to be improved for some. These findings show that the effects are extremely complex and depend on how it is used by each adolescent individually.

Most research on adolescents' technology use addresses the time that adolescents spend on technology and the effects that screen time has on mental health, sleep, attention span, and more. PEW Research (2024) states that one in every ten parents and teens get into arguments about the time that the teen spends on his or her phone. PEW also reports that 76% of parents say their top priority is managing how much time their teen spends on a smartphone. This shows that parents play a vital role in shaping their children's technology habits. However, there is a gap in understanding parents' perception of their children's technology use and its

effects. There are multiple factors that influence parents' decisions about their children's technology use besides the risks. Young et al. (2024) explain that parents' decisions about technology restrictions revolve around trust, family conflicts, and social and educational benefits. Understanding parents' perception of technology use can allow them to make more informed decisions regarding screen time while taking into account these different perspectives. The gap in research on parents' perceptions is important because parents are often the ones who create household rules related to when their children have access to devices, how much they can use them, and the consequences and restrictions related to them. This information can influence choices related to screen time limitations, parental monitoring, and family policies related to technology.

Thus, a remaining question in the literature and the focus of the present study is: "How do parents perceive the effects of their children's technology use on mood, attention span, school performance, and social relationships?" Answering this question is vital because parents play a key role in regulating their child's screen use. That role ideally should help capture the benefits of technology use while mitigating the potential negative effects. Based on existing literature, the following hypotheses were developed:

1. Parents will perceive that their child's mood worsens with technology use.
2. Parents will believe their child should use less technology than they actually do.
3. Parents will overestimate their child's technology use in comparison to the average child.
4. Parents will perceive that their child's attention span worsens with technology use.
5. Parents will perceive that their child's school performance and social relationships remain neutral despite technology use.

Methods

50 parents consented to and completed a Google Form survey, some of whom provided information for more than one child. From this survey, the technology use habits of 60 children, ages 5 through 17, were recorded. The survey was distributed to parents through grade-level WhatsApp chats and sports team chats. Participation was voluntary and anonymous. Parents were required to consent to the survey before proceeding with any additional questions.

The Google Form survey was split into multiple sections. The first question required parents to consent to continue. After consenting, parents were asked what the ideal screen time for their child(ren) would be, and parents were asked to divide that ideal amount of time into three sections to account for the different uses of technology: social, productivity, and entertainment.

Parents then continued by answering how many children they had between the ages of 5 and 17. The next section required them to specifically provide information about their youngest child. It asked them 5 questions on a 7-point scale. The first question asked about their perception of their child's screen time use in comparison to the average child. Four additional 7-point scale questions were asked to gather information on parents' perception of technology's effects on mood, social relationships, academic performance, and attention span. Parents were finally asked to report their child's actual screen time based on Apple Screen Time if available. They provided their child's screen time in social, productivity, and entertainment apps. After these questions, parents were allowed to answer the same question for up to two more children. The data collected from the Google Form was then exported into a spreadsheet where it was reviewed, organized, and prepared for statistical analysis.

The survey responses that were exported into a Google Sheet had statistical analyses performed on them. The 7-point scale was used on questions that asked about mood, attention, school performance, social relationships, and perceived technology use compared to the average child. Actual technology use was reported in multiple choice questions using time ranges. The responses from each of the productivity, social, and entertainment categories were converted into numerical values so they could be combined to create an overall measure of each child's technology use. Parents' perception of their child's technology use was compared with the calculated actual overall technology use measure. By comparing them, it could be determined whether parents overestimated, underestimated, or correctly estimated their child's screen time use compared to the average child. The means were calculated for each hypothesis on a 7-point scale comparing the data with the hypothesis. One sample t-tests were used to test if the mean response was statistically significantly different from the value it was being compared to (commonly the neutral value of 4). Statistical significance was determined by $p < 0.05$.

Results

Hypothesis 1 predicted that parents would perceive that their child's mood worsened with the use of technology. The mean score on a 7 point scale, where 1 was negatively affected and 7 was positively affected, was 2.79. Since neutral is 4 on the 7 point scale and 2.79 is below the neutral value, parents perceive that technology has a somewhat negative effect on their child's mood. Using a one sample t-test, the data was deemed statistically significant ($t = -6.34$, $p < 0.05$). Therefore, we reject the null hypothesis of Hypothesis 1 that there is no difference between technology use and children's mood.

Hypothesis 2 predicted that parents would say that their child should use technology less than how much their child actually does. The mean 7-point rating for how much parents would ideally have their children use technology was 2.98, which is slightly below the neutral value of 4, indicating that parents believed their children should spend slightly less time on technology than they currently did. However, the mean rating of the actual technology use was 3.97 after converting the responses from time-range categories to a 7 point scale. The difference between the two means was 0.99, meaning that parents believed children should spend less time on technology than they actually do. Using a one sample t-test, the difference in the data was statistically significant ($t = 2.45$, $p < 0.05$). Therefore, we reject the null hypothesis of Hypothesis 2.

Hypothesis 3 predicted that parents will more commonly overestimate how much their child uses technology in comparison to the average child. Children's calculated technology use was compared with parent's perception of their children's technology use in comparison to the average child. To calculate how precisely parents predicted their child's technology use, the child's actual technology use time was subtracted by the parents' estimates. A value of zero meant parents estimated correctly, whereas negative values represented an overestimate and positive values represented an underestimate. 24 parents correctly predicted how much their children were using technology in comparison to the average child. 11 parents overestimated and 11 parents underestimated how much their children were using technology in comparison to the average child. Using a one sample t-test, it was revealed that there was no statistical significance ($t = -0.17$, $p = 0.43$), indicating that parents accurately predicted their child's technology usage time. Therefore, we fail to reject the null hypothesis of hypothesis 3.

Hypothesis 4 predicted that parents thought that with technology use, children's attention span will shorten. Using a 7-point scale where 1 represented an extremely worsened attention span and 7 represented an extremely improved attention, the mean rating was calculated at 2.54. Since the mean rating is slightly less than 4, which is neutral, parents' perception was that technology slightly worsened their children's attention span. Using a one sample t-test, the data was deemed statistically significant ($t=-8.17$, $p<0.05$). Therefore, we reject the null hypothesis of Hypothesis 4.

Hypothesis 5 predicted that parents would perceive that their children's performance in school and social relationships would remain neutral with technology use. Using a 7-point scale, 1 represented an extremely negative effect on school performance, 7 represented an extremely positive effect on school performance, and 4 was neutral. The mean rating was 3.25, meaning that parents perceived that technology was having a slight negative effect on their child's performance. The mean rating for social relationships was 3.10, which was also slightly below the neutral value of 4 on a 7 point scale. This indicates that parents perceived that technology was having a slightly negative effect on their children's social relationships. Using a one sample t-test in relation to the mean rating for the effect of technology on school performance, the data were deemed statistically significant ($t=-4.23$, $p<0.05$). Similarly, with the one sample t-test, the data on social relationships were also statistically significant ($t=-4.57$, $p<0.05$). Therefore, we fail to reject the null hypothesis of Hypothesis 5.

Discussion

The goal of this research study was to assess parents' perception of technology use in children. Overall, statistical analysis of the data collected in the present study indicates that generally parents perceived technology as a factor that was negatively affecting their children. Understanding these findings is vital because it allows parents to make educated decisions when it comes to household technology rules.

It was found that according to parents' perceptions, both children's mood and attention span were below neutral. This means that they believe their children are being negatively affected by technology in terms of mood and attention. These perceptions are consistent with other findings, including those reported in the American Academy of Pediatrics, who found that adolescents who owned smartphones earlier than others had higher rates of depression by 31% and less sleep by 62%. The lack of sleep in adolescents with smartphones at a younger age is also linked with a lowered attention span, capability to regulate emotions, and cognitive functions. This can explain why parents' perceptions were also mainly negative. This study did not directly measure the effects technology has on adolescents' mental health and attention but rather it measured parents' perceptions of its effects. Although parents may observe their children to be more easily irritable and distracted after technology use, it is also vital to account for the literature that explains that technology can be an outlet to release stress benefitting moods and also provides additional resources for students that weren't previously available. Many parents still perceive that technology has a negative effect on children's mood and attention, while still acknowledging that it does provide benefits as well.

The study revealed that parents preferred their children to use less technology than they actually do, confirming hypothesis 2. However, parents overestimated their children's technology use in comparison to the average child, but these estimates were reasonably accurate. Due to parents' relatively accurate prediction of the time their children spent on technology, it likely

caused them to feel as though their children's time on technology was more than what is necessary. Parents were presumably accurate in their estimates due to their day to day observations, household rules that are already set, and Apple's screen time tracking in settings. Parents might want their children to use technology less because of the side effects that are shown in other pieces of literature as well as those noticed in their own households. It is important to note that because it's shown that parents are accurately aware of their children's technology use and still believe they should spend less time using it, their decisions about technology limits are likely caused by concern rather than a misunderstanding. This parental awareness shows that communication in households relating to technology does already exist. Rather than arguing about technology use, conversations can shift into what their children do on technology and how to work toward healthier habits.

Hypothesis 5 was not supported by the study. The hypothesis asserted that parents would perceive that technology's effects on their children in regards to school performance and social relationships would be neutral, whereas in reality they said there was a slight negative effect for both. Some reasons as to why parents would have this view with school performance is because technology can be seen as a distraction while doing homework, causing procrastination, reducing concentration, and more. Similarly, the negative effect parents believe technology has on social relationships could be because they may perceive that it replaces face to face interactions, increases time in isolation, and encourages online interactions. Conversely, technology also allows for collaboration with peers on homework assignments and the ability to maintain relationships over long distances. With these benefits, it helps explain why parents perceive only a slight negative effect of technology in these fields. This slightly negative data, rather than extremely negative data, shows parents appear to recognize both the harms and benefits that technology use poses. It shows that families may benefit from maintaining a balanced use of technology rather than attempting to completely reduce it. This allows for the use of technological benefits while also keeping oneself away from any harms that come with using technology.

This study has some limitations. Only 50 parents participated in the Google Forms and accounted for 60 children. The results of the study can't be as broadly generalized with this small sample size. It is possible that with a larger sample size, different results may be produced. Children reported all came from similar communities which may not represent different cultures, regions, and socioeconomic backgrounds. Responses may have been affected by parents' personal beliefs and may unintentionally over or underestimate certain behaviors. This is a cross-sectional study collected at one moment in time, and as technology develops, so too could parental attitudes about technology use. Although limitations do exist, the study was capable of giving insight toward learning about parents' perception of children's technology use.

In order to better understand the relationship between parents' perception of children's technology use and children's actual technology use, future studies should be conducted. To improve how well the findings relate to other populations, a larger sample size should be used with different backgrounds. Furthermore, the data should be accumulated over the course of months or years to understand how these perceptions change over time. Future studies could also look into other perceptions. Instead of focusing on parents, they can also observe teachers, adolescents themselves, or community members. These findings can assist parents in making even more informed decisions and learn more about technology's role in adolescent development.



This study focused on parents' perception of children's use of technology in terms of their attention spans, social relationships, academic performance, and mood. Parents perceived technology to negatively affect mood and attention. Parents were capable of accurately estimating the time their children spent on technology while still hoping they would use it less than they currently do. They perceived that technology does have a slightly negative effect on academic performance and social relationships. Technology is not a resource that is viewed as entirely harmful or beneficial. While understanding the harms and benefits of technology, parents appear to be concerned about the effects it has on their children's daily life. This research can benefit parents, families, educators, and mental health professionals and researchers. Technology is not a tool that will leave adolescents' lives but it is important to use this information to make informed and healthy decisions relating to technology. It is necessary for research to continue to account for the continuous evolution of technology.



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Supplemental Material Parent Perception of Children's Screen Use

Below is the survey that participants completed on Google Forms. Parents completed the survey for each child that they had from ages 5 to 17.

- 1: How many hours a day do you think is the most a child should spend on social apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)
- 2: How many hours a day do you think is the most time a child should spend on productivity apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)
- 3: How many hours a day do you think is the most time a child should spend on entertainment apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)
- 4: How many children do you have between the ages of 5-17? (Multiple Choice) (0, 1, 2, 3+)
- 5: What is the age of your child? (Multiple Choice) (5-7, 8-10, 11-13, 14-17, N/A)
- 6: How much my child uses technology in comparison to the average child. (7 point scale) (1 - extremely less, 7 - extremely more)
- 7: How my child's mood adjusted after the use of technology. (7 point scale) (1 - very negatively, 7 - very positively)
- 8: How my child's attention span has adjusted with the use of technology. (7 point scale) (1 - extremely worsened, 7 - extremely improved)
- 9: How my child's performance in school has adjusted with the use of technology. (7 point scale) (1 - weakened performance, 7 - strengthened performance)
- 10: How my child's social relationships have adjusted with the use of technology. (7 point scale) (1 - extremely worsened, 7 - extremely improved)

How many hours a day does your child spend on each category app?

To find this information:

1. Go to the settings app on the parents' phone
2. Click the tab labeled "family"
3. Choose a child to access their screen time
4. Click the tab labeled "screen time"
5. Scroll down to where it shows the breakdown of social, productivity, and entertainment screen time amounts.

These are not required questions.

- 11: How many hours a day does your child spend on social apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)



12: How many hours a day does your child spend on productivity apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)

13: How many hours a day does your child spend on entertainment apps? (Multiple Choice) (<1, 1-2, 3-4, <5 hours)