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The Effects of Excessive Screen Time on Children and Young Adolescents

by Greg Landry

I am authoring this Research Essay with my phone tucked away in my pocket. It vibrates and my brain tells me, “Check your phone.” I stop writing, pull it out, and glance at my new notification. Here I can decide to put my phone down, or I can stop for a moment, take a break, and open up Tik Tok. The next thing I know ten minutes have passed, and in those ten I accomplished absolutely nothing. I am not alone. Many of you reading this may relate and think “Oh I do the same thing!” We are not alone.

Common household items such as computers, television sets, and phones have been around us for quite some time. Where we used to have to go to our living room to watch the morning news, nowadays these smart devices follow us around, invading our privacy. While there are many benefits to this technology, researchers have discovered an increasing number of drawbacks associated with too much screen time. For the purposes of this paper, excessive screen time is referring to more than two hours of usage per day. Before I get started on the negative effects of excessive screen time, I want to talk about our brains. Let us take advertisements for example as they can be found on any screen you look at. Their flashy and intricate visuals are meant to grab our attention. They are made to entice the consumer and promote a positive connection to their brand. Now our brains crave things that make us feel good. This is called your dopaminergic reward system. “It’s not the reward itself, but the expectation of a reward that most powerfully influences” one’s actions. (Halber 1). Most of us have a positive relationship with our technology. Just like my Tik Tok example above, our brains are craving that funny video to make us forget the arduous work. With this unwavering access to

all kinds of information, our brains have become accustomed to instant satisfaction. Dopamine rushes at the click of a button or scroll of a finger. We have become inundated by screens and their negative effects have been seen most evidently in children and young adolescents. While I do not know the precise solution to this problem, I do know this issue of excessive screen time needs addressing. Lastly, for the purposes of this paper, excessive screen time is noted as more than one or two hours of usage per day. These timelines are an average for all the authors in this article.

How can screens affect the youth of today? A child's mind is an extremely malleable tool. These children and young teens are constantly being interrupted by their phones and tablets; would it not make sense that their brains are developing in a way that best pleases their dopamine response system? A scholarly study in *Child Development* measured how background television impacted a toddler's ability to play with toys. The study was conducted by Mary Evans Schmidt and her colleagues, who had a total of fifty children, male and female, with ages ranging from twelve to thirty-six months old. The TV was on for a total of one hour with the first half-hour displaying a game show, and the second half-hour was spent with the TV off. It was stated that "the children looked at the TV for only a few seconds at a time and less than once per minute." (Schmidt 1). Their findings showed that while background television did not completely inhibit a child's ability to focus on their toys, it did, however, significantly decrease the time children spent playing with their toys.

I find this article to be most useful for the parents of young children. They might think that since their child is so young, watching a little TV is simply fine. Now I am not saying to stop watching your favorite show because you live with a toddler. The television is an entertainment center, use it. I mention this study because of its surprising results. Even from the age of 12

months old, these children could be developing unhealthy habits regarding focus and attention while just trying to play with toys. As these kids get older, they will start to recognize and want screens to be around them. Think of all the tablets sold by Apple, Amazon, and other brands catered toward our children. The iconic “iPad kid” who cannot go more than five minutes without their device before throwing a temper tantrum in Walmart. Do we want to raise our children with a dependence on electronic devices for happiness? I surely do not.

Our children are the future, and we need to protect them the best we can. What are some specific drawbacks of excessive screen time? Jill Christensen has the answer to that in her article published through the Mayo Clinic. This piece titled “Children and screen time: How much is too much?” is a brief yet informative article that brings attention to some of the negative effects associated with too much screen time. As listed, we have obesity, irregular sleep, behavioral problems, impaired academic performance, violence, and less time for play. (Christensen 1). Note that “less time for play” is not related to the previous study where I talked about toy play behaviors. The biggest issue on this list seems to be impaired academic performance. Some of those negative effects such as irregular sleep and behavioral problems correlate directly to how well a child is performing in school. As we know, a good education is the key to a bright future. I would assume most parents do not want their children hindered by electronic devices, yet some parents may be unaware.

I was an overweight child growing up, and one that spent too much time on my computer or Xbox. Not to discredit Christensen’s findings, but my academic performance was never negatively affected by the overconsumption of media. Because I did so well in school my parents never thought my screen time to be a negative impact on my life. As an adult, I realize what it did to me. Because of my lack of outdoor activity, all that time on Xbox made me overweight.

Additionally, I was introduced to violence at an incredibly immature age through games like Call of Duty and Grand Theft Auto. Now of course not all children are the same. Whereas I did well in school but was overweight, I knew plenty of skinnier friends who, instead of doing their homework, would spend hours and hours playing video games.

An interesting thought occurred to me while reading Christensen's article. Some of the negative side effects she associated with too much screen time looked familiar to symptoms that describe ADHD (attention deficit hyperactivity disorder). A disorder that affects both boys and girls, ADHD is "characterized into 2 types of behavioral problems: inattentiveness (difficulty concentrating and focusing), hyperactivity, and impulsiveness." (NHS 1). Half of the problems Christensen lists are all symptoms of ADHD. Specifically irregular sleep, behavioral problems, and impaired academic performance. (NHS 2). Additionally, the results of the "Toy Play Behavior Study," mentioned earlier, found that background television had significantly decreased the time children spent playing with their toys. With this said, how might screen time relate to ADHD? Is it a disorder that an individual is born with? Or could modern technology be developing or at least accelerating the rate of children with ADHD in our society?

To answer the questions above, we need to delve into the findings of "Screen-time is associated with inattention problems in preschoolers: Results from the CHILD birth cohort study." Written by Sukhpreet K. Tamana and her colleagues. They took Preschool children, ages three to five, and compared their average amount of screen time to their behavioral data. Behavioral data was taken from parents by completing the study's own "Child Behavior Checklist (CBCL)." (Sukhpreet 1). On average the children spent around one-and-a-half hours a day using screens. The results concluded that "more than 2-hours of screen-time/day had a 7.7-fold increased risk of meeting criteria for ADHD." (Sukhpreet 1). In short, the results of their

study found that excessive screen time is linked to worse attention deficit problems. I was able to find this study due to research done by Dr. Phil Reed and I bring up his relevance to discuss some of his research.

Dr. Reed published an article called “Does Excessive Screen Time Cause ADHD?” He discusses the likelihood that screen time is affecting children’s attention spans. He has done some extensive research on this topic, and I cite him to discuss his own opinions on the matter. When looking at convincing data, it is important to keep in mind that correlation is not causation. As Dr. Reed puts it, “we cannot conclude that excessive screen time causes ADHD (or anything else) from these data alone.” He also uses the phrase “a novel problem for the digital generation.” I would like to agree with this statement, yet I would not call it entirely accurate. Say ten years from now, new research has come out to show that yes screen time has been planting the seeds for ADHD in young children. This finding is no longer “novel” nor is it specific to just our generation (Gen Z and after). It becomes the parents'/caretakers' job to deal with this problem. If an increased number of kids are developing attentional issues, they are going to require more care. After school tutoring, poorer grades, and worst of all a severe addiction to screens. Now, this is all hypothetical and by no means am I saying to live off the grid in the Alaskan wild. But certainly, it makes me think about dialing back my use of technology, even just a tad.

Finally, I want to look at how too much screen time is affecting our teenagers. This scholarly study is related to the paragraphs above on ADHD having a correlation to excessive screen time. Titled “Problems in Adolescents: Investigating Directionality,” The authors wanted to test if social media use (SMU) and ADHD-like symptoms are related in any way. This Dutch study was conducted by Boer, Maartje, et al., and in it, they used adolescents aged eleven to

fifteen. The authors asked them a set of questions split into two categories. The first category is SMU problems, consisting of problematic social interactions which occurred during SMU time. These problems ranged anywhere from cyberbullying to feelings of inadequacy due to social media platforms. The second category was SMU intensity, or how often the teens' used social media. Additionally, they used an ADHD-Questionnaire to measure the ADHD symptoms of this adolescent population. Their "findings suggest a unidirectional relation: SMU problems increased ADHD symptoms over time, SMU intensity did not." (Boer 1). So, what does this all mean?

The results of this study found that the amount of time spent using screens did not correlate to higher levels of ADHD-like symptoms. However, the problems that occurred while the teens were on their devices worsened their ADHD-like behaviors. Overall, this study reinforces the negative effects that screen time, and in this case, social media can have on our society. While most of the research I have done has talked about children, this study argues that young adolescents are not out of the danger zone. It is worth stating that this article did not try to solve or address problems associated with too much screen time. Nor did they make efforts to improve the mental health of their patients. It focused on screen time and its relation to ADHD-like behaviors.

In conclusion, too much screen time has been shown to negatively affect children and young adolescents. I was not able to go in-depth into how excessive amounts of screen time might be affecting adults. However, the results of this analysis hint that adults are affected as well. According to the Mayo Clinic, we know for certain that excessive screen time can play a role in a child's obesity, irregular sleep, behavioral problems, impaired academic performance, violence, and outdoor play. (Christensen 1). Additionally, according to the CHILDBirth cohort

study, just two hours of screen time per day has been shown as an “increased risk of meeting criteria for ADHD.” (Sukhpreet 1). My hypothetical question to you is, could too much screen time be developing or at least accelerating the rate of children with ADHD? Is this link one of the biggest finds of the 21st Century? Possibly. Though there is much more research needed, I believe that future generations could encounter similar, if not worse problems. But as of April 21st, 2022, there is no definitive answer to “yes screen time causes ADHD.” Even though I just bashed on screen time for the duration of this analysis, I would not have been able to do it without my computer. So, the next time you catch yourself procrastinating, or watching a silly video, remember you are not alone. Everything is good in moderation.

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