

Too Much Screen Time Linked to Sleep and Behavior Problems in Children

Analysis by [Dr. Joseph Mercola](#)

January 21, 2025

STORY AT-A-GLANCE

- › Children aged 8 to 12 now spend four to six hours daily on their digital devices, while teenagers spend up to nine hours, leading to significant impacts on sleep quality and behavioral problems
- › Research shows a "positive feedback loop" between screen time and sleep disturbances, where excessive screen use increases anxiety, hyperactive attention problems and depression in children
- › Digital media is intentionally designed to be addictive, releasing dopamine in the brain's reward center through unpredictable outcomes — it's similar to a slot machine's psychological effects
- › It's best to delay your children's smartphone access until high school and social media until they turn 16. Implement phone-free schools and encourage more real-world independence and play
- › Excessive screen time negatively impacts cognitive development, academic performance and language skills while exposing children to harmful electromagnetic fields (EMFs) that interfere with cellular energy production

According to an article from the American Academy of Child and Adolescent Psychiatry (AACAP), children between 8 and 12 years old now spend around four to six hours watching TV or using their smartphones, gaming consoles or computers, while older teenagers spend as much as nine hours on these gadgets per day.¹

While it seems like a harmless form of entertainment, excessive screen time actually affects many areas of children's health – in particular, it can lead to poor sleep quality and trigger behavior problems.

Study Links Screen Time with Poor Sleep Quality and Behavioral Problems Among School-Aged Children

A recent study published in the *Early Child Development and Care* journal² investigated the effects of screen time on schoolchildren's sleep quality and how it affects and changes their behavior.

The researchers, who were from China and Canada, surveyed mothers of preschool-aged children in Shanghai, with 571 valid respondents being used for the study. The children were between 3 and 6 years old and attended seven different public preschools.

"Specifically, at ages of 2.5 and 4, approximately 55.5% and 34.5% of children, respectively, did not adhere to the screen time recommendations of the American Academy of Pediatrics (AAP). The COVID-19 pandemic has further escalated screen time, doubling children's daily usage for online activities. Consequently, investigating preschool children's screen time necessitates immediate attention," the researchers said.³

Using survey questionnaires, the mothers reported how much time their children spend in front of electronic screens every day. They also answered questions about their children's behavioral problems, such as emotional symptoms, peer problems and hyperactive attention difficulties. Lastly, they also responded to questions about their children's sleep quality and duration.

After studying the responses, the researchers concluded that there is a "positive feedback loop" between screen time and sleep disturbances – meaning they exacerbate each other because of cyclic reinforcement, leading to an increased risk of anxiety, hyperactive attention problems and depression.⁴

Simply put, children who spend more time in front of screens have a higher risk of emotional problems. It also negatively affects the quality of their sleep.⁵

"Sleep quality was significantly and negatively correlated with hyperactive attention problems, emotional symptoms, and peer problems.

In addition, the results also show that sleep quality partially mediated the associations between screen time and hyperactive attention problems, and between screen time and emotional symptoms.

These findings offer valuable insight into the negative impact of screen use on early childhood development, while also illuminating the underlying mechanism by which sleep quality acts as a mediating factor," the researchers concluded.⁶

Higher Screen Time Correlates with Increased Hyperactive Attention Problems

The authors of the featured study highlighted how sleep quality is extensively correlated with decreased hyperactive attention problems, emotional symptoms and peer problems.

According to an article in Science Daily,⁷ excessive screen time leaves children's brains in an excited state, leading to poor sleep quality and duration. As noted by Shujin Zhou, a doctor of psychology from Shanghai Normal University and lead author of the study:

"This poor sleep may be due to postponed bedtimes caused by screen viewing and the disruption of sleep patterns due to overstimulation and blue-light exposure. Screen use might also displace time that could have been spent sleeping and increase levels of physiological and psychological arousal, leading to difficulties in falling asleep."⁸

A different yet also recent study supports these claims; specifically, it focused on the effects of short-form videos, which are mostly viewed on digital devices like smartphones and tablets.

Published in BMC Psychology, the authors found that excessively watching short-form videos (like TikTok, Instagram Reels or YouTube Shorts) is positively correlated with poor sleep quality and social anxiety among adolescents.⁹ The participants were first- and second-year high school students from Shandong province, China.

The study authors noted that since teenagers are generally prohibited from using phones during school hours, they make up for lost time by using their devices and watching videos before bedtime, thus affecting sleep quality. This habit also impairs melatonin production, which is essential for optimal sleep, due to the blue light emitted by these screens.¹⁰

"Short-form video addiction has a significant direct effect on adolescents' sleep quality. Adolescents should learn to consciously suppress their desire to watch short-form video, reduce the frequency of their Internet use, and engage in self-control before falling asleep to ensure sufficient sleep hours," the researchers concluded.¹¹

Excessive Screen Time Linked to Poor Academic Performance as Well

Aside from hampering sleep and triggering behavior issues, too much time spent on digital devices also impairs children's learning and academic performance. A 2023 review published in Cureus¹² investigated the profound effects of excessive screen time on various areas of development, including cognitive skills, language and social-emotional development.

The research noted that although screens could have positive educational benefits for children (for example, using E-books to improve reading skills), the negative effects outweigh the benefits. According to the authors:

"[E]xcessive screen time and media multitasking can negatively affect executive functioning, sensorimotor development and academic outcomes. Early screen exposure has been associated with lower cognitive abilities and academic

*performance in later years. Language development is also affected by screen time, as it diminishes the quantity and quality of interactions between children and caregivers."*¹³

The authors also pinpoint too much screen time as a risk factor for social-emotional development problems, including obesity, depression and anxiety. "It can impair emotional comprehension, promote aggressive behavior, and hinder social and emotional competence," the researchers noted.¹⁴

Digital Media Are Designed To Be Addictive

Similar to many children, the majority of adults today are heavily reliant on digital devices, and usually find it difficult to moderate their usage. Since children consider adults their role models, it's not surprising that many children also cannot make it through a day without spending a significant amount of time on their gadgets.

However, this is troubling, considering that digital media – games, apps and social media platforms – are designed to be addictive. Using digital media, such as browsing on Facebook, watching videos on YouTube or scrolling through Instagram, activates your brain's reward center by releasing dopamine. This feel-good chemical is linked to pleasurable activities. However, this also triggers addiction and leads to anxiety, depression and other physical ailments.¹⁵

But if social media is causing these negative outcomes, then why can't people resist it? Jacqueline Sperling, Ph.D., a psychologist at McLean Hospital, explains:

"When the outcome is unpredictable, the behavior is more likely to repeat. Think of a slot machine: if game players knew they never were going to get money by playing the game, then they never would play," Sperling says.

"The idea of a potential future reward keeps the machines in use. The same goes for social media sites. One does not know how many likes a picture will get, who will 'like' the picture, and when the picture will receive likes. The

*unknown outcome and the possibility of a desired outcome can keep users engaged with the sites."*¹⁶

Particularly alarming is the fact that young children, especially those under the age of 2, are far more susceptible to addictive behavior than older children and adults. Yet many parents today are more than willing to hand their children a cellphone or tablet for their entertainment or to control their tantrums. They fail to realize how harmful this might be in the long run.

Digital Screens Also Expose Children to Damaging EMFs

Another damaging effect of using digital devices is that they expose your child to excessive amounts of electromagnetic fields (EMFs). EMFs are one of the most detrimental aspects that impair your ability to reach optimal health, as they disrupt your cellular energy production.

When EMFs penetrate your body, they interfere with mitochondrial function by boosting the influx of calcium ions into your cells. Once your cells have elevated intracellular calcium levels, harmful free radicals are produced, leading to increased oxidative stress. This is specifically detrimental for young children, whose brains and bodies are still developing.

I recommend reading my newest book "Your Guide to Cellular Health: Unlocking the Science of Longevity and Joy," to give you a deeper understanding on how EMFs harm you and your children, and why it is crucial to eliminate all sources, especially during bedtime (more on this below).

Initiate a 'Digital Detox' for Your Children

If your child is spending too much time in front of the TV or computer or on their smartphone or tablet, and are showing symptoms of becoming withdrawn, being hyperactive or developing social anxiety, initiating a "digital detox" is the smart thing to do.

Jonathan Haidt, Ph.D., a social psychologist at New York University, recommends these four tips as "norms" to help break smartphone addiction among your kids:¹⁷

1. No smartphones before high school (around age 14)
2. No social media accounts until age 16
3. Phone-free schools with restricted or zero use during the school day
4. Give kids far more independence, free play and responsibility in the real world

"If we do those four things, we can actually fix this problem in the next year or two. We're not going to burn the technology, [but] we need to delay it," he said. A digital detox is challenging, which is why you need to start the process gradually but with realistic goals in mind.

For example, ask your child how much time away from their phones they can spend with, then use that as a launching point. Another tip is identifying their current usage patterns and specific apps that consume most of their time, then set limits.¹⁸

Another great idea is to set up a "no-phone" zone in your home, like the dining table and their bedroom. This helps cultivate spaces that are completely free from digital distractions. Keeping devices away while they work on personal projects or hobbies will also help them detox from digital media.¹⁹

How Much Sleep Do Your Children Need?

Once you've successfully done a digital detox, you'll likely see the results, such as better sleep quality in your children. The next step then is to make sure that your child is meeting the required amount of sleep for their age.

If you're wondering how much sleep your child needs, check out these guidelines from the National Sleep Foundation (NSF):²⁰

- **Infants (4 to 12 months)** – 12 to 16 hours (including naps)
- **Toddlers (1 to 2 years)** – 11 to 14 hours (including naps)

- **Preschoolers (3 to 5 years)** – 10 to 13 hours (including naps)
- **School-age children (6 to 12 years)** – 9 to 12 hours
- **Teenagers (13 to 18 years)** – 8 to 10 hours

Start Incorporating Healthy Sleep Habits at a Young Age

Once you've moderated your child's screen time, you must implement healthy habits to optimize their sleep quality. Aside from removing all gadgets from their bedroom, especially during bedtime, one strategy is to enforce a regular bedtime routine. Set a fixed bedtime and wakeup time for your children, which will help optimize their circadian rhythm (the body's internal clock).

Another beneficial habit is to let them get enough sun exposure in the morning. Bright, blue light-rich morning sunlight signals to your body that it's time to wake up. By getting at least 10 to 15 minutes of natural light first thing in the morning, your body will be alerted that day has arrived, making it less likely to be confused by weaker light signals later on.

Lastly, make sure to be a good role model for your children. Limit your own exposure to electronic devices and blue light at night, and wrap up your work prior to bedtime. Below are other helpful tips to help you get high-quality, restorative sleep at night. For a more comprehensive list, read "[Top 33 Tips to Optimize Your Sleep Routine.](#)"

- **Keep your room cool** – The optimal temperature for sleeping is between 60 and 68 degrees Fahrenheit. If your room is cooler or warmer, you will have a more restless night's sleep. During sleep your body's core temperature drops to the lowest level during a 24-hour period. The cooler your room is, the more conducive it is to your body's natural drop in temperature.
- **Sleep in complete darkness or as close to it as possible** – Even the tiniest bit of light in the room will disrupt your internal clock and your production of melatonin, thereby interfering with your sleep. Use blackout drapes or shades or wear an eye mask.

- **Avoid drinking fluids within two hours of going to bed** – This will reduce the likelihood of needing to get up and go to the bathroom, or at least minimize the frequency.
- **Exercise regularly, but don't do it within three hours of bedtime** – Even 30 minutes of moderate-intensity exercise daily will improve your sleep. However, don't exercise too close to bedtime or it will keep you awake.
- **Evaluate your mattress and pillow** – You'll get more restful sleep when your mattress and pillows are comfortable and supportive. Consider replacing your mattress after nine or 10 years, which is the average life expectancy of a good-quality mattress.

Sources and References

- ¹ American Academy of Child and Adolescent Psychiatry, May 2024
- ² Early Child Development and Care, December 6, 2024
- ³ Early Child Development and Care, December 6, 2024, Introduction
- ^{4, 7, 8} Science Daily, December 12, 2024
- ⁵ News Medical Life Sciences, December 18, 2024
- ⁶ Early Child Development and Care, December 6, 2024, Discussion
- ⁹ BMC Psychol 12, 369 (2024), Abstract
- ¹⁰ BMC Psychology volume 12, Article number: 369 (2024), Correlation analysis of short-form video addiction, social anxiety, and sleep quality
- ¹¹ BMC Psychology volume 12, Article number: 369 (2024), Conclusions
- ^{12, 13, 14} Cureus, June 18, 2023 15(6):e
- ^{15, 16} McLean Hospital, The Social Dilemma: Social Media and Your Mental Health
- ¹⁷ The Defender, August 13, 2024
- ^{18, 19} Very Well Mind, October 31, 2023
- ²⁰ Sleep Foundation, May 13, 2024