

Contemporary Screen Time Modalities And Disruptive Behavior Disorders In Children: A Review Study

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Abstract

This review article highlights the screen time modalities, its nature and pattern and its physiological and psychological impact on children. The article also features the disruptive behavioral disorders and open up the way of contemplation of link with screentime. The recommendation primarily is focused on parents and parenting technique through monitoring, modelling and digital hygiene measures. Utilization of screen time for extracting the benefits from screentime should be the ideology and trimming the child's engagement from digital time as they need humans not screens.

Keywords: Screentime, Digital Hygiene, Parenting, Disruptive Behavioral Disorders.

INTRODUCTION

In today's technological and media-driven society, many parents utilize screens to amuse or divert their young children while juggling other requirements. The system is effective. The attention that screens hold children's attention in a manner that absolutely nothing else does gives parents a brief respite. But how much screen time should children spend using screens, and what effect do screens have on developing brains? Amount of time spent each day watching screens—on a phone, TV, computer, tablet, or any other portable or visual device—is referred to as screen time. Our lives now cannot function without screens. Concerns have been raised by parents, educators, and health professionals regarding the rise in kids' screen time. Screens must be carefully chosen, consumed in the proper quantity, and at the appropriate times, just like the balanced meal we eat. Whether we use screens in a healthy or unhealthy way depends on how we use them. While watching inappropriate TV shows, going to dangerous websites, or playing violent video games are just a few examples of negative or unhealthy screen time, it is considered positive or healthy when used for educational or prosocial activities like schoolwork, interacting with friends and family, creating art or music, or relaxing.

USE OF SCREEN TIME

According to Indian Academy of Paediatrics Screen Time Guidelines for Parents Manual Children below the age of 2 years should not be exposed to any type of screen with the exception of occasional video call with relatives. Screen time for children between the age of 2 and 5 years should not exceed 1 hour; the lesser, the better. For older children and adolescents, it is important to balance screen time with other activities that are required for overall development. These activities include an hour of physical activity (play time), adequate duration of sleep (recommended sleep time varies with age, for example, adolescents require 8–9 hours of uninterrupted sleep at night), and time for schoolwork, meals, hobbies, and family time. If any of these activities is displaced due to screen use, then it is called excessive screen time and it should be reduced. In study published by Koshy B titled Academic stress among 10th class students. Journal of Psychiatric Nursing the cause of academic stress in retrospect view was found to be excessive use of screen time in early ages.

PHYSICAL IMPACT OF SCREEN TIME

Obesity: A risk factor for obesity is spending too much time doing sedentary activities like playing video games or watching TV. A person's heart health can affect their chance of developing diabetes, having high blood pressure, or having

high cholesterol. For a very long period, screen time has been linked to obesity in both children and adults. The apparent cause is a more sedentary lifestyle, but it's also due to lack of sleep, which can make you more ravenous and crave junk food.

Sleep problems: Sleep is disturbed by blue light exposure from screens because it throws off our circadian rhythm, especially at night. Primary source of blue light, the sun, controls our level of attentiveness during the day. However, when we are exposed to blue light during times when it is not daytime, our bodies suppress the melatonin—a hormone that regulates sleep—and we are deprived of restorative REM sleep. In other words, even brief late-night screen time sessions for adults and kids confuse our systems into producing less melatonin, which makes it harder for us to go asleep. As we scroll through our inboxes and social media accounts, the electrical activity in our brains is on overdrive, making it harder to put our bodies and minds into a calm state for sleep. And the results multiply. Missing even one hour of sleep each night can result in

- Decreased cognitive function
- Mental fog
- Reduced attention span
- Memory problems (e.g., not being able to learn new information or convert short-term memory into long-term memory)
- Problematic or risky decision-making
- Lower energy levels
- Mood changes, such as stress, anxiety, irritability, and even depression

Long-Term Vision Damage

Myopia and screen usage are clearly linked, according to an increasing number of studies. While genetics unquestionably affect children's and adults' vision, other irrefutable factors raise concerns about screen usage and less time spent outdoors.

Diabetes

Being overly sedentary is associated with a higher risk of developing diabetes, and excessive screen usage frequently entails sitting and remaining in a resting condition. The negative consequences of screen time can compound again. Musculoskeletal problems brought on by excessive sitting can also affect our daily health and enjoyment by creating aches and pains. But it's more than just a sedentary way of life. In most situations, increased screen time means more exposure to advertisements and digital marketing content that encourage bad habits. Continual exposure to these pictures and words has an impact on the human psyche and can change dietary preferences and behavioural patterns even though people may know better. Screen time is believed to be a secondary cause of cancer because weight gain is causally linked to at least 12 different malignancies.

COGNITIVE IMPACT OF SCREENTIME

Language development

When it comes to language development, it is well known that children pick up new words while conversing or playing with adults. A dialogue with adults that is two-way and contains both facial expressions and emotional input is considerably better for a child's language development than a one-way interaction with screens. Studies reveal that kids who spend the most time on screens typically have lower levels of attention and concentration and do worse on reading tests.

Working memory

Screen time is the amount of time spent watching TV, surfing the Internet, and playing video games on electronic screens. In order to distinguish between various forms of screen time usage, the categories can be loosely broken down into active screen time (i.e., using cellphones, tablets, and laptops, playing video games), and passive screen time (i.e., watching television). According to reports, parents have negative attitudes about smart electronic devices because they are concerned about potential physiological and psychological problems in their children. The impact of screen use on working memory is hotly contested. The perspectives can be categorised as having a negative impact on memory due to screen time, a positive impact on memory, or having no obvious relationship at all. Additionally, it is believed that once a person enters puberty, the relationship between activities performed away from a screen and cognitive development alters. Screens hold kids' attention in a way that almost nothing else does, giving parents a moment to relax.

PARENTING

Being a parent has never been simple. But the increasing use of cellphones and the emergence of social media have added a new dimension to parenting's concerns. One aspect that is adjustable is parenting. Parents and other adults who look after young children have a lot of influence over their early experiences. Intervention research has shown the effects of good parenting practises on kids' development, with advantages for their emotional maturity and cognitively responsive actions. Being receptive to, accepting of, and interested with the child while establishing limits that are developmentally appropriate are all components of excellent parenting. Parenting is actually harder today than it was 20 years ago, according to the majority of parents in the United States (66%) who include those who have at least one child under the age of 18 but who may also have an adult child or children. Yes, parents nowadays spend more time in person with their kids than nearly any other parent in history. Mothers today astonishingly spend more time caring for their children than

mothers did in the 1960s, despite a significant rise in the proportion of women in the labour. However, the interaction between parents and children is getting worse and even artificial. Physically, parents are always there in their children's life, but emotionally, they are less tuned in. Parents use screen time for children in order to juggle up their own needs. This indicates the selfish motive on the part of parents as babies need humans not screen for learning and human interaction. Children need off screen experiences in the form of interaction, sharing, love and belongingness to achieve social and cognitive skills.

DISRUPTIVE BEHAVIOR DISORDERS- ESTABLISHING THE LINK

Because they involve behaviours that are easily observed, such as tantrums, physical aggression like attacking other children, excessive argumentativeness, stealing, and other forms of defiance or resistance to authority, disruptive behaviour disorders are among the simplest coexisting conditions to identify. These disorders, which include ODD and CD, typically gain attention when they start to affect family and peer relationships or school performance and frequently worsen over time.

When impulsivity and hyperactivity are present, disruptive behaviour disorders' characteristic behaviours can mimic those of ADHD very closely. However, ODD, CD, and ADHD are all recognised as distinct diseases that can exist on their own. Children with ADHD who also have ODD or CD make up about one-third of the total population. Because their defiant behaviour causes so many confrontations with adults and other children they contact with, children with both diagnoses typically have harder lives than those with ADHD alone. However, chances that your child will be able to learn to manage these behaviours may be increased with early detection and treatment.

ATTENTION DEFICIT HYPERACTIVITY DISORDER

Attention-deficit hyperactive disorder (ADHD) is the most prevalent neurodevelopmental disorder in the paediatric population. In the 2016 National Survey of Children's Health, about 2.4 million school-aged children had been diagnosed with ADHD, 9.6% of the population for this age group (Danielson et al., 2018). Attention-deficit/hyperactivity disorder (ADHD) is defined by a continuous pattern of hyperactivity, impulsivity, and/or inattention that interferes with a person's development or functioning. Most of us know what it's like to be riveted for a while to a screen, whether it's a TV, phone, or tablet. But for children with ADHD, the pull is even stronger. Short attention spans crave the ever-changing menus of flashy graphics, sound, and action, delivered with the thrill of instant gratification. Electronics can send steady doses of dopamine – a neurotransmitter – straight to the brain's reward center.

And the damage doesn't stop with an ADHD diagnosis. Ongoing screen overload can cause symptoms to get worse, and cause other problems as well.

OPPOSITIONAL DEFIANT DISORDER

Oppositional defiant disorder is defined in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) as including persistent symptoms of "negativistic, defiant, disobedient, and hostile behaviors toward authority figures." The behaviours of an ODD child may include arguing regularly with adults, losing his temper easily, refusing to follow rules, blaming others for his own mistakes, purposefully annoying others, and other angry, resentful, and vengeful behaviours. He'll probably run into disciplinary issues and social disputes a lot at school. Without prompt diagnosis and treatment, these symptoms can often get worse over time, sometimes getting so bad that conduct disorder is eventually diagnosed.

While other screen-related activities, such as viewing films and television, playing video games, and texting, were more likely to be linked to oppositional defiant disorder, social media use was most frequently tied to conduct disorder (ODD). Data on screen use was gathered, and one year later, behaviour abnormalities were assessed. The prevalence of conduct disorder was found to increase by 62% for every hour spent on social media, whereas the prevalence of ODD increased by 14% to 21% for every hour spent on television, video games, video chat, and texting.

CONDUCT DISORDER

Conduct disorder is a more extreme condition than ODD. Defined in the *DSM-IV* as "a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate social rules are violated," CD might involve severe hostility toward people or animals, intentional property damage (vandalism), theft, evading parental authority, skipping school, or other attempts to violate some of the most important social norms without being discovered. Many CD patients were or could have been diagnosed with ODD at a younger age, especially those who displayed physical aggression as youngsters. These kids typically keep their ODD symptoms (argumentativeness, resistance, etc.) as the CD symptoms grow more noticeable. These children are sometimes perceived as delinquents due to a combination of their behaviours and the impulsivity and hyperactivity of ADHD, and they are more likely to be suspended from school and interact with the police than children with ADHD alone or ADHD with other conditions.

With respect to mental disorders, studies suggest that media misuse is associated with aggressive, delinquent and antisocial behavior. Media misuse is generally defined as use of media devices for more than 2 hours per day³⁻⁶. Media misuse has been associated with antisocial behavior in children ($\beta=0.180$ (0.026 – 0.333) aggressive behavior ($r=0.18$, $P<.01$) criminal convictions (adjusted OR=1.27 (1.00–1.61) conduct problems (1.91 (1.28–2.83) and externalizing problems (delinquent and aggressive behaviors) ($P=0.007$)³⁻⁶. It is crucial to learn more about how media abuse is related to conduct disorder because of the rise in media use among children and adolescents and the long-lasting effects of the disorder. Other risk factors may independently influence a child's conduct disorder as well as media use.

Male children are more likely than female youngsters to experience conduct disorder and to be exposed to media gadgets. In conclusion, studies have shown that media abuse is associated with a persistent conduct disorder diagnosis.

MINDFUL USE OF SCREEN TIME

The finest learning occurs when young children under the age of five interact live and actively with family members and other carers. When given the option, kids almost always choose to engage in conversation, play, or reading. Parents and carers can actively improve—and limit—media encounters by selecting them jointly and with a specific goal in mind (e.g., "Let's watch or play this content, at this time, for this reason").

- Restrict screen time in public areas and during family activities like eating. The best moments to master social skills are during family gatherings.
- To reduce exposure to advertising, choose content from reputable, non-commercial sources.
- When selecting content, take into account messages concerning gender, body image, violence, diversity, and societal issues.

MODELLING SCREEN TIME

Essential life skills like language, self-control, and creative thinking must be developed in young children under the age of five through active play and excellent family time. No of their age, kids shouldn't have to fight for parents' attention with devices. When parents set a good example for their children, they:

- Reduce their personal screen usage when there are young children around, especially during mealtimes, playtimes, and other crucial social learning opportunities.
- Place a high value on relationships with kids through dialogue, games, and healthy, physical routines.
- Select the appropriate times to consume media with others and switch off screens when not in use.
- Encourage kids to detect and challenge advertising messages, stereotyping, and other problematic content, and make sure that any media used around kids is devoid of this kind of material.

RECOMMENDATIONS

Doctors and other healthcare professionals should advise parents and other carers of young children on how to limit screen time in order to enhance children's health and development in the digital age. The following guidelines are more specific:

Reduce your screen time

- It's not advisable for kids under 2 to watch television.
- Keep routine or regular screen use for kids ages 2 to 5 to no more than one hour each day.
- Make sure that children under the age of 5 do not regularly participate in screen time that is sedentary.
- Keep daily "screen-free" periods in place, particularly for family dinners and book sharing.
- Due to the possibility of melatonin-suppressing effects, avoid screens at least an hour before night.

Risk reduction

- When using a screen, be attentive and involved, and wherever you can, co-view with kids.
- Consider the content and give interactive, educative programming first priority.
- Use parenting techniques that promote relaxing, self-control, and setting boundaries.

Digital hygiene

When boundaries and norms for behaviour are established, children feel safe and are better able to control their behaviour. When a child starts using a digital device, parents should create "digital rules" to promote healthy media usage. These should be age-appropriate, and as the child gets older, more ones could be added. This needs to be regularly checked on and discussed with the youngster. Several other guidelines for practising "digital hygiene"

- Make sure your house is a welcoming, nurturing, supporting, enjoyable, and safe place. If regulations are taught to kids in a courteous and sympathetic way, they will follow them.
- Screens should be turned off an hour before bedtime because the blue light they emit inhibits the release of melatonin, which is essential for restful sleep.
- Do not multitask. All screen devices should be turned off while performing schoolwork that must be done offline.
- Avoid watching or playing any violent TV shows or games. Make sure the computer has correct privacy settings, safe browser and app search engines, and antivirus software, but don't rely on them because kids may easily work their way past them. Install security software to prevent young children from accessing inappropriate websites.
- Mark areas where no family member uses a device as "digital free zones," such as the bedroom, dining table, kitchen, bathroom, and motor vehicles.

CONCLUSION

This document summarises the literature work from earlier years. It analyses the impact of screen time on memory in order to provide advice for parents how to encourage healthy cognitive development as they get older. The perspectives examined in this research can be categorised between those that believe screen time has a negative impact on working memory and those that believe it has little to no impact on working memory and language development. Although

numerous research in the field have supported the various viewpoints, this paper examines them in terms of how screen time engagement affects physiologically and psychologically and pattern of disruptive behaviour disorders in children. Numerous studies have revealed extensive effects on variables including attention and perhaps addictive behaviour. Today's kids have never known a period without screens, and they see adults using them all the time, which normalises the practise. Parents, teachers, and other carers can greatly benefit children by providing positive examples. With proper training, screening and modelling the screen time can be utilised for its numerous benefits unknown.

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