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ADHD IN CHILDREN AND THE GROWING PROBLEM OF DIGITAL ADDICTIONS: SOCIAL MEDIA AND VIDEO GAMES

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ABSTRACT
Attention Deficit Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder among children and is manifested by lack of attention, hyperactivity and impulsiveness. The recent years have seen the issue of social media and video-game addiction as a concern due to widespread use of digital technologies especially in children with ADHD. Studies show that the impulsivity and the reward-seeking behaviors that come with ADHD predispose one to extreme screen time and digital overuse. This paper discusses the connection between ADHD in children and an increasing issue of digital addictions with a particular focus on the behavioral, cognitive, and social impacts. It also points out prevention and intervention strategies such as parental advising, school policies and clinical reinforcing. Knowing the interaction between ADHD and exposure to digital media, caregivers, educators, and healthcare professionals will be able to take appropriate steps to reduce the risks and encourage children to adopt healthier digital media habits.

Keywords
ADHD, children, social media addiction, video games, digital addiction, behavioral disorders

1. INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopment disorder, usually diagnosed during childhood and prevalence of this disorder is about 5-7 percent in children around the world (American Psychiatric Association, 2013). ADHD is a disorder that is characterized by inattention, hyperactivity, and impulsivity, which may greatly interfere with academic success, socialization, and life activities. Children with ADHD usually have difficulty in regulation of self, delayed gratification as well as sustaining attention, which makes them more susceptible to the environmental factors, which provide instant stimulation and gratification. Children are also becoming exposed to many types of electronic media in the digital age and this is through social networking sites and the video games. Continuous stimuli and instant feedback are some of the features of these technologies and can be very attractive to ADHD children. Although moderate digital use could help in the learning and social interaction process, excessive use can lead to behavioral, cognitive and social challenges, which can at times turn into digital or behavioral addictions (Griffiths, 2018). The lack of awareness of the intersection of digital addictions and ADHD has become the issue of concern in recent research. Unlike the average child, children affected by ADHD tend to spend a lot of time on video games or social networking platforms which are associated with symptoms of irritability, sleeping problems, and a loss of focus on education (Weiss et al., 2011). This increased vulnerability can greatly be attributed to the neurobiological and behavioral attributes of ADHD such as impulsivity, novelty-seeking, and the desire to get gratification immediately. This article is aimed at studying the relationship between ADHD in children and the growing rates of digital addictions, paying attention to social media and video-game use. The paper also covers the behavioral, cognitive and social impact of excessive digital involvement and how it can be prevented and intervened through the identification of strategies. The awareness of such dynamics will enable caregivers, school educators, and medical workers to take evidence-based steps to reduce risks and ensure healthy digital habits in children with ADHD.

2. UNDERSTANDING ADHD IN CHILDREN

There are three types of ADHD, namely inattentive, hyperactive-impulsive, and combined (American Psychiatric Association, 2013). Children of the inattentive subtype have difficulties mainly in maintaining attention, task organization, and following directions. Hyperactive-impulsive subtype is characterized by too much fidgeting,

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restlessness, and making decisions impulsively. The combined subtype shows signs of inattention and hyperactivity-impulsivity.

2.1 Symptoms and Diagnosis

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) provides the criteria related to ADHD diagnosis, such as patterns of persistent inattention or hyperactivity-impulsivity that persist during at least six months and do not provide social, academic, or occupational functioning (American Psychiatric Association, 2013). Such behavioral signs can be inability to complete tasks, constant interruptions, impatience, and impulsive behavior that might cause safety issues.

2.2 Cognitive and Emotional Challenges

ADHD children are characterized by executive dysfunctions, such as difficulty in working memory, inefficient planning abilities, and loss of self-control (Barkley, 2015). Emotional dysregulation can be characterized by recurrent mood swings, frustration or stress inability to cope. Such emotional and cognitive difficulties make one susceptible to the surroundings that offer quick and repetitive stimulation as in the case of digital media.

2.3 Impact on Academic and Social Life

ADHD may impact unfavorably on academic performance by missing of deadlines, incompletion of work, lack of concentration on lessons. Children can have problems with keeping friends socially, either because they are impulsive, inattentive, or disruptive. Arguments over homework, screen time, and behavioral management usually cause more stress to families.

3. DIGITAL ADDICTIONS IN CHILDREN

Digital addiction is the state of obsessive use of digital devices or the Internet, which leads to poor performance (Griffiths, 2018). The most common types of digital addiction among children are social media and video games.

3.1 Social Media Addiction

The social media platforms provide immediate gratification in the form of likes, shares, and notifications, which generated a system of rewards that support compulsive use (Andreassen et al., 2017). Children can be preoccupied with social media, change of moods when restricted and ignore other duties.

3.2 Video Game Addiction

Overwhelming playing of video games may give rise to some of the symptoms of substance addiction such as withdrawal, tolerance, and loss of control (Kuss & Griffiths, 2012). Video games are usually rewarding in the short term, immersive and organized challenge, which children require to be stimulated.

3.3 Neuropsychological Effects

Online addictions have effects on attention, memory, and impulse control. Repeated screen time will excessively stimulate the reward systems in the brain, thus strengthening the compulsive behavior (Weinstein and Lejoyeux, 2010). Research has also attributed high levels of gaming and use of social media to anxiety, lack of sleep, and low grades.

4. ADHD AND SUSCEPTIBILITY TO DIGITAL ADDICTIONS

Children with ADHD are particularly susceptible to digital addictions due to the interplay of neurobiological and behavioral characteristics. Impulsivity, novelty-seeking, and a heightened need for immediate gratification make digital platforms especially engaging.

4.1 Evidence from Research

Research shows that children with ADHD spend more time on video games and social media compared to neurotypical peers (Kofler et al., 2019). Studies indicate correlations between ADHD symptoms and problematic internet use, highlighting the vulnerability of these children to digital overuse (Ho et al., 2014).

4.2 Behavioral Mechanisms

Video games and social media provide instant rewards and predictable feedback loops, which align with the dopamine-driven reward deficiencies observed in ADHD (Volkow et al., 2009). This reinforcement encourages prolonged engagement and reduces motivation for offline tasks.

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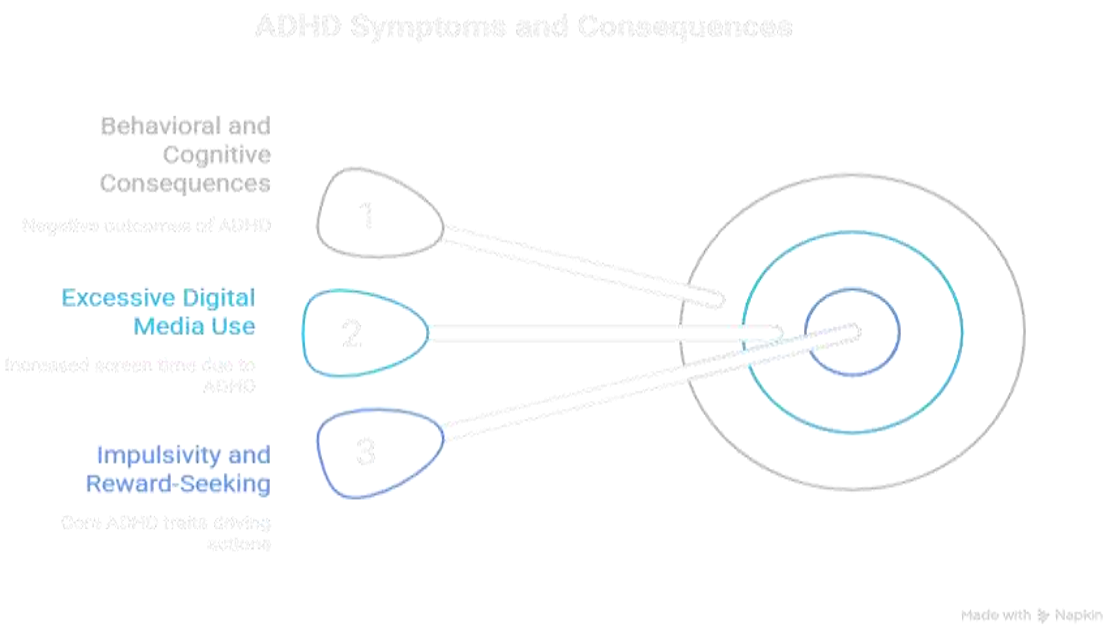
Table 1: Correlation Between ADHD Symptoms and Digital Use

ADHD Symptom	Likelihood of Excessive Digital Use	Key Risk Factor
Inattention	Moderate	Easily distracted by interactive stimuli
Hyperactivity	High	Seeks constant stimulation
Impulsivity	Very High	Difficulty delaying gratification
Emotional Dysregulation	High	Uses digital platforms to self-soothe

Figure 1: ADHD Symptoms and Digital Addiction Pathway



flowchart illustrating ADHD symptoms → impulsivity & reward-seeking → excessive digital media use → behavioral and cognitive consequences.

5. IMPACTS OF DIGITAL ADDICTIONS ON CHILDREN WITH ADHD

5.1 Behavioral Impacts

Excessive digital engagement exacerbates ADHD symptoms, leading to increased irritability, restlessness, and difficulty controlling impulses (Weiss et al., 2011). Screen overuse may also disrupt sleep patterns, worsening attention deficits.

5.2 Cognitive Impacts

Overstimulation from video games and social media can impair executive functioning, working memory, and sustained attention. Academic performance may decline due to distractions and reduced engagement in educational activities (Swing et al., 2010).

5.3 Social Impacts

Digital addictions can lead to social isolation, reduced peer interaction, and family conflicts. Children may prefer online interactions over face-to-face communication, further hindering social development (Kuss & Griffiths, 2012).

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6. PREVENTIVE STRATEGIES AND INTERVENTIONS

6.1 Parental Strategies

Parents can mitigate risks through structured screen time schedules, monitoring digital activity, and encouraging alternative offline activities such as sports or creative hobbies. Positive reinforcement for balanced digital use can also be effective.

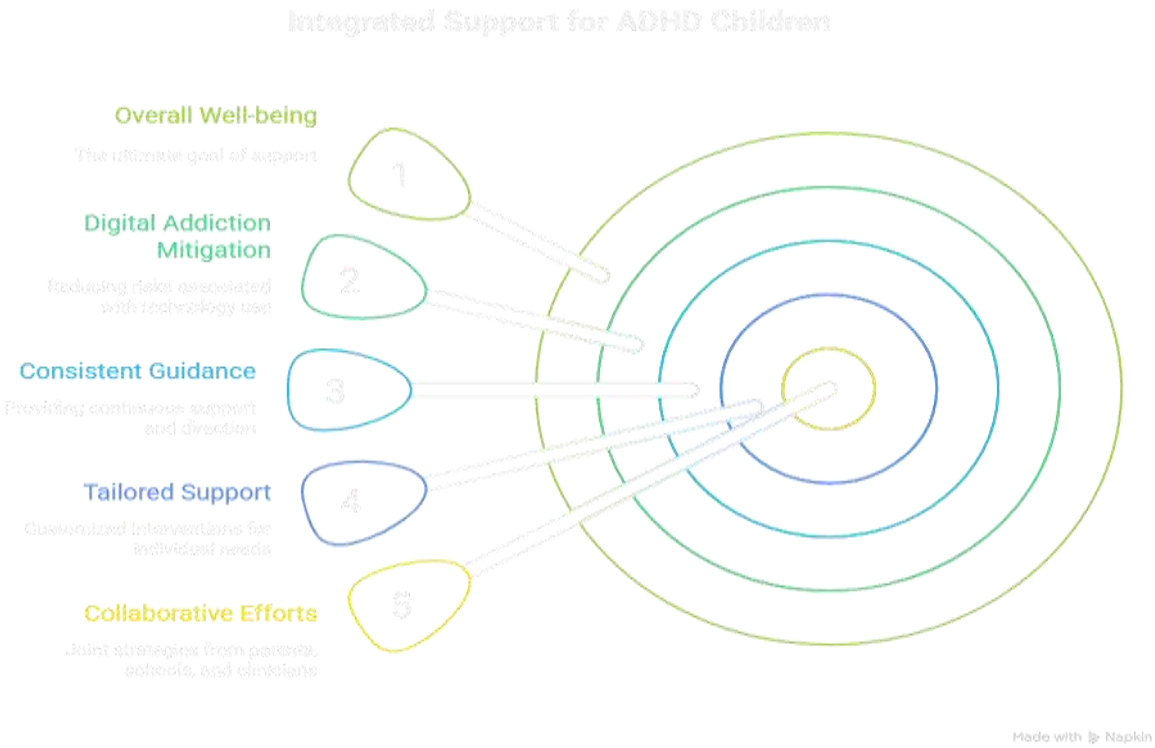
6.2 School-Based Strategies

Schools can implement digital literacy programs, educate students on responsible media use, and provide support for ADHD students through individualized learning plans and structured classroom activities.

6.3 Clinical Interventions

Behavioral therapy, including cognitive-behavioral approaches, can help children with ADHD develop self-regulation skills and reduce compulsive digital engagement. In some cases, pharmacological interventions may be necessary to manage core ADHD symptoms (Barkley, 2015).

Figure 2: Integrated ADHD and Digital Addiction Intervention Model



Parental, school, and clinical interventions working together to reduce digital addiction and support ADHD children.

7. CONCLUSION

ADHD in children significantly increases vulnerability to digital addictions, particularly social media and video games. Impulsivity, hyperactivity, and reward-seeking behaviors contribute to excessive digital engagement, leading to behavioral, cognitive, and social consequences. Understanding this relationship is critical for caregivers, educators, and healthcare professionals. Preventive strategies, including structured screen time, educational interventions, and clinical support, can mitigate risks and promote healthier digital habits. Future research should focus on longitudinal

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studies to better understand causal mechanisms and develop targeted interventions that address both ADHD symptoms and digital addiction tendencies.

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