

RESEARCH ARTICLE/ARAŞTIRMA MAKALESİ

# Autism Spectrum Disorder (ASD) or early electronic screen exposure – 67 month-old case study

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## Abstract

Concerns about screen addiction have become increasingly prevalent, particularly with regard to its potential impact on children's development. This study examines the possible connection between Autism Spectrum Disorder (ASD) symptoms and early exposure to electronic screens. It focuses on a case involving a 67-month-old child who was heavily exposed to screens during the COVID-19 lockdown. The child spent an average of 5 hours per day in front of screens, which included television and mobile devices. Observations indicated delays in language development, poor social skills, and an anxious emotional state. The family initially associated these symptoms with ASD and sought professional consultation. However, it was observed that the child exhibited behaviors such as restlessness, avoidance of social interaction, and a preference for screen time over fulfilling basic needs, such as eating. These behaviors were particularly evident when the child was not engaged with digital devices, manifesting in sadness, frustration, and anger.

The case highlights how early and excessive screen exposure can lead to developmental and psychological challenges that mimic ASD-like behaviors. Excessive screen time in children has been associated with attention disorders, sleep disturbances, language delays, and emotional instability. In this case, the family did not impose restrictions on screen usage during the lockdown period, which contributed to the child's increased demand for digital media. The therapeutic intervention focused on reducing screen time and encouraging non-digital activities, including outdoor play and social interactions with peers. As a result, improvements were noted in the child's anxiety, social engagement, and language development.

In conclusion, this case underscores the importance of distinguishing between ASD and the effects of excessive screen exposure, as the symptoms of both conditions can overlap. Reducing screen time and promoting parent-child interactions are essential in mitigating these developmental issues.

**Keywords:** Autism Spectrum Disorder (ASD) , Screen Exposure, Screen Addiction, Digital Media Overuse, Technology Addiction

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## 1. INTRODUCTION

Autism Spectrum Disorder (ASD) is frequently diagnosed alongside individuals who experience issues with technology addiction or excessive use of digital media. This suggests that there may be a link between certain behavioral patterns and prolonged exposure to digital environments. Recognizing the wide range of characteristics that a person on the autism spectrum may exhibit is important in being able to recognize the diagnosis and get to the bottom of the problem.

Research has indicated that young children who spend more time in front of screens may face negative health consequences. These outcomes can include a reduction in cognitive functioning and delays in language development, both of which are critical during early childhood. Additionally, mood disturbances and behaviors resembling those seen in autism, such as increased hyperactivity, shorter attention spans, and heightened irritability, have been observed. Such findings highlight the potential risks of excessive screen exposure for developing children (Hermawati et al., 2018).

### 1.1. What is Autism Spectrum Disorder (ASD)?

Autism Spectrum Disorder (ASD) is recognized as a neurodevelopmental condition rooted in brain function, emerging early in life. It is primarily characterized by challenges in social communication and interaction, as well as restricted and repetitive patterns of behavior or interests (APA, 2013).

In some instances, parents or caregivers may observe signs of ASD within the first year of a child's life, with a formal diagnosis often being made by the age of two. However, current understanding among autism specialists reveals that many individuals with autism remain undiagnosed until later in life, when social demands surpass their ability to manage. It is not uncommon for some individuals to reach adulthood without realizing that they are on the autism spectrum.

Historically, autism was divided into four distinct categories in the fourth edition of the Diagnostic and Statistical Manual of Mental

Disorders (DSM-IV), namely autistic disorder, Asperger's disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS). However, the release of DSM-5 in 2013 consolidated these categories under the broader diagnosis of Autism Spectrum Disorder. It is important to note that the DSM-5 emphasizes the diverse manifestations of autism, acknowledging that symptoms can vary widely across individuals (Gillespie-Lynch et al., 2020). Furthermore, ASD is recognized as a highly complex condition, with a heterogeneous presentation in both behavioral and biological aspects, impacting multiple domains such as motor function, cognition, and sensory processing (Bradshaw, Schwichtenberg & Iverson, 2022).

Autism Spectrum Disorder is a condition that affects numerous domains, including language, communication, and social interactions. It not only complicates but sometimes entirely impedes communication. Individuals with ASD often exhibit limited social skills and motor behaviors, which can result in inappropriate self-stimulatory movements. These behaviors create a restricted environment around the individual, limiting their interaction with others to the extent that communication with their surroundings becomes significantly reduced. Furthermore, disruptions in the fundamental development of multiple functions are frequently observed in individuals with ASD. The symptoms of ASD typically manifest through challenges in social interaction, communication difficulties, and restricted, repetitive behaviors (Hodges, Fealko & Soares, 2020).

When examining these individuals based on their general characteristics, it is often noted that they display resistance to changes in their daily lives and exhibit insistence on repeating the same actions multiple times. Additionally, a strong adherence to routines is common, and even the slightest deviation from these routines may trigger episodes of frustration or tantrums (Mills et al., 2022).

During the diagnostic process, it is critical to recognize that autism presents a wide range of symptoms, which can vary greatly from

person to person and must be assessed across a broad spectrum. Given that some symptoms of autism may resemble those of screen addiction/electronic screen exposure, it is essential to maintain a high level of awareness regarding differential diagnosis. This is crucial for adopting the most appropriate approach in distinguishing between the two conditions.

## 1.2. What is Digital Media Overuse and Technology Addiction?

Digital media use occurs on a spectrum, with healthy use on one end and addiction on the other. In the middle, lies digital media overuse (Figure 1). (Markle & Kennedy 2024).

Addiction can be defined as an obsessive behavior or uncontrollable urge that persists despite causing harm to an individual's mental and physical health, as well as their social life. There are several criteria used to diagnose addiction, and the presence of just three of these is sufficient for a formal diagnosis. These criteria include an increase in the amount of time spent engaging in the behavior, withdrawal symptoms when the behavior is discontinued, persistent efforts to reduce usage, a reduction in social activities due to the behavior, and the continuation of the behavior despite physical or psychological harm. When evaluating these six conditions from an addiction perspective, three primary issues emerge: the irresistible urge to engage in the behavior, the increasing duration of use, and the deficiency in meeting both physical and psychological needs (Yengin, 2019).

**Figure 1.** Digital Media Use Spectrum (Markle & Kennedy 2024).



Both the internet and the technologies that provide access to it (such as smartphones, tablets, and televisions) as well as the applications developed for these devices (like gaming apps and streaming platforms) exhibit parallels with other forms of addiction. Recent studies have shown that screen addiction has been added

to the growing list of addiction types. The similarities between internet addiction and other substance or behavioral addictions underscore the complexity of this issue, especially as screen addiction continues to become more prevalent in modern society (Kırlioğlu, Kayaalp & Arslan, 2023).

Technology has an impact on all children, even those who use it at low or average levels. Various studies have established a clear connection between technology use and physical health issues, and a significant body of research links problematic internet use and internet addiction to mental health concerns. These include emotional instability, depression, loneliness, anxiety, and impulsivity. Furthermore, excessive technology use is associated with negative social health outcomes. Specifically, higher levels of internet usage correlate with poorer interpersonal skills, decreased quality of family interactions, diminished quality of life, and an increased tolerance for violent content (Smahel, Wright & Cernikova, 2015).

Excessive screen time in children can lead to a range of social disturbances. When children spend too much time in front of screens, they are likely to experience difficulties in family communication, deterioration in social relationships, negative impacts on peer interactions, and the development of eating disorders. As the duration of screen use increases, the risk of these social issues grows more pronounced (Smahel, Wright & Cernikova, 2015).

In one study, parents expressed concerns that the use of smartphones and tablets could hinder their children's social development, model negative behaviors, and potentially lead to addiction. The findings also indicated that as children's screen time on smartphones increases, so does the risk of developing screen addiction. This risk is particularly high for children in the preschool age group, who are more susceptible to becoming addicted to screens when given early access to smartphones. The accessibility of smartphones, combined with the allure of entertaining games and videos, makes them particularly attractive to children. This ease of use is a significant factor

contributing to the growing prevalence of screen addiction among young children (Kıroğlu, 2023).

## 2. METHOD

This study is framed as a qualitative case study of a 67-month-old child with excessive screen exposure. This study was conducted to understand how autism spectrum disorder and excessive screen exposure may present similar symptoms and to prevent misdiagnosis.

## 3. DATA COLLECTION

Data were collected through interviews, observations, and documents. Interviews were conducted with 1 child and 2 parents. The researcher conducted interviews with the children at regular intervals. He visited the child's home and spoke with the child and his/her family. Unstructured interviews with the parents were conducted to learn their thoughts, attitudes, and daily routines regarding their children's interest in screens.

The interview questions included the following;

1. At what age did your child's interest in screens begin?
2. When did you start to think that your child had autism spectrum disorder?
3. Based on which behaviors did you start to think that he/she had autism spectrum disorder?

## 4. CASE

Upon examining the findings from the case assessment, it was determined that the 67-month-old child was exposed to screens, including television and mobile devices, for an average of 5 hours per day. The first two years of life, covering the infant stage, were spent in quarantine due to the Covid-19 pandemic. During this period, the child was introduced to screens and began to actively request access to them. Following the quarantine, the early childhood stage saw a marked increase in the child's demand for screen time. The family reports that problems in the child's development became noticeable during this period. Specifically, the parents observed delays in language development, poor social skills, and an anxious and restless general

emotional state. Concerned that these might be symptoms of Autism Spectrum Disorder, the family sought professional consultation.

## 5. APPROACH TO THE CASE AND DISCUSSION

Observations of the child revealed a limited vocabulary, avoidance of social interaction, and a tendency to request screen time when feeling anxious, preferring solitude. When not engaged in screen-based activities, the child was frequently observed to be restless, sad, or angry. Additionally, the child often postponed basic physical needs, such as eating, in favor of spending time in the digital world.

Excessive screen exposure during early childhood has been associated with a variety of developmental and psychological issues, including attention disorders, sleep disturbances, depression, anxiety, academic underachievement, and language development delays (Pinar, Ünal & Kubilay Pinar, 2018). Similar concerns, such as attention difficulties, anxiety, and language delays, are evident in this particular case.

When reviewing the potential mental health symptoms related to excessive screen use in children, previous research has identified cognitive salience of online events, aggression, and sleep disturbances as common issues. Some children reported experiencing these problems within 30 minutes of screen usage, suggesting that even short periods of exposure can lead to self-reported health concerns (Smahel, Wright & Cernikova, 2015). Given the duration of screen exposure in this case, it is plausible that the child's problems have become cyclic, with the same symptoms manifesting repeatedly throughout the day.

First exposure to screen devices has been found to occur at increasingly younger ages, with parents often encouraging their children to use electronic media as a means of keeping them entertained and occupied. This allows parents to focus on their own activities. Remarkably, many parents report with pride that their children, even those under the age of 2, are able to actively engage with and enjoy electronic media on a



regular basis (Hermawati et al., 2018). In the present case, the family imposed no limitations on the child's screen use due to the restrictive conditions of the quarantine.

While electronic media can serve as a source of information and entertainment, contributing in some cases to language development, early learning—especially in the realm of language—depends heavily on direct social interactions within a linguistic context (Hermawati et al., 2018). A study on internet-dependent children living in urban settings found that screen exposure had negative effects on verbal proficiency, aggression, and cognitive abilities (Takeuchi et al., 2015). In this case, similar issues have been observed, including limited verbal ability, poor comprehension skills, and episodes of aggression.

A study examining the impact of early screen exposure on autistic-like behaviors found that children exposed to screens before the age of two exhibited speech delays and short attention spans. Those exposed to screens for more than 3 hours per day demonstrated not only speech delays and short attention spans but also hyperactivity. The study included nine children (6 males, 3 females, aged 44–78 months) who presented with autistic-like behaviors. In all cases, speech delay and short attention spans were reported, and hyperactivity was observed in two-thirds of the children. Notably, more than half of the cases involved minimal parent-child interaction during screen exposure (Hermawati et al., 2018). Similarly, in the current case, the family reported symptoms resembling those seen in Autism Spectrum Disorder. These symptoms closely mirror the effects of excessive screen exposure or screen addiction.

In conclusion, this case highlights the potential developmental and psychological risks associated with excessive screen exposure in early childhood. While the family's initial concerns focused on Autism Spectrum Disorder, the child's symptoms appear to align with those commonly associated with excessive screen time. Future interventions should prioritize reducing screen exposure and increasing parent-child interactions to support the child's development

and address the observed symptoms.

## 6. CASE ANALYSIS AND CONCLUSION

In this case, both Autism Spectrum Disorder and excessive screen consumption/screen addiction were evaluated. Based on observations made during play and art therapy sessions with the child, it became clear that the focus should be on the overuse of screen time.

Considering that the child spent the first two years of life in quarantine due to the Covid-19 pandemic—during which the child was introduced to and began requesting screen time—and the subsequent increase in screen time demands during early childhood, the therapeutic model aimed at “substitution” of the child's demands. This approach involved redirecting the child to non-screen-related activities. Various alternatives were provided, such as visits to playgrounds, natural environments, and spaces where the child could interact with peers.

Research suggests that children need “free play,” a form of play that is independent of screens and digital devices. In this case, a free-play environment was created where the child could engage in activities without parental interference, allowing the child to focus on play and explore personal boundaries. With each outdoor activity, the child's screen time was progressively reduced. Correspondingly, a reduction in the symptoms that concerned the family—such as anxiety, social withdrawal, and language delays—was observed.

This case demonstrates that Autism Spectrum Disorder and excessive screen use/screen addiction can manifest similar symptoms, potentially complicating early and accurate diagnosis.

## 7. RECOMMENDATIONS

Parents and educators should be informed about the potential physical and mental health issues related to average screen and technology use in children.

Mental health professionals, when assessing symptoms in children, should not limit their

evaluations to Autism Spectrum Disorder alone. They should also consider the rising issue of screen/technology addiction, which has become a significant concern in modern times.

In conclusion, the findings from this case support the notion that reducing screen time and increasing engagement in free play and social interactions can significantly alleviate the developmental and psychological symptoms observed in children.

## 8. STUDY LIMITATION

A key limitation of this study is that it involves only a single case, which restricts our ability to fully assess the impact of screen exposure and determine whether autistic-like behaviors are genuinely exacerbated in children due to excessive screen time. Further research involving larger sample sizes would be necessary to draw more conclusive results.

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