

Research Paper

## Impact of Screen Time Over Early Developmental Stage of Children and Its Relation with Occurrence of Autism Like Features in Post COVID Era

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### ABSTRACT

Screen exposure in early infantile stage of a child can directly affect the sleep cycle and the circadian rhythm that is responsible for the development of multiple psychological issues like developmental and cognitive impairment, memory deterioration and obesity. Persistent and prolonged exposure of screentime in the early infantile stage leads to the development of sensory issues and behaviors which leads to autism like features such as sensory integrative disorders, social isolation, lack of reciprocation, communication difficulties, lack of peer group interaction, emotional control issues, auto-regulation and various behavioral issues among children during their early developmental stages.

**Keywords:** *Virtual Autism, screentime, behavior*

Autism spectrum disorders (ASD) is a neurodevelopmental disorder that impacts how people interact with others, communicate, learn and behave. Autism is associated with congenital factor such as genomic mutation and prenatal, perinatal and neonatal risk factors. The classical autism which is more likely to be associated with genomic mutation, prenatal and perinatal risk factor that can be diagnosed in early childhood (before 3 years) but in postnatal stage mostly environmental factors are responsible like isolation of a child, parenting style and most commonly persistent screentime which causes the development of virtual autism. Children of today's generation are growing up with digital devices, such as mobile phones, iPads, computers, video games and smart gadgets therefore screen become ubiquitous in children's daily life. (Vaishnavi, 2023) Children having prolong exposure of screen can harm their cognitive, linguistic and socio emotional growth. Screen can improve education and learning; however too much time spent in front of screen is related with low academic performance. (Adler, 2023)

Sleep is important for lifelong physical, mental, and emotional health maintenance. Securing sleep duration is essential for the development of the brain and body, especially during early childhood. During deep sleep, growth hormones are actively secreted, promoting neural network formation in the brain and body during childhood. Melatonin secretion also begins, the amount of which rapidly increases until approximately 1 year of age, forming a day and

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night rhythm. (Shimko, 2019). Bedrosian TA and Nelson RJ summarizing the effect of aberrant light and mood disorders through ipRGC projections to brain regions involved in emotions, and also effective sources for suppressing nocturnal melatonin that can lead sleep disruption. (Figueiro MG, 2011)

American Academy of pediatrics (AAP) recommends until 18 months of age limit screen use to video chatting along with an adult (for example, with a parent who is out of town), between 18 and 24 months screen time should be limited to watching educational programming with a caregiver, for children 2-5, limit non-educational screen time to about 1 hour per weekday and 3 hours on the weekend days, for ages 6 and older, encourage healthy habits and limit activities that include screens. (aacap, 2020)

Neurobiological alterations, genetic mutations, and disrupted sleep architecture can play a role in the onset and exacerbation of sleep problems present in individuals with ASD. Disrupted expression of several neurotransmitters, such as serotonin, melatonin, and gamma-aminobutyric acid (GABA), that have been described in the cause of ASD are also implicated in the regulation of sleep-wake cycle. (Mazzone, 2018)

Sensory processing is the organization and interpretation of sensory stimuli coming from the body and the environment, and symptoms of atypical sensory processing manifest themselves in inappropriate responses to sensory stimulation. Disorders of an SPD character is defined as a lack of ability to use information received by the senses in order to efficiently function in everyday life. (Borkowska, 2017)

The COVID-19 pandemic has led to an increase in screen time for children and families. Traditionally, screen time has been associated with negative physical and mental health outcomes, and children with autism spectrum disorder (ASD) are at increased risk of these outcomes. (Cardy, 2021)

In this study it was focused more on COVID duration that hamper a child's neurological and behavioral development due to more commonly isolation and screentime. Children with the age of early childhood indulged more screentime and isolation during COVID had faced psychological disorders after the COVID time; including cognitive impairment, behavioral issues and sensory integration issues.

### **MATERIAL AND METHODS**

Parents brought their children (Age 1.5 to 4.5 years) with the chief complaints of lacking social reciprocation, peer group interaction, delayed speech and language development, difficulty to express emotions, tendency to play solitarily, low or no reaction on being called. The structured interview was conducted to compare their pre and post covid conditions.

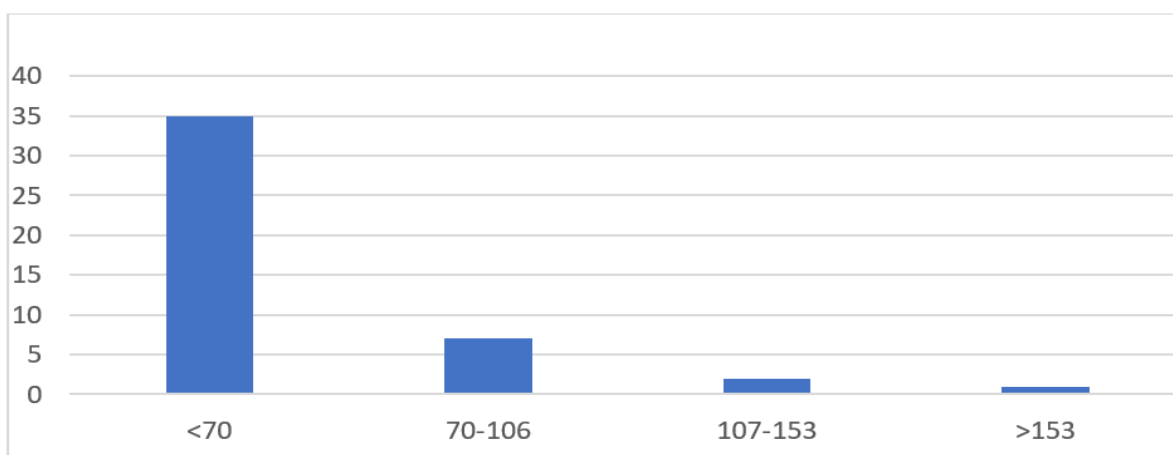
#### ***Methodology***

Structured interview included for demographic detail, history of present illness and screen time majorly. Parents were the only informants for the child's history as children were not able to express themselves. Child was brought with multiple chief complaints and a complete evaluation was conducted for such kind of issues. Behavioral observation of the children was noticed for multiple parameters like orientation for self, people and place, energy level, reactions on being called, instruction following and play patterns. According to

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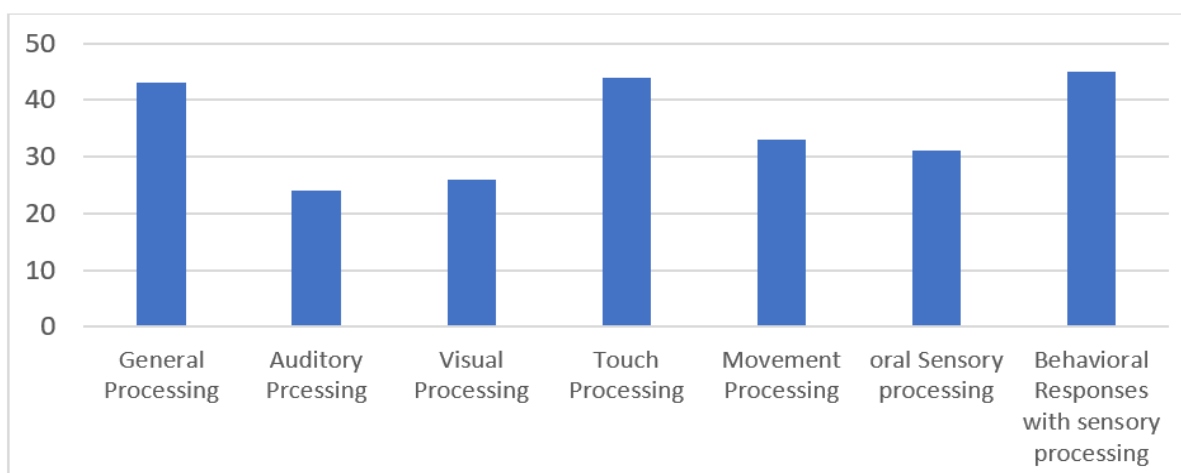
the parents, children were not showing any delay in the development prior to COVID. Most of the parents reported that during lockdown the children did not get any social exposure as they were all confined to their own places, got maximum exposure of screen as most of the parents were working. In order to manage their work schedule and household chores the parents couldn't even devote much time to their children. Owing to which, the family members noticed appreciable regression in their children's social and linguistic domains, also their behavior shown drastic changes, they had seen energy issues in them. They had also mentioned that this all hampered their sleep cycle initially and then gradually everything happened which is mentioned earlier

During examination ISAA (Indian scale for Autism Assessment) was included to rule out whether the children were coming into Autism spectrum or not. As the present study aimed to work with the children who were not falling into the spectrum, as per the inclusion criteria, only children with NO Autism were selected for the same.



After putting the score in ISAA the scoring reveal that 70% of the children falling in NO autism category and rest 30% falling for mild to moderate Autism. As per the inclusion criteria of the study; children with the score less than 70 were included for further study.

Sensory evaluation was conducted using toddler sensory profile (7 to 35 months) and SIPT (sensory integration praxis test).



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Sensory evaluation revealed that the children who were not falling into Autism spectrum were having sensory processing difficulties in various domains including auditory, visual, tactile, vestibular, gustatory, olfactory and proprioception.

### **DISCUSSION**

Children of today's generation are growing up with digital devices, such as mobile phones, iPads, computers, video games and smart gadgets therefore screen become ubiquitous in children's daily life. (Vaishnavi, 2023) Children having prolong exposure of screen can harm their cognitive, linguistic and socio emotional growth. Screen can improve education and learning; however too much time spent in front of screen is related with low academic performance. (Adler, 2023) During COVID duration when children confined at a place and parents were bound to give more screen to them in order to make them manage along with their regular work flow. During these conditions children developed multiple sensory issues and autism like features.

Parents brought their children with the chief complaints of lacking social reciprocation, peer group interaction, delayed speech and language development, difficulty to express emotions, tendency to play solitarily, low or no reaction on being called. On examinations it was noticed that screen exposure was the main important cause for these kinds of issues generated over a period of time. For Sensory processing Disorder, Sensory intervention was given by the specialists and evaluation process again followed that showed remarkable changes in the sensory issues and the development of speech and language (After 3 months of regular interventions). This study found that more than a half of children (70%) had no parents-child interaction during the exposure, speech delayed and short attention had been reported in all cases, and hyperactivity was found in 70% children. Previous studies shown negative associations between times spent viewing TV and the range of cognitive outcomes in young children including attention, intelligence and future educational attainment. A longitudinal study in 2004 found that the more TV watched by infants (aged 1-3), the more likely they were to have attention problems. In addition, poor quality of interactions with parents combine with screen excessive use may have negative effects on children's health and development, parent-child interactions found had positive impact on language development especially word learning and retention. (Christakis DA, 2004) (Tanimura M, 2007)

### **CONCLUSION**

There is emerging evidence that excess screen time in children causes adverse cognitive, developmental and health outcomes. This study has shown that a large proportion of very young children have screen exposures for >2 hours per day. Factors contributing to excess screen time have also been identified in this study; however, a greater understanding of risk factors needs to be ascertained in order to facilitate greater public health efforts to reduce screen exposure. Prolong exposure of screen affect the nerve conduction by affecting the production of neurotransmitters that develops sensory processing issues in children. A child with sensory processing issues resembles some similar sought of features like autism. (Mazzone, 2018)

The present study revealed that the overall development of the children in pre COVID era was not an area of concern, which on the other hand hampered the overall development of children specially in terms of cognitive, social, linguistic and academic domains in post

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COVID era which resembled more of ASD features in children even after not falling into the spectrum due to prolong exposure of screen to them.

### **Limitations of study**

The study did not aim at direct interventions. We did not categorize the type of screen exposure, such as exposure to cartoons, video games or educational nursery rhymes or programs, in detail; thus, the potential benefits of electronic screens may have been ignored, and these benefits may play a role in future ASD interventions. These interventions may help children limit their screen time to a reasonable duration, but the ability to do so is difficult to ensure.

### **REFERENCES**

- Aacap. (2020, February). *American academy of child and adolescent psychiatry*. Retrieved from <https://www.aacap.org/>: [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Children-And-Watching-TV-054.aspx#:~:text=between%2018%20and%2024%20months,limit%20activities%20that%20include%20screens](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx#:~:text=between%2018%20and%2024%20months,limit%20activities%20that%20include%20screens).
- Adler, A. M. (2023). Effects of Excessive Screen Time on Child Development: An Updated Review and Strategies for Management. *NIH library of medicine*.
- Borkowska, A. R. (2017). Sensory processing disorders – diagnostic and therapeutic controversies. *current issues in personality psychology*.
- Cardy, R. E. (2021). Characterizing Changes in Screen Time During the COVID-19 Pandemic School Closures in Canada and Its Perceived Impact on Children With ASD. *Frontier of psychiatry*.
- Christakis DA, Z. F. (2004). Early television exposure and subsequent attentional problems in children. *Pediatrics*.
- Figueiro MG, W. B. (2011). The impact of light from computer monitors on melatonin levels in college students. *Neuro Endocrinol Lett*.
- Hermawati, D. (2018). Early electronic screen exposure and autistic-like symptoms. *Intractable & Rare Diseases Research Advance Publication*.
- Kushima, M. (2022). Association Between Screen Time Exposure in Children at 1 Year of Age and Autism Spectrum Disorder at 3 Years of Age: The Japan Environment and Children's Study. *Jama Pediatrics*.
- Mazzone, L. (2018). The Relationship between Sleep Problems, Neurobiological Alterations, Core Symptoms of Autism Spectrum Disorder, and Psychiatric Comorbidities. *Journal of clinical medicine*.
- Shimko, A. (2019). Sleep in infancy: A concept analysis. *J. Pediatr. Nurs.*, 100-105.
- Tanimura M, O. K. (2007). Television viewing, reduced parental utterance, and delayed speech development in infants and young children. *Arch Pediatr Adolesc Med*.
- Vaishnavi, P. (2023). impact of screen time on children's development: Cognitive, Physical, social and emotional domains. *MDPI*.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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