# Virtual autism among children: A leading hazard of gadget exposure and preventive measures

Dear Sir,

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder involving social communication challenges, repetitive behaviors, and restricted interests, with varying symptom severity. "Virtual autism" is excessive device use. The prevalence was estimated at 61.9/10,000 globally in 2012, and more than 2 million people may have ASD in India.<sup>[1]</sup> The study explores "virtual autism," its causes, and protective measures, emphasizing a balanced approach to child development in the digital age.

## **Understanding Virtual Autism**

Virtual autism describes symptoms in children due to excessive digital device use, including social withdrawal, communication issues, physical inactivity, attention problems, and developmental delays.<sup>[2]</sup>

## **Consequences and Potential Risk**

Extensive screen time may lead to negative outcomes for children. They are as follows:

- 1. Impaired Social Skills: Excessive screen time limits crucial face-to-face social interactions for skill development.
- 2. Language and Communication Delays: Extended screen exposure may cause language and communication delays.
- 3. Reduced Physical Activity: Prolonged screen use leads to a sedentary lifestyle linked to health issues, including obesity.
- 4. Sleep Problems: Screens before bedtime disrupt sleep patterns, leading to sleep issues.
- 5. Attention Difficulties: Some studies suggest excessive screen time may cause attention difficulties.
- 6. Emotional and Behavioral Issues: Prolonged exposure to certain screen content, like violence, can negatively affect children emotionally and behaviorally.<sup>[3]</sup>

## Limitations and Controversies of VR/ Technology in ASD

- 1. Privacy Issues: Sensitive data collection in VR raises privacy and security concerns.
- 2. Over-Reliance on Tech: Debate questions impact on holistic development.
- 3. Skill Transfer: VR may struggle to transfer skills to real-world scenarios.

- 4. Long-Term Effects: Uncertainty in VR's impact on autism therapy.
- 5. Balanced Approach: Requires ethics, efficacy, inclusivity in ASD care.<sup>[4]</sup>

## **Preventive Measures**

Preventing "virtual autism" requires a holistic approach involving parents, educators, and policymakers. Key steps include setting screen time limits, selecting age-appropriate content, promoting physical activity, nurturing in-person relationships, and teaching digital literacy. The following tactics and preventive actions are described in the paper:

- 1. Screen Time Limits: Establish age-appropriate screen time standards, ensuring a balanced mix of digital and non-digital activities for children.
- 2. Educational Content: Promote educational materials fostering cognitive growth and critical thinking.
- 3. Digital Literacy: Teach technology and internet safety for informed decision-making.
- 4. Parental Supervision: Actively engage in monitoring and discussing internet activities with children.
- 5. Physical Activity: Encourage exercise and outdoor play to counteract sedentary screen time.
- 6. Professional Guidance: Seek help from experts when signs of virtual autism appear.
- 7. Parental and Educational Roles: Emphasize parental involvement, open communication, and healthy technology use.<sup>[5]</sup>

## **Policy Implications**

The paper addresses policymakers' role in regulating and raising awareness about children's gadget exposure, highlighting potential policy measures like age-appropriate content rules, advertising limitations, and public health campaigns.

## Conclusion

"Virtual autism" raises concerns about technology's impact on children. This paper emphasizes the need to recognize risks from extended screen time and promotes proactive prevention involving parents, educators, and policymakers. Ongoing research and evidence-based guidelines are crucial to understanding technology's impact on child development, ensuring a balanced digital environment for children.

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There are no conflicts of interest.

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## References

 Chauhan A, Sahu JK, Jaiswal N, Kumar K, Agarwal A, Kaur J, et al. Prevalence of autism spectrum disorder in Indian children: A systematic review and meta-analysis. Neurol India 2019;67:100-4.

- 2. Hermawati D, Rahmadi FA, Sumekar TA, Winarni TI. Early electronic screen exposure and autistic-like symptoms. Intractable Rare Dis Res 2018;7:69-71.
- 3. Berard M, Peries M, Loubersac J, Picot MC, Bernard JY, Munir K, et al. Screen time and associated risks in children and adolescents with autism spectrum disorders during a discrete COVID-19 lockdown period. Front Psychiatry 2022;13:1026191. doi: 10.3389/ fpsyt.2022.1026191.
- 4. Zhang M, Ding H, Naumceska M, Zhang Y. Virtual reality technology as an educational and intervention tool for children with autism spectrum disorder: Current perspectives and future directions. Behav Sci (Basel, Switzerland) 2022;12:138. doi: 10.3390/bs12050138.
- 5. Canadian Paediatric Society, Digital Health Task Force, Ottawa, Ontario. Screen time and young children: Promoting health and development in a digital world. Paediatr Child Health 2017;22:461-77.

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