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Parent Perspectives on Screen Time as an Intervention for Children with Autism Spectrum Disorder in Pakistan: A Qualitative Study

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Abstract

Purpose

This qualitative study explored parents' perceptions and lived experiences of using screen time as an intervention strategy for children with Autism Spectrum Disorder (ASD) in Pakistan.

Methods

Semi-structured interviews were conducted with 20 parents/caregivers of children with ASD aged 3–12 years. Purposive sampling ensured demographic diversity and varied screen time experiences. Data were analyzed using reflexive thematic analysis following Braun & Clarke's 6-phase framework. Trustworthiness was established through member checking, peer debriefing, and researcher reflexivity. Ethical approval was obtained from the Ethical Review board (ERB), Riphah Institute of Clinical and Professional Psychology, Riphah International University.

Results

Three main themes emerged: 1) Dual impact of screens on development, 2) Challenges in balancing screen time with therapeutic/family routines, and 3) Parent-driven management strategies including co-viewing and time limits. Parents acknowledged both benefits for language/communication and risks for irritability/behavior.

Conclusions

Parents view screen time as a double-edged tool for children with ASD. Findings highlight the need for clinician-guided, structured screen use protocols tailored to LMIC contexts. Implications for parent training programs and clinical practice are discussed.

Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and interaction, alongside restricted, repetitive patterns of behavior, interests, or activities, as outlined in the DSM-5-TR (American Psychiatric Association, 2022). While research shows that the average age at which an ASD diagnosis is made ranges from 38 to 120 months, and many children are not diagnosed until they are of school age, symptoms usually manifest during the first three years of life, and a credible diagnosis can be made by 24 months (Daniels & Mandell, 2013).

ASD refers to a variety of conditions with varied degrees of severity and symptoms. (Jordan, 2013) Since Kanner's first diagnosis of ASD, difficulties with emotional processing, such as interpreting emotions,

facial expressions, and body language, have remained key symptoms (Pellicano & Houting, 2021). Maintaining gaze and making eye contact are two skills that children with ASD frequently struggle with and are a sign of early developmental impairments. Gaze is important in language acquisition as well as the formation of Theory (the ability to understand one's own and others' mental states). For many children with ASD, social interaction difficulties are the most complex core issue (Morales et al., 2000). Despite a desire to make social connections, their distinctive facial expressions, strange eye contact, body language, linguistic difficulties, difficulty in imagination play, and generally withdrawn behavior can make this need less obvious (Wing, 1981). Sensing technologies are becoming increasingly crucial in meeting these difficulties. These tools help people with ASD navigate social and emotional environments. Since ASD is not a neurological disorder, many of its symptoms can be improved with the right care and education. Improving learning and day-to-day functioning requires early intervention (Kaliouby et al., 2006). Voss et al. (2019) studied the impact of a wearable digital intervention, Superpower Glass, on improving socialization in children with autism spectrum disorder (ASD. The study enrolled 71 children, with results showing significant improvements in socialization for the group receiving the Superpower Glass intervention compared to the control group, The Vineland Adaptive Behaviors Scale socialization subscale was used. The research emphasized the potential of digital therapy at home to supplement conventional ASD care, stressing the role that enhanced facial involvement and emotion recognition play in producing favorable results.

Screen time became popular in the 1950s when televisions were introduced into homes. Screen time rose with the availability of computers, gaming consoles, and the Internet during the 1990s. This trend continued in 2010 with the release of the iPhone and iPad. There were worries expressed regarding excessive television watching in the early 20th century. However, comparing watching television to using various devices in the twenty-first century is like comparing lightning bugs to thunderstorm lightning. Children were multiscreen, or using several devices simultaneously, such as watching Television while accessing the Internet on a tablet and smartphone. As a result, youngsters are spending an inordinate amount of their time on displays such as laptops, iPads, mobile phones, and televisions (Arora, 2023). Heffler et al. (2022) research Reduce screen time while concentrating on social contact in autism spectrum condition. A total of eighteen children with an ASD diagnosis, ranging in age from 18 to 40 months, who viewed screens for at least two hours a day were the participants. The study's findings indicate that children's screen time has down from a standard of 5.6 hours per day before the intervention to 5 minutes per day. Parental stress and the main indicators of autism showed notable changes between the pre- and post-intervention periods.

Despite growing research on digital interventions for ASD (Voss et al., 2019), limited qualitative studies have captured parental voices from Low- and Middle-Income Countries (LMICs) such as Pakistan regarding screen time as a home-based intervention. Existing guidelines largely reflect Western contexts and may not align with resource-constrained family dynamics. Given that 80% of children with ASD live in LMICs (WHO, 2023), understanding parental perspectives in these contexts is critical for developing culturally sensitive clinical recommendations. The present study addresses this gap by exploring how Pakistani parents perceive, manage, and negotiate screen time for their children with ASD.

Children with ASD are particularly captivated by screens. Approximately 60.3% of kids with ASDs spend most of their time watching TV or videos. In comparison, just 28% of typically developing teens were found to be avid television viewers. Almost half the adolescents having ASDs in the study (41.4%) spent most of their free time (that is, outside of school or work) playing video games. This is compared to 18% of kids in the general population (Mazurek et al., 2011).

Parents have an important role in influencing how much time their kids spend on screen habits or experiences. Their attitudes, beliefs, and behaviors around screen time can have a substantial impact on children's screen use habits and consequences. Understanding parental behaviors and mindsets about screen usage is critical for establishing effective therapies and guidelines customized to the requirements of children with ASD (Ponti et al., 2018).

METHOD

Research Design

The research design for this study is qualitative, employing thematic analysis to explore parents' perspectives on screen time as an intervention for children having autism spectrum disorder (ASD). Thematic analysis allows for the identification and interpretation of patterns, themes, and meanings within qualitative data, facilitating a deeper understanding of participants' experiences and perspectives. The first author, a clinical psychology researcher, maintained a reflexive journal throughout data collection and analysis to bracket preconceptions about screen time. Prior assumptions were discussed during peer debriefing sessions with the co-author to minimize researcher bias.

Sample, Sampling Strategy, and Setting

The sample was consisted of 20 parents/caregivers of children diagnosed having autism spectrum disorder (ASD) aged between 3 and 12 years old. Sampling will be done through non-probability sampling, particularly purposive sampling to ensure diversity in demographics and screen time experiences. Thematic analysis allows for the identification and interpretation of patterns, themes, and meanings within qualitative data, facilitating a deeper understanding of participants' experiences and perspectives.

Data Collection

Data was collected through semi-structured interviews conducted with parents/caregivers. Sampling will be done through non-probability sampling, particularly purposive sampling to ensure diversity in demographics and screen time experiences. Interviews will be audio-recorded and transcribed verbatim for analysis. Initially, the interview guide was constructed to investigate the Parent’s Perspective on Screen Time for Children with Autism Spectrum Disorder. The interview guide consists of some main

questions and probing questions which can provide an opportunity to reveal in-depth information about the phenomena.

The main questions were:

1. How do parents feel screen time affects their child's behavior and growth? Do they think it's mostly good or bad?
2. How do parents use screen time to help with their child's health and daily life?
3. What are the good and bad things parents notice about their child's screen time?
4. What problems do parents face with screen time, and what solutions work for them?

Ethical approval was obtained from the Institutional Review Board of (IRB) of University. Written informed consent was obtained from all participants. Confidentiality was maintained through pseudonyms, and participants were informed of their right to withdraw at any stage.

Measures

The study was utilized semi-structured interviews to gather rich qualitative data on parental perspectives on screen time for children with ASD. The interview guide was developed based on relevant literature and research questions, covering topics such as parental attitudes toward screen time, perceived benefits and drawbacks, and challenges faced. Probing questions was used to explore participants' in-depth responses and elicit detailed accounts of their experiences.

Data Analysis

According to the study, parents' perspectives on the impact of screen as an intervention use on kids with autism spectrum disorder (ASD) vary. The researcher read and re-read the transcription of statements in detail, to get an idea and grasp the individual's sense of information and experience related to the problems (Callary et al., 2015). The statements were highlighted from the transcribed data to directly hit the proposed area of the study (Dahlberg, & Dahlberg, 2019). Then the interpretative meanings were developed from each significant statement. The researcher re-read all the protocols of the research to identify the original description by the participants which further helped in developing the interpretative meanings for the research (Dahlberg, & Dahlberg, 2019). Credibility was ensured through member checking, where preliminary themes were shared with 3 participants for validation. Dependability was established via peer debriefing with a qualitative research expert. Transferability is supported through thick description of participant contexts.

Results

Data analysis of semi-structured interviews with 20 parents/caregivers of children with ASD aged 3-12 years yielded three superordinate themes: 1) Perception of Screen Time Efficacy, 2) Concerns and

Challenges, and 3) Strategies and Solutions. Table 1 presents the thematic structure with supporting emergent themes.

Table 1 *Thematic Structure of Parental Perspectives on Screen Time for Children with ASD (N= 20)*

Superordinate theme	Master theme	Emergent theme
Perception of Screen Time Efficacy	Positive outcomes	• Vocabulary Development • Eye Contact • Compliance • Language and Speech Improvement • Educational Engagement • Improved quality of life
	Negative outcomes	• Antisocial Behavior • Irritability • Anger and Emotional Outbursts • Rigidity
Concern and challenges	Health and wellbeing Content and Usage	• Visual Strain • Sedentary Behavior • Increase Anxiety • Sleep Disruption • Reduced Physical Activity • Quality of Content • Monitoring Difficulties • Screen Time Addiction • Exposure to Inappropriate Content • Reduced Family Interaction
	Parental Involvement	• Co-viewing • Parental Education • Positive Reinforcement • Emotional Support
Strategies and solution	Balancing screen time	• Time Scheduling • No screens during meals/bedtime • Transitioning to TV/LED
	Institutional support	• Financial Support • Government Support Programs • Parent Awareness Sessions

Note. N= 20. Themes were derived using reflexive thematic analysis following Braun and Clarke (2006)

Superordinate Theme 1: Perception of Screen Time Efficacy

Parents described screen time as having dual effects on their children's development. This theme was divided into positive and negative outcomes based on parental reports.

Positive Outcomes

Sixteen out of 20 parents reported developmental benefits when screen time was structured and content was educational. Parents highlighted improvements in language, communication, and engagement.

One mother stated: *"…When he watches educational cartoons with Urdu and English words, his vocabulary has improved a lot. He now repeats new words and tries to communicate more…"*

Another parent noted gains in social responsiveness: *"…I observed that during video calls with family, he started making eye contact with the screen. Before that, he never maintained eye contact…"*

Parents also reported that educational apps provided structured learning opportunities tailored to their child's pace, which contributed to improved compliance during learning tasks.

Negative Outcomes

All 20 parents reported adverse effects associated with excessive or unregulated screen exposure. Common concerns included increased irritability, anger outbursts, and antisocial behavior.

A father described behavioral changes:

"…If we try to switch off the mobile after his cartoon time, he becomes very aggressive. He throws things and has anger outbursts for 20-30 minutes…"

Another parent linked rigidity to screen use: *"…He wants the same cartoon every day at the same time. If we change it, he becomes rigid and refuses all other activities…"*

These findings suggest that while screens can support development, lack of boundaries may exacerbate core ASD-related challenges in emotional regulation and flexibility.

Superordinate Theme 2: Concerns and Challenges

Parents expressed two categories of concerns: health-related and content/usage-related.

Health and Wellbeing

Parents reported concerns about visual strain, sedentary lifestyle, and disrupted sleep patterns. Fourteen parents specifically mentioned bedtime phone usage as a challenge.

"…He uses the phone before sleeping. Now he cannot fall asleep without it. His sleep timing is completely disturbed…"

Concerns about reduced physical activity were also prominent, with parents linking increased screen time to lower engagement in outdoor play.

Content and Usage

Eighteen parents struggled with monitoring content quality and controlling usage. Exposure to inappropriate content and addiction-like behaviors were frequently mentioned.

"…Sometimes YouTube shows violent content even in kids' cartoons. It is very difficult for me to monitor everything while managing household work…"

Parents also reported that excessive screen time reduced face-to-face interaction with family members, which was a source of guilt for several caregivers.

Superordinate Theme 3: Strategies and Solutions

Despite challenges, parents employed three main strategies to manage screen time as an intervention.

Parental Involvement

Co-viewing and active engagement emerged as the most used strategy. Twelve parents reported watching content with their child and discussing it afterward to reinforce learning.

"…I sit with him during educational videos and ask him questions. This way he understands better and we spend quality time together…"

Balancing Screen Time

Time scheduling and environmental rules were commonly used. Parents reported setting fixed screen hours, removing devices during meals, and enforcing no-screen rules at bedtime.

Institutional Support

Eight parents highlighted the need for financial support and awareness programs. They suggested that government and healthcare institutions should provide parent training on structured screen use.

"…If there were training sessions for parents like us, we could learn better ways to use screens for therapy instead of just trial and error…"

Discussion

The current study was qualitative, focusing on a subjective investigation of parents' perspectives on screen time for children with autism spectrum disorder (ASD). The study aimed to know the impact of screen time on these children's lives and the subsequent effects on family dynamics or relationships

with significant others. The findings highlight either positive or negative outcomes associated with screen time, offering a nuanced view.

Results suggest that parents vary their perceptions regarding using screens in encouraging children with Autism. Many parents reported a “positive outcome”, including increased language improved socialization, and even educational growth. Wang et al. (2024), it was also found that if combined with screen time intervention, overall social skills and performance among individuals diagnosed with ASD exhibited a substantial enhancement. Their meta-analysis also showed large effect areas of residual increase in social functioning and total adaptive performance are child-ASD.

It identified important issues that the parents had regarding regulating screen use among children with ASD. Some of those affected areas are physical health, vision, and sedentary behavior. In his previous work, Ebrahim (2022) focuses on the challenges and barriers parents face when regulating children's screen time with ASD. Issues concerning the impact of screen time on physical health rank top in the list, including vision damage and sedentary-related behavior. Excessive screen time has been linked to developmental delays, sleep disruptions, decreased physical activity, and several other health problems that may harmfully influence occupational engagement for children with ASD.

Parents have different strategies for ensuring appropriate control over the screen time of their children. These can be categorized under three major themes: involvement from parents, well-balanced screen time, and the support of the institution. Direct engagement with children while they are on screen activities helps in strengthening positive behaviors and at the same time ensuring that the content is educative and suitable. Burrell & Borrego, 2012 evaluate. Parents use different techniques to oversee the screen time for children who have ASD; these methods involve setting limits, choosing appropriate content as well as monitoring the usage. The involvement of the parents in therapy helps in improving outcomes by providing advocacy for correct measures to be taken in terms of screen-time management and making sure there is parental involvement.

Screen Time Balancing is a way to mix it with other activities: physical activity, education, and family time. Other effective strategies include setting time limits and not allowing devices during meals and bedtime. Musetti et al. (2021) reported the challenge of balancing screen time as greater for parents with children having ASD than for those having normally developing children. In terms of monitoring, social inclusion, and physical activity, there are more barriers perceived by the ASD children's parents. These barriers are inversely linked to physical activity and positively associated with screen time, thus underpinning the need for community-based programs and policies that take into consideration the special needs of a child with ASD.

Findings suggest that clinicians should avoid a blanket “reduce screen time” approach for children with ASD. Instead, parent training programs in Pakistan should incorporate structured screen use protocols that leverage educational content while setting clear boundaries. Co-viewing strategies and time-scheduling techniques reported by parents can be integrated into behavioral interventions. Future

clinician-parent partnerships must consider LMIC resource constraints when recommending screen-based interventions.

Conclusion

This qualitative research investigates how parents manage screen time as an intervention for children having Autism Spectrum Disorder. This study provides insight into the management of screen time by surveying the effectiveness of screen time, related concerns, and parental interventions. Parents differed in their opinion about screen usage for children having ASD. Parents reported many positive outcomes for screen time as an intervention. Screentime contributes to improvement in vocabulary, language development, and overall education enhancement. Parents also reported that screen time is very helpful for balancing the mood and improving their quality of life. Physical health concerns include irritation to the eyes and inactivity in the mental and behavioral issues, major challenges are noted in areas ranging from anxiety to mood swings.

But against these barriers, three key strategies are employed by parents, parental involvement, balancing screen time, and institutional support. Active participation of parental participation means establishing clear rules, choosing appropriate content, and actively engaging in screen activities. There is institutional support, for example, the resources and guidance provided by educational and healthcare institutions that provide the supporting vital effort.

Declarations

Data availability statement: This study was approved by the ethical review board (ERB), Riphah Institute of Clinical and Professional Psychology, Riphah International University. The study was conducted in accordance with the relevant institutional ethical guidelines and regulations. Written informed consent was obtained from all participants prior to their participation in the study.

Ethical approval statement: Ethical Review Board (ERB), Riphah Institute of Clinical and Professional Psychology, Riphah International University

Accordance Statement: This study was conducted in accordance with the relevant ethical guidelines and regulations set forth by the ethical review board (ERB), Riphah Institute of Clinical and Professional Psychology, Riphah International University.

Consent to participate: Written informed consent was obtained from all participating parents prior to their participation in the study.

Data availability statement: The datasets generated during and analyzed during the current study are not publicly available due to privacy and confidentiality concerns and ethical restrictions concerning the participants but are available from the corresponding author on reasonable request.

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