


Chapter 14

Using Technology as a Support for Autism Spectrum Disorder

Cátia Coelho

School of Health, Polytechnic of Porto, Portugal

Joaquim Faias

 <https://orcid.org/0000-0002-6389-6284>

School of Health, Polytechnic of Porto, Portugal

Daniela Pinto

School of Health, Polytechnic of Porto, Portugal

Bruna Silva

 <https://orcid.org/0009-0005-7459-8767>

School of Health, Polytechnic of Porto, Portugal

Mariana Curvelo

School of Health, Polytechnic of Porto, Portugal

ABSTRACT

Autism spectrum disorder (ASD) affects approximately 1 in 100 children worldwide. Early diagnosis and family-clinician collaboration are crucial for effective intervention. Families often face difficulties accessing clinical services due to distance or logistics. The rise of COVID-19 has catalyzed the use of telehealth, offering remote health services, and mHealth technologies. Although beneficial, technology in ASD treatment requires specialized training and raises privacy concerns. Hence, a balanced approach combining in-person and tech-based interventions is needed for optimal ASD treatment.

DOI: 10.4018/978-1-6684-9251-2.ch014

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder, primarily characterized by difficulties in social communication and social interaction, restricted and repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2013).

Early diagnosis and intervention and collaboration between the family, significant individuals in the child's life, and clinicians, can lead to better development, behavior, and functionality (Bradshaw et al., 2015; Dawson et al., 2010; Landa, 2018; Roberts & Williams, 2016).

It is estimated that worldwide about 1 in 100 children has autism (Zeidan et al., 2022). Due to the high prevalence of ASD, it is necessary to provide resources and services that support families of these children (Baio et al., 2018). In addition to the therapeutic and medical team that follows the child development, parents play a crucial role in the intervention process since they spend more time with the child than the clinical team, allowing for the application of different intervention strategies in the child's natural environment (Hao et al., 2021; Ingersoll & Dvortcsak, 2009). the family support, there's a greater probability of maintaining and generalization of child's skills, while reducing parental stress and increase family leisure time (Hao et al., 2021; Schreibman & Britten, 1984; Tonge et al., 2006). It should be noted that a study carried out by Gengoux et al. (2015) demonstrated that parents can apply the learnt strategies with fidelity.

One of the main obstacles reported by families of children who require clinical intervention is timely access to these services due to a long geographical distance and, sometimes, difficulties of transportation or other logistical issues (Boisvert et al., 2010; Sutherland et al., 2018).

With the emergence of the COVID-19 pandemic, the use of technology as a tool for intervention has had an exponential growth (Ellison et al., 2021), and there has been an increasing use of Information and Communication Technologies (ICTs) in healthcare, through the comprehensive concept of "telehealth" (Gentile et al., 2022) term refers to the provision of health services that encompass all healthcare professions, as well as the education/training of professionals themselves (Ryu, 2012a). Consequently, new terms have emerged, particularly mobile health (mHealth), which concerns the use of mobile devices in healthcare (Ryu, 2012b).

Therefore, telehealth becomes a sustainable alternative for families who have difficulties accessing in-person clinical services or when in-person visits are not possible. Telehealth can be used in diagnostic evaluations, which has revealed several benefits and advantages, as it allows the healthcare professional to observe the child's performance in their family context. This resource allows the involvement of the family in the diagnostic process, and a reduction in costs compared to an in-person evaluation. However, obtaining a standardized assessment through direct observation and assessment of child skills may be more challenging due to a lack of control over the family environment (Kryszak et al., 2022; Stavropoulos et al., 2022).

A study conducted by Thabtah (2019) presents the proposal of a mobile application aimed at screening for ASD, consisting of four different tests corresponding to early childhood, adolescence, and adulthood. It is a tool initially composed of data from 1400 families, allowing for the acquirement of more data related to the cases that use it, promoting a better analysis of the characteristics and consequently increasing the efficiency and accuracy of the screening process.

Caregivers, especially parents, are one of the groups that benefit the most from the introduction of telehealth in healthcare, as it allows them to learn and reflect on situations, increase confidence to try new strategies and enhance a conscious treatment of the person's condition they are helping (Wallisch et

31 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage:

www.igi-global.com/chapter/using-technology-as-a-support-for-autism-spectrum-disorder/334918?camid=4v1

Related Content

Open Dialogue Through Telehealth: Exploring Family and Professionals Experiences

Ana Raquel da Rocha Ferreira, Maria Goreti Moreira Magalhães De Sousa Silva, Maria de Oliveira Correia and Filipa Campos (2024). *Handbook of Research on Advances in Digital Technologies to Promote Rehabilitation and Community Participation* (pp. 162-186).

www.igi-global.com/chapter/open-dialogue-through-telehealth/334912?camid=4v1a

"Just Counting the Threads!"

Trevor Kauer (2021). *Cases on Applied and Therapeutic Humor* (pp. 147-148).

www.igi-global.com/chapter/just-counting-the-threads/277830?camid=4v1a

Interweaving Narrative Methods Into a Mandala of Transformational Practices

Susan Mossman Riva (2022). *Narrative Theory and Therapy in the Post-Truth Era* (pp. 236-258).

www.igi-global.com/chapter/interweaving-narrative-methods-into-a-mandala-of-transformational-practices/304944?camid=4v1a

Four-Thirty on a Friday

Shana Ratner (2021). *Cases on Applied and Therapeutic Humor* (pp. 210-211).

www.igi-global.com/chapter/four-thirty-on-a-friday/277840?camid=4v1a