



Autism Spectrum Disorder (ASD) Therapy in the Era of the Covid-19 Pandemic

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Abstract

Background: Autism Spectrum Disorder is a common neurodevelopmental disorder with a reported prevalence in the United States of around 1.7%. The core deficits of ASD were identified in 2 domains: social communication/interaction and restrictive, repetitive behavior patterns. Children and adolescents with ASD have service needs in behavior, education, health, recreation, family support, and other areas. For individuals with autism spectrum disorders, school and therapy services can serve various essential functions, from delivering academic instruction to developing effective communication and building social skills.

Objective: This study is to examine ASD during the COVID-19 pandemic. The researcher has emphasized the importance of specific therapies for children with ASD and has repeatedly shown their association with positive outcomes across various skill domains.

Method: The literature review is processed based on academic journals published on Science Direct, PubMed, and Google Scholar, from 2019 to 2020.

Results: The study found various methods and learning methods for children with ASD in the COVID-19 pandemic.

Conclusion: Many obstacles have been overcome for children with ASD and therapists during the COVID-19 period. Suggestions and tips for parents and therapists to take further action on children.

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INTRODUCTION

Autism Spectrum Disorder (ASD) is a common neurodevelopmental disorder with a reported prevalence in the United States of 1 in 59 children (approximately 1.7%). The core deficits of ASD were identified in 2 domains: communication/social interaction and restrictive, repetitive behavior patterns¹. Children and adolescents with ASD have service needs in behavior, education, health, recreation, family support, and other areas. Standard screening for ASD at 18 and 24 months of age with ongoing developmental monitoring and continues to be recommended in primary care (although it can be done elsewhere) because ASD is common, can be diagnosed as young as 18 months of age and has interventions that can improve developmental functioning of life². An accurate screening approach is required, and the primary care unit must be familiar with the diagnostic criteria for ASD, evaluation of the appropriate etiology, and concomitant medical and behavioral conditions (such as sleep and eating disorders, gastrointestinal tract symptoms, obesity, seizures, attention-deficit disorder/ hyperactivity, anxiety, and wandering) that affect a child's functioning and quality of life. There are evaluations to support behavior and other interventions to address specific skills and symptoms³.

There is no cure for autism spectrum disorder, and there is no one-size-fits-all treatment. The goal of treatment is to maximize a child's ability to function by reducing symptoms of autism spectrum disorders and supporting development and learning. Early intervention during preschool can help children learn critical

social, communication, functional and behavioral skills⁴. The range of home-based and school-based treatments and interventions for autism spectrum disorders can be overwhelming, and a child's needs can change over time. For individuals with autism spectrum disorder (ASD), schools and therapy services can serve various essential functions, from delivering academic instruction to developing effective communication and building social skills.

Researchers have emphasized the importance of specific therapy for children with ASD and have repeatedly demonstrated its association with positive outcomes across multiple skill domains. These specific programs for children with ASD often involve explicit instruction in multiple skill areas, repeated practice throughout the environment, environmental and support settings to facilitate interaction and independent performance on daily routines, and function and behavior-based assessments. When implementing these high-quality, individualized programs, schools and therapy services are prepared to maximize positive outcomes for individuals with ASD. Unfortunately, recent events have shed light on the complexities of providing appropriate public education for students with ASD in the face of the local and national crisis that is COVID-19. Children and their families are exposed to the potential trauma associated with crisis events and sudden changes in daily routines. For many students with ASD, especially those with extensive support needs (i.e., intellectual comorbidities, complex communication needs, intensive behavioral support needs), these events can result in a more difficult transition from routine school and therapy services to the home than for children without ASD.

There are many obstacles that children with ASD and therapy service providers go through during this COVID-19 period, namely many parents and families who may have little knowledge and experience in delivering education and therapy programs at home. While some families may access instructions from other entities that can be delivered at home (e.g., applied behavior analysis, speech-language pathology), many of these therapies require assessment and a waiting period before the start of the intervention and may only be given a few hours a week. In addition, at-home service providers may be limited in their capacity to provide interventions due to the COVID-19 crisis.

METHOD

The research method used is literature review using international journals through accredited databases such as Science Direct, PubMed, Google Scholar with the keywords Autism Spectrum Disorder, teletherapy, and Covid-19. The inclusion criteria used by the author is to limit the articles or journals used in the range of 2019 to 2020. Journals have titles and contents under the research objectives is related to mental medicine and have full text. It aims to update research results and update database retrieval. Exclusion criteria are articles that do not have a complete structure.

RESULT

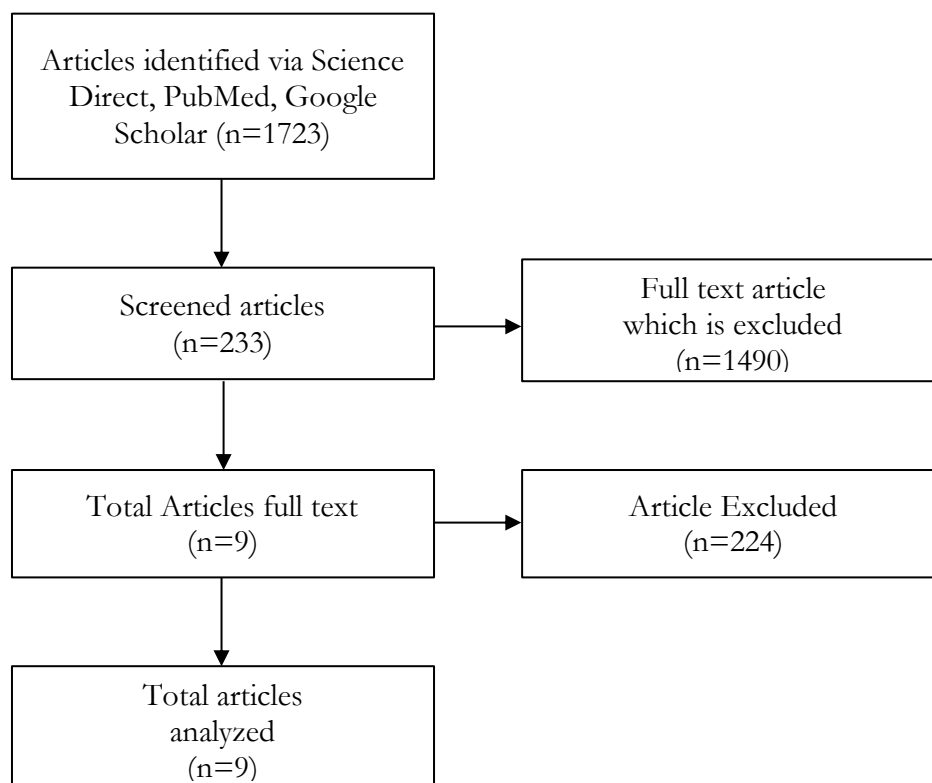


Figure 1. Flowchart of Review of the Articles

Table 1. Article Review Table

Article	Design	Sample	Data collection procedure	Result	Title
Parentea u <i>et al.</i> ⁵ (2020)	Phenomenological Qualitative Studies	A total of 15 parents with children who have ASD were recruited via email from the school director and assisted by the study team	Data collection was carried out through telephone interviews by asking several questions related to experiences and general concerns of covid-19, changes in mood and behavior of children and parents, and handlers/advice.	There are many challenges for parents of children with ASD during the COVID-19 pandemic, especially in routine education, communication, social, environmental, and emotional skills. Changes in routine can lead to disobedience, aggression, stereotypes, and tantrums, so they have to adjust to the circumstances of this pandemic. Some of them make strategies to overcome these challenges, such as making study schedules without reducing the flexibility of children's play and modifying routines with things that interest them to continue to do these routines. Several parents noted that it is essential to continue education and therapy for their children during the covid-19 pandemic.	Covid-19 Related Challenges and Advice from Parents of Children with Autism Spectrum Disorders
Majoko & Dudu ⁶ (2016)	Qualitative	Using eight parents with inclusion criteria: having a child who has been diagnosed with ASD and living with the child during the covid-19 pandemic	Data was collected through telephone interviews following the guidelines given by the researcher, and they were given seven days to answer the questions that had been given.	Theme 1 (Every family member is a cog in home education during a pandemic). This theme found that all family members were involved in home education for ASD children. Theme 2 (Sudden transition from school to routine at home is tricky). In this theme, it was found that parents can adopt various ways to design activities at home that are considered best for their children, such as involving their children in physical activities, educational games, etc Theme 3 (exposition of direct experience of social reality and security). Children are invited to leave the house to visit the stores that have been closed due to the covid epidemic, and they are taught new habits such as wearing	Parents' Strategies For Home Educating Their Children With Autism Spectrum Disorder During The Covid-19 Period in Zimbabwe

Article	Design	Sample	Data collection procedure	Result	Title
Yarımkay a Esenturk ⁷ (2020)	Literature and review	33 articles		<p>masks and keeping a safe distance outside the house.</p> <p>Theme 4 (Conditions that impose gender roles and responsibilities at home). Children are taught to do household activities based on gender responsibilities, such as washing dishes for girls or washing cars for boys.</p> <p>Theme 5 (Cultural collaboration and service provider structure). This theme shows the need for support from families of other people with ASD to exchange experiences and strategies to educate their ASD children. In addition, a structure for other service providers such as teachers, caregivers, and therapists is needed to support further in-home education for their ASD children.</p> <p>Considering that the spread of COVID-19 cases is relatively high, it is still necessary to stay at home to control infection. In children with autism spectrum disorder, of course, many challenges must be faced, including parents. Staying at home can certainly cause boredom, anxiety, or depression for children with ASD. Family support for ASD children by providing at least 20 or 30 minutes of activity can help children reduce anxiety, have fun, train muscle strength, improve attention and concentration.</p>	Promoting physical activity for children with autism spectrum disorder during corona virus outbreak: benefits, strategies, and examples
Deirdre MacEville ⁸ , (2020)	Descriptive	18 children with moderate-to-severe mental disorders and parents who have attended three weekly SAS sessions at CAMHS	Data was collected using teletherapy to 18 families.	With the current Covid-19 situation, changing the therapy scheme for children with mental disorders from face-to-face to teletherapy is necessary so that therapy is not interrupted. Teletherapy can be advantageous	Adapting an emotional regulation and social communication skills group program to teletherapy in

Article	Design	Sample	Data collection procedure	Result	Title
				because it is more economical and performed on families with limited access to therapy. In-depth exploration and post-intervention analysis needs to be done to see the effectiveness of program delivery through teletherapy	response to the covid-19 pandemic
Espinosa <i>et al.</i> ⁹ (2020)	Qualitative Experimental	30 families who had previously been running the home-based program (ABA) for six months <ul style="list-style-type: none"> • 6 Preschoolers and children who have not started school (until seven years old) • 16 minimally verbal children (children with limited adaptation, independent, and verbal skills) • Eight verbally interactive children 	Conduct ABA-based interventions through telehealth or online observation and discussion for children with autism during the lockdown period to assess risk and evaluate behavioral changes in children with autism during the first three weeks of lockdown.	The ABA Telehealth program empowers parents to raise their children, motivates, and provides clear direction for everyone involved. If parents are ineffective in providing adequate support in the form of encouragement and setting task difficulty at an achievable level, then such a system may result in inadequate access to positive reinforcement. However, with the support of their ABA consultant, parents manage to keep their home in order and help their children be calm, productive, engaged, and happy.	A model of Support For Families of Children With Autism Living in the COVID-19 Lockdown: Lesson From Italy
Stenhoff, <i>et al.</i> ¹⁰ (2020)	Literature review	Educators/Teachers who are planning distance learning programs for ASD students	The author uses 36 references that are used for analysis.	Teachers have several distance education methods ranging from providing materials such as developing teaching materials for use at home. The teaching materials should also consider important aspects of distance or online teaching, including preparation of the teaching environment, curriculum selection, LMS selection, active involvement, systematic encouragement during teaching, and monitoring progress. Then teach students directly using LMS (Learning Management System). When teachers carefully consider factors	Distance Education Support For Students With Autism Spectrum Disorder and Complex Needs During Covid-19 and School Closures

Article	Design	Sample	Data collection procedure	Result	Title
Janessa Mannin g, <i>et al.</i> ¹¹ , (2020)	Descriptive quantitative	471 respondents Inclusion: - Have an Autistic family - Willing to fill out survey form questions to completion	An online survey is conducted by asking respondents to fill out a form containing questions according to the research objectives	related to student needs, distance education can be a reasonable alternative during school closures to continue FAPE (free, appropriate public education) for students with ASD and complex needs in rural areas. Because parents with autism must work at home while caring for their children, their routines have also shifted throughout the pandemic. The Autism Alliance of Michigan offers an autistic care program in their homes, but most parents are worried that the waiter will bring COVID-19 into their home, so most parents do not need it.	Perceptions of Families of Individuals with Autism Spectrum Disorder during the COVID-19 Crisis
Ardiyani <i>et al.</i> ¹² , (2020)	Case report	1 sample	Consultation	The Parental Training Program has a positive impact on children and parents or families. In addition, it is helpful to increase knowledge and insight about the individual child, enable the incorporation of therapy into the child's environment and facilitate generalization of the skills learned.	Parent Training Program For Autism Spectrum Disorder During The Covid-19 Pandemic Period In Indonesia
Marco, <i>et al.</i> ¹³ , (2020)	Quantitative	527 respondents	Data collection is done by filling out a questionnaire with a google form.	Many modifications and adaptations were made for families and children with ASD during the COVID-19 epidemic, and challenges with behavioral guidance were numerous and varied.	Psychosocial and Behavioral impact of COVID 19 in autism spectrum disorder: an online patent survey

DISCUSSION

The analysis of Parenteau et al. found many challenges for parents of children with ASD during the COVID-19 pandemic, especially in routine education, communication, social, environmental, and emotional skills⁵. Changes in routine can lead to disobedience, aggression, stereotypes, and tantrums, so they must adjust to the circumstances of this pandemic. Some of them make strategies to overcome these challenges, such as making study schedules without reducing the flexibility of children's play and modifying routines with things that interest them to continue to do these routines. Several parents noted that it is essential to continue education and therapy for their children during the covid-19 pandemic.

Majoko and Dudu, who interviewed eight respondents, found that Theme 1 (every family member is a cog in education at home during a pandemic). This theme found that all family members were involved in home education for eight ASD children. On theme 2 (Sudden transition from school to routine at home is tricky). In this theme, it was found that parents can adopt various ways to design activities at home that are considered best for their children, such as involving their children in physical activities, educational games, and others. In Theme 3 (exposition of direct experiences about social reality and security), children are invited to leave the house to see the shops that are closed due to the covid pandemic, are taught new behaviors to use masks and physical distancing when outside the house as a form of their safety. In Theme 4 (Conditions that impose gender roles and responsibilities at

home), children are taught to carry out household activities based on responsibilities and gender, such as washing dishes for girls or washing cars for boys. Theme 5 (cultural collaboration and service provider structure) shows the need for support from families of other people living with ASD to exchange experiences of other service providers such as teachers, caregivers, and therapists to support further in-home education for their ASD children⁶.

Research conducted by Yarumkaya and Esentruk considering that the spread of COVID-19 cases is relatively high, it still requires staying at home to control the spread of infection⁷. In children with autism spectrum disorder, of course, many challenges must be faced, including parents. Staying at home can certainly cause boredom, anxiety, or depression for children with ASD. Family support for ASD children by providing at least 20 or 30 minutes of activity can help children reduce anxiety, have fun, train muscle strength, improve attention and concentration.

Meanwhile, Deidre McEvile's research said that the current COVID-19 situation requires changing therapy schemes for children with mental disorders from face-to-face to teletherapy so that therapy is not interrupted⁸. Teletherapy can be advantageous because it is more economical and performed on families with limited access to therapy. In-depth exploration and post-intervention analysis need to be done to see the effectiveness of program delivery through teletherapy.

Espinosa et al. say that with a reinforcement program that relies on active engagement with household schedules, this study empowers

parents to raise their children, motivates, and provides clear direction for everyone involved⁹. If parents are ineffective in providing adequate support in the form of encouragement and setting task difficulty at an achievable level, then such a system may result in inadequate access to positive reinforcement. However, with the support of their ABA consultant, parents manage to keep their home in order and help their children be calm, productive, engaged, and happy.

In the study of Steinhoff et al., an analysis was carried out on educators. Teachers have several distance education methods available, ranging from providing materials and teaching caregivers to teach students directly using the LMS (Learning Management System)¹⁰. When teachers carefully consider factors related to student needs, distance education can be a reasonable alternative during school closures to continue FAPE (Free Appropriate Public Education) for students with ASD and complex needs in rural areas.

Janessa Manning analyzed parents with ASD children and found that the perspective of parents with autism was stressed because they had to work at home while caring, so their routines during the pandemic also changed¹¹. The Autism Alliance of Michigan offers an autistic care program in their homes, but most parents are worried that the waiter will bring COVID-19 into their home, so most parents do not need it. Ina et al.'s research found that the parent training program positively impacted children and their parents or families¹². In addition, it is helpful to increase knowledge and insight about the individual child, enable the incorporation of therapy into the child's environment and facilitate generalization of the skills learned. In the research of Marco et al., it

can be concluded that there are many changes and adjustments of families and children with ASD during the COVID-19 pandemic, and the problems faced related to behavioral guidance are many and varied¹³.

CONCLUSION

Based on nine analyzed journals, it was found that parents with ASD children during the COVID-19 pandemic faced many challenges and pressures due to changes in the routine adjustments of children with ASD because significant and drastic routine changes could worsen the behavioral development of children with ASD. Therefore, parents must participate in the child's transition period. This challenge is not only faced by parents but also educators who carry out distance learning so that a unique program formed through distance learning through teletherapy becomes a new learning system solution that can be used and has a significant and practical effect on the learning of children with ASD during the COVID-19 pandemic and doing activities at home.

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