

**PARENTAL LIVED EXPERIENCES ON THE EFFECTS OF THE COVID-19  
PANDEMIC ON CHILDREN WITH DISABILITIES IN SAUDI ARABIA**

***EXPERIÊNCIAS PARENTAIS SOBRE OS EFEITOS DA PANDEMIA DE COVID-19  
EM CRIANÇAS COM DEFICIÊNCIA NA ARÁBIA SAUDITA***

***EXPERIENCIAS VIVIDAS POR LOS PADRES SOBRE LOS EFECTOS DE LA  
PANDEMIA DE COVID-19 EN LOS NIÑOS DISCAPACITADOS DE ARABIA SAUDÍ***



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**ABSTRACT:** This qualitative interpretive analysis explores parents' perceptions of the impacts of COVID-19 on children with disabilities in Saudi Arabia. Twenty semi-structured interviews were conducted with caregivers of these kids, and data analysis was performed using a thematic approach. The results revealed that the pandemic significantly impacted the children and their parents, with numerous reports of depression and stress due to the challenges imposed by this crisis. The effects encompassed psychological, academic, and social aspects. The efficient use of distance learning platforms is emphasized as crucial. The cooperation between different sectors is highlighted as essential to mitigate the effects of COVID-19 on the lives of children.

**KEYWORDS:** COVID-19. Children with disabilities. Parental experience. Pandemic. Perceptions.

**RESUMO:** Trata-se de uma análise qualitativa interpretativa que explora as percepções dos pais acerca dos impactos da COVID-19 em crianças com deficiência na Arábia Saudita. Foram conduzidas vinte entrevistas semiestruturadas com os cuidadores dessas crianças e a análise dos dados foi realizada utilizando a abordagem temática. Os resultados revelaram que a pandemia teve impactos significativos tanto nas crianças quanto em seus pais, sendo notórios diversos relatos de casos de depressão e estresse decorrentes dos desafios impostos por essa crise. Os efeitos abarcaram as esferas psicológicas, acadêmicas e sociais. É salientado a relevância de uma utilização eficiente das plataformas de ensino à distância. A cooperação entre diferentes setores é apontada como fundamental para mitigar os efeitos da COVID-19 nas vidas das crianças.

**PALAVRAS-CHAVE:** COVID-19. Crianças com deficiência. Experiência parental. Pandemia. Percepções.

**RESUMEN:** Se trata de un análisis cualitativo interpretativo que explora las percepciones de los padres sobre las repercusiones del COVID-19 en los niños discapacitados de Arabia Saudí. Se realizaron veinte entrevistas semiestructuradas a los cuidadores de estos niños y el análisis de los datos se llevó a cabo mediante el enfoque temático. Los resultados revelaron que la pandemia tuvo impactos significativos tanto en los niños como en sus padres, con varios informes de casos de depresión y estrés derivados de los retos impuestos por esta crisis. Los efectos abarcaron las esferas psicológica, académica y social. Se hace hincapié en la importancia de un uso eficaz de las plataformas de aprendizaje a distancia. Se destaca la cooperación entre diferentes sectores como clave para mitigar los efectos de la COVID-19 en la vida de los niños.

**PALABRAS CLAVE:** COVID-19. Niños con discapacidad. Experiencia de los padres. Pandemia. Percepciones.

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## Introduction

The SARS-CoV-2 pandemic, declared in January 2020, has generated considerable anxiety and stress in the general population. It has adversely affected the lives of children worldwide, especially those with disabilities, such as mental disorders, intellectual disabilities, and hearing problems (UNICEF, 2020). Consequently, several studies have explored the impacts of lockdown restrictions on children with disabilities and their families worldwide.

For instance, Zhang *et al.* (2020) investigated the psychological and academic impacts of the COVID-19 crisis on children with disabilities in the United States. The authors noted that these children faced more significant difficulties accessing online classes than their non-disabled peers and experienced psychological effects such as fear and anxiety due to COVID-19. This finding contrasts directly with the results of studies conducted with disabled adults from different countries, which reported positive effects resulting from lockdowns.

Pellicano *et al.* (2020) reported that autistic adults in Australia perceived some positive changes, such as adaptations in service delivery, alterations in environments to provide greater flexibility of space and time, as well as improvements in family relationships. Likewise, Lois Mosquera *et al.* (2021) found a reduction in "camouflaging" attempts among autistic adults in Spain. Furthermore, Halstead *et al.* (2021) observed a positive influence of isolation on sleep quality and duration, resulting in improved daytime performance. Therefore, it is of utmost importance to consider the factors that may explain such discrepancies, predominantly observed in children living in a family context and attending formal educational settings.

According to studies by Morgül, Kallitsoglou and Essau (2020), the psychological impact related to the spread of COVID-19 in elementary school children was observed. The authors noted that caregivers noticed a negative effect of restrictions on their children's behavioral and emotional functioning. The most prevalent symptoms among children included boredom (73.8%), loneliness (64.5%), and frustration (61.4%). More than 30% of caregivers reported the occurrence of anger, anxiety, insomnia, arguments with family members, and sadness. Parents said that their children spent more time using electronic devices, which reduced the time allocated for sleep and physical activities.

On the other hand, Spinelli *et al.* (2020) investigated the impact of risk factors associated with the COVID-19 period on the well-being of children and their families. Parents of children between the ages of 2 and 14 responded to an online survey that examined the lifestyle affected by quarantine. They reported psychological stress problems and behavioral and emotional difficulties faced by their children.

The pandemic profoundly impacted various areas, such as health, government economies, and education systems worldwide, especially in Saudi Arabia. Many countries chose to close multiple educational institutions, such as universities and schools, to contain the virus spread. Notably, statistics reveal that 107 nations suspended traditional education, affecting approximately 862 million children around the globe (BUSAAD; ALNAIM, 2021). This number represents almost half of the world's student population.

In March 2020, Saudi Arabia implemented restrictions, including social distancing policies, mandatory home quarantine, and online learning. Most studies conducted focused primarily on the online learning experiences of students with regular development (ABUHAMMAD, 2020; DONG *et al.*, 2020; GARBE *et al.*, 2020; KIM; LEE, 2020; HSIANG *et al.*, 2020; RASMITADILA *et al.*, 2020). However, this shift in education disproportionately affected children with disabilities and their families, resulting in emotional and psychological distress (ALQRAINI; ALASIM, 2021). The need to provide parents with proper guidance on effectively and satisfactorily utilizing the Madrasati online learning platform became essential. Moreover, it is widely recognized that children with disabilities require distinct support from their schools and families to benefit from and succeed in their educational experiences.

Before the pandemic, schools provided essential services for these children, including speech therapy, occupational therapy, individualized education programs (IEP), physiotherapy, and counseling (ABDELFAHATTAH *et al.*, 2021; ALADWAN, 2021; MADHESH, 2021). Unlike countries such as Turkey (YARIMKAYA; TÖMAN, 2021), specialized education centers were closed in Saudi Arabia, interrupting technical educational and therapeutic services for these children (MOHAMMED ALI, 2021). This scenario led to several studies examining the pandemic's effects on the well-being, education, and social outcomes of children with disabilities.

An online survey showed that caregivers reported the absence of interventions to address speech and language problems (AL AWAJI *et al.*, 2021). Caregivers were frustrated with the suspension of speech therapy sessions, as their children were left without access to these services. The increase in disease cases also affected telemedicine services, such as video calls.

In a study by Alqrain and Alasim (2021) approximately 54% of parents of children with disabilities stated that their children adapted to distance education, while 46% reported having difficulty accepting this new form of education. Notably, 10% of parents mentioned that their kids chose to play online games instead of focusing on school activities during this period.

Several research studies corroborate that children with disabilities in Saudi Arabia were negatively affected by COVID-19, experiencing impacts on psychological, social, and academic aspects (ALJEDAANI *et al.*, 2021; AZZAM, 2020; MOHAMMED ALI, 2021; SHARMA; EL-SOFANY; SEOUD, 2021). For example, Sharma *et al.* (2021) reported that parents faced difficulties in making significant decisions related to the care of their kids and how to develop their skills. Additionally, Busaad and Alnaim (2021) in their study with 310 caregivers in Saudi Arabia, found that the restrictions imposed due to the COVID-19 pandemic significantly negatively impacted the psychological well-being of children, whether they had disabilities or not. These studies emphasize the importance of promoting public health awareness to mitigate the issues arising from global pandemics like COVID-19 through the organization of workshops and training courses.

It is important to note that children with disabilities represent one of the most vulnerable populations affected by the pandemic. Their intellectual and cognitive limitations make it difficult for them to understand government guidelines aimed at helping them protect themselves from the spread and contagion of COVID-19. In addition, online education has proven challenging for them, who require alternative educational approaches due to difficulties adapting to the teaching model provided by the Ministry of Education during this pandemic (ABDULLAH, 2021).

### Current Study

Based on the results of previous studies, it has become essential to conduct a qualitative investigation to analyze parents' perceptions regarding the impact of the COVID-19 pandemic on their children's mental health, education, and overall well-being. The objective is to explore the following aspects:

- Parents' opinions on the effect of the COVID-19 pandemic on kids with disabilities;
- Measures adopted by caregivers to mitigate the effects of the COVID-19 pandemic on their children;
- Recommendations from parents for implementing effective strategies in caring for children with disabilities during a pandemic.

This study aims to provide relevant information for stakeholders, to address the challenges faced by these kids due to the COVID-19 pandemic. A deep understanding of

these aspects contributes to developing more appropriate measures tailored to the needs of these vulnerable groups.

## **Methods**

This study adopted an interpretivist approach, whose aim is to understand the population's perceptions about a specific subject. In this approach, researchers separated their views and positions from the participants' responses to ensure the members' opinions and voices were heard (YANOW, 2017). Instead of conducting experiments, advocates of this approach value observation and conversations as techniques for interpreting social phenomena. Thematic analysis was the methodology used to examine the survey data. Themes were identified based on information collected during the qualitative study, literature review, and identification of new themes that emerged from the results. These issues were carefully matched according to the study's objectives.

The conversations with the parents were crucial in hearing their opinions about the challenges they faced in ensuring their children's education during the COVID-19 pandemic. The interpretivist approach was deemed the most suitable choice for this study as it allowed the interviewees (the parents) to share their experiences regarding the impact of COVID-19 on children with disabilities. The method of semi-structured interviews was employed to collect the study's data.

The research involved the participation of twenty parents, whose ages ranged from 30 to 52 years, and their kids with disabilities were between the ages of 10 and 16 years, as presented in Table 1 with demographic information.

To ensure the inclusivity of parents from all city regions, an administrator from the Ministry of Education facilitated the selection of participants. The inclusion criteria required that the child be at least 5 years old, have some form of disability, and be enrolled in a particular education center. Parents were contacted by phone, with the administrator's assistance, and the purpose of the research and the participation process was explained to them. Subsequently, consent forms were emailed to caregivers interested in participating in the study. A timeframe for conducting the interviews was established, and information about the research was provided.

Twenty semi-structured interviews were conducted in Arabic that followed a guide with questions focused on the effects of COVID-19 on kids with disabilities and its impact on the social, academic, and physical spheres of their lives. In addition, the strategies used by parents

to cope with the challenges caused by the pandemic were addressed. Each interview lasted 45 to 60 minutes, and bilingual researchers translated the transcripts to ensure the accuracy of capturing Arabic meanings and culture. Caregivers were identified by codes from R1 to R20 to maintain their anonymity. The statements of the interviewees were translated as literally as possible. By considering both the direct responses of the participants and their non-verbal expressions, researchers were able to gain a more complete and in-depth understanding of the phenomenon under study.

**Table 1 - Participants' characteristics**

Pseudonyms	Education	Gender	Income	Age of parents	Condition
R1	University	F	Low	33	Intellectual disability
R2	High School	M	Middle	42	Autism
R3	High School	M	Middle	37	Intellectual disability
R4	University	F	Low	30	Autism
R5	High School	F	Middle	48	Autism
R6	University	F	High	52	Intellectual disability
R7	High School	M	Low	35	Deafness
R8	University	F	High	32	Intellectual disability
R9	University	M	Middle	49	Physical disability
R10	University	M	Middle	39	Intellectual disability
R11	University	F	Middle	31	Deafness
R12	High School	F	Low	38	Autism
R13	University	M	Middle	45	Intellectual disability
R14	High School	F	Low	40	Intellectual disability
R15	University	M	Low	32	Visual impairment
R16	High School	F	High	33	Cerebral Palsy
R17	University	M	Middle	35	Intellectual disability
R18	High School	F	High	43	Intellectual disability
R19	University	F	Low	30	Visual impairment
R20	University	F	Middle	31	Intellectual disability

Source: Adapted from Survey Results by the authors

Ethical approval for conducting this study was obtained from the University of Jeddah Research Ethics Committee. All caregivers provided written consent to participate in the research.

The data obtained from the interviews were transcribed and converted from verbal to written text. Subsequently, these data were presented to the parents to verify their responses' accuracy. This exercise aimed to enhance the reliability and validity of the qualitative analysis process.

The research team independently coded the data, and the themes represented by the codes were compared, showing a high level of agreement among the investigators and academics involved in the study. To further ensure data reliability, Huberman and Miles' formula (2002) ( $Consensus/(Consensus + Dissensus)100$ ) was used. Any points of disagreement

were thoroughly discussed until a consensus was reached. Furthermore, the parents' detailed perceptions were included in the themes obtained without any intervention from the researcher.

## Results

The results were organized based on the research questions, presenting the caregivers' views and experiences and being grouped into four themes for each question, as shown below.

### **What are parents' perceptions regarding the impact of the COVID-19 pandemic on children with disabilities?**

The findings related to this question were organized into four main themes, presented in the following subsections.

#### **Change in Social Life**

The COVID-19 pandemic profoundly impacted the lives of children with disabilities, especially those from vulnerable groups living in less favorable conditions (United Nations Human Rights Office of the High Commissioner, 2020).

It is important to remember that these kids seek guidance from adults to cope with stressful events. Families made efforts to adapt to the changes brought about by the COVID-19 pandemic in their daily lives. This implied modifications in the interactions of children with their peers and teachers as they could not meet in person as they used to at school. Caregivers reported that their kids face discrimination in the community, as people often focus only on their limitations, overlooking their abilities.

One of the parents of a child diagnosed with Autism Spectrum Disorder (R2) reported:

*The pandemic has significantly impacted our children's social lives, reducing their opportunities for interaction with others, which has caused feelings of loneliness and abandonment. They can no longer interact with their peers and teachers as they used to when schools were open.*

Another parent (R5) highlighted, "*Children no longer have the opportunity to meet their peers as they did when schools were open, which will likely affect their social life.*" Another interviewee (R12) emphasized, "*Isolation can contribute to more feelings of loneliness and even stress.*"

These observations align with Imran, Zeshan, and Pervaiz's (2020) findings, which indicate that social distancing and isolation are twice as harmful to kids' physical and mental health, significantly increasing undesirable behaviors.

Children with disabilities are highly susceptible to stigma, segregation, and discrimination from other family members. With the COVID-19 pandemic, they are subject to even more exclusion, lack of access to essential services, and increased vulnerability to poverty (CUSINATO *et al.*, 2020). The global crisis has amplified the various threats these kids already face in their daily lives, resulting in changes in mood, behavior and limited availability of support services. Therefore, parents are expected to meet an enormous caregiving burden after this pandemic.

### **Child Malnutrition**

The pandemic has also impacted family economies, resulting in difficulty for parents to provide adequate and effective nutrition for their kids. Caregivers have expressed concern about the possibility of their kids suffering from malnutrition-related medical conditions.

This becomes evident in the words of one parent of a child diagnosed with intellectual disability (R18), who stated, *"I felt sad that I couldn't support my child, not even with basic needs like food. It was one of the most challenging experiences of my life."* Another interviewee (R6) mentioned, *"My child lost weight due to the lack of a balanced diet."* Another participant (R7) also shared, *"The low-income situation made it difficult to buy enough food for my family."*

### **Worsening of the Educational Crisis**

The closure of schools was one of the measures adopted to control the spread of COVID-19. This scenario resulted in educational challenges for children with disabilities (AWAN *et al.*, 2020), mainly because most of them were not familiar with the new method of distance education. Parents believe their kids were discriminated against and not equitably included in the new educational system due to being marginalized.

One of the interviewees (R7) reported:

*Parents should receive detailed information about the new educational system to be adequately prepared to assist their children in learning outside of the school environment. They must be appropriately trained to provide support and monitor academic progress.*

Interviewee R10 mentioned, *"Many parents do not have computer knowledge and need to be taught how to use it."* Another participant, R13, also stated, *"Learning was affected as kids prefer playing online video games instead of studying."*

We can conclude that the COVID-19 pandemic impacted children with disabilities in various ways: weakened immunity due to a lack of access to specialized care, significant emotional and social impacts, and a considerable consequence on education. It is important to emphasize that these kids rely on classroom tutors who use learning resources not always available at home when schools are closed. Therefore, they likely miss learning opportunities and risk falling behind in their education, which could affect their academic progress.

### **Behavioral Problems**

Behavioral problems among children are characterized by disruptive behaviors, often accompanied by antisocial actions, negativity, hostility, and aggression. It is essential to highlight that kids with behavioral problems may have poor emotional skills and interpersonal relationships. Anger, sadness, aggression, low self-esteem, and loneliness often intensify these undesirable behaviors.

Since COVID-19 is a viral disease, weakening children's immune systems is a risk factor. For example, kids with Autism Spectrum Disorder (ASD) often have a fragile immune system. Participant R17 expressed, *"I have been facing difficulties dealing with my child's unwanted behavior and attitude. I believe the pandemic has affected him mentally."* This statement highlights the vulnerability of kids with disabilities to behavioral disorders. Another interviewee, R16, reported, *"In some situations, my child damages objects at home purely out of anger."* Interviewee R9 commented, *"My child has become more hostile and aggressive."* According to Singh *et al.* (2020), parents face difficulties in dealing with their children and experience higher stress levels, aggravating their kids's behavioral and emotional problems.

In summary, caregivers report that the pandemic has affected their children differently, from malnutrition problems to worsening emotional crises and behavioral disorders. Affected and vulnerable kids and their families need psychosocial support to deal with conduct problems (UNICEF, 2020).

After the emergence of COVID-19, children with disabilities ceased to receive special education services, and their families faced behavioral changes due to hypersensitivity and alterations in appetite and sleep (HEATH *et al.*, 2021; MUTLUER; DOENYAS; GENC, 2020).

## How can parents alleviate the effects of the COVID-19 pandemic on children with disabilities?

The findings related to this question were organized into four themes, which will be detailed in the following subsections.

### Establishment of a Daily Routine

An essential approach is establishing a structured daily routine, each activity occurring at designated times. Allocating time for specific actions, such as engaging in conversations and encouraging physical exercises, is especially relevant for kids with intellectual disabilities and those capable of physical activities, such as deaf children. Parents recognize that a well-planned daily routine contributes to minimizing the effects of COVID-19. For example, interviewee R7 emphasized, *"A daily routine for kids will improve consistency in mitigating the effects of COVID-19."* Another interviewee (R15) also stated, *"It's important to have a designated schedule for each exercise to ensure that the child participates in various activities."*

An organized, regular, and predictable daily routine can provide security and protection in the home environment (KARVOUNIDES *et al.*, 2021). Additionally, engaging in physical activities is beneficial for these kids' physical and mental health, promoting inclusion, improving their bodily functioning, and contributing to their overall well-being (MURPHY; CARBONE, 2008).

It is essential to offer new routines that keep their occupied and support families in coping with the stress caused by the pandemic. This approach may include discussions about their fears and counseling to reduce anxiety and encourage independent problem-solving.

### Meal Organization

Caregivers emphasized the importance of providing adequate food for their kids to prevent malnutrition-related diseases. This approach was also crucial to strengthen the children's immunity and reduce their vulnerability to COVID-19. Interviewee R13 highlighted, *"A sufficient and balanced diet will minimize malnutrition among kids with disabilities."* Additionally, respondent R11 emphasized, *"Families should implement measures to provide emergency food for vulnerable families."*

Meal organization has become a more pronounced challenge during the pandemic. Preparing meals requires analyzing four distinct dimensions: access, availability, stability, and utilization of food (FAO, 2021). COVID-19 has significantly impacted various aspects of the lives of children with disabilities, including their lifestyle (ABAWI *et al.*, 2020). The multiple changes in daily life have increased childhood obesity; therefore, families must ensure access to proper food through well-organized meals.

It is anticipated that the pandemic will significantly impact kids' health, encompassing their physical, mental, and social well-being, as defined by the World Health Organization (WHO) in the International Classification of Functioning (ICF). Studies like Pietrobelli *et al.* (2020) have evidenced a decrease in physical activity and increased food intake and hours of sleep during the COVID-19 lockdown. In this context, it is crucial to implement quality nutrition programs that demonstrate the importance of proper nutrition for the child's healthy development and emphasize the negative impact of inadequate meals (GUNDERSEN; ZILIAK, 2014).

### Remote Learning and Services

Parents faced difficulties understanding the implications of school closures and overcoming the challenges of finding viable strategies to facilitate the remote learning of children with disabilities through tutoring. The pandemic brought significant changes to learning operations in various countries. For example, the Ministry of Education of Saudi Arabia adopted alternative teaching methods after the closure of schools (ABDULLAH, 2021), implementing a framework for remote learning to replace the traditional education system.

Caregivers believed that promoting online learning for their kids would alleviate the effects of COVID-19 on their academic life. They emphasized that kids would remain engaged and not face long periods of idleness, as their minds would be involved in the teaching process. It is important to note that even in pre-COVID-19 studies, some parents already had conflicting feelings about remote learning experiences, even under the best circumstances (SØRENSEN, 2012).

As one of the interviewees (R7) mentioned, *"Parents must be properly informed about remote learning to be prepared to assist their kids in learning outside the school environment. Additionally, they must receive training to provide effective support and monitoring in an*

*online learning environment.*" Such efforts will enable caregivers to understand how remote classes function. Another interviewee (R4) highlighted, *"Although the traditional school system is more efficient than remote learning, we need to adapt to this new mode of education."* Furthermore, another respondent (R7) emphasized, *"Remote learning for children with disabilities will improve their academic performance."*

Regarding remote learning, the competent authorities must consider appropriate ways to offer exceptional education to children with disabilities. This will significantly contribute to the effectiveness of teaching approaches. Some critical measures include training families to support and promote their kids' educational development at home and providing occupational therapy, behavioral support, language and speech interventions, and teletherapy (MEADAN; DACZEWITZ, 2015). The abrupt transition from in-person services to virtual techniques during the early months of the government's response to the pandemic may have been challenging for early childhood exceptional education professionals and personnel responsible for related services, mainly due to a lack of prior experience with technology.

### **Implementation of a Behavioral Modification Plan**

The COVID-19 pandemic represents the peak of a global health crisis, as it demanded significant behavioral changes and imposed considerable psychological burdens on kids. Behavioral and social sciences perspectives can be employed to mitigate undesirable behavioral patterns in these kids.

Some approaches, such as Response to Intervention (RTI), have the potential to offer solutions for behavioral challenges and improve academic performance (PEARCE, 2018). To mitigate these problems, parents believe it is essential to carefully monitor and evaluate their children's behaviors with specialists in psychosocial support. Such professionals will contribute valuable strategies to deal with the children's emotions. As one of the interviewees (R9) mentioned, *"Psychological support professionals need to be involved in improving the mental health of kids with disabilities and their parents."* Another interviewee (R12) emphasized, *"Caregivers need to counsel their kids, helping them cope with the changes brought about by COVID-19."*

The researcher agrees with the parents' ideas, acknowledging that the procedures above play a crucial role in mitigating the effects of COVID-19 on children with disabilities and enabling a better life during the pandemic. Implementing activities such as organizing

daily routines, providing healthy food, adopting feasible approaches for remote learning, and carefully monitoring kids' behaviors are effective measures to reduce the impacts of the pandemic on various aspects of their lives, including psychological, social, and academic factors. According to Dursun *et al.* (2020) the application of behavioral modification plans, combined with psychiatric support and medical treatment, represents a comprehensive and efficient approach to managing kids with disabilities in in-person and virtual sessions.

### **What are the parents' recommendations for practical strategies for dealing with children with disabilities during a pandemic?**

It is important to note that national and international studies show that during lockdown, kids with disabilities face various challenges, including behavioral disorders, emotional issues, and anxiety (JIAO *et al.*, 2020; SPINELLI *et al.*, 2020; XIE *et al.*, 2020). Caregivers provided recommendations regarding the most effective strategies for dealing with their children during the COVID-19 pandemic, such as online training for kids and their parents, providing healthy food, including in the new educational system, and offering behavioral training.

The findings related to this issue are organized into four themes, as presented in the following subsections.

### **Inclusion for Children with Disabilities**

Children with disabilities are among the most vulnerable population groups during the COVID-19 pandemic, exposed to various adverse effects such as abuse and reduced access to essential services. The changes in these kids' routines demand substantial support from care services, assistive technology, and fundamental educational support. The current pandemic crisis provides an opportunity to reassess the need for inclusive and accessible education, requiring authorization for educational systems to ensure that distance learning is available to all. Teachers need to be trained and supported to provide quality remote education to children with disabilities and caregivers who also require appropriate support. It is essential to offer suitable approaches to improve the mental health of these kids, including nutritional and psychosocial support, benefiting them and their families. Furthermore, it is imperative to reallocate resources to ensure more inclusive social, health, and educational services.

Moreover, collecting disaggregated data on disability for emergency response and monitoring is paramount, aiming to assist personalized interventions and enhance support for children with disabilities in their learning environment.

In this way, it is mandatory to ensure that these kids receive accessible distance education through flexible and virtual learning (BAILEY, 2017). Including them in the new distance education system is essential, providing them with appropriate educational materials, such as computers, to facilitate online teaching. For example, one of the interviewed parents (R20) stated, *"The government should provide accessible learning resources for kids with disabilities to promote distance education."* Furthermore, their educational rights must be respected and observed. As emphasized by interviewee R16, *"Children with disabilities should receive equal treatment compared to other kids in school."* They should also be included in society and recognized as integral community members, not suffering marginalization or discrimination because of their disabilities.

Including people with disabilities should guide the response and recovery from COVID-19. This pandemic represents a unique opportunity to promote more inclusive education for this group while improving access to health services and expanding social protection and other support services (TOQUERO, 2020).

## Healthy Nutrition

It is of paramount importance for children to adopt a healthy diet from their early years to strengthen their immunity and promote proper growth and development in the future. Breastfeeding is recognized as the best way to provide nutrition, reinforcing immunity in young kids, as it encompasses all the essential nutrients they need and offers protection against infections. However, it is vital to note that the current pandemic has caused disruptions in the daily lives of families, resulting in tighter financial conditions for many parents. Consequently, some have faced difficulties in acquiring healthy foods. This situation affects both the quality of breast milk available for babies, as the nutrition of mothers may be affected by financial limitations, and the diet of older children, who may be deprived of essential foods for their proper growth.

Parents must be aware of the specific dietary needs of their kids. It is essential to emphasize that the requirements of these children can vary, influenced by factors such as physical disabilities, medication usage, and behavioral issues. Their nutritional demands also

differ. Caregivers recommend that, given the immunological vulnerability of their kids, benevolent individuals and relevant authorities should provide donations of healthy food to assist them in feeding their children. Many faces financial hardship and struggle to provide a healthy diet for their kids. One of the interviewees (R17) expressed, "Benevolent individuals should donate food to families of children with disabilities to ensure their health." Another interviewee (R12) stated, "The government should implement measures to distribute food assistance to families."

Healthy diets are crucial for strengthening the immune system, and adequate nutrition reduces the likelihood of developing other health issues such as obesity, heart disease, and diabetes (BERASATEGI *et al.*, 2021). As emphasized by Mbazzi *et al.* (2020) a healthy and balanced diet is essential for the growth and development of kids with disabilities, helping them lead more active life.

### Online Training

After the onset of the COVID-19 pandemic and the closure of schools, many caregivers found themselves deprived of the daily support they previously received. This situation has placed considerable pressure on parents, who are now forced to take on multiple roles beyond their traditional caregiver role. During online learning, parents become teachers, therapists, and guides for their kids. The pandemic has profoundly impacted the education system, especially for children with disabilities who require specialized education. According to the World Health Organization (WHO), people with disabilities may be disproportionately affected by the COVID-19 pandemic, as disruptions have occurred in the services they depend on. The WHO recommends that children with disabilities "keep playing, reading, learning, and connecting with friends" (WORLD HEALTH ORGANIZATION, 2020, p. 4, our translation). To ensure that kids with special needs can continue their education and receive the specialized support required by law (LIM, 2020), school districts have been making efforts to maintain the provision of educational services remotely and online.

Parents must actively participate in their children's online learning, offering moral support and making important educational decisions (SMITH *et al.*, 2016). In this study, caregivers recommended that they and their kids undergo training to use electronic teaching platforms, thus becoming more familiar with online learning environments. This training will enable parents to monitor and assist their children in utilizing these educational platforms. As

a result, children will feel more at ease with remote learning, and the difficulties related to using these tools will be mitigated.

*The online learning platform employed in the distance education system has proven to be highly challenging for me. The Saudi Arabian Ministry of Education needs to adopt measures to guide parents in properly supporting and teaching their kids to use this tool (R6).*

Participant R8 expressed: *"It is essential for parents and their children to receive regular training on the appropriate use of online learning tools."* On the other hand, interviewee R11 reported: *"So far, I have been facing difficulties in guiding my child through electronic teaching tasks."* Parents who have kids with disabilities and are engaged in remote learning activities recognize the need to take an active role in the distance education process by providing guidance and instructions (AVERETT, 2021).

## **Behavioral Training**

To mitigate behavioral problems, it is recommended that caregivers participate in projects such as the Behavioral Skills Training Program (KUMALASARI; KURNIAWATI, 2018). These programs can assist in reducing intellectual disabilities by providing kids with guidance to control their emotions and face life's challenges more efficiently. *"Psychology experts are beneficial in alleviating behavioral problems among children with disabilities,"* emphasized R20. Parents should also be empowered to monitor their children's behavior and help them adopt more appropriate behaviors. R10 expresses, "Parents should also undergo training to deal with the behavioral problems presented by their kids."

By implementing such recommendations, children will be more likely to face the significant impacts of COVID-19. Their inclusion in the new educational system and the community will boost their self-esteem, making them integral parts of society. Additionally, a healthy diet will strengthen their immunity, and online training will familiarize them better with electronic learning. Lastly, behavioral training will ensure these kids are better equipped to manage negative emotions such as anger, hostility, and sadness.

Previous evidence indicates that the necessary social restrictions to contain the spread of COVID-19 have had negative impacts on physical activity (GUTIÉRREZ-ORTIZ *et al.*, 2020; MOORE *et al.*, 2020; ZENIC *et al.*, 2020), leading to an increase in sedentary behavior among children (MARGARITIS *et al.*, 2020; VANDERLOO *et al.*, 2020). Cox *et al.* (2020), LeBlanc *et al.* (2020), and Colombo *et al.* (2020) presented arguments against a widespread

interruption of behavioral training services for kids with disabilities and recognized behavioral professionals as essential during the health crisis. Behavioral skills training is crucial for health promotion and risk mitigation in this context.

## **Discussion and Recommendations**

### **Parental Training**

Parents need to be educated about the efficient and effective use of the Madrasati online learning platform, receiving support and solutions for common issues. With this knowledge, they can guide their children more effectively in online learning, ensuring a smooth transition from in-person to distance education. This caregiver involvement will enable better monitoring of their kids' academic activities, ensuring that they remain dedicated to learning and avoid distractions, such as online games, as Alqraini and Alasim (2021) reported.

Furthermore, parents must receive guidance on how to deal with their stress. This will enable them to better attend to their children's needs and provide necessary care. They should be instructed on anger management, fatigue treatment, and improving their self-control. It is also indispensable to raise awareness about the importance of avoiding exposing their weaknesses to kids to prevent increasing anxiety.

A five-point Likert scale (1-5) can be used to measure parental pressure, where lower scores indicate lower parental stress, and higher scores indicate higher stress. This measure of stress will help policymakers understand if children with disabilities are a source of anxiety for their caregivers and to what extent this is occurring. In this way, appropriate measures can be taken to offer support and proper resources to families and ensure a healthier environment for the kids' development.

### **Creation of Awareness**

All stakeholders must be aware of the consequences of COVID-19 on children with disabilities in the Kingdom of Saudi Arabia. The Ministry of Health plays a crucial role in communicating with Saudi citizens about the vulnerabilities faced by this population group. The public needs to be informed that these kids should not be subjected to any form of discrimination and must be treated equally alongside other members of society.

The Ministry of Health should ensure that healthcare professionals know the possibility of discrimination and prejudice against children with disabilities. Everyone involved should be conscious of the risk of violence and promote support systems to enhance their well-being (UNITED NATIONS HUMAN RIGHTS OFFICE OF THE HIGH COMMISSIONER, 2020).

The Saudi government should also reach out to families and inform them about their kids' educational rights. This measure aims to encourage those who have not yet enrolled their kids in school to ensure proper access to education.

### Providing Solutions

As a nation, it is paramount that we cooperate and understand the effects of the pandemic, addressing each challenge as it arises. Maintaining our capacity for assistance and empowerment is crucial, acting as family and community members to enhance the situation of children with disabilities.

International organizations, such as the World Health Organization (WHO), play a crucial role in providing information about the impact of COVID-19 on children with disabilities. It is essential for the WHO to closely monitor their situation in conjunction with national governments and share this information with authorities and the general public. Additionally, the WHO should offer comprehensive guidance on techniques, tools, and interventions that can be adopted to address the challenges faced during the COVID-19 pandemic.

It is vital that individuals, family members, friends, the community, and the government engage with these kids and actively participate in their daily lives. These individuals should also be attentive to these kids' mental health needs, seeking to understand their psychological and social behaviors to address them appropriately. Providing attention and affection is fundamental in calming their fears and uncertainties. Caregivers should be honest when explaining the pandemic simply and understandably to their children. Moreover, they should encourage kids to express their feelings and thoughts through creative activities and establish daily routines, especially at home. Providing child protection services and psychosocial support is essential to enhance the care of kids with disabilities and their families.

To address anxiety disorders among children with disabilities, a helpful tool is the *Generalized Anxiety Disorder 7 (GAD-7)*, a questionnaire consisting of seven components to

assess fear and anxiety symptoms (LIGHTER *et al.*, 2020). These elements are evaluated using a *Likert* scale, where participants assign a score of 0 to 3 for each item. The sum of these topics' results yields a score ranging from 0 to 21. Higher scores on the GAD-7 indicate higher levels of anxiety.

The Ministry of Health and the Ministry of Education of Saudi Arabia must collaborate to address the adverse effects of COVID-19, especially concerning the mental health and anxiety disorders faced by kids with disabilities. Saudi government agencies and educational organizations should promote inclusive strategies for deaf students, ensuring the implementation of optional educational approaches, including distance education.

## **Conclusion**

The COVID-19 pandemic has significantly impacted children's academic, social, and psychological well-being. The transition from in-person schooling to distance education following the closure of institutions exacerbated the educational crisis. Both kids and their parents were unfamiliar with online learning platforms, making the new educational system inefficient.

Moreover, the pandemic also intensified behavioral problems, manifesting aggression and sadness. Other challenges included malnutrition, limitations in social life, and the exacerbation of mental illnesses. Faced with this reality, all parties involved must collaborate to mitigate the effects of COVID-19 on children.

Therefore, it is imperative that when implementing distance education for kids with disabilities, the mentioned effects are carefully considered to ensure appropriate education that aligns with their psychological, social, and academic needs. This care is essential to ensure that they are adequately supported and can develop their educational potential, even in the face of challenges posed by the COVID-19 pandemic.

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