



## **The Impact of Covid-19 on Parents of Children with Disability: Educational Needs and Challenges**

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During the Corona pandemic, parents of children with disabilities experienced unprecedented situations. The aim of this study was to identify the educational needs and challenges which prevented parents from providing adequate support to their children during the outbreak. An online survey was launched on June 4, 2020, to gather information from 638 parents of children with disabilities. The findings revealed that 60% of parents need assistance in implementing Individual Education Program activities. Similarly, 71.7% of parents reported that the centers had only spent less than one-hour on-line per day educating the children. Significant challenges emerge as a result of parents' inability to cope with the load and their loss of hope in helping children, which varies depending on the severity of the condition, with severe disabilities posing the greatest challenge. According to the study, special education centers should follow defined protocols that focus on parents' educational needs, as well as establish proactive approaches for providing support to parents of children who require special care.

Keywords: covid-19, educational needs, challenges, parents of children with disabilities

**Citation:** Rababah, A., Khlaifat, D., Abdelfattah, F., Busaad, Y., Alqaryouti, I., & AlAwamleh, A. (2022). The impact of Covid-19 on parents of children with disability: Educational needs and challenges. *International Journal of Instruction*, 15(4), 701-722. <https://doi.org/10.29333/iji.2022.15438a>

## **INTRODUCTION**

The World Health Organization (WHO) declared the novel coronavirus outbreak a global pandemic as approximately 428 million individuals were infected, 5 million people died from the inception of the outbreak of the coronavirus to February 2022 (WHO, 2022) which had adverse impacts on the entire world.

The World Health Organization declared this disease a pandemic due to its spread across borders and in all countries throughout the world, and it was dubbed Covid-19. Its health implications have outstripped the capability of traditional healthcare systems, and it has been accompanied by economic, social and educational consequences that have surpassed the people's ability to manage their everyday lives. The spread of this pandemic caused rapid significant changes that have touched people; for example, obliging countries to take strict measures such as isolation, physical distancing, stopping outdoor activities, "stay-at-home" recommendations for at-risk groups or vulnerable populations and imposing a partial or full health ban. Despite the rapid development of vaccines against Covid-19 which aimed to immunize people against the virus, mitigate its health effects and limit its societal spread, many people remain not vaccinated. As the Covid-19 virus variants evolved rapidly in various countries, they resorted to imposing partial or full bans on daily activities and setting quarantine from time to time. This resulted in the closure of educational institutions which has negatively affected the education of more than 360 million students and disrupted the achievement of planned goals at different educational levels. The UNICEF report has indicated concerns regarding the substantial impacts of education disruption on millions of children (UNICEF, 2020).

The Covid-19 pandemic has led to school closures, and a shift to online education, that has forced teachers to learn new techniques and skills, also led to increase stress between teachers and students, imbalance in distributing time and effort equitably among students, and form difficulties to continuing education according to each student's individual educational plan (IEP) (Clinton, 2020).

In one hand, teachers have felt the impact of lack of access to technology and internet, and the increasing difficulty of preparing and delivering online instruction (Young & Donovan, 2020; Kaden, 2020), On the other hand; students with disabilities struggle with the online learning environment because of their need for a structured and more interactive learning environment, and they find it difficult to access some services such as speech, occupational, and physical therapy (Schaeffer, 2020).

Children with disabilities who use resource rooms and special equipment are more likely to lose their learning as a result of the risk of complete interruption of their education and rehabilitation as special education centers continue to be closed. The educational challenges associated with Covid-19 continue to be exacerbated, adding more barriers for children with disabilities. As a matter of fact, they are less likely to attend primary school than their peers, and in such schools, the enrolment rate for children with disabilities in some countries is less than 1%. Therefore, persons with disabilities resort

to enrolling in private schools and centers (UNICEF, 2020). In response to this, the WHO has prepared an inclusive procedural plan to ensure the inclusion of students with disabilities in its procedural plan managing the recovery from the Covid-19 pandemic circumstances. This plan comprises four work areas: disability mainstreaming, ensuring access to information, facilities, and program services that ensuring meaningful consultation for people with disabilities and their active participation. Furthermore, the establishment of accountability mechanisms guarantees that disability is included at all stages of the process of managing and recovering from the Covid-19 pandemic (United Nations, 2020). Several educational systems have shifted from traditional education to distance education in response to the emerging conditions that accompany Covid-19, and different plans have emerged, characterized by limited resources, difficulties in financing, besides other challenges that have emerged in rural and remote areas. Some systems have emanated from their high ability to meet the needs of their students and their families as having a history of strong relationships with them. This also involves effective community partnerships, good professional development for teachers, effective communication between centers and families, availability of supportive resources and a commitment to procedural and substantive compliance. These systems utilized diverse communication methods with families to support and monitor the progress of the educational plan for students with disabilities (Tremmel et al., 2020).

In response to the country's wide steps to minimize the spread of COVID-19, special education centers and schools around the Arab world have closed till further notice (Abdelfattah et al., 2021). As a result, teachers and specialists are shifting their teaching and rehabilitation sessions to online, leaving families in a difficult position to handle home schooling.

### **Education for children with special needs**

Distance education has been used for over a century and can be defined as educational institution-oriented education where the teacher and students are geographically separated and utilize interactive communication systems to share information. Where teachers allocate extra time to prepare materials that are modified according to student's requirements, they transfer part of the teaching responsibility of providing education to one of the family caregivers. In this context, the teacher concentrates largely on academic skills and teaching caregivers how to apply programs that teach coping skills at home, such as using the bathroom or improving communication skills (Stenhoff et al., 2020). Because students with special needs have the right to receive an appropriate education through an individual plan as well as adequate support services (Agoratus, 2020), families are required to participate in educational planning, feedback processes on school-related activities and compensatory educational programs (Jameson et al., 2020).

Some countries have performed specific strategies to mitigate the challenges of distance education that faced families of children with special needs such as continuous communication between home and school, the provision of technical and communication devices from authorities if they are not available, support behavioral treatment programs at home using positive behavioral support, and introducing the

strategies that stimulate learning to the fullest (Agoratus, 2020), based on the assumption that the needs of families are frequently associated with lack of information and lack skills regarding how to deal with behavioral problems (Bailey et al., 2006). Countries also sought to devise strategies for adapting learning to individual needs, involving parents in teaching their children (Duraku & Nagavci, 2020) and adapting the home environment to the cognitive needs of the child that enhances the quality of education for children with disabilities (Granlund et al., 2008). In this context, teachers are responsible for training caregivers on how to use educational strategies, preparing curriculum materials and sharing them with family members, monitoring the caregiver's performance and progress, and providing adequate support by introducing them to problem-solving strategies for student behaviors or their failure to respond to educational measures. When educational practices shift from face-to-face school learning to distance learning, the need to develop an IEP must be recognized by understanding and meeting the needs of the student and family and including them in the educational process, after the teacher collects the information he needs from families electronically, through e-mail or direct meetings with families via video conferencing (Jameson et al., 2020).

The educational literature in the field of special education indicates the basic demands of the parents of children with disabilities which may aid them in overcoming the difficulties they face when dealing with their children (Al-Enezi, 2019). These include financial support to help the family live with the crisis and overcome the psychological, social, and economic consequences that burden the family. They also relate to the need for social support that facilitates the process of helping children with disabilities and reduces parents' distance and separation from their social reality (Madfooni, 2015; Yunus, 2015) as well as the requirement for emotional support. The presence of a disability in a family may create an atmosphere of tension and emotional pressure which contributes to weakening family ties and cohesion. This particularly happens between spouses, and the family atmosphere may display a kind of distress, grumbling, feelings of despair and sadness (Mohammed et al., 2015). Studies and scientific research have proved the favorable effects of training programs on parents of children with disabilities in managing obstacles and making decisions. They also revealed the necessity for parents to be well trained in how to cope with their children (Al-Zahrani & Al Harthi, 2019; Al-Qaryouti, 2009). They also showed the requirement to give them basic information regarding the child's current condition, future, and available services as well as how to search for sources of information related to the diagnosis and assessment of their child's condition (Al-Qaryouti, 2009). It is also necessary to bear in mind the benefit of parents' participation in the activities that their children undertake in the classroom as they will be acquainted with the purpose and the methods of performing these activities. Consequently, they will be able to employ them in teaching their children and assessing their performance (Abdelaziz, 2012; Al-Qaryouti, 2009).

Boonroungrut et al., (2022) explained in their Bibliometric network analysis that many studies indicated exacerbation of differences between parents, severe stress, depression and anxiety, deterioration of the economic situation especially among families with low

economic class due to the pandemic. A large number of children suffers from eating disorders, behavioural problems and a low level of education during the closure period. All of this has increased the family's need to receive social support, some studies showed the importance to use applications to communicate with students and their parents by social media, educational applications and platforms, and the need to develop students' skills of using information and communication technology during the epidemic.

The greatest burden of educating children during the pandemic period falls on the shoulders of parents, which has resulted in several family issues. To avoid these issues, educators must grasp the educational demands and resources that families of children with disabilities require during the pandemic. Understanding the types of instruction that the center or school should provide to families. Most importantly, we need to comprehend the difficulties that a parent has in supporting a child with a disability during the coronavirus outbreak. The main objective of this study was to identify the educational needs of parents of children with disabilities, as well as the challenges they experienced while supporting their kids during the pandemic.

### **Literature Review**

No one can deny the unique circumstances that parents of children with disabilities have faced during the novel pandemic and its consequences on their children's care and educating. In fact, as a result of the closure measures during the pandemic, parents of children with disabilities combine their traditional tasks of parenting and home care with the new educational and rehabilitation roles.

Busaad and Alnaim (2021) explored parents' perceptions regarding the effects of the Covid-19 pandemic on their children from the psychological, academic, and social aspects. The sample consisted of 310 parents from Saudi Arabia (parents of children with disability and non-disability) using a questionnaire, The results indicated that the impact of Covid-19 on the psychological aspect of children from both samples was more serious and higher than its impact on the social and academic aspects. The Authors did not report differences in those aspects between normal children and children with disabilities.

Mbazzi et al. (2021) conducted a study to reveal the impact of the Covid-19 public health response on families of children with disabilities in Central Uganda. Using phone interviews with 39 parents and 9 children with disabilities who were well informed about Covid-19 and eager to adhere to government prevention measures. The findings of the study showed that parents support their children in their education at home, but at the same time, they are concerned about their children's education. Only 8 out of 39 received tools from the school to continue learning at home. Parents of children with intellectual disabilities found it very difficult to educate their children at home, because they did not know how best to manage behavior and help them learn, and many could not obtain the ULM curriculum. They are also concerned about not being able to afford tuition fees when work resumes due to the economic impact of the precautionary measures on their families. To explore the experiences of home learning in times of

Covid-19, a descriptive qualitative study by Bhamani et al. (2020) was designed to investigate the experiences of parents about home learning and management during Covid-19 to get an insight into real-life experiences. Data were collected from 19 parents through online open-ended questions related to Covid-19 and home learning. The findings identified three major topics namely, the impact of Covid on children learning; support given by schools, and strategies used by caregivers at home to support learning. It also revealed that academicians around the world have come forward to support learning at home offering a wide range of free online means to support parents to facilitate home learning and that parents have adapted quickly to address the learning gap that has emerged in their children's learning in these challenging times.

Neece et al. (2020) examined the impact of Covid-19 in 77 ethnically, linguistically, and socioeconomically diverse families with young children with intellectual and developmental disabilities in California and Oregon. Parents responded to interview questions about the effect of the pandemic. The findings revealed that the parents' major challenge was being at home caring for their children with the loss of many essential services. It also reported several results, the most important of which are the parents' inability to leave the home, difficulty balancing work and caring for young children. This also involved changes in routine, lack of emotional family support, difficulty in finding activities and preventing child boredom. There were also financial concerns due to one or both parents losing their jobs as a result of the stay-at-home request, diminished or discontinued services and feeling that they cannot fulfil their children's educational and developmental demands. Other factors were their children's behavioral problems, caused by the loss of education services and opportunities for social participation.

Parents of children with special educational needs and disabilities in the UK (n = 241) were asked to describe the effect of Covid-19 on their mental health and the health of their children. The results showed that parents and children experience loss, anxiety and changes in mood and behavior as a result of the rapid social changes caused by the pandemic. Some parents felt that their children were not receiving adequate support because of the lack of personalized support such as providing children in regular classrooms with the same input as the rest of the class. Parents also mentioned the need for some children to see familiar faces such as their teacher or teaching assistant (Asbury et al., 2020).

Duraku and Nagavci (2020) sought to investigate the factors that influence the inclusion of children with disabilities in education in Kosovo before and during the pandemic. Semi-structured interviews were conducted with experts on disabilities and children's rights (n=12) and with some parents. According to the results, parents were challenged by their lack of expertise in supporting their children's learning as well as their low levels of education. Furthermore, online education platforms disseminate information in such a way that students with disabilities and their parents feel alienated from the learning process. However, there was constant communication and cooperation between teachers and parents of children with disabilities to reach the goals of the IEP. This

included activities related to distance learning, support with homework, counselling and help in improving children's behavior.

Toseeb et al. (2020) presented initial insights into the support needs of families with children with disabilities during Covid-19, especially those with autism spectrum disorder as well as suggestions for addressing these needs. Three hundred and thirty-nine parents completed an online survey during the first two months of social distancing in the UK. They cited their families' needs to support their children during the lockdown and to transition back to school. There were also considerable differences in satisfaction with support during Covid-19, suggesting a wide variation in the support given to families of children with disabilities. The findings also suggest that educators and policymakers should place the implementation of clear routines and targeted mental health support at the center of any strategy designed to support children with SENDs in making the transition back to school. A study sought to investigate the perceived family needs of parents of children with a mild intellectual disability and to investigate the relationship between parents perceived self-efficacy in their parental role and in collaborating with professionals as well as with their perceived needs for support. Huus's et al. (2017) interviewed 38 parents and concluded that they felt a lack of information, respite, locations to meet other parents with similar situations and financial help. Informational requirements were linked to parental self-efficacy and getting support. A greater sense of control over services was linked to a lesser demand for knowledge.

The findings of the study that conducted by Yunus (2015) examined the demands of 87 parents of autistic children, revealed that material requirements, such as rehabilitation, education, and treatment expenses were high, followed by basic needs, namely, information about autism disorder, the causes of its occurrence, the distinctive characteristics of children, and treatment and rehabilitation programs. Where the social needs ranked last. The results also reported no significant differences in the needs attributed to the age of the child. Abdel Aziz (2012) demonstrated the demands of 164 families with children with intellectual disabilities in terms of cognitive, material, psychological, and social demands. The findings revealed statistically significant differences in the needs of families of children with intellectual disabilities attributed to the variable of the child's gender, with the increase in demands favoring families of male. The results also indicated that there were statistically significant differences between the needs of families due to the variable degree of disability and in favor of those with mild disabilities, while the study showed that there were no differences in the needs due to the age variable.

Whiting (2012) conducted a study on 33 families of parents of children with disabilities, which revealed a shortage of free time for parents as well as a lack of opportunities to take a break from the process of caring for and following up on the child's demands. The results revealed that parents of children with disabilities occupy many roles with their children such as nurse, doctor, and therapist. They also stressed the need for parents to be supported and assisted in the areas of educational and social services, specialized

care and follow-up, assistive aids and medical devices and child development center services.

The study builds on the needs' framework for parents in emergency situations to investigate their needs for rehabilitative and essential programs. Specifically, the needs that influenced the efficiency of educational processes and services for their children throughout the Covid-19 pandemic as a result of changing restriction measures.

### **The significance of the study**

The study's significance lies in increasing understanding of the pandemic's impact on parents' roles from several Arab countries as caregivers for children with disabilities, as well as the emergence of educational and pedagogical needs that accompany the emerging circumstances, paving the way for future strategies and providing guidance based on scientific evidence to guide the work of special education centers and specialists when dealing with parents and their children with disabilities. Given that participation in the study was relatively large and from several Arab countries, this increases its importance and ability to provide a better understanding of the consequences of the pandemic on the education of children with disabilities and their families.

### **The problem statement**

While the global impact of corona pandemic is still being experienced, efforts are being made to develop ways of lessening its consequences on society. The pandemic that has afflicted their children has left parents of children with disabilities fatigued and stressed. Children with special-needs and their parents are among those who require continual care and support. Therefore, the purpose of this study was to determine the educational needs of parents of children with disabilities, as well as the resources available to them to help their kid during the closure of special education institutions, and the challenges parents had in supporting their child during the pandemic. The study particularly aims to answer the following research questions:

1. What educational demands and services are required by the family of children with a disability during the Corona pandemic?
2. What training did the parents of children with disability receive from the center during the Corona pandemic?
3. What are the challenges that a parent encounters when supporting a child with a disability while caring for him at home during the spread of the coronavirus?

## **METHOD**

### **Participants**

The study sample comprised parents of children with disabilities who provided educational and instructional care for their child at home, while special education centers were closed because of the Corona pandemic. An online survey was launched on

June 4, 2020, and most responses were collected till June 20, 2020. Respondents were recruited through social media. In addition to communicating with special education teachers, specialists, and centers to publish the link of the electronic questionnaire to parents. Because the dataset is entirely composed of responses to an online survey, it is unable to obtain information from parents, who may not have internet or social media access. However, the survey was able to collect information from parents of various socioeconomic backgrounds and locations. Responses of 638 participants were obtained, table 1 summaries the sample characteristics.

Table 1  
Characteristics of the study sample

Variable	Categories			
	Age	> 30 yrs.	30-50 yrs.	< 50 yrs.
N (Ratio)	109 (17.1%)	444 (69.6%)	85 (13.3%)	
Academic qualification	Less than secondary	Diploma	BA	Postgrad.
N (Ratio)	227 (35.6%)	94 (14.7%)	267 (41.9%)	50 (7.8%)
Relationship With child	Mother	Father	Relatives (others)	
N (Ratio)	421 (66.0%)	144 (22.6%)	73 (11.4%)	

Participants were from various Arab countries of which 252 parents responded from Saudi Arabia, 217 from the Sultanate of Oman, 81 from the United Arab Emirates, 28 from Jordan, 29 from Kuwait and 31 from Bahrain, Qatar, and Palestine. Schools and special education centers in each of these countries were closed for the remaining of the academic year until further notice set of common educational restrictions. Due to the closure of economic activities. Like many countries around the world, Arab countries responded by closing schools and other educational facilities till further notice at the start of the pandemic. Some educational support has continued through different methods such as television and online courses. It is worthwhile to mention that no controlling variables were used in the study.

### Measures

The study instrument was designed on the basis of theoretical literature and recent research concerning the role of parents in caring for their disabled children at home (Van Esch et al., 2018; Courtenay & Perera, 2020; Abdelfattah et al., 2021). The questionnaire was based on a self-report type consisting of 36 statements covering the areas of the study. This was in addition to the demographic information of the parent and the child with a disability, including gender, age, education level and the severity and type of the child's disability. The study instrument measured the following areas:

*Needs required by the parents.* Twenty statements measure this area, divided into 6 statements measuring the needs for parents to follow up the implementation of the activities of the IEP; for example: "audio and video clips sent by the specialist to interact with the child in the presence of the parent" and 14 statements measuring the general needs that help the parents to manage the child; for example, "Guidelines for parents on monitoring and evaluating the implementation of activities, exercises and duties." Participants responded to a five-point scale that measures the level of their needs (low to very high).

*Training.* Eleven statements measure the training that was provided to parents of children with disabilities during the center suspension, for example: "Does the center provide continuous services and (remotely) instructions to implement the activities and skills of the IEP?" they respond to a three-point scale (no=1; to some extent =2; yes=3).

*The challenges facing parents.* Eleven statements measure the challenges faced by the parents in supporting their children while caring for them, for example: "Not knowing how to better discover the child's abilities." A five-point scale was utilized including the responses (very little - very much) represented numerically (1-5).

Due to the lack of direct measures concerning the areas targeted in this study during the Corona pandemic's spread, the researcher relied on previous studies such as (Colizzi et al., 2020; Esentürk, 2020) forming the questionnaire statements, in addition to the research team's experiences in building and developing standards in the field of special education.

*Validity.* A committee of six faculty members in universities and specialists in special education centers were asked to review the content of the items, clarity, and ability to measure what it aims. After examining the feedback and making modifications based on the comments from the reviewers, the final questionnaire was electronically distributed. This procedure is considered an indication of the content validity of the instrument.

*Reliability.* The internal consistency was obtained by Cronbach's Alpha as an indicator of reliability. The internal consistency of the items of needs related to the IEP was 0.93, and the items of general needs to manage the child with disabilities was 0.92. The training and procedures used by the parent reached to 0.86, and items of the challenges facing the parents reached to 0.83. These values outline sufficient indicators of the reliability of the study instrument.

### **Procedures**

Parents' views were polled using an electronic questionnaire designed on Jotform (<https://eu.jotform.com>). Parents of children with disabilities from several Arab countries participated after receiving emails from the centers' administrations or by communicating with specialists working in the field of special education, forums, and communication groups concerned with the affairs of persons with disabilities. The study's data was collected during June 2020. The questionnaire was constructed in such a way that parents could only select one option from the given alternatives. A thank you message to the parents for their involvement in the study appeared at the end of the questionnaire. The introduction of the questionnaire emphasizes that participation in the study is entirely voluntary and that the parent has the right to withdraw at any time. It was also stated that the data from this survey is confidential and will be used for scientific research aimed at providing recommendations for special education centers.

## Methodology

The study followed the descriptive methodology to explore the study variables and examine the relationships between them without interfering or controlling any conditions.

## Statistical Analysis

Descriptive statistics were calculated for the parents' needs and challenges during the interruption of the center's work to answer the first research question. Proportions were calculated to display the responses of parents of children with disabilities about the training they received. Descriptive analysis and F-test were calculated to display results of the third research question. Chi-square and ANOVA analysis were used to detect differences and made comparisons according to the variables of the parent.

## FINDINGS

Regarding the characteristics reported by parents of children with disability, of the 638 parents, 107 reported their children have intellectual disability (16.8%), 208 autism (32.6%), 122 Down syndrome (19.1%), 48 attention deficit hyperactivity disorder (7.5%) and other disorders 153 (23.9%). Concerning the severity of disability classification, 155 children suffer mild severity (24.3%), 306 (48.0%) moderate, 111 (17.4%) between severe and very severe, and 66 unspecified (10.3%) where the ages of 84% of the children ranged from (1 to 15 years), and males were (65.8%) of the children. The data regarding the caregivers shows that 421 (66%) of them were mothers who supervise and train the child at home most of the time, contrasting fewer number of 51 (8%) father supervise their children. A brother or sister supervises in 48 cases (7.5%), while the caregiver supervises the child at a low rate of 22 (3.4%). These ratios are beneficial when considering the services to be provided to parents, and in activating the father's participation at a higher rate to share a fair responsibility with the mother.

*Results according to the study questions:* To address the first research question, "What are the educational needs and services required by the family of a child with disabilities during the Corona pandemic?" Descriptive statistics were calculated as shown in Table (2) according to the severity of the disability "mild, moderate, severe, don't know" in addition to describing the general needs of the parents when caring for their child with disabilities during the closure of the special learning centers.

Table 2  
Descriptives of parental needs according to the severity of the disability and F-test

Item	Means (SD) according to severity of the disability				F-test	
	Mild n=155	Moderate n=306	Sever n=111	Do not know.n=66		
The needs of the child's parent to follow up on the implementation of the activities of the IEP during the Corona pandemic and the suspension of the work of the centre						
1	Activities, exercises, and duties sent daily to the child by the centre's specialist	3.73 (1.26)	3.81 (1.21)	3.33 (1.40)	3.64 (1.34)	3.87*
2	A simplified guide showing the role of the parent and the family in carrying out activities, exercises, and duties	3.90 (1.21)	3.93 (1.15)	3.43 (1.39)	3.86 (1.24)	4.81*
3	Guidelines for parents on monitoring and evaluating the implementation of activities, exercises, and duties	3.97 (1.12)	3.98 (1.06)	3.41 (1.36)	3.82 (1.26)	7.06*
4	Guidance from the centre about the tools and games that must be provided to the child throughout his stay at home	3.91 (1.18)	3.98 (1.14)	3.59 (1.38)	3.85 (1.23)	3.01
5	Audio clips and video clips sent by the specialist to interact with the child in the presence of the guardian	3.98 (1.09)	3.95 (1.17)	3.59 (1.30)	3.79 (1.26)	3.20
6	Weekly contact or "electronic" session between the parent and the centre's specialist to discuss the change in the child's behaviour during play and his behaviour at home.	3.76 (1.18)	3.75 (1.29)	3.56 (1.41)	3.50 (1.30)	0.67
General needs that help the parent in dealing with the child with disabilities better during the pandemic and the suspension of the work of the centre						
1	Constant instructions on how to deal with the child during the home quarantine.	3.94 (1.15)	3.94 (1.20)	3.77 (1.23)	3.82 (1.25)	0.67
2	Practising strategies to modify the child's behaviour during home quarantine.	3.95 (1.15)	3.98 (1.14)	3.90 (1.18)	3.85 (1.21)	0.29
3	Training on assessment methods and tools that help in knowing the child's progress in achieving goals.	4.05 (1.08)	3.92 (1.09)	3.86 (1.16)	4.06 (1.02)	0.92
4	Training on the technical resources available for people with disabilities that are appropriate for my child's condition.	4.00 (1.18)	4.05 (2.53)	3.84 (1.07)	4.02 (1.07)	0.32
5	Psychosocial support services that aid the family and the child adapt to the conditions of home quarantine.	3.86 (1.24)	3.86 (1.20)	4.00 (1.14)	3.76 (1.24)	0.63
6	Information about the support services and voluntary services that I can get from the community for my child during the home quarantine.	3.64 (1.29)	3.89 (1.13)	3.95 (1.11)	3.73 (1.26)	2.21
7	Consultations from specialists to prevent my child from harming himself or others in emergency times.	3.46 (1.44)	3.61 (1.34)	3.84 (1.25)	3.58 (1.40)	1.71
8	Financial support to cover the costs of the child's sensory needs "games or tools for drawing and colouring..." during the home stone.	3.12 (1.53)	3.22 (1.50)	3.61 (1.37)	3.36 (1.42)	2.70
9	Medical and treatment services and medicines from specialized centres and hospitals for my child during the home quarantine	2.92 (1.53)	3.19 (1.50)	3.63 (1.39)	3.42 (1.39)	5.41*
10	Daily visual communication from the centre's specialist "such as reading a story to the child or interacting with him" so that the child maintains his familiarity with the specialist	3.31 (1.43)	3.21 (1.46)	3.22 (1.52)	3.36 (1.35)	0.32
11	Places to play or walk that is close to and outside the house, considering the inability of a child with disabilities to social distance	3.59 (1.39)	3.92 (2.68)	3.68 (1.40)	3.74 (1.21)	0.97
12	Instructions telling me what to do if my son gets infected with the coronavirus.	3.84 (1.31)	4.06 (1.21)	4.15 (1.17)	4.03 (1.31)	1.62
13	Recent information about the impact of the coronavirus on groups of people with disabilities and its outcomes on their health	3.68 (1.39)	4.08 (1.22)	4.04 (1.17)	4.12 (1.07)	3.94*
14	Common symptoms of coronavirus infection in children with disabilities	3.63 (1.39)	4.01 (1.23)	4.00 (1.21)	4.15 (0.95)	4.34*

\* Statistically significant level ( $\alpha < 0.01$ ). The bold values indicate a significant difference between means favoring the underline mean.

Table 2 shows the parents' demands for a simplified guide to explain their role in pursuing the execution of IEP activities with statistically significant needs according to the severity level of the child's impairment,  $F(3, 634) = 4.81, p = .003$ . Need for some advice on the appropriate tools and activities for the child to use at home, as well as clear instructions and support from an expert in order to improve the child's social interaction, such as supplying audio and video clips,  $F(3, 634) = 7.06, p = .001$ . Post-hoc comparisons demonstrate that the mild and moderate disability categories are more favorable than the severe disability category.

findings demonstrated the parents' general needs, they reported a desire to obtain information on how to deal with the child during home quarantine, strategies for behavior modification, and training on technical resources appropriate to their child's condition, as well as how to make an initial diagnosis from known symptoms of infection. Furthermore, they indicate a need to additional information how to deal with their child when infected with Covid-19, also more data on the coronavirus influences on health and impairment. the difference in needs according to severity of disability, as revealed in items, had a statistical significance at the level of  $\alpha < 0.01$  and means ranged from (3.21 to 4.01) as shown in items (9, 13, 14). Parents expressed a greater desire for medical services and treatment (item9;  $F(3, 634) = 5.41, p = .001$ ), recent information about coronavirus and its impact on disability (item 13;  $F(3, 634) = 3.94, p = .008$ ), and known symptoms of the infected child with disability (item 14;  $F(3, 634) = 4.34, p = .005$ ). When compared to the mild and moderate disability categories, all significant differences were in favor of the severe disability. These findings suggest that, depending on the severity of the child's disability, parents require more medical and health advice. Because of their low immunity, limited physical functions, and health functions, and slow response to rehabilitation, children with severe impairments are more likely to be exposed to diseases than children with mild impairments.

*Results of the second question:* "What training did the parents of children with disability receive from the center during the Corona pandemic?" proportions of parents who agree or disagree on receiving services from education centers was summarized in table 3.

**Table 3**  
**The ratio of parents' responses to the procedures enabled them to deal with their child**

Questions	Yes	To some	No	$\chi^2$
Did you participate in the preparation and design of the IEP for the child?	53.9%	-	46.1%	3.92*
Did you receive training from the centre on implementing and following up on the IEP at home before the outbreak of	39.5%	-	60.5%	28.14*
Have you received online training from the centre on implementing and following up the IEP at home, after the centre stopped providing services directly?	44.7%	-	55.3%	7.25*
Do you have at home the requirements for implementing the IEP, such as tools, activities, and means...etc.?	16.6%	58.8%	24.6%	191.98*
Are the activities and exercises given in the IEP easy to implement and follow up remotely?	26.3%	52.0%	21.6%	102.56*
Does the centre provide continuous services and guidance (from a distance) to implement the activities and skills of	29.0%	31.5%	39.5%	11.51*
Has the centre provided you with training on forms of technology and smart applications to deal with and follow up on the activities of the IEP?	27.7%	27.3%	45.0%	38.99*
Has the centre provided you with websites to help you deal with your child?	27.0%	22.3%	50.8%	89.54*
Does the specialist in the centre communicate with you to know the level of progress in implementing the IEP?	33.4%	26.8%	39.8%	16.20*
Did the specialist in the centre ask you to shoot video clips or record audio clips documenting the follow-up of the child's development?	27.3%	34.5%	38.2%	78.61*
Did the centre provide you with some video lessons on how	37.0%	22.4%	40.6%	36.48*

\*:  $P < .05$

The responses on the questions shown in table 3 indicate that the services provided by the special needs centers in terms of preparing, guiding and communicating with parents were inadequate. The frequencies of parents who answered "no" or "to some extent" was higher than of those who answered "yes" on all questions. As can be seen by the frequencies in table 3, responses on the categories were not equally distributed in the caregivers population with Chi-Square statistics significance level  $p < .05$ .

Using a follow up question, parents were asked "How much time did the center devote daily to the education and training your child on the skills of the IEP?" majority of the parents 44.3% reported that the period was < 30 minutes; 27.4% of the parents reported it was between half an hour and less than an hour; 11.7% asserted it was one to two hours while 16.5% declared that it reach sometimes > two hours. With regard to the periods that a parent devoted daily to train the child on IEP skills, approximately similar results were shown, 42.7% of parents responded that they allocate < 30 minutes, 31.9% < an hour, 16.1% between one and two hours, and 9.3% > 2 hours per day on average. These results suggest the need for parents' training to deal with their children during emergency times similar to Covid-19 outbreak.

*The results of the third question:* “What are the challenges that a parent encounters when supporting a child with a disability while caring for him at home during the spread of the coronavirus?” Means and standard deviations for challenges are presented in table 4 with F-test for the differences according to the severity of the disability.

Table 4  
Descriptive statistics of the challenges facing parents according to the severity of the disability and the F-test

Item	Means (SD) according to severity of the disability				F-test
	Mild (n=155)	Moderate (n=306)	Sever (n=111)	Do not know. (n=66)	
Believing that a child can learn any skill presented to him	4.05 (0.90)	3.62 (1.11)	3.15 (1.18)	3.77 (1.21)	15.09*
Fear of transmitting the virus to the child and contracting corona disease	2.67 (0.81)	2.84 (0.72)	2.87 (0.88)	2.93 (0.86)	2.55
Change in family routine and responsibilities due to home quarantine	3.01 (1.33)	3.12 (1.25)	3.31 (1.43)	2.94 (1.38)	1.30
The inability of the guardian to bear all the burden and to educate the child	2.71 (1.30)	3.07 (1.28)	3.06 (1.31)	3.12 (1.33)	3.13
Not knowing how to better discover a child's abilities during home stone	2.75 (1.35)	3.04 (1.28)	2.86 (1.38)	3.03 (1.40)	1.79
The inability of the parent to educate the child and help him to progress	2.41 (1.08)	2.83 (1.16)	3.05 (1.28)	3.02 (1.39)	7.96*
Lack of support and cooperation of the child's brothers and sisters at home	2.44 (1.45)	2.75 (1.33)	2.57 (1.28)	2.70 (1.29)	2.04
Parents lose hope in helping and developing the child	2.26 (1.20)	2.47 (1.15)	2.75 (1.26)	2.64 (1.33)	3.99*
Exposing the child to household dangers by not being able to follow him inside the house all the time	2.13 (1.27)	2.39 (1.27)	2.58 (1.45)	2.41 (1.39)	2.69
The emergence of family problems due to the presence of a disabled child at home all the time	2.08 (1.30)	2.35 (1.39)	2.55 (1.59)	2.44 (1.51)	2.68
Troubled psychological feelings and self-blame that the child's disability is a punishment for the guardian	2.03 (1.38)	2.14 (1.36)	2.14 (1.44)	2.47 (1.47)	1.57

\* Statistically significant with a level ( $\alpha < 0.01$ ). The bold values indicate a significant difference between means favoring the underlined higher mean

Table 4 shows the challenges experienced by parents. The greatest challenge is the parent's confidence that their child can master any skill taught to him. The  $F(3, 634) = 15.09$ ,  $\alpha < 0.01$  suggests that the presence of this challenge varies statistically depending on the severity of the disability. The Tukey post hoc test revealed that the difference is in favor of mild disability. The second challenge was the shift in the family's environment and responsibility as a result of the suspension of activities outside the house, which had no statistical significant differences according to the severity of the disability. The two indicated items 6 and 8,  $F\text{-test}(3, 634) = 7.96$  0.01, and  $F\text{-test}(3, 634) = 3.99$ , 0.01, respectively, demonstrated statistically significant differences in the parents' feelings of being unable to shoulder alone the burden of teaching the kid and losing faith in aiding and growing the child.

## **DISCUSSION**

Following the declaration of the coronavirus as a global pandemic, majority of research is focused on the medical side such as conducting medical examinations and testing vaccinations to limit the virus's spread and mitigate its impacts. Further research then focused on educational concerns and the social consequences of the pandemic on community members. The current study is one of the few Arab studies that look into the consequences of the corona pandemic on parents of children with disabilities in terms of their educational and rehabilitation needs. This highlights the necessity for parents to have tools to help them manage their children while the special education institutions are closed due to health measures. The study involved a large number of parents of children with intellectual disabilities, down syndrome, autism spectrum disorder, attention deficit hyperactivity disorder, speech and language disorders ranging from mild to severe disability.

The first research question was “What educational demands and services are required by the family of a child with a disability during the Corona pandemic?”. The results of the first research question revealed that parents’ require guidelines to define their role in monitoring and implementing the IEP's activities, as well as relevant resources and games to use in teaching their children. In addition to providing interactive tools (audio-video clips) to help parents in monitoring and analyzing their children’s communication skills. Keeping in mind that the more severe the disability, the higher the need for assistance by the parents is required. The basic needs of parents were also determined to be centered on several requirements, including receiving instructions on how to care their children during the quarantine, as well as training on behavior modification strategies and IEP implementation. This is in addition to locating technical resources that are relevant to their child’s condition, as well as identifying common health symptoms that could indicate COVID-19 infection of children with disabilities. Subsequently, how to provide care for a child in the case of infection according to severity degree of the disability condition.

These findings were confirmed by (Huus et al., 2017) which indicated that the common requests from parents were the need for information on how to manage their child’s behavior and how to teach them different skills. Also, Van Esch et al. (2018) demonstrated the necessity of giving parents with adequate information about their child's condition, support and encouragement, guidance, and teaching cognitive aspects. The current study's findings are consistent with (Whiting, 2012; Abdelaziz, 2012; Yunus, 2015; Duraku & Nagavci, 2020) in terms of parents' need for support and help in the areas of education, social services, special care, and follow-up.

The results of the second question “What training did the parents of children with disability receive from the center during the Corona pandemic? “ revealed that only a small percentage of participants had received the essential training and assistance from special education centers, as well as the the centers' communication with them was poor. In addition, the amount of time parents set aside to train their special needs child in the skills covered by the IEP increased at the same rate. This emphasizes the necessity of

strengthening the relationship between parents, center management, and specialists so that the parents can receive training and take a significant role in the IEP's implementation and monitoring. Parents are concerned about their child's education and support at home (Mbazzi et al., 2021).

Few of them received resources from school to continue studying at home, and parents found it difficult to educate their children at home because they did not know how to control their children's behavior and help them to learn. The findings of Asbury et al. (2020) and Whiting (2012) confirmed this, revealing that parents of children with disabilities require information to raise their ability and skill. Some parents believed that their children were not receiving adequate help because of a lack of particular support, such as providing them with learning resources comparable to those used in regular classes. In addition to what was emphasized by the regulations related to individuals with disabilities, what is related to the role of parents and their consideration as members of the multidisciplinary team that makes plans and sets educational supportive programs for the child (Huus et al., 2017).

Recent research (Kawabe et al., 2020) has proposed a method that aims for providing a Covid-19 information booklet divided into three sections. The first part includes the definition of coronavirus infection, directions for children to stay at home, and information about the challenges in determining who should deal with the child, and a cartoon image depicting the cognitive and social abilities of children with disabilities. The second section addresses the general challenges faced by all children, including those with special needs, as well as the possibilities of infection prevention. The final section includes brief suggestions for parents on how to encourage their children to stay at home, manage their time, play, and discuss their feelings of anxiety with family members. It also explains how to obtain medical advice over phone to help families adjusting to their new circumstances and maintaining social interaction with friends to alleviate the psychological stress caused by social isolation, closure, and quarantine.

The results of the third question "What are the challenges that a parent encounters when supporting a child with a disability during the spread of the coronavirus?" highlighted many challenges encountered by parents. Their belief that the child can learn any skill provided to him, and that the less severe the disability, the greater difficulty, was the fundamental obstacle. Another challenge comes from the pandemic's significant impact on families, as the majority of participants expressed concern about coronavirus infections spreading to their children, as well as the change in family circumstances and their responsibilities toward their children as a result of the suspension of activities outside the home, which had a significant impact on the parent.

One of the difficulties they faced was the feeling that they could not take the responsibility of their child's education and that they had lost hope of supporting and developing the child. This is supported by the findings, which show that parents are challenged by their lack of competence in supporting their children's learning because of low educational levels, and that online education platforms transmit information in a way that makes students with disabilities and their parents feel excluded from the learning process (Duraku & Nagavci, 2020). Parental challenges include caring for their

children at home (Neece et al., 2020), losing many essential services and being unable to leave the house, service reductions or suspensions, and feeling unable to satisfy their children's educational and developmental needs at home, as well as the behavioural problems of their children, due to the loss of education services and opportunities for social participation. Where Bhamani et al. (2020) reported that the challenges were the lack of support provided by schools, and the strategies used by caregivers at home to support learning.

Given the rising consequences as a result of the pandemic, there is an apparent need to bridge the gap between the needs of parents of children with disability and the lack of assistance provided to them. Hence, it is critical to emphasize the parent's participation in teaching their child with a disability in all aspects, such as including them in the development of the IEP. Plans for instructions must be made in advance (before the start of the school year) taking into account any unexpected circumstances that may arise in the future (Busaad & Alnaim, 2021). Establishing such guides could take into account a variety of situations and conditions, such as a parent background, the type of disability need, and strategies for overcoming the obstacles that may face them.

#### **CONCLUSION AND RECOMMENDATIONS**

Parents of children with disabilities become the primary mentors in delivering education, directing behavior, and following up the services directed to their children as a result of the corona pandemic. Institutions for special education will need to implement dynamic educational continuity strategies that can adapt quickly and have close feedback loops with kids and parents. Because the roles of parents in helping their children have shifted considerably, they now require professional support in order to take a more active role as learning coaches for their children.

As a matter of fact, adequate information and training should be provided to parents of children with disabilities to enable them to maintain their children's education at home. Undoubtedly, various challenges have emerged among families of children with disabilities, including a lack of experience and information, the fear for their children from corona infection and other challenges. This fact highlighted the malfunction in the provision of information to parents of children with disabilities and required services during emergencies such as the Corona pandemic.

The study recommends the importance of giving training and guidance to parents, providing various techniques to help families in educating children with disabilities and modifying their behavior. Furthermore, it recommends using remote learning platforms and services startgies (Boonroungrut et al., 2022) to train parents to meet their needs, as well as working on publishing protocols for receiving educational help, implementing and monitoring the progress of children with disabilities.

This study has some limitations. First, because the sample utilized was purposeful, generalizations about parental opinions should be taken with caution. The sample, however, represents a wide range of socioeconomic backgrounds from different Arab countries and the common types of children's special educational needs. Second, the

study is based on reports from parents which are more likely to reflect their own concerns. The study also did not look at parents' job or the extent to which the presence of normal siblings affects the training of children with disability or the educational needs.

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