



Research Article

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Covid-19 Impact on Children with Autism Spectrum Disorder and Intellectual Disability: Study in Saudi Arabia

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Abstract

This study investigated the impact of COVID-19 on children with autism spectrum disorder and intellectually disabled children from a parent's point of view and statistically significant differences between the responses of parents of children with disabilities about the impacts of the COVID-19 attributed to the child's sex (male/female), the type of the child's disability (autism/intellectual disability), the parents' education level (intermediate or lower/above intermediate). The study used the quantitative approach and used a questionnaire applied to a sample of (217) parents of children with autism spectrum disorder and intellectually disabled children in Jeddah who are registered in governmental and private centers and institutes of the Ministry of Education and the Ministry of Social Affairs. The results of the study showed that the impact of COVID-19 on children with autism spectrum disorder and intellectually disabled children had a high degree. Also, the results showed that there are no statistically significant differences between the responses of parents of children with disabilities about the impacts of the COVID-19 attributed to the child's sex, the type of the child's disability, the parents' education level. The study recommends involve parents of children with disabilities during rehabilitation sessions for their children so that they can train their children in desired behaviors in light of some crises such as the Corona pandemic.

Keywords: Covid-19, Intellectual Disability, Autism Spectrum Disorder

1. Introduction

The coronavirus (SARS-CoV- 2) that caused acute respiratory failure with severe symptoms was discovered in late 2019 (Amorim et al. 2020). COVID-19 is caused by a coronavirus virus that has spread swiftly over the world which leads to puts a strain on healthcare systems around the world (Baweja, Brown, Edwards & Murray, 2021). Physical separation laws, social interaction limits, and quarantine regulations were among the first steps taken to stop the virus from spreading (Agwa & Elmasry, 2021). The COVID-19 epidemic has not only been considered the most important international health crisis today, but it is also considered the biggest universal danger after World War II (Roesch, Amin, Gupta & Moreno, 2020). Individuals on all seven continents have been infected with the COVID-19 virus (Neece, McIntyre & Fenning, 2020).

The COVID-19 has created an unparalleled socio-economic challenge in addition to representing the largest health threat (Centres for Disease Control, 2020). The COVID-19 has the

probability to have detrimental societal consequences that will leave long-lasting and profound scars, whether developed countries or developing countries (Adom, 2020; Schuengel, Tummers, Embregts & Leusink, 2020). Despite the fact that children are less prone to become infected than adults with the Coronavirus, psychological and social factors have a greater impact on them (Amorim et al., 2020). Children in general and children with special needs in particular are one of the groups most affected by the quarantine imposed on them by this virus, as they depend on others to help them and to fulfill their needs (Abdelfattah et al., 2021). Isolated children are more prone to suffer acute stress disorder, adjustment difficulties, and feelings of sadness. 30% of the quarantined children with Post-Traumatic Stress Disorder (PTSD) satisfied the clinical standard (Huang et al., 2021).

Due to the closure of schools, was impossible to provide treatment services electronically (Courtenay & Perera, 2020). Before the coronavirus epidemic, one of the key duties of schools was to provide several services for children with impairments such as speech-language therapy, physical therapy, occupational therapy, counseling and individualized education programs (Schuengel et al., 2020; Abdelfattah et al., 2021). As a result, specialists and instructors are helpless to give adequate needs and instruction to children after special education institutions close (Ren et al., 2020). Children with impairments are among the at-risk categories, as that their intellectual disabilities make it difficult for them to grasp the cautions offered to assist them in protecting themselves and preventing the spread of COVID-19 (Courtenay & Perera, 2020). Autism spectrum disorder, for example, necessitates professional therapy interventions and services, including attendance at specialist institutes (Narzisi, 2020).

During the initial COVID-19 outbreak on a global scale, reports from the United States revealed inequities in services are available to people (The Center for Public Integrity, 2020), with one research revealing that 27 states had implemented "Rationing in the medical field" practices that might impact autistic children and intellectual disabilities (Oakley et al., 2021). As a result, tension and irritation have evolved as negative psychological states in families. More services were required for parents and caregivers to compensate for the loss of centers services during closures (Huang et al., 2021). Given the parents' lack of understanding of how to handle a disabled child, there is an increased requirement for psychological and social assistance, as do the needs of a child's development and growth, as well as the need for a variety of services for dealing with and adapting to new situations, as well as providing all of the necessities for a child's development and growth (Kucharewicz & Wieteska, 2019).

Based on the study by Fontanesi et al. (2020), parents who work have described pressure that is beyond comprehension on their efficiency, time, and resources in order meet day-to-day demands of home-schooling and parenting. Agwa and Elmasry (2021) mentioned that delay experienced by children with disabilities reflected negatively on the parents' sense of reassurance emotional, anxiety, and fear mixed with sadness for their son accompany them all time after their son was advancing even with simple steps, but they may have had a setback, which is reflected in the parents' feeling of safety and reassurance. Orgiles et al. (2020) emphasized that there is lockdown has a harmful impact on children aged 3 to 18 because the social interaction of children has been limited and their emotional condition has changed. Anxiousness, learning difficulties, impatience, boredom, and Irritability are becoming more common among children which lead to parental stress is exacerbated by children's rising emotional symptoms.

COVID-19's harmful impact in developing countries, particularly Saudi is still emerging and little is known about it. As a result, there is insufficient understanding of the impacts on families with children who have intellectual disabilities and autism spectrum disorder challenges. When compared to the general public, existing evidence in the world setting argues that COVID-19 has greater detrimental effect on parents of a child with intellectual disabilities and autism spectrum disorder (Amorim et al., 2020; Courtenay & Perera, 2020; Agwa & Elmasry, 2021; Baweja et al., 2021; Chandolias et al., 2021; Huang et al., 2021; Munir, Rubaca, Munir & Munir, 2021; Oakley et al., 2021; Oomen, Nijhof & Wiersema, 2021). Children's parents with intellectual disabilities and autism spectrum disorder have new issues in addition to those faced by the general public as a result of the epidemic

(Abdelfattah et al., 2021). Detecting the parents' sentiments of concern and worry will help and provide support to alleviate such sentiments. As a result, they will achieve a greater degree of psychological adjustment and the services provided to children will improve.

The objective of this research was to learn more about the impact of COVID-19 pandemic intellectual disabilities and autism spectrum disorder in Saudi Arabia from parent's perspectives. The following research questions are addressed in detail by the study.

1. What is COVID-19's impact on children with autism spectrum disorder and intellectually disabled children from the perspective of parents?
2. Are there statistically significant differences between the responses of parents of children with disabilities about the impacts of the COVID-19 attributed to the child's sex (male/female), the type of the child's disability (autism/intellectual disability), the parents' education level (intermediate or lower/above intermediate)?

2. Literature Review

2.1 COVID- 19

Since January 2020, the whole world has been exposed to unprecedented events, especially after the spread of the Corona pandemic (COVID-19), whose impact reached an extent that no one could have imagined. The Coronavirus has claimed the lives of thousands of people, despite all countries taking all precautionary procedures to the point of closing borders between countries and stopping transport and air traffic. Countries all across the world began looking for the virus's unknown structure, which belongs to the Coronavirus family. Coronavirus (COVID- 19) is one of acute respiratory diseases caused by the emerging coronavirus that was discovered in December 2019 in Wuhan, China (World Health Organization, 2020). Clinical symptoms of the virus include fever, dry cough, fatigue, muscle pain and shortness of breath (World Health Organization, 2020). On January 30, 2020, the World Health Organization declared a public health emergency of international significance, urging all governments to work together to halt the virus's rapid spread (Sathyamurthi & Devi Lakshmi, 2020).

The 2019 novel coronavirus pandemic is the most devastating health disaster since the outbreak of SARS in 2003, the first disease outbreak in modern times (Yang et al., 2020). The infections are becoming more spread, the lack of knowledge related to the virus, and the rapid exchange of information led to many individuals suffering from some mental disorders (Grier, Lunskey, Sullivan & Casson, 2020). COVID-19 has a significant psychological impact at all levels of society (Baweja et al., 2021). A rise in the number of cases in a short period of time infected with the virus has led to high levels of anxiety, depression, tension, fear, boredom, loneliness, symptoms of post-traumatic stress, confusion, anger, mood swings, decreased mental ability, and sleep problems that indicate psychological distress due to quarantine (Alizadeh, et al., 2020; Baweja et al., 2021).

There is no doubt that children are the most affected groups in times of crises and disasters, as they are the most vulnerable groups (Huang et al., 2021). The effects of this crisis were not restricted to the medical field aspect of the child, but it also includes the psychological, educational, social, and economic aspects (Zandifar & Badrfam, 2020). Children with disabilities such as autism and intellectual disabilities are not immune from the effects of COVID-19. This was evident in the stage of the spread of Coronavirus, as governments around the world implemented strict closure measures without taking into account these children who at risk in public health protocols (Chandolias et al., 2021). Redquest, Tint, Ries & Lunskey (2021) indicated that many persons with intellectual/developmental disabilities lost their daily routine and social support as a result of the COVID-19 pandemic.

2.2 The Impact of the Corona Epidemic on People with Disabilities

The COVID-19 pandemic is a major and ongoing concern for those with autism or intellectual disability and their families (Courtenay & Perera, 2020; Baweja et al., 2021). The lack of clarity circumstances around the pandemic as well as constant flow of new knowledge related to COVID-19 might exacerbate impact on the psychological aspect of people with disabilities and their families (Cassidy et al., 2020). Lima, Barrosa, and Aragão (2020) indicated that autism spectrum disorder is like other chronic diseases, explaining that autism is a neurodevelopmental disorder that affects the human immune system, in addition to the presence of concomitant diseases such as diabetes, heart and pleural infections. The Clegg study (2020) notes that there is a growing international concern that intellectually disabled individuals who many of whom are in poor health particularly vulnerable to contracting COVID 19, but they receive less care in these crises.

The effects of the Coronavirus are not limited to the personal aspect of people with disabilities, but the matter extends to those services provided to them (Munir et al., 2021). Individuals with an autism spectrum disorder or intellectual disabilities often meet with health and educational care providers on a regular basis for examinations and treatment (Frankova, 2020). In addition to educational services where many of them attend special education schools and participates in various remedial educational programs (Munir et al., 2021). There are many concerns about whether or not these individuals can continue to receive these important services and treatments (Huang et al., 2021). Agwa and Elmasry (2021) mentioned that COVID-19 affects children with autism spectrum disorder and intellectual disability through three aspects as follow:

- **Undesirable Behaviors:** Stress, depression, and anxiety are common in children with autism spectrum disorder and intellectual disability, as the application of new routine procedures leads to increased stress within the home, which may lead to disordered behaviors and higher reluctance, particularly if they are implemented without warning and unexpectedly (Rezendes & Scarpa, 2020; Munir et al., 2021).
- **Rehabilitation Stopped:** The COVID-19 pandemic has halted behavioral therapy, play therapy and physical therapy important to the rehabilitation of children with autism spectrum disorder and intellectual disability. In addition to stopping organizing their daily schedule and using different activities using the board or finding new games to play, as well as scheduling these games at specified times during the day (Narzisi, 2020).
- **The Psychological State of the Child:** There is no doubt that the period of banning people from the home due to the Corona epidemic has negatively affected all children, whether with disabilities, as a result of depriving them of the routine of practicing their normal lives and all the activities that they were doing outside the home (Oomen et al., 2021). The sudden change of the child when he stops going to school or the center, and then the issue of his education or treatment has stopped, it is known that these children need individual, legalized intervention tailored to each child according to his needs, and it is not appropriate for him to receive visual and audible information from a distance, but rather he needs the presence of a person with him continuously (Agwa & Elmasry, 2021).

2.3 Autism Spectrum Disorder

Autism is considered one of the most developmental disorders affecting the different aspects of a child's development such as language, social, motor, attention, and cognition (Amorim et al., 2020). The impact of autism disorder does not stop only on the child but extends to the family which is trying to adapt to the situation to provide everything the child needs (Huang et al., 2021). Autism is a term derived from the Greek word "Autos" which means the self (Bloch et al., 1999). Autism spectrum disorder is defined as a neurodevelopmental disorder resulting from a defect in the brain that affects brain functions leading to deficits in social communication, stereotyped behaviors, and specific

interests that appear during early childhood (APA, 2015). Corrêa and Van de Gaag (2017) stated that autism is a type of neurodevelopmental condition that causes impairments in social behavior, unusual connection, limited and restricted interests, and repetitive behavioral patterns. Schmeisser and Boeckers (2017) defined autism as a developmental disorder communication and social interaction difficulties, as well as repetitive patterns, characterize this disease. Bagasra, Heggen, and Hossain (2018) indicate that autism is a diverse developmental disease marked by difficulties in interaction with others, communication both verbal and nonverbal, and repeated stereotyped actions and movements.

Statistics issued by the American Autism Society of America (1999) confirm that the number of persons affected by this disorder is rising at an alarming rate every year, as the number of cases increases year after year. According to the United States Diagnostic Center (CDC), the prevalence of autism in 2016 was (1: 68), then the percentages increased to reach (1: 59) for the year 2018 and finally in the report of the year 2020, the rates of autism spectrum disorder increased to reach (1: 54). Autism spectrum disorder is more prevalent in males than females at a ratio of (1:4), and some believe that the increase in this percentage in males compared to females, may be due to the fact that the criteria for diagnosing autism spectrum disorder still focuses largely on the characteristics of males compared to females (Corrêa & Van de Gaag, 2017).

2.4 Intellectual Disability

Smith (2003) defined intellectual disability as one of the types of developmental disorders because it appears in the early days of life for the individual, and it has a lasting effect throughout life, as mental functioning declines at all levels. Seligman (2005) indicated the fourth statistical evidence decides to diagnose intellectual disability through maladaptation to two or more of the abilities that are: communication, protection of oneself, residing at home, social abilities, self-awareness, safety and health, and aspects of academic functionality. Intellectual disability is described by the American Association for Intellectual and Developmental Disabilities (AAIDD) (2010) as a marked decline in general mental function that appears during the developmental period and results in or is accompanied by a deficiency in adaptive behavior.

Agwa and Elmasry (2021) stated that judging an individual as mentally retarded must include three basic elements, which are as follows:

- **Clear decrease in general mental functions:** This means that there are two standard deviations in the average IQ test.
- **Deficiencies in adaptive behavior:** The concept of adaptive behavior refers to the degree of adequacy of the individual in responding to the social expectations of the same age and social category as the individual, whether with regard to personal autonomy or social responsibility.
- **The emergence of both a decline in mental functions and a deficiency in adaptive behavior during the developmental stage:** meaning that there is a deficiency in mental functions with a deficit in adaptive behavior, which may occur in later life stages as a result of various factors.

2.5 Previous Studies

Amorim et al. (2020) investigated the experience of children with autism spectrum disorder and their parents during the COVID-19 outbreak social isolation. The sample consisted of 99 parents of school-age children with an autism spectrum disorder in Portugal, this study used questionnaires to collect data. The results revealed that children with autism spectrum disorder showed a wide range of behavioral changes. Also, Anxiety levels were high in autism spectrum disorder children and their parents.

Abdelfattah et al. (2021) investigated sources and worry of stress parents of disabled children. The sample consisted of 623 parents of disabled children from Saudi Arabia, Oman, United Arab Emirates, Jordan, Kuwait, Bahrain, Qatar, and Palestine. The results revealed that the parents expressed great worry about the risk of their child becoming infected and they are worried about losing their child's therapy and care. Also, the results revealed that compared to parents with less than high school education, parents with a bachelor's degree perceive the causes of stress at a higher level. In addition, during the pandemic, 59 percent of parents said they did not get services from special education facilities.

Agwa and Elmasry (2021) aimed to determine the impact of the corona epidemic on children with autism spectrum disorder and intellectually disabled children from the perspective of their mothers, as well as to determine the differences in perceptions' mothers of the impact of the corona epidemic on their children attributed to demographic variables (the child's gender, the disability type of the child, the disability severity of the child, and the mother's level of education. The sample consisted of 100 Egyptian mothers of children with autism spectrum disorder and intellectually disabled children, this study used the questionnaire to measures the impact of the corona epidemic. The results revealed that (98%) of women reported unfavorable impacts of the corona epidemic on themselves and their children. where the result revealed that (61%) of mothers stated that the corona epidemic had a negative impact on their children's behavior, whereas (56%) of mothers said their children's rehabilitation had been negatively impacted, and (36%) of mothers stated that the corona epidemic had a negative impact on their children's psychological state. in addition, the results showed that there were no statistically significant variations in the impact of the corona epidemic on children with autism spectrum disorder and intellectually disabled children attributed to child' gender, disability level, and education level of mothers, but there were statistically significant variations in the impact of the corona epidemic on children with autism spectrum disorder and intellectually disabled children attributed to disability type of child in favor of autistic children.

Huang et al. (2021) investigated the effects of the COVID-19 epidemic on autistic children and their families. The sample consisted of 406 parents of autistic children in China, this study used questionnaires to collect data. The results revealed that 50.3 percent of parents believed their children were having sleep issues, 47.3 percent of parents believe their children's time spent outside has decreased. About 40% of parents believe their children's cognitive abilities have improved understanding and language expression. 36.2 percent of parents said their children's emotional and social functioning had deteriorated. The training intensity of children has dropped according to 60.8 percent of parents. crying, losing temper, and being easily distracted were the most prevalent aberrant behaviors identified in autistic children. Although 81.3 percent of parents said they were not anxious, 98 percent said their family training was under stress.

Oomen et al., (2021) examined impact of COVID-19 epidemic-regarding changes in the health of mind, their daily routines and social lives, satisfaction with epidemic-regarding advice and information, the desire of participants to the direction. The sample consisted of 1044 adults with and without autism in three European countries: UK, Netherlands, and Belgium, this study used a mixed-method approach to collect data. The results revealed that there is an increase in anxiety symptoms and depression due to the epidemic for both groups' autism and non-autism, which was higher in autistic adults. Furthermore, individuals with autism had higher levels of anxiety regarding their jobs, medicines, and food, as well as their personal security and safety. Also, adults with autism were more stressed because of losing their daily routines. In addition, adults with autism have problems regarding guidance that has been canceled owing to the epidemic and indicated a need for more advice and information about autism.

Munir et al. (2021) examined the effect of COVID-19 lockdown on families with children who have intellectual and/or developmental disabilities. The sample consisted of 176 parents with children who have intellectual and/or developmental disabilities in rural Pakistan, this study used interviews to collect data. The results revealed that parents of children with intellectual and/or developmental disabilities face a variety of difficulties consisting of slow mental development, negative behavioral

impacts, closure of educational institutes, reduced or no health services, deteriorated health conditions of their children, social lockdown, and financial constraints. Also, results revealed that parents of children with intellectual and/or developmental disabilities are faced with severe problems that cause them to become more stressed.

3. Method

The researcher used the quantitative approach due to its relevance to the objectives of the study, where the quantitative approach is characterized by looking for facts and reasons in an extensive manner, and the researcher can study the relationship between variables and thus can explain cause and effect relationships between different variables, which makes it easier for researchers reaching accurate predictions regarding the phenomena under study (Saunders, Lewis & Thornhill, 2016).

3.1 Population and Sample

All parents of children with autism spectrum disorder and intellectually disabled children were included in the current study in Jeddah who are registered in governmental and private centers and institutes of the Ministry of Education and the Ministry of Social Affairs, as for the study sample, it reached (217) parents of children with autism spectrum disorder and intellectual disabilities who were randomly selected.

3.2 Research Instrument

Depending on the nature of the research and the approach used, the researcher found that the questionnaire is the appropriate instrument to achieve the objectives of the study, due to the difficulty of achieving the objectives of the study through other research instruments such as interviews or direct observation. Therefore, the researcher adopted a study instrument of Agwa and Elmasry (2021), which related to the mothers' perspective of children with autism spectrum disorder and intellectually disabled children. Therefore, the researcher adopted a study instrument of Agwa and Elmasry (2021), which related to the mothers' perspective of children with autism spectrum disorder and intellectually disabled children. The questionnaire of this study included (35) items divided into (3) dimensions: undesirable behaviors, rehabilitation stopped, and the psychological state of the child. Each item was graded on a five-point Likert scale ranging from "1" (very low) to "5" (very high).

3.3 Instrument Validity

To ensure scientific accuracy, formulation, and clarification in linguistics, the instrument was handed to a group of (7) Saudi university faculty members with a doctorate in special education. The number of items has been decreased to (30) as a result of these experts' feedback.

3.4 Instrument Reliability

The reliability of the instrument means that when using the same instrument on the same sample in the same circumstances, the same results are obtained every time. The internal accuracy and replies of the respondents were measured using Cronbach alpha. The reliability of respondents' responses was demonstrated by a value of (60%) or above (Bryman & Bell, 2011; Saunders et al., 2016), as shown in Table (1).

Table 1: Cronbach Alpha Test

Variables	Cronbach Alpha Value
Undesirable behaviors	0.811
rehabilitation stopped	0.820
Psychological state of the child	0.713
All items	0.773

The measurements of study had high internal consistency coefficient values, as shown in Table1, ranging between (0.713-0.820). This indicates that the coefficient of Cronbach Alpha is greater than (0.60) for all parts of the questionnaire. This result emphasizes that the items in the instrument of the study are internally consistent.

3.5 Data Analysis

The researcher used SPSS software to achieve the study's objectives by using means and independent sample "t" test. When comparing two means, the independent sample "t" test is used (Cuevas, Febrero & Fraiman, 2004). Means were used to explaining the findings according to Table (2).

Table 2: Explaining Means

Mean	Information
1.00-2.33	Disagree (DA)
2.34-3.67	Moderate Agree (MA)
3.68-5.00	Agree (A)

Source: (Bryman & Bell, 2011)

4. Results and Discussion

4.1 Respondents Profile

To describe the profile of autistic or intellectual disabilities children in terms of 'sex, type of disability, and parents' education level', a descriptive analysis was used. The majority of children were male representing 63.9%, while 36.1% were female, respectively, as shown in Table (3). About the type of disability, table (3) showed that the vast majority of children were intellectual disabilities representing 62.5%, while 37.5% of children were autism spectrum disorder. Concerning the parents' education level, 81.0% of parents had above intermediate education level, while 19.0% of parents had intermediate or lower education level.

Table 3: The Children and Parents Profile (N=216)

Variables	Category	N	%
Sex	Male	138	63.9
	Female	78	36.1
Type of Disability	Autism	81	37.5
	Intellectual	135	62.5
Parents' Education Level	Intermediate or Lower	41	19.0
	Above Intermediate	175	81.0

4.2 Result Related to the First Question

Mean scores and standard deviation were employed by the researcher for every item and dimension in order to answer the study's first question.

Table 4: Mean scores and standard deviation

N	Item	Mean	St.dev	Result
Undesirable behaviors				
1	You find a difficult to deal with your child's behavior during the quarantine period	3.89	1.15	A
2	Your child's disruptive behavior has increased during the quarantine period	3.95	1.10	A
3	You feel that your child has become more violent during the quarantine period	3.89	1.25	A
4	Your child's behavior worsened as a result of his psychological state during the quarantine period	3.75	1.25	A
5	You felt powerless as a parent to rehabilitate your child instead of a specialist during the quarantine period	3.84	1.21	A
6	Your child has become very angry during the quarantine period	4.03	1.12	A
7	The child became very moving during the quarantine period	3.86	1.24	A
8	There is a difficulty in teaching your child some positive behaviors during the quarantine period	3.70	1.29	A
9	Your child has shown inappropriate behaviors as a result of sitting at home during the quarantine period	3.86	1.22	A
10	Your child is more nervous than before the quarantine period	4.00	1.10	A
11	You felt that the child's sitting at home during the quarantine period strains the family.	4.02	1.11	A
12	The cessation of your child's rehabilitation during the quarantine period negatively affected your child's behavior	3.62	1.38	MA
13	Quarantine has negatively affected your child's behavior	4.06	1.04	A
Total		3.88	0.66	A
rehabilitation stopped				
14	deficiencies began to appear the child's abilities during the quarantine period	3.93	1.12	A
15	Your child's attention has been negatively affected as a result of stopping rehabilitation sessions during the quarantine period	3.80	1.26	A
16	Your child's level of some skills decreased during the quarantine period	3.73	1.26	A
17	You feel that your child needs training sessions as an alternative to the regular sessions that are difficult to maintain during the quarantine period	3.82	1.22	A
18	You feel that the rehabilitation process during the quarantine period has become a heavy burden	4.00	1.12	A
19	You feel that the child's sitting at home for a longer period of time represents a great burden on the family	3.84	1.26	A
20	You felt the brothers' distress as a result of the long-time their brother with autism spectrum disorder/intellectual disability was sitting with them at home	3.69	1.30	A
21	Sitting at home negatively affected the level of the child	3.85	1.22	A
22	You feel helpless about your ability to rehabilitate the child during the quarantine period	3.98	1.12	A
23	You feel helpless towards your child more than before the quarantine as a result of sitting at home	4.02	1.11	A
Total		3.87	0.74	A
Psychological state of the child				
24	Your child's psychological condition has been negatively affected during the quarantine period	4.14	1.00	A
25	Your child is becoming more frustrated than he was before the quarantine period	3.82	1.28	A
26	The repercussions of the quarantine as a result of the Corona pandemic negatively affected the psyche of your child	3.83	1.27	A
27	Your child's body began to increase as a result of sitting at home during the quarantine period	3.97	1.17	A
28	Your child's nutritional system has been negatively affected during the quarantine period	4.00	1.08	A
29	Your child's requests increased during the quarantine period, which is a burden on you	3.97	1.07	A
30	Depriving your child of some of the benefits that he was receiving during the quarantine period negatively affected his psychological condition	3.51	1.43	MA
Total		3.89	0.81	A
Over all		3.88	0.39	A

Table (4) was shown that the impacts of the COVID-19 lockdown had a mean value of (3.88) with a standard deviation of (0.66). This indicates that the effects of the COVID-19 lockdown on children with autism spectrum disorder and intellectually disabled children are high from the point of view of parents of children with autism spectrum disorder or intellectual disabilities who are registered in government and private centres and institutes of the Ministry of Education and the Ministry of Social Affairs in Jeddah. The researcher believes that this result is reasonable and acceptable, as the COVID-

19 lockdown has brought many negative effects on all people. The most important of these effects is the halting of the rehabilitation of children with disabilities, and then the regression in some behaviors and even some unwanted behaviors, and these children have become more angry and violent. There are no doubt that all these effects on children with disabilities exposed parents to many psychological pressures. The psychological pressure was not only limited to the material burdens but this pressure extended to fear and anxiety for their children, the psychological and behavioral aspects of them, which have begun to deteriorate with the extension of the Corona pandemic, which affected the parents' sense of fear and anxiety. This result is in agreement with the studies of Amorim et al. (2020); Abdelfattah et al. (2021); Agwa and Elmasry (2021); Huang et al. (2021); Oomen et al., (2021) and Munir et al. (2021).

Also, Table (4) showed that the mean score of undesirable behaviors of children with autism spectrum disorder and intellectually disabled children is high from the point of view of parents of children with autism spectrum disorder intellectual disabilities with (3.88) and a standard deviation of (0.66).

Item 13, which state, "Quarantine has negatively affected your child's behavior" has the highest means score among the items of undesirable behaviors of children with autism spectrum disorder and intellectually disabled children with (4.06). While item 12, which states, "The cessation of your child's rehabilitation during the quarantine period negatively affected your child's behavior" has the lowest mean scores among items of undesirable behaviors of children with autism spectrum disorder and intellectually disabled children with (3.62). This result may be interpreted according to the researcher's point of view to the routine, restrictive, and specific behavioral characteristics that these children are characterized by that make them angrier and more nervous during the quarantine period. Also, the reason can be attributed to poor coordination skills that may be characteristic of many children with autism spectrum disorder and intellectual disabilities. This finding is congruent with Amorim et al. (2020); Agwa and Elmasry (2021); Huang et al. (2021) and Munir et al. (2021).

In addition, Table (4) revealed that the mean score of rehabilitation stopped of children with autism spectrum disorder and intellectually disabled children was (3.87) with a standard deviation of (0.74). This means that the rehabilitation stopped of children with autism spectrum disorder and intellectually disabled children is high.

Item 23, which states, "You feel helpless towards your child more than before the quarantine as a result of sitting at home" has the highest means score among the items of the rehabilitation stopped of children with autism spectrum disorder and intellectually disabled children with (4.02). While item 20, which states, "You felt the brothers' distress as a result of the long-time their brother with autism spectrum disorder/intellectual disability was sitting with them at home" have the lowest score of the means among the items of the rehabilitation stopped of children with autism spectrum disorder and intellectually disabled children (3.69). This result is explained, according to the researcher's point of view, that children with autism spectrum disorder and intellectually disabled children stopped going to the rehabilitation centers he used to go to develop their skills before the Corona pandemic, which led to a regression in skills, the need for alternative sessions and the parents standing unable to rehabilitate her child, which negatively affected the child and all members of his family. This finding is congruent with Abdelfattah et al. (2021); Agwa and Elmasry (2021); Huang et al. (2021); Oomen et al., (2021), and Munir et al. (2021).

As regards the psychological state of children with autism spectrum disorder and intellectually disabled children, the mean scores was found (3.89) with a standard deviation (0.81). In other words, the psychological state of children with autism spectrum disorder and intellectually disabled children from the point of view of parents of children with autism spectrum disorder and intellectually disabled children was high.

Item 24, which state, "Your child's psychological condition has been negatively affected during the quarantine period" has the highest means score among the items of the psychological condition of children with autism spectrum disorder and intellectually disabled children with (4.14). While item 30, which states, "Depriving your child of some of the benefits that he was receiving during the

quarantine period negatively affected his psychological condition” have the lowest means score among the items of the psychological condition of children with autism spectrum disorder and intellectually disabled children with (3.51). This result may be interpreted according to the researcher's point of view to depriving the child of going out and going to rehabilitation centers and developing his skills as a result of the Corona pandemic has a negative impact on the psychological state of the child such as his feeling of frustration and the increase or decrease in eating. This finding is congruent with Amorim et al. (2020); Huang et al. (2021); Oomen et al., (2021) and Munir et al. (2021), but disagrees with the study of Agwa and Elmasry (2021).

4.3 Result Related to the Second Question

The independent sample "T" test was used to determine the significance of statistical differences of impacts of the COVID-19 attributed to the child's sex (male/female), the type of the child's disability (autism/intellectual disability), the parents' education level (intermediate or lower/above intermediate).

Table 5: Independent Samples T- test

Variables	N	Mean	St.dev	df	t	Sig
Male	138	3.87	0.42	214	0.434	0.769
Female	78	3.90	0.45			
Autism	81	3.78	0.45	214	2.687	0.413
Intellectual Disability	135	3.94	0.40			
Intermediate or Lower	41	3.76	0.45	214	1.953	0.396
Above Intermediate	175	3.91	0.42			

The mean score of male was shown in Table (5) with (3.87) and the mean of female was (3.90), with (0.769) Sig of two groups of sex. This finding is congruent with Agwa and Elmasry (2021). Also, the results showed that the mean score of the children with autism was (3.78) and the mean of children with intellectual disability was (3.94), with (0.413) Sig of two groups of children's disability. This finding is disagrees with Agwa and Elmasry (2021). In addition, the mean score of the intermediate or lower was (3.76) and the mean of above intermediate was (3.91), with (0.396) Sig of two groups of parents' education level. This finding is congruent with Agwa and Elmasry (2021), but disagrees with the study of Abdelfattah et al. (2021).

The researcher explains these results to the nature of the pandemic, which does not differentiate between males and females, but rather represents a great danger, especially for people with disabilities, because they depend on others to help them and meet their needs. Also, children with autism spectrum disorder are equally affected by the effects of the Corona pandemic with children with intellectual disabilities, as isolating children at home represents a greater psychological burden than the physical suffering caused by the virus, closing schools and children not being exposed to the air and practicing their beloved activities, and changing sleeping habits, and the usual lifestyle, can lead these children to feel lonely, distressed, disturbed, and have neuropsychological manifestations. The researcher attributes this result to the fact that the level of education of parents does not affect their awareness of the effects of the Corona pandemic and that they are able to deal with these effects and how to deal with their child with disabilities.

5. Conclusion and Recommendations

This study found that the effects of the COVID-19 lockdown on children with autism spectrum disorder and intellectually disabled children are high from the point of view of parents of children with autism spectrum disorder and intellectually disabled children who are registered in government and private centres and institutes of the Ministry of Education and the Ministry of Social Affairs in

Jeddah. Also, the results showed that there are no statistically significant differences between the responses of parents of children with disabilities about the impacts of the COVID-19 attributed to the child's sex, the type of the child's disability, the parents' education level. This study concludes that some of the bad manifestations and behaviors that the child is supposed to have gotten rid of during rehabilitation, and these negative behaviors may be due to the sudden breaking of the routine that the child is accustomed to, which increases the child's anxiety and tension and the emergence of negative behaviors. The study recommends the following:

1. Involve parents of children with disabilities during rehabilitation sessions for their children so that they can train their children in desired behaviors in light of some crises such as the Corona pandemic.
2. Reconsidering the support provided to families of children with disabilities in light of these crises, whether psychological, financial, or social support.

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