

Family support provided to children with autism spectrum disorder during COVID-19 pandemic

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Abstract: The study aimed to identify the level of family support provided to children with autism in light of the Covid 19 pandemic, and the Descriptive analytical method was adopted. To achieve the goals of this study, the researchers developed a tool that consisted of (29) items distributed into (3) dimensions (psychological, training, and recreational). The indications for the validity and reliability of this tool have been verified. The study sample included (86) mothers of children with autism spectrum disorder who were enrolled in special education centers for the year 2019/2020 in Amman, and the researchers reached many results, the most important of which are: The level of family support provided to children in light of the Covid 19 pandemic, according to their mothers' point of view, was average in the overall score of the Family Support Scale and in its three dimensions, where the mean of the total score was (3.34), and for the training dimension the mean was (3.51), while the recreational dimension was (3.41) and the psychological dimension was (3.12), the results indicated that there were no statistically significant differences at the level of significance ($\alpha = 0.05$) in the level of family support provided to children with autism spectrum disorder in light of the Covid 19 pandemic according to the variables (economic status and educational qualification of mothers) and (age variable for children). The study recommended conducting more studies related to the impact of the Covid 19 pandemic on people with disabilities specifically for people with autism spectrum disorder, it also recommended to the relevant authorities the necessity to provide families and mothers of children with autism spectrum disorder with sufficient and necessary information about family support, its importance and the mechanism of its implementation

Key words: Family support, children with autism spectrum disorder, Covid-19 pandemic

الدعم الأسري المقدم للأبناء ذوي اضطراب طيف التوحد في ظل جائحة COVID-19

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الملخص: هدفت الدراسة الى التعرف على مستوى الدعم الاسري المقدم للأبناء ذوي اضطراب التوحد في ظل جائحة كوفيد 19، وتم اعتماد المنهج الوصفي التحليلي، ولتحقيق أهداف هذه الدراسة قام الباحثون بتطوير أداة تألفت من (29) فقرة موزعة على (3) أبعاد (النفسي، التدريبي، والترفيهي) وقد تم التحقق من دلالات صدق وثبات هذه الأداة. واشتملت عينة الدراسة على (86) أم من أمهات الأبناء ذوي اضطراب طيف التوحد الملتحقين في مراكز التربية الخاصة للعام 2020/2019 في مدينة عمان، وقد توصل الباحثون إلى العديد من النتائج أهمها: أن مستوى الدعم الأسري المقدم للأبناء في ظل جائحة كوفيد 19 من وجهة نظر امهاتهم جاء متوسطا في الدرجة الكلية لمقياس الدعم الأسري وفي أبعاده الثلاثة، حيث بلغ المتوسط الحسابي للدرجة الكلية (3.34)، وللبعد التدريبي بلغ المتوسط الحسابي (3.51)، أما المتوسط الحسابي للبعد الترفيهي (3.41) وللبعد النفسي (3.12)، كما أشارت النتائج إلى عدم وجود فروق دالة إحصائية عند مستوى الدلالة ($\alpha = 0.05$) في مستوى الدعم الأسري المقدم للأبناء ذوي اضطراب طيف التوحد في ظل جائحة كوفيد 19 وفقاً لمتغيرات (الحالة الاقتصادية والمؤهل الدراسي للأمهات) و(متغير العمر للأبناء)، وقد أوصت الدراسة بإجراء المزيد من الدراسات ذات العلاقة بتأثير جائحة كوفيد 19 على ذوي الاعاقة وتحديدًا على ذوي اضطراب طيف التوحد، كما أوصت للجهات ذات العلاقة بضرورة تزويد أسر وامهات ذوي اضطراب طيف التوحد بالمعلومات الكافية واللازمة عن الدعم الأسري وأهميته وآلية تنفيذه

الكلمات المفتاحية: الدعم الأسري، الأبناء ذوي اضطراب طيف التوحد، جائحة كوفيد 19

Introduction:

People with disabilities, under normal circumstances, suffer from exclusion, especially in Arab countries. When the COVID-19 crisis came, the fears of this group and their families increased all over the world, especially in the Arab region, where the incidence of disability is increasing due to the severe wars and difficult conditions witnessed in several regions over the past years, and the lives of people with disabilities were not without difficulties in normal times, their families and those working with them face constant difficulties in order to provide the basic daily needs, appropriate family support, and the mechanism for implementing their educational plans and programs. In addition to the above difficulties, the COVID-19 pandemic has caused a special kind of crisis that carries with it great concerns and unexpected problems in the whole world and in our Arab region in particular (APA, 2020). The international human rights organization "Human Rights Watch" said in a previous report, the new Corona virus, which causes the "Covid 19" disease, poses risks to many persons with disabilities around the world (WHO, 2020), so it was imperative for governments to make a lot of additional efforts to protect their rights in response to this fast-spreading pandemic (APA, 2020) And "persons with disabilities" are among the most excluded and stigmatized groups in the world, even under normal circumstances, and unless governments move quickly to help them as part of their response to the outbreak of the virus, they will be at great risk of infection and death as the pandemic spreads." (WHO, 2020)

Autism spectrum disorder:

This disorder was first discovered in 1946 by Dr. Liu Kanner and since then the search for its causes continues, and until now no clear and specific causes of this disorder are known specifically, noting that there are many theories that indicate the existence of biological or genetic causes in most cases, in addition to environmental reasons (Al-Waladah, 2016). It is a neurodevelopmental disorder whose symptoms appear in the first years of a child's life, as these symptoms are characterized as deficiencies in

communication skills (verbal and non-verbal) used in social interaction and the way to respond to sensory and environmental stimuli, which appear as restricted and repetitive behavioral patterns. This disorder appears as a result of the affected data processing in the brain, due to a change or defect in the connection and regularity of neurons and their synapses, which is called brain connectivity disorder. So far, it has not been discovered how this connectivity defect occurs. (Abdullah, 2017) The prevalence of autism is on a steady increase, as the prevalence of it in "1975" was 1 per 5, 000 births, and in 1985 it became 1 per 2500. The rates continued to increase, reaching in "1995" 1 per 500. As for the beginning of the millennium, specifically in the year "2001" it became 1 for every 250 births, to reach, after that, 1 for every 166 births. Today, the prevalence rate is 1 per 68 births (Al-Zureikat, 2019). The high prevalence is due to several factors, perhaps the most important of which are the development of accurate diagnostic methods for this disorder, the development of methods for identifying cases and the increase in the accuracy of the diagnostic tools used, in addition to the diversity and multiplicity of environmental factors and widespread unhealthy habits, and the increasing reliance on modern technological means as tools to entertain our children instead of interaction, communication and movement play as it was in the past (Al-Shami, 2004).

The impact of the COVID-19 pandemic on people with autism spectrum disorder:

Feeling of anxiety and turmoil is considered natural due to the repercussions of the Coronavirus pandemic and the fact that many countries of the world are subject to complete lockdown and self-isolation (APA, 2020). However, people who suffer from autism spectrum disorder are more vulnerable to side effects, in terms of psychological and behavioral, due to the extrem change in the daily routine of those people who rely on behavioral, sensory and possibly kinetic therapy in addition to special programs for learning and acquiring life and possibly professional skills (Al-Eid, 2013). But with the closure of institutions following the new pandemic, these people lost the opportunity to obtain these treatments and programs and were forced to stay at home, which may increase the difficulties and problems facing them (Unite Nation, 2020). There is no doubt that the COVID-19 pandemic has hindered the daily life of individuals with disabilities in general and those with autism spectrum disorder in particular, especially since staying at home is one of the difficult matters for this group, and exposes them to sudden, unwarranted changes, and because of the spread of the pandemic, they face difficulty in carrying out daily tasks which they used to many years ago, such as going to school and dealing with specialists to carry out various tasks, meeting their schoolmates, and other activities that they were used to, (Government of South Australia) (2020). But after the quarantine that occurred in many countries, the available method of interaction for communication has become video, which is a new and different method for them, which may expose them to many problems and at the same time impose a double burden on the family to provide the necessary support for their autistic children to deal with these problems resulting on this

unusual global situation, especially since the "Corona" virus and the necessary precautionary measures that followed had a negative impact on children with autism spectrum disorder, explaining that they need to continue treatment sessions, which is what stopped for many of them due to the "Corona" pandemic (Güzel, Yildiz, Esentas, and Zerengök), 2020. Therefore, it is imperative to follow up regularly with families of autistic children in an attempt to focus on the role of family support in this circumstance, as these families alone can compensate for the absence from the different treatment centers, especially since each child of this category has different requirements from others, so it is necessary that every family adheres to the instructions of the specialists who used to deal and supervise the cases of these children in an attempt to safely pass this critical global stage. (Al-Zureikat, 2019). With regard to the impact of the COVID-19 pandemic on individuals with autism, there are those who suffer from "sensory integration disorder", which may cause them to refuse to use sterilizers due to their sticky composition or smell. This may also represent a challenge to their need for sensory stimulation by placing things in their mouths, which may also increase the chances to be infected with Corona virus. (Haynes, 2020). Some also believe that the global physical distancing procedure used to limit the spread of the virus does not pose any problem to autistic people because they often prefer not to have physical closeness, but there is a different opinion that physical distancing may in fact be a challenge for some people with autism spectrum disorder who wish Embracing, smelling and touching others as part of the sensory stimulation they need (APA, 2020).

Family support for people with autism spectrum disorder during the COVID-19 pandemic:

The family is considered an essential support in implementing educational and therapeutic programs for their children with autism disorder, as it is the one that often monitors and notes any problem or developments on the behavior of its children, and it transmits information and observations to specialists, it is also one of the most important members of the work team with the information it has that qualifies it in practice to take an important role in selecting goals, setting priorities, following up on training and recording progress (Dunn, 2016) and continuing training at home with the aim of generalizing the skills learned in school. There are many parents who have reached the stage of innovation in working with their children and generating new options and alternatives through experimentation and observation and their insistence on the progress of their children for the better, and their involvement in social activities, visits and interaction with others (Ghoneim, 2016). Family support has had a great impact on the advancement of the various skills of their autistic children, and this has been confirmed by many scientific studies that have proven the importance of the role of parents in developing the skills of these children, especially the communication skills that people with this disorder clearly lack, because parents represent the largest part of the son's world who spends more time with his parents compared to what he spends with the professionals and therapists supervising his condition (Zahra, 2016). In light of the spread of the Covid-19 pandemic, the global conditions resulting from the spread of

this pandemic imposed on people with autism spectrum disorder two isolations, the isolation resulting from the nature of this disorder on the one hand and the isolation imposed on them as well as on everyone due to the circumstances of the spread of the pandemic on the other hand (Government of South Australia, 2020), This increased the burdens of families that have a son or more with autism spectrum disorder, and the urgent need to provide the necessary support for those with this disorder in a way that ensures alleviation of the misfortune caused by the spread of the pandemic and the subsequent home quarantine and a complete closure. It may be appropriate for the family to focus on supporting its children with autism spectrum disorder during the Covid 19 pandemic through some issues, the most important of which are:

- Providing information: The family should provide the necessary information about the Covid 19 pandemic in a simple and reassuring manner about the reason for the change in his usual routine, closing schools, treatment centers, training sessions, etc. (Güzel & Others, 2020)
- Maintaining a routine: the family should establish a routine and a specific program with a clear schedule that can be hung in a suitable place at home to help their children with autism disorder anticipate their daily program, so that it focuses on maintaining the routine of bedtime, waking and meal time and others (Al-Safran, 2011), because changing the daily routine due to home quarantine is a great shock for people with this disorder, Here comes the important role of the family in providing the necessary support to help them maintain the routine to provide a sense of stability and reassurance, by practicing things similar to their basic pre-quarantine routine, such as eating their regular breakfast, training them in some academic skills or daily life skills, watching their favorite TV programs and carrying out educational activities, play, entertainment and other activities and pre-programmed exercises (Others, 2020 & Güzel). The family should also promote calming and relaxation activities such as taking a hot bath, practicing breathing exercises, meditation and singing together, especially since adopting such activities as part of the daily routine helps people with autism spectrum disorder feel with tranquility (Al-Shami, 2004)
- Diversification in academics: While teaching should continue during the home isolation period, we must not adopt it frequently or individually, as various activities such as cooking, making some crafts or even reading some stories can help develop academic skills in an attractive way.. (Güzel & Others, 2020)
- Continue sensory therapy: the family should make an effort to find a place inside the home for sensory therapy if possible (a place with low lighting and music, as well as sensory games such as a swing or a trampoline (Al-Qamish, Al-Jawaldeh, 2014).
- Maintaining communication: The family must provide the opportunity for their autistic children to communicate through the available means such as video calls with people who used to communicate with them, such as teachers, therapists, specialists, or some family members such as

grandparents, and it is recommended that this communication be part of the daily routine, which promotes a sense of reassurance and no fear of losing the key people in their lives. (Güzel & Others, 2020) It is preferable to reduce the use of smartphones, tablets, computers, and watch TV among all family members, or to allocate time for what is known as "no screen time". To help relax and relieve stress and anxiety, this can be achieved by finding alternative activities in which all family members participate, varying between sensory and kinetic, and activating visual or auditory-motor synergy (Al-Eid, 2013)

- Providing safety: The family must make sure of some issues related to safety in the home, such as closing the doors well and providing additional locks in a safe place that is difficult to reach. In addition to communicating with the neighbors, the neighborhood police or security men in the area and explaining the son's condition with pictures of him in anticipation of the son going out into the street without the family knowing, which may expose him to many problems: Government of South Australia. (2020).

Previous studies:

Due to the novelty of the subject of the study, the researchers did not have any previous studies on family support for people with autism spectrum disorder in light of the Covid 19 pandemic, so the researchers decided to present some relevant studies as possible.

- **(Zureikat and Al-Shamri, 2020)** conducted a study aimed at describing the psychological and social effects of the outbreak of the COVID-19 pandemic on persons with disabilities in the State of Kuwait. The sample consisted of 150 participants. To achieve the objectives of the study, the study tool was constructed with two dimensions, one for the psychological effects and the other for the social effects. The results indicated that the COVID-19 pandemic has caused psychological and social effects on persons with disabilities, and these effects differ according to the type of disability. The sample members also confirmed that the Corona virus caused a change in their daily social routine, and negatively affected their participation in social activities. In addition, they fear the spread of this virus and stigma if infected. The study recommended the necessity of providing psychological, social and health services to individuals with disabilities in the State of Kuwait where the study was conducted.
- **McStary, Trembath, & Dissanayake, 2014)** conducted a study aimed at examining the effect of having a child with autism spectrum disorder on both the mother and father and the extent to which the stresses they are exposed to on their quality of life and their ability to support them. The sample consisted of (169) parents who had children with autism spectrum disorder, whose ages ranged from 3-16 years. This study was based on the dual ABCX model in family adaptation, and the results indicated the negative impact of children's behavior directed towards the outside, and

in contrast to the positive effect on family cohesion in relation to family adjustment and that the family is exposed to certain pressures due to the presence of a child suffering from autism spectrum disorder, which affects negatively the level of family support provided to the child.

- **(Weiss, 2013)** also conducted a study that aimed to find out the extent of the contribution of factors of family psychological hardness, perception of social support, and self-efficacy in predicting family crises for a sample consisting of (138) mothers of children with autism spectrum disorder whose ages ranged from 4-41 years. The results indicated that parental self-efficacy contributed to predicting family crises more than the variables of psychological hardness and perception of social support.
- **(Seymour, Wood, Giallo & Jellet, 2012)** conducted a study aimed at identifying the effect of exhaustion in mothers of autistic children and coping strategies on the relationship between behavioral problems of children with autism disorder and parental pressures. The sample consisted of (65) mothers whose children ranged from (2-5 years). The results indicated that maternal exhaustion was related to both behavioral problems and maternal stress and not the use of negative coping strategies, and this indicates that behavioral problems of children with autism may contribute to maternal exhaustion, which in turn affects the ineffective use of stress management strategies that increase stress, the results also indicated the effect of exhaustion and fatigue on the quality of a comfortable life for families of autistic children.
- **(Baker, Seltzer, and Greenberg, 2011)** conducted a study aimed at identifying whether family adjustment reflects positively on children with autism spectrum disorder depending on the family system. The sample consisted of (149) families with children and adolescents with autism spectrum disorder whose ages ranged between (10-22) years during three years. Mothers responded to measures of family adaptation, the relationship between the mother and the adolescent child, the depressive symptoms they suffer from, and the behavior of their children. After three years, the results indicated that family adjustment was a factor affecting depression symptoms in mothers as well as behavioral problems shown by children, and it was not associated with the intelligence level of autistic children.
- **(Plumb, 2011)** also conducted a study aimed at identifying the relationship between social support, family resilience and parental pressures for (50) parents of children aged (6-12) years who were diagnosed with autism spectrum disorder, using three measures that measure study variables. The results of the study indicated that most families suffer from a high level of psychological pressure and that families with psychological resilience are associated with a low level of stress. The results also indicated that the perception of social support was associated with a high level of stress, as it may be that families experiencing stress are those who seek social support more than other families.

- **(Smith, Greenberg, Seltzer, and Hong, 2008)** conducted a study aimed at examining the positive actions taken by the family and their effect on changing autism symptoms and behavior problems. The sample consisted of (149) mothers and their teenage sons who have autism spectrum disorder. The warm parenting treatment by mothers and the praise they use when talking about their children was measured. The results indicated a strong correlation between warm parenting treatment and praise for the reduction in behavioral problems shown by the children.
- **(Harris, 2004)** also conducted a study aimed at identifying the relationship between behavioral problems in children with autism spectrum disorder during different stages of development and the psychological pressures that their mothers are exposed to. The study sample consisted of (60) mothers with autistic children aged (2-7) (Years), the results of the study indicated that two-thirds of the study individuals have a high level of feelings of stress, and there is a significant correlation between mothers' sense of stress and behavior disorders in their children with autism spectrum disorder.

Problem of the study:

people with disabilities in Jordan, like others around the world, are affected by the emergency conditions related to the spread of the Covid 19 pandemic, especially since people with disabilities may be affected more than others by many risks, which makes them more vulnerable to facing difficult challenges that are different from what they used to. Therefore, this study came to deal with the group of people with autism disorder being the most adherent to the daily routine that gives them the feeling of safety and psychological stability, especially with their forced absence, as a result of home quarantine, from schools or centers that were taking care of them, and it provides them with educational programs, skills training, behavior modification programs and communication with teachers, professionals and even colleagues in the school,

Questions of the study:

- 1- What is the level of family support provided to people with autism spectrum disorder in light of the Covid 19 pandemic from parents' point of view?
- 2- What is the level of psychological support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view?
- 3- What is the level of training support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view?
- 4- What is the level of recreational support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view?

- 5- Are there statistically significant differences at the level of significance ($\alpha = 0.05$) according to the interaction between the dimensions of family support (psychological, training and recreational), according to a variable (educational level, economic level, and age) for children with autism spectrum disorder?

Significance of the study:

- The importance of the current study comes from the novelty of the topic and the lack of studies on family support for people with autism spectrum disorder in light of the covid 19 pandemic.
- This study reveals the level of family support provided to people with autism spectrum disorder in light of the Covid 19 pandemic in Jordan.
- This study establishes awareness among families with autism spectrum disorder of the importance of providing an appropriate level of family support for their children with autism spectrum disorder, especially during the Covid 19 pandemic
- This study provides a tool to measure the level of family support provided to people with autism spectrum disorder in light of the Covid 19 pandemic
- This study deals with an important category of people with disabilities in Jordan, which is the group of people with autism spectrum disorder and their families

Limitations of the study:

- This study was restricted to parents of children with autism spectrum disorder registered in a number of special education centers in the capital Amman / Jordan for the academic year 2019-2020.
- The nature of the study procedures in terms of designing the study tool and its validity and stability, with the possibility of generalization only to groups similar to the study community.

Procedural definitions:

- Family support: is defined as the individual's awareness that he has a family that can provide adequate support to its children when they need, and that the children can use it when needed (Al-Lewis, 2012). It is defined, procedurally, by the degree that mothers receive on the current study tool.
- Autism spectrum disorder: It is a neurodevelopmental disorder characterized by deficiencies in communication and social interaction, and repetitive and stereotypical behavior patterns and certain interests that appear before the age of eight (Al-Zureikat, 2016). Procedurally, it is known as persons registered in private centers in the capital, Amman, and officially diagnosed with autism spectrum disorder.
- The Covid-19 pandemic, also known as the Coronavirus pandemic, is a currently ongoing global pandemic caused by the Coronavirus 2 associated with severe acute respiratory syndrome (SARS-

Cove-2). The disease first broke out in Wuhan, China, in early December 2019, the World Health Organization announced Officially, on January 30th, the outbreak of the virus constituted a public health emergency of international concern, and confirmed the disease's transformation into a pandemic on March 11th. More than 20 million cases of COVID-19 were reported in more than 188 countries and regions as of August 10, 2020, including more than 734, 000 deaths, in addition to the recovery of more than 12.2 million infected people (Wikipedia, 2020).

Methodology of the study.

The descriptive, analytical approach was adopted

Study population and sample:

the study population consisted of all mothers of children with autism spectrum disorder registered in special education centers in the capital, Amman, Jordan, and a representative sample of the study community was selected (86) mothers from (7) centers, who agreed to answer the study tool, and the study individuals may be distributed according to the variable (age) of the children (and educational level and economic status) of mothers, as in Table (1).

Table (1) Distribution of the study members according to the variable (age of the son), (the educational and economic level of the mother)

Variable	Variable levels	No.	Percentage
Son's age	Less than 6 years	28	32%
	From 6to 12	58	68%
Total		86	100%
Educational level of the mother	Secondary or less	30	35%
	Diploma	15	17%
	BA degree or higher	41	48%
Total		86	100%
Economic level of the mother	Less than 500 jd	50	58%
	From 500 to 1000 jd	20	23%
	More than 1000jd	16	19%
Total		86	100%

Study tool:

The researchers built the Family Support Scale according to the following steps:

- Reviewing the theoretical studies through what has been published online in interviews, articles and news due to the recentness of the Covid 19 pandemic and the lack of sufficient references related to

the pandemic, and previous studies related to family support for people with autism spectrum disorder were reviewed (such as Aaron, 2005; Plumb, 2011) Seymour, et al., 2012; Al-Khawalda, 2014; Dhamrah, 2011; Al-Lewisi, 2012; Bedarneh, 2012; Al-Ajamiya, 2014; Al-Safran, 2011; Al-Atoum, 2006).

- Based on previous readings, the researchers agreed to divide family support into three dimensions: psychological, training and recreational support.
- Drafting the items for each dimension of the Family Support Scale, and the scale contained in its initial form (35 items).
- The amendments proposed by the arbitrators were made. 6 items were deleted so that the number of items in the final version (29 items) they are divided as follows:
 - The psychological dimension, items 1 to 10
 - The training dimension, items 11 to 10
 - The recreational dimension, items 20 to 29

Validity and stability indications were extracted according to the following:

Validity of the tool:

- **Validity of the content:** the validity of the content of the scale was verified by presenting it to ten arbitrators specialized in special education to determine the extent to which each item of the scale measures the family support provided to people with autism spectrum disorder in light of the Covid 19 pandemic, in addition to determining the appropriateness of the wording of the items and taking their observations into account in developing Scale in terms of deletion, modification and addition. The criterion of (80%) was adopted as the percentage of agreement between the arbitrators on one item, and in light of this criterion (4 items) were deleted, and the wording was amended for some of them.
- **Validity of construction:** To verify the validity of the scale construction, the correlation coefficients between the item and the total degree of the dimension on the scale were extracted and Table (2) shows these parameters:

Table (2) Correlation coefficients between the item and the total degree of the dimension to which it belongs on the family support scale with its three dimensions (psychological, training, and recreational)

Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient
1	0.49**	9	0.72**	17	0.76**	25	0.51**
2	0.75**	10	0.52*	18	0.81**	26	0.50**
3	0.74**	11	0.69**	19	0.70**	27	0.44**

Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient	Item	Dimension Correlation Coefficient
4	0.72**	12	0.77**	20	0.74**	28	0.58**
5	0.72**	13	0.70**	21	0.66**	29	0.48**
6	0.74**	14	0.75**	22	0.48**		
7	0.68**	15	0.74**	23	0.49**		
8	0.77**	16	0.65**	24	0.53**		

It can be seen from the previous table that the values of the correlation coefficients between each item and the overall degree of the dimension to which they belong are positive, as they ranged between (0.44 and 0.81). All these coefficients are statistically significant at the level of significance ($\alpha = 0.05$).

Tool Stability:

To verify the stability of the tool, the researchers calculated the stability parameter using two method:

- **Split- Half Method:** The researchers applied the scale on (30) parents with autism spectrum disorder from outside the study sample, and the split-half reliability was calculated, and it reached (0.71). Table (2) shows the stability coefficients for the overall score and the dimensions calculated by the Split- Half Method
- **Internal consistency using the Cronbach Alpha equation;** Where the reliability coefficient of the total score (0.92). Table (3) shows the stability coefficients for the degree of dimensions calculated by the return method and the internal consistency method.

Table (3) Reliability coefficients calculated by both re-application and internal consistency of dimensions and overall score on the family support scale

Dimensions	Split- Half Method	Internal consistency
1 st dimension	0.86	0.87
2 nd dimension	0.88	0.91
3 rd dimension	0.81	0.87
Total	0.71	0.92

Scale correction:

The scale, using the Fifth Likert Scale, was corrected by giving the answers: (Always, often, sometimes, rarely, never). Scores (1, 2, 3, 4, 5) are given respectively, and a higher score indicates a higher level. The following correction was adopted:

(5-1=4) Then we find the length of the category (4-3=1.33), and based on the above, the level of the answers became as follows: -

First level: $1+1.33=2.33$ (1-2.33) high level

Second level: $2.33+1.33=3.67(2.34-3.67)$

Third level: $3.67+1.33=5(3.68-5)$ low level

Study procedures:

To achieve the objectives of the study and answer its questions, the following was carried out:

- Building the study tool and verifying its psychometric properties (validity and reliability)
- Obtaining a list of the names of special education centers in the capital, Amman, through the Ministry of Social Development
- Communicating with special education centers in Amman by phone, and approval of (7) centers was obtained to facilitate the task of researchers in order to apply the tool to parents of children with autism spectrum disorder
- Visiting the centers that agreed to participate in this study, and selecting the study sample from all mothers of students registered in these centers who were diagnosed with autism spectrum disorder and their number was 101 mothers.
- The centers participating in the study kindly provided us with the mothers' phone numbers, and we created a group on the WhatsApp application for mothers, where the objectives of the study and the method of answering the tool were explained and provided to us within a week by responding individually to ensure the privacy and confidentiality of information.
- 86 out of 101 mothers sent the tool after answering it, thus the recovery rate would have reached 85%
- Data were monitored and entered into the statistical program (SPSS) and statistically analyzed, the results presented and interpreted, and finally recommendations were made.

Statistical processors:

To answer the study questions, the following statistical methods were used:

- To answer the first, second, third and fourth questions, means and standard deviations were used.
- To answer the fifth question, the means, standard deviations and One Way-ANOVA analysis of the study members were calculated on the Scale of family support sources, according to the variable (educational and economic level of mothers) and (age of children).

Results.

Results related to the first question: "What is the level of family support for people with autism spectrum disorder in light of the Covid 19 pandemic from parents' point of view? To answer this question, the means and standard deviations of the responses of the study members were calculated on the three

dimensions of family support (psychological, training and recreational) in the family support tool for people with autism in light of the Covid 19 pandemic, as in Table (4).

Table (4): The means and standard deviations of the evaluation of the study sample on the dimensions of family support

Rank	Dimension	Mean	Standard deviation	Rate
1	Training support	3.51	0.70	Average
2	Recreational support	3.41	0.65	Average
3	Psychological support	3.12	0.67	Average
	Total	3.34	0.54	Average

It can be seen from Table (4) that the averages of the study individuals' estimates of the family Support Scale were average, as the mean was (3.34) with a standard deviation of (0.54). The training support dimension was in the first order, with a mean of (3.51) and a standard deviation of (0.70) with a moderate degree. Recreational support dimension is ranked second with a mean of (3.41) and a standard deviation of (0.65) with a medium degree, while in last rank was the psychological support dimension with a mean of (3.12) and a standard deviation of (0.67) with a medium degree.

- To answer the second question, what is the level of psychological support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view? The researchers calculated the means and standard deviations for each of the psychological support items, and Table 5 shows the results.

Table (5) the means and standard deviations of the study sample estimates on the psychological support dimension

No.	Item	Mean	Standard deviation	Rank	Rate
2	The family expresses their joy to their son when something good happens to him	3.95	.98	1	High
6	We encourage our son when he fails to perform a task.	3.84	.99	2	High
1	We help our son to feel that he is an important family member	3.83	1.02	3	High
5	We help our son to feel that he is a loved one in his family	3.72	1.09	4	High
3	We understand our son's negative feelings as a result of home quarantine	3.69	0.99	5	High
4	We told our son about the Covid 19 pandemic in a simple and convenient way.	3.24	0.91	6	Moderate
7	We accept our son's problems, no matter how severe they are	3.22	0.95	7	Moderate
9	We make video calls with the people our son loves (teacher, speech therapist, grandfather or grandmother... etc)	2.01	0.93	8	Low
10	We Set a daily time for deep breathing and relaxation exercises	1.93	0.85	9	Low
8	We Set a daily time to listen to quiet music	1.81	1.00	10	Low
	Psychological support	3.12	0.67		Moderate

It is evident from Table (5) that the item "The family expresses its happiness to its son when something good happens to him" has achieved the highest mean in the psychological support dimension with a mean of (3.95) and a standard deviation of (0.98) with a high degree, In the second order is the item "We encourage our son when he fails to perform a task..", for which the mean is (3.84) and the standard deviation is (0.99) with a high degree, while the item "A daily time has been set to listen to quiet music." In the last order, with a mean of (1.81) and a standard deviation of (1.00) with a low degree.

- To answer the third question. What is the level of training support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view? The researchers calculated the means and standard deviations for each of the training support items, and Table 5 shows the results.

Table (5) the means and standard deviations of the study sample estimates on the training support dimension

No.	Item	Mean	Standard deviation	Rank	Rate
12	Specific times for bathing and self-care have been determined	4.21	1.06	1	High
18	Mealtimes were set.	4.01	0.86	2	High
14	Sleep and wake times are set.	3.92	0.90	3	High
19	We contact the center to continue training online.	3.88	0.96	4	High
15	The daily to-do schedule is created in a clear and simple form in the form of a visual schedule using words and pictures	3.55	0.90	5	Moderate
17	Together with our son, we perform math lessons by playing with appropriate tools.	3.44	0.90	6	Moderate
13	We benefit from online training materials provided by professionals or free training courses that have become available recently.	3.21	1.08	7	Moderate
16	The daily schedule was posted in a clear place for our son and the rest of the family.	2.78	0.85	8	Moderate
11	Together with our son, we accomplish reading lessons through storyboards and other attractive means	2.62	0.98	9	Moderate
Training support		3.51	0.70	Moderate	10

It is evident from Table (5) that the item "Specific times for showering and self-care have been determined" achieved the highest mean in the training support dimension which is (4.21) and a standard deviation of (1.06) with a high degree. In the second order is the item "Determining meal times." For which the mean is (4.01) and the standard deviation is (0.86) with a high degree. Whereas, the item "We accomplish reading lessons with our son through storyboards and other attractive means" came last, with a mean of (2.62) and a standard deviation of (0.98) with a moderate degree.

- To answer the fourth question, what is the level of recreational support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' viewpoint? The researchers calculated the means and standard deviations for each of the recreational support items, and Table 6 illustrates the results.

Table (6): The means and standard deviations of the study sample estimates on the recreational support dimension

No.	Item	Mean	Standard deviation	Rank	Rate
22	We allow our son to use electronic games for a specific period of the day.	4.56	0.82	1	High
25	We share our son's drawing and coloring with the materials he prefers	4.39	0.83	2	High
29	We involve our son in making the deserts or the dishes he loves	4.20	0.93	3	High
26	We share with our son the formation of figures out of putty or clay	3.84	0.82	4	High
21	We do group exercises at home / inside the park	3.82	0.97	5	High
24	We share with our son the games he loves (cubes, puzzles, forming with colored sand... etc).	3.25	0.94	6	Moderate
28	Specific times for watching TV have been determined.	3.24	0.88	7	Moderate
20	We provided simple musical instruments for our son to play (percussion, wind instruments, etc.)	2.80	0.87	8	Low
27	A place has been found inside the home for sensory therapy (a place with low lighting, music and sensory toys such as a swing or a "trampoline")	2.02	0.95	9	Low
23	We share our son with the dramatic play through the dolls	1.98	0.80	10	Low
Recreational support		3.41	0.84	Moderate	

It is evident from Table (6) that the item "We allow our son to use electronic games for a specific period of the day" has achieved the highest mean in the recreational support dimension with a mean of (4.56) and a standard deviation of (0.82) with a high degree, followed in second order by the item "We share With our son drawing and coloring with the materials he prefers, for which the mean is (4.39) and a standard deviation of (0.83) with a high degree, while the item "We share our son with the dramatic play through the dolls" came in last order with a mean of (1.98) and a standard deviation of (0.80) with a low degree.

- To answer the fifth question, "Are there statistically significant differences at the level of significance ($\alpha = 0.05$) according to the interaction between the dimensions of family support (psychological, training and recreational), according to a variable (educational level, economic level, and age) for children with autism spectrum disorder? To answer this question, the means and standard

deviations of the study individuals were calculated on the Scale of family support sources, according to a variable (educational and economic level and age), as in Table (7).

Table (7): The means and standard deviations of the study individuals' estimates on the dimensions of family support, according to the variable (educational and economic level of mothers) and (age of children)

Dimension	Variable	Category	No.	Mean	Standard deviation
Psychological support	Educational level	Secondary school	30	3.61	0.79
		Diploma	15	3.32	0.43
		BA	41	3.51	0.64
	Economic status	Less than 500jd	50	3.48	0.77
		From 500to 1000 jd	20	3.62	0.58
		More than 1000jd	16	3.44	0.34
	Age	Less than 6 years	28	33.18	0.47
From 6to12		58	35.93	0.72	
Training support	Educational level	Secondary school	30	3.92	0.71
		Diploma	15	3.99	0.44
		BA	41	3.96	0.77
	Economic status	Less than 500jd	50	3.84	0.77
		From 500to 1000 jd	20	4.32	0.55
		More than 1000jd	16	3.78	0.40
	Age	Less than 6 years	28	41.50	0.74
From 6to12		58	44.37	0.67	
Recreational support	Educational level	Secondary school	30	3.92	0.68
		Diploma	15	3.97	0.62
		BA	41	3.73	0.60
	Economic status	Less than 500jd	50	3.72	0.68
		From 500to 1000 jd	20	4.04	0.58
		More than 1000jd	16	3.95	0.47
	Age	Less than 6 years	28	3.62	0.53
From 6to12		58	3.94	0.66	
Family support sources	Educational level	Secondary school	30	3.82	0.58
		Diploma	15	3.76	0.40
		BA	41	3.74	0.52
	Economic status	Less than 500jd	50	3.68	0.58
		From 500to 1000 jd	20	4.00	0.45
		More than 1000jd	16	3.72	0.28
	Age	Less than 6 years	28	107.21	0.46
From 6to12		58	115.76	0.53	

It is evident from Table (7) that there are apparent differences in the means of the study individuals on the total family support scale and its dimensions according to the educational level variable, the economic level and age, and to reveal the statistical significance of these differences at the level of significance ($\alpha = 0.05$), One Way-ANOVA was calculated as in Table (8).

Table (8) One Way-ANOVA analysis to reveal the significance of the differences in the means of the study individuals on the scale of family support according to the variable of educational and economic level and age

Source of variation	Sum of squares	Degree of Freedom (DF)	Squares' average	F- value	Statistical significance
Age	0.915	1	0.915	3.772	0.056
Educational level	0.306	2	0.153	0.631	0.535
Economic status	1.519	2	0.760	3.130	0.50
Age * educational level	0.009	2	0.005	0.019	0.982
Age * economic status	0.037	2	0.018	0.076	0.927
Educational level* economic status	1.728	4	0.432	1.780	0.142
Age * educational level * economic status	0.666	4	0.167	0.686	0.604
Error	17.717	68	0.243		
Total error	1318.381	86			
Corrected error	24.278	85			

It can be seen from Table (8) that there are no statistically significant differences at the level of significance ($\alpha = 0.05$) in the means of the study individuals on the scale of family support due to the variable of educational and economic level and age. The (F) value for the age variable was (3.772) at the level of significance (0.056), which is a non-statistically significant value. The (F) value for the educational level variable was (0.631) at the level of significance (0.535), which is a non-statistically significant value. The (F) value for the economic level variable (3.130) at a level of significance (0.50), which is a non-statistically significant value.

Discussion of results:

- **Results related to the first question:** What is the level of family support provided to people with autism spectrum disorder in light of the Covid 19 pandemic from parents' point of view? The level of family support was moderate, with a mean of (3.34) and a standard deviation of (0.52). This result can be explained by the fact that the Covid 19 pandemic came suddenly and quickly spread widely all over the world. This did not allow families of autistic children to be sufficiently prepared and trained to face the pandemic with regard to the requirements of caring for their children, especially since most

of the centers and institutions that deal with these children have become closed, so families had to take the main and unique role in training their children and continue their training sessions, treatment plans, etc. In most cases, the families made a lot of efforts to support their children and protect them from being negatively affected by home quarantine. However, many families have a lack of scientific information about the nature of this disorder, and they also lack adequate training to deal with these children, because these tasks were entrusted to professional and specialized centers and institutions, so the grade was medium and was not as high as was expected and hoped.

- **Results related to the second question:** What is the level of psychological support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view? The level of psychological support was moderate, with a mean of (3.41) and a standard deviation of (0.84). This can be explained by the fact that families have limited capabilities to psychologically deal with their children with autism spectrum disorder in normal cases, so what is the situation with the spread of the Covid 19 pandemic which is considered an emergency and exceptional circumstance?. These children are difficult to deal with due to the ambiguity and difficulty of this disorder on the one hand, and the difficult conditions of home quarantine due to the rapid spread of the pandemic on the other hand. Therefore, the level of psychological support varied from one item to another, as it is sometimes high, medium or low at other times. For example the mean was high in some items that do not need special scientific knowledge or special training, these items are originally suitable for dealing with all children, not only those with autism spectrum disorder, such as encouraging the child to perform well, while it was low in items that require awareness and specialization, such as acceptance of severe problems, relaxation exercises and deep breathing, and the item came at the lowest average of those related to listening to quiet music, and here religious convictions may affect that as many believe that music is forbidden, in addition to the lack of sufficient knowledge to choose the appropriate compositions, most of which are classical music that is foreign and distant from our Arab society in general and does not form part of its culture.
- **Results related to the third question:** What is the level of training support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view? The level of training support was of a medium degree, with an average of (3.51) and a standard deviation of (0.70). The high averages of 4 items can be explained by that these items focused on maintaining the routine of the autistic child, and the tendency of the members of this group to routine is not considered strange to families that have a son suffering from this disorder, and it can be easily applied because it is already, and in normal circumstances (far from the outbreak of the pandemic), programmed and present in the daily routine of these children, as sleeping, waking up, eating meals, bathing, etc. Therefore, the family did not find it difficult in this field, which led to a high average of the items it represents. while 5 other items were of a moderate degree because they need to train the

family to carry out specialized tasks such as teaching reading and mathematics using attractive methods, in addition to following training courses online which needs time and devotion that the family of these children may not possess, and between this increase in some items and the decrease in others, the overall result of this dimension was moderate

- **Results related to the fourth question:** What is the level of recreational support provided to children with autism spectrum disorder in light of the Covid 19 pandemic from their mothers' point of view? The level of recreational support was moderate, with a mean of (3.41) and a standard deviation of (0.84). This can be explained by taking into consideration the wide range and the large discrepancy between the averages of the items. The items that came with a high degree, such as using electronic games, participating in cooking, preparing sweets, practicing sports in addition to drawing and painting, all these activities do not require a special budget or specialized information required for the family, for example electronic games have become widespread and do not take any effort or time from the parents (take Considering its many disadvantages), In addition to the availability of smartphones, laptops or iPads in every home, this means that the son with autism spectrum disorder has an opportunity to play whatever electronic games he wants, and the parents' role comes to choose the appropriate games and determine when to use them. While the items related to playing musical instruments, providing space and tools for sensory processing, in addition to dramatic playing with cloth dolls, all came at a low grade. For example, "Dramatic play through cloth dolls" requires a clear effort from the family and reading appropriate stories for children to select the best, in addition to the need for cloth dolls, which are often available only to a few families. Based on the above, the mean of the recreational dimension came with a medium degree, as it included high and low averages that merged together to bring the result to a medium degree.
- **Results related to the fifth question:** "Are there statistically significant differences at the level of significance ($\alpha = 0.05$) according to the interaction between sources of family support (psychological, training and recreational) according to a variable (educational level, economic status, and age) for children with autism spectrum disorder? The results related to this question came without the presence of statistically significant differences according to all variables, and this can be explained by the fact that the family support provided to children with autism in light of the Covid 19 pandemic was not affected by the educational level of the mother or the economic status of the family. The family's concern for its children with autism spectrum disorder has nothing to do with the economic situation, especially since the largest number of family support items in its three dimensions does not require a special budget or high expenses, and the original implementation is within the home because of the quarantine imposed on everyone. There are no special costs or fees for clubs, centers, or others. Likewise, with regard to the educational level, the fields of knowledge and the search for information have become available to everyone via the internet, which has reduced mainly the

knowledge differences between the scientific certificates that mothers hold, taking into account that all of them can be considered with the same academic degree if we take into account that their specializations are not originally in the field of special education. Therefore, their knowledge about autism spectrum disorder and the most appropriate family support in light of the pandemic is almost the same, and with regard to the age variable for children, this can be explained by the fact that the family cares for its children, regardless of their age, as all of them have a special need and all have a need for their family support.

Recommendations.

- Conducting more studies related to the impact of the Covid 19 pandemic on people with disabilities, especially those with autism spectrum disorder.
- The relevant official and private authorities should work to provide families of children with autism spectrum disorder with sufficient information about family support, its importance and the mechanism for its implementation

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