

## Effect of Family Counseling Program on Psychological Stress and Self-Efficacy among Parents of Autistic Children

Nahla Abdallah Abd El-Tawab<sup>1</sup>, Sara Galal Mohammed<sup>2</sup> & Maha Arafat Mahmoud<sup>3</sup>

<sup>1</sup>Lecturer at Psychiatric Mental Health Nursing Department, Faculty of Nursing, Helwan University, Egypt

<sup>2</sup>Lecturer at Pediatric Nursing Department, Faculty of Nursing, Helwan University, Egypt

<sup>3</sup>Lecturer at Psychiatric Mental Health Nursing Department, Faculty of Nursing, Helwan University, Egypt

### Abstract

**Background:** Autism is a neurological disorder that affects social interaction and communication that can impede the daily functioning, educational and social attainments of autistic children. Psychological stress of parents of autistic children can negatively correlate with coping and social support. For families with autistic children, parental stress is significantly influenced by parental self-efficacy. Family counseling is the best solution for autistic children which can revitalize the role of family members. **The study aimed to** evaluate the effect of family counseling program on psychological stress and self-efficacy among parents of autistic children. **Design:** A quasi-experimental research design. **Setting:** This study was conducted at the Children Outpatient Clinics in El-Abbassia Hospital for mental health and addiction. **Sample:** A purposive sample of 60 parents of autistic children. **Tools:** A Structured Interviewing Questionnaire, Parental stress scale, and Parents' Perceived Self-efficacy Scale. **Results:** The study findings clarified that there were statistically significant positive correlations between parents' self-efficacy regarding care of autistic children, knowledge and reported practices post family counseling implementation. While there were a high statistically significant negative correlation between parents' self-efficacy regarding care of autistic children and stress level post family counseling program. **Conclusion:** Family counseling program had a positive effect on psychological stress and self-efficacy among parents of autistic children. **Recommendations:** Developing periodical family counseling and awareness programs for parents and family members having autistic children.

**Keywords:** *Autistic Children, Family Counseling, Parents, Psychological Stress & Self-Efficacy.*

### Introduction

Autism is a neurological disorder that affects social interaction and communication that can hinder the daily functioning, educational and social attainments of children with autism spectrum disorder (ASD). While some autistic children have certain degrees of ability that enable autistic children to live autonomous, fruitful lives with variable degrees of assistance, while others are seriously impacted and need care and support for the rest of their lives (Coury et al., 2020). The term spectrum refers to the wide range of symptoms, skills, and functioning disabilities. Autism is diagnosed based on observing the child behavior and speech in comparison to other children of the same age (Wang et al., 2020).

Parents of autistic children may be shocked by the diagnosis and may find it difficult to understand their child's diagnosis and identify suitable care options for their child. Parents of autistic children also confront difficulties both in the community and at home. Compared to parents of normal children, there are more likely to experience financial burden, poor physical and mental health and higher divorce rates. As well as, Parents of autistic children may have to travel great distances to receive therapy or pay for treatments out of pocket. As a result, certain parents might need to move their family or seek career shifts

to be able to pay for the services that are rendered (Brown et al., 2020).

Psychological stress of parents having autistic children can negatively correlate with coping and social support. Given the critical role that parents play in a child's development, knowledge of mental health issues and coping styles of parents can give a better understanding of the possible barriers in the change process (Miranda et al., 2019). Caring for autistic children can be more stressful for parents than caring for child with another neurodevelopmental disorder. Stress can have a detrimental effect on parents' mental health and the development of autistic children. So that, It is critical to determine what influences parental stress (Di Renzo et al., 2021).

Parental self-efficacy (PSE) plays a significant role for families of autistic children (Li et al., 2022). PSE has been associated with reduced discomfort, improved psychological stress in parents of autistic children (Stephenson et al., 2022). PSE is also an important aspect in child-rearing that influence on the parents' behavior and children development. Parents' ability to communicate and exhibit behavioral tendencies is influenced by parental self-efficacy level. Parents who are able to increase their self-efficacy will have greater confidence, engage with their children more actively, and have a favorable

impact on their cognitive, emotional, and behavioral development (**Hong & Liu, 2021**).

Family counseling is considered the best solution for autistic children who can revitalize the role of family members. Family support helps autistic children grow optimally (**Mujahid et al., 2022**). Moreover, family counseling has a beneficial effect on the development of autistic children because it includes; involvement of family members in counseling activities to establish close relationships between family members, helping family members to understand family dynamics, equipping family members to understand the character of children, developing mutual respect, a balanced spirit of autistic children's growth and development, and family therapy is as a structural approach to deal with family problems (**Sackett & Cook, 2021**).

The nurse plays an important role to assess the parental stress level and self-efficacy. Additionally, nurses can provide parents anticipatory counseling to prepare child adequately for increasing independence, instruct parents to keep channels of communication opened with child. Nurses also can help parents to overcome the challenges that prompt diagnosis and treatment of autism, providing parental guidance to address the child's needs through the family counseling programs. In addition to, nurses raise the parents' awareness about autism and impart to the parents all the necessary skills for their children (**Mandal et al., 2020**). Moreover, nurses need to be aware of such issues and the parent's ability to care for autistic child (**Brown et al., 2020**).

### Significance of the study

Around 1 in 100 children worldwide are affected by autism. Prevalence estimates increased over time and varied greatly within and across sociodemographic characteristics. Additionally, males are 4 times more to have autism than females (**Zeidan et al., 2022**). The Social Solidarity Ministry estimates that there are 800,000 autistic people in Egypt. Autism symptoms are present in one out of every 160 children, with men experiencing prevalence four times higher than that of women (**Gobrial et al., 2019**).

From the researchers' point of view, there is an urgent need for counseling programs for parents of autistic children who are unable to cope effectively because the parents of autistic children may experience more stress as a result of the special demands of child care. So that, family counseling program for parents of autistic children helps to reduce psychological stress and enhance self-efficacy of parents of autistic children.

### Aim of the study

The study aimed to evaluate the effect of family counseling program on psychological stress and self-efficacy among parents of autistic children through:

1. Assess the parents' knowledge and reported practices regarding care of autistic children.
2. Assess the parents' psychological stress and self-efficacy levels regarding care of autistic children pre/post family counseling program.
3. Design family counseling program for parents of autistic children.
4. Implement family counseling program for parents of autistic children.
5. Evaluate the effect of the family counseling program on psychological stress and self-efficacy among parents of autistic children.

### Research hypothesis:

Implementation of the family counseling program would have a positive effect on psychological stress and self-efficacy among parents of autistic children.

### Subject and Methods

#### Research Design:

A quasi-experimental research design was used to achieve the aim of this study.

#### Research Setting:

The study was conducted at the Children Outpatient Clinics in El-Abbassia Hospital for mental health and addiction.

#### Research Subjects:

A purposive sample of parents having autistic children were attending the previously mentioned setting and satisfying the following inclusion criteria:

- Children aged less than 12 years old.
- Both genders.
- Parents who did not attend any workshop or program about autism.

#### Sample size:

Using the following formula, the sample size was determined by modifying the test's power to 80%, the confidence interval to 95%, and the acceptable margin of error to 5%:

$$n = \frac{N \times p(1-p)}{\left[ \left[ N - 1 \times (d^2 \div z^2) \right] + p(1-p) \right]}$$

$N \times p(1-p)$	$= 72 \times (0.5 \times (1-0.5))$
$N-1$	$= (72-1)$
$d^2/z^2$	$= 0.0025 / 3.8416$
$p(1-p)$	$= 0.5 \times (1-0.5)$
$N$	$= 60.4 = 60$

$N$ = Community size

$z$ = Class standard corresponding to the level of significance equal to 0.95 and 1.96

$d$ = The error rate is equal to 0.05

$p$ = Ratio provides a neutral property = 0.50

Based on the above equation, the sample size is 60 parents participated in this study.

**Tools for Data Collection:**

Three tools were used to collect data as the following:

**Tool (I): A Structured Interviewing Questionnaire: (was used pre family counseling program)**

Structured Interviewing Questionnaire that was designed by the researchers after reviewing the current available literature and was written in simple Arabic language to suit level of understanding of parents of autistic children to assess the following:

**Part I: Characteristics of children** namely; age, gender, ranking, place of residence and educational level.

**Part II: Characteristics of parents** namely; age, educational level, marital status, occupation, family income, family size, number of rooms and type of family.

**Part III: Autistic children past medical history** such as onset, symptoms and treatment.

**Part IV: Parents' knowledge regarding care of autistic children: (was used pre/post family counseling program)**

This part was concerned with assessment of parents' knowledge regarding care of autistic children such as definition, causes, signs and symptoms, types, diagnosis, treatment and complications. Related to parents' knowledge assessment pre & post family counseling program, a correct answer scored one and incorrect answer scored zero, a total of  $\geq 60\%$  was considered satisfactory knowledge and  $< 60\%$  was considered unsatisfactory.

**Part V: Parents' reported practices regarding care of autistic children (was used pre/post family counseling program)**

This tool was concerned with assessment of parents' reported practices regarding care of autistic children such as developing motor skills, personal care skills, eating skills, drinking skills, using the bathroom, feeding problem coping skills, skills to overcome sleeping problems, skills of providing a safe environment for the child at home. Each statement received a score of either "done" or "not done." After summing up all completed reported practices and converting into a percentage, the final score was as follows: incompetent reported practices were  $< 60\%$  & competent reported practices were  $\geq 60\%$ .

**Tool (II): Parental stress scale (was used pre/post family counseling program)**

It is a self-reported scale developed by (Berry & Jones, 1995) then adapted by the researchers and validated. This scale is used to assess stressor level of parents of autistic children and contains 18 items representing positive themes of parenthood (emotional benefits, self-enrichment and personal development) and negative components (demands on resources, opportunity costs and restrictions). The

scale items were scored 1,2,3,4, and 5 regarding the responses, they are as follows: strongly disagree, disagree, uncertain, agree and strongly agree. The items' scores of each part were added up, and the result was divided by the total number of items to determine the mean score for the part. These scores were converted into a percentage score. Score 1-22 is no stressor level, score 23-45 is mild stressors level, score 46-68 is moderate stressors level and score 69-90 is severe stressors level.

**Tool (III): Parents' Perceived Self-efficacy Scale (was used pre/post family counseling program)**

Parents' Perceived Self-efficacy Scale is a global standardized scale which was developed by (Johnston & Mach, 1989) then adapted by the researchers and validated. This scale is used to identify the perceived self-efficacy of parents of autistic children, consisted of (17) items. A five-point Likert scale was adapted to correct the study scale, by giving each of its statement one degree out of its five degrees (strongly agree, agree, neutral, disagree, strongly disagree), and it is numerically represented (1, 2, 3, 4, 5) to the scale items with a positive trend. As for the negative trend items, the scores have been reversed (1, 2, 3, 4, 5). These scores were converted into a percentage score. Score  $\leq 60\%$  is low self-efficacy, score 61-75% is average self-efficacy and score  $> 75\%$  is high self-efficacy.

**Content Validity and Reliability:**

The revision of the tools for relevance, comprehensiveness, understanding clarity, and applicability was done by a panel of 3 experts in the field of pediatric nursing and psychiatric mental health nursing to assess the content validity of the tools and the necessary modifications were done accordingly. Internal consistency and reliability were performed by using Cronbach's alpha- coefficient test.

Scales	Cronbach's Alpha
Parents' knowledge	0.788
Parents' reported practices	0.894
Parental stress scale	0.775
Parents' perceived self-efficacy scale	0.778

**Pilot Study:**

It was carried out including 10% (6) of the study subjects at the previously mentioned setting to test the clarity, efficiency and applicability of the tools and then the necessary modifications of the tools were done accordingly. Parents under pilot study were later excluded from the sample.

**Ethical Considerations**

Prior to study conduction, an ethical approval was obtained from the Scientific Research Ethical Committee of Faculty of Nursing, Helwan University granted ethical approval with the code number (36-3/10/2023) the researchers clarified the purpose of the study to the parents who were involved in the study, confidentiality of the gathered data and results were secured, and parents' oral informed consent were obtained.

**Field Work**

Data collection, program design and implementation were carried out from the beginning of October 2023 to the end of December 2023. Data collection (filling out the study tools) and implementation were conducted at the waiting area of the selected study settings in the days (Saturday and Tuesday) at the morning shift.

The researchers first met with the parents and their autistic children attending the selected study setting. The researchers then introduced themselves to the parents and simply clarified the aim of the study to the parents who accept to participate in the study, and then the parents were interviewed individually using the previously mentioned tools.

The researchers assessed the studied parents' knowledge, their reported practices, parental stress and self-efficacy regarding care of autistic children before and after the family counseling program. Also, the researchers evaluated the effect of family counseling program on parental stress and self-efficacy among parents of autistic children.

Questions were in the form of multiple choices and closed ended questions. The time consumed to fill in the questionnaire for each parent included in the study was 30-45 minutes.

The family counseling program regarding care of autistic children was divided into four phases: Assessment, planning, implementation, and evaluation.

**Assessment phase: (the first phase):**

At the first week, the researchers interviewed each parent individually for about 30-45 minutes to fill out the study tools. First, the researchers asked the studied parents if they had any questions to answer them. Afterwards, the researchers analyzed the results of filled-out questionnaire to assess the parents' needs and knowledge deficit regarding autism.

**Planning phase (the second phase):**

According to the initial assessment, and after reviewing the relevant literature, the content of the family counseling program was designed based on the actual educational needs assessment of the studied parents. The content of the family counseling program was written in a simple Arabic language.

Furthermore, family counseling program met the parents' needs and their level of understanding.

The family counseling program booklet is used to improve the knowledge, reported practices, parental stress and self-efficacy of the parents of autistic children regarding definition, causes, signs and symptoms, diagnosis and treatment of autism. As well as, psychological and parental stress, its effects, self-efficacy, introduction of family counseling and its important skills in dealing with stressors, problems and different needed skills of life, social relations, attention, concentration and communication. By utilizing a range of instructional techniques, such as brainstorming, group discussions, and lectures. Furthermore using other audiovisual tools such sharing pictures, posters, and videos. The family counseling program booklet was developed to be a guide and a reference for the parents of autistic children and distributed on the parents.

**Implementation phase (the third phase):**

The family counseling program was designed to provide the parents with knowledge, skills and positive attitude toward the effect of family counseling program on psychological stress and self-efficacy among parents of autistic children. It was carried out through nine sessions that were divided into 3 sessions for theoretical parts and 6 sessions for practical parts over three months with one hour for each session. The total duration of all sessions was 9 hours. The parents of autistic children were motivated and rewarded for their active participation during family counseling program.

The content of the family counseling program was covering the parents' knowledge regarding care of the autistic children as definition, causes, signs and symptoms, diagnosis and treatment of autism. Additionally, parental stress and its effects, self-efficacy, introduction of family counseling and its important skills in dealing with stressors, problems and different needed skills of life, social relations, attention, concentration and communication. The booklet was distributed on the studied parents.

**Evaluation phase (the fourth phase):**

It was applied through pre/post the family counseling program implementation by using the same study tools in order to appraise differences, similarities, areas of improvement, as well as defects. It was also used to assess level of parents' knowledge, reported practices, parental stress and self-efficacy regarding care of autistic children pre and post family counseling program. At the end of the three months post implementation was carried out using the same tools.

**Administrative Design:**

An official permission was obtained from the director of El-Abbassia Hospital for mental health and addiction to conduct the current study.

**Statistical analysis:**

Data entry and statistical analysis were done using Statistical Package for Social Sciences (SPSS) version 24. Descriptive statistics were used to present

the data, with the mean and standard deviation for the quantitative variables and frequencies and percentages for the qualitative variables. The qualitative variables were compared using the chi-square test ( $X^2$ ). The interrelationships between ranking quantitative variables were evaluated using Pearson rank correlation coefficient analysis, with a p-value of <0.05 being considered significant.

**Results**

**Table (1): Frequency and percentage distribution of the studied children regarding to their demographic characteristics (n= 60)**

Items	Number (No)	Percentage (%)
<b>Age of the child in years</b>		
3: <6	3	5
6: <9	43	<b>71.7</b>
9: ≤12	14	23.3
<b>mean ± S.D.</b>	7.33±1.548	
<b>Gender</b>		
Male	52	<b>86.7</b>
Female	8	13.3
<b>Ranking</b>		
First	18	<b>30</b>
Second	15	25
Third	11	18.3
Fourth	5	8.4
Others	11	18.3
<b>Place of residence</b>		
Urban	38	<b>63.3</b>
Rural	22	36.7
<b>Educational level</b>		
Kindergarten	14	23.3
Primary school	7	11.7
Not admitted school	39	<b>65</b>

**Table (2): Frequency and percentage distribution of the studied parents according to their demographic characteristics (n= 60)**

Items	No	%
<b>Age in years</b>		
< 20	7	11.7
20:<30	4	6.7
30: ≤40	41	<b>68.3</b>
> 40	8	13.3
<b>mean ± S.D.</b>	31.75 ± 10.213	
<b>Educational level</b>		
Illiterate	3	5
Diploma	28	<b>46.7</b>
Bachelor's degree	18	30
Others	11	18.3
<b>Marital status of mother</b>		
Married	57	<b>95</b>
Divorced	3	5
<b>Occupation</b>		
Work	22	36.7
Don't work	38	<b>63.3</b>

Items	No	%
<b>Family income</b>		
Enough	20	33.3
Not enough	40	<b>66.7</b>
<b>Family size</b>		
< 3 persons	7	11.7
3: < 6 persons	47	<b>78.3</b>
6: ≤9 persons	6	10
<b>Number of rooms</b>		
One	5	8.3
2:3	52	<b>86.7</b>
More than 3	3	5
<b>Type of family</b>		
Nuclear	30	50
Extended	30	50

**Table (3): Frequency and percentage distribution of the studied children according to their past medical history (n= 60)**

Items	No	%
There is no positive family history of autism	60	<b>100</b>
There is a consanguinity relationship between parents.	32	<b>53.3</b>
<b>How old was the child when he/she diagnosed with autism?</b>		
1:5 years	49	<b>81.7</b>
> 5 years	11	18.3
<b>How long does a child has autism?</b>		
Less than one year	3	5
1:5 years	30	<b>50</b>
> 5 years	18	30
Do not know	9	15
<b>How was the child's development during the first 3 years of his/her life?</b>		
Normal	30	<b>50</b>
Abnormal	23	38.3
Normal then stop	7	11.7
<b>What are the symptoms that lead to detection of the disease?</b>		
<b>Communication with others</b>		
Letters and words	4	6.7
Uses signs and gestures	27	45
The child does not communicate permanently	29	<b>48.3</b>
<b>Social interaction</b>		
Lack of interaction with others	22	36.7
The child does not interact with others	38	<b>63.3</b>
<b>Behavioral problems</b>		
Anger and screaming	31	<b>51.7</b>
Aggressive	6	10
Repetitive movements	10	16.7
Isolated from others	13	21.6
<b>Nutritional problems</b>		
Difficulty swallowing and chewing	19	31.7
Eating at inconsistent times	16	26.6
No problem	21	<b>35</b>
Others	4	6.7
<b>Bowel and bladder control</b>		
Yes	49	<b>81.7</b>
No	11	18.3
<b>In order for the child to develop personal care skills, he/she needs:</b>		
Total help	17	28.3
Partial help	31	<b>51.7</b>
The child does not need help	12	20

Items	No	%
<b>What kind of treatment does the child receives?</b>		
Improving speech and language	19	31.7
Behavior modification	3	5
Improving skills	11	18.3
All of the above	27	45

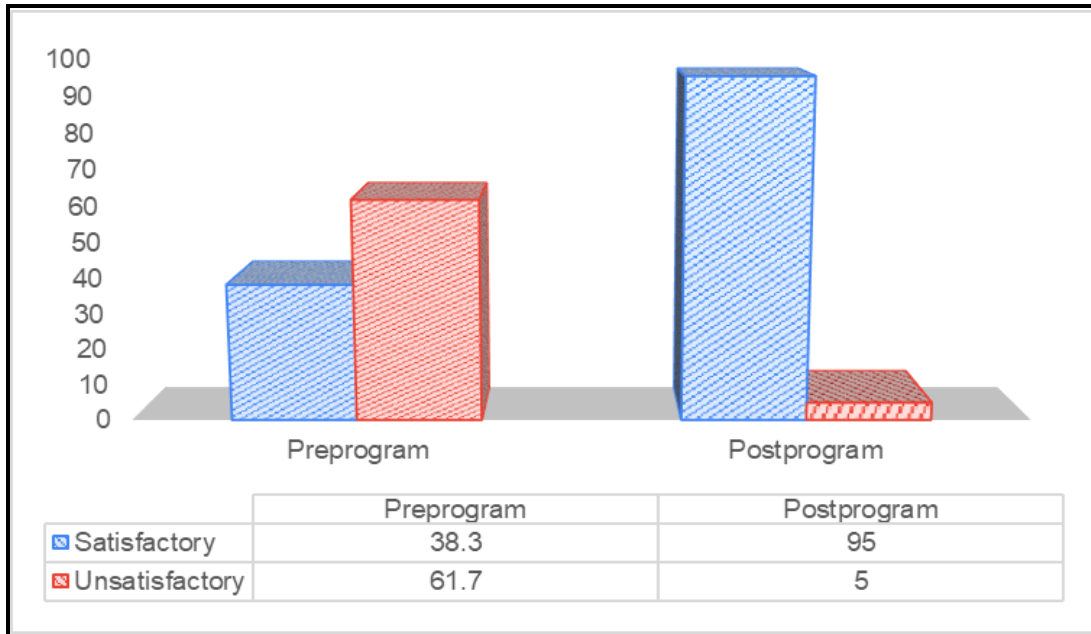


Figure (1): Comparison of parents' total knowledge regarding care of autistic children pre/post family counseling program (n= 60)

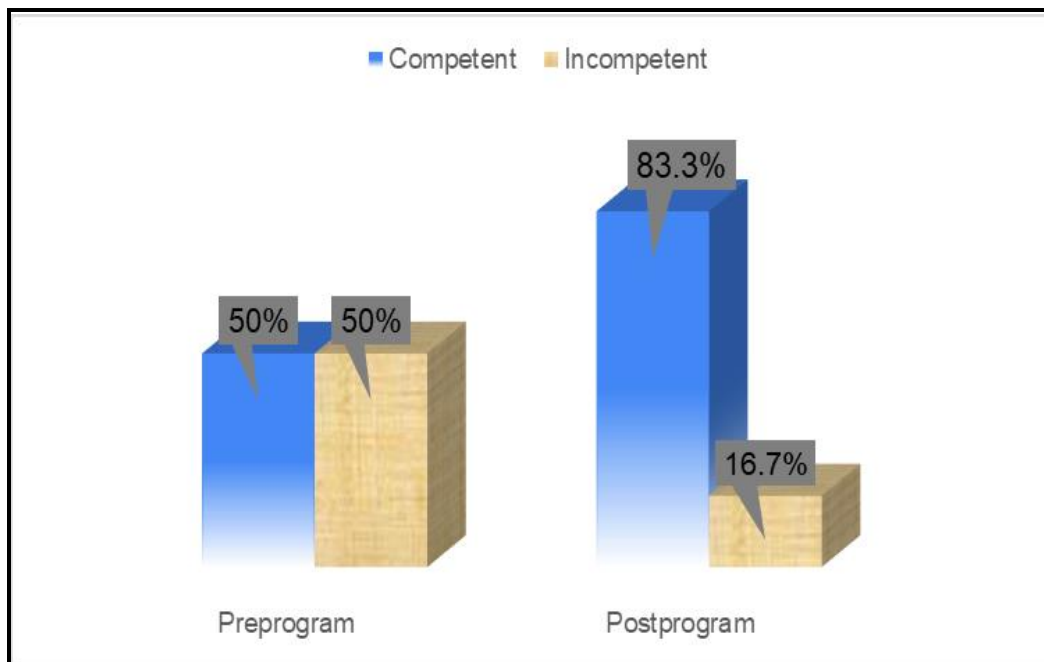


Figure (2): Comparison of parents' total reported practices regarding care of autistic children pre/post family counseling program (n= 60)

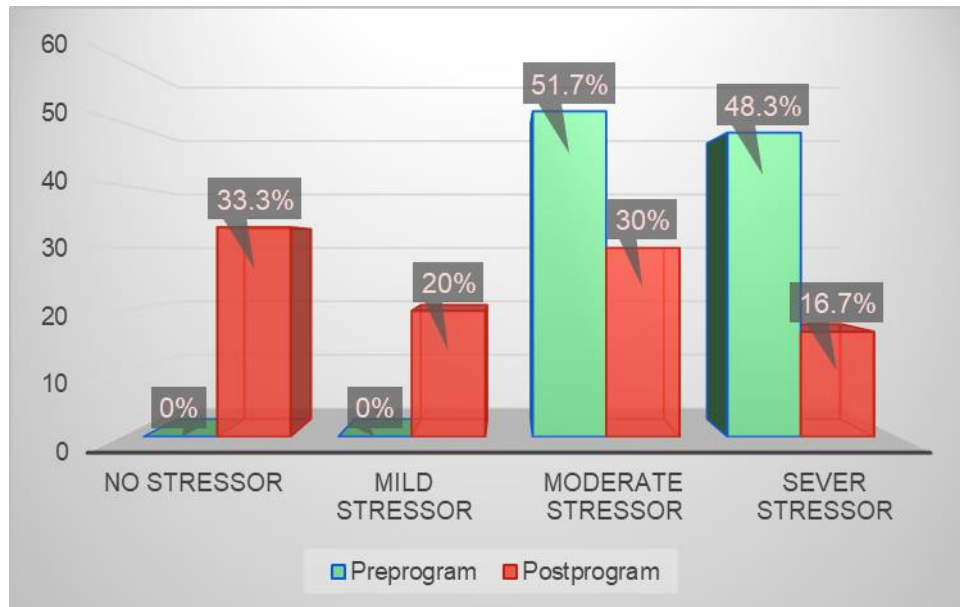


Figure (3): Comparison of parents' total stress level regarding care of autistic children pre/post family counseling program (n= 60)

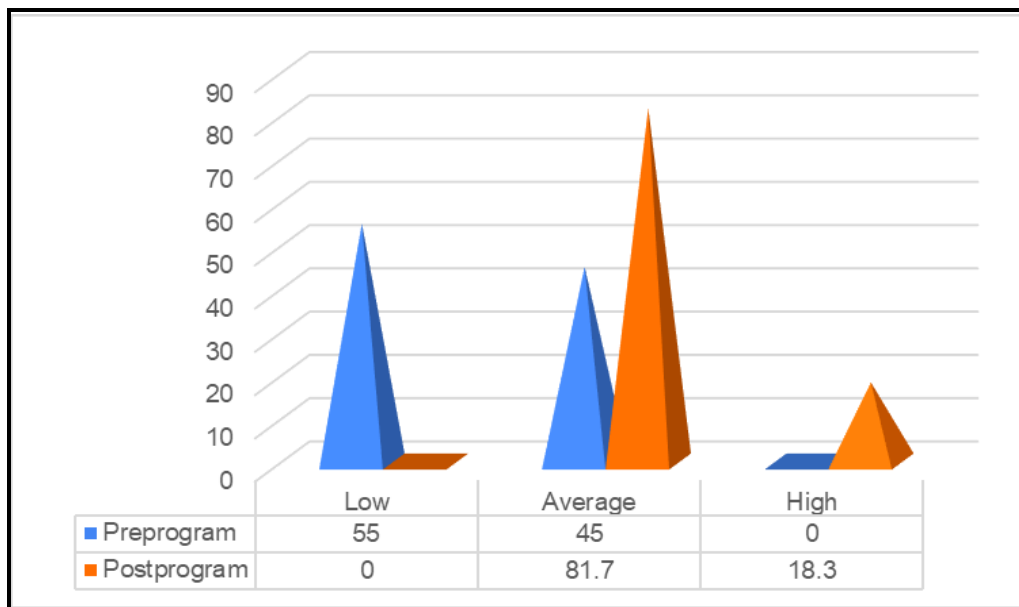


Figure (4): Comparison of parents' total self-efficacy regarding care of autistic children pre/post family counseling program (n= 60)

Table (4): Correlations between parents' self-efficacy regarding care of autistic children and their knowledge, reported practices and stress post family counseling program (n= 60)

Items		Parental self-efficacy
Parents Knowledge	R	0.420
	P	0.02 *
Parents Reported Practices	R	0.731
	P	0.003 *
Parental Stress	R	-0.853



**Table (1):** Presents that 71.7% of the studied children aged from 6:<9 years, 86.7% of them were males and 30% of them were the first ranking among their siblings. Regarding place of residence, 63.3% of them were living in urban areas. As well, 65% of them did not admit school.

**Table (2):** Shows that 68.3% of the studied parents aged from 30: ≤40 years with a mean age  $31.75 \pm 10.21$  years. Regarding educational level, 46.7% of them were having diploma. As well, 95% of them were married and 63.3% of them did not work. Concerning family income, 66.7% of them did not have enough income. As well, 78.3% of them had 3:<6 members in their families and 86.7% of them had 2:3 rooms. As well, 50% of the families were either central or extended.

**Table (3):** Clarifies that 100% of the studied children did not have positive family history of autism and 53.3% of them had a consanguinity relationship between parents. Concerning medical history of them, 81.7% of the children were diagnosed with autism at age 1:5 years, 50% of them had the disease from 1:5 years and had normal development during the first 3 years of life. Regarding symptoms that led to detection of the disease, 48.3% of the studied children did not communicate permanently, 63.3% of them did not interact with others, 51.7% of them had anger and screaming as behavioral problems, 35% of them did not have nutritional problems and 81.7% of them were have bowel and bladder control and 51.7% of them need partial help to develop personal care skills. Concerning kind of treatment the child receives, 45% of the studied children received many treatments as improving speech and language, behavior modification and improving skills.

**Figure (1):** Clarifies that 95% of the studied parents had satisfactory total knowledge regarding care of autistic children post family counseling program implementation, compared to only 38.3% of parents had satisfactory total knowledge pre family counseling program implementation.

**Figure (2):** Illustrates that 83.3% of the studied parents had competent total reported practices regarding care of autistic children post family counseling program implementation, compared to 50% of parents had competent total reported practices pre family counseling program implementation.

**Figure (3):** Shows that 33.3% and 30% of the studied parents had no stressor and moderate stressor regarding care of autistic children post family counseling program implementation respectively, compared to 51.7% and 48.3% of parents had moderate and sever stressor level pre family counseling program implementation respectively.

**Figure (4):** Illustrates that 55% and 45% of the studied parents had low and average total self-

efficacy regarding care of autistic children pre family counseling program implementation respectively, improved to 81.7% and 18.3% of parents had average and high total self-efficacy post family counseling program implementation respectively.

**Table (4):** Reveals that there were statistically significant positive correlations between parents' self-efficacy regarding care of autistic children, knowledge and reported practices post family counseling program implementation with (p value= 0.02 & 0.003). While, there were a high statistically significant negative correlation between parents' self-efficacy regarding care of autistic children and stress level with (p value= 0.000).

### Discussion

Autism is a developmental disorder that common among children, who possess a severe impairment in their ability to interact with others, communicate socially, and engages in limited or repetitive activities, interests, or conduct (Muhammad et al., 2020). Caring for autistic children can be more stressful for parents than caring a child with another neurodevelopmental disorder. Stress can have a detrimental effect on parents' mental health and the development of autistic children (Di Renzo et al., 2021). Additionally, PSE is a significant and adjustable component in parental stress for families of autistic children (Strauss et al., 2022).

Regarding the studied children demographic characteristics. The current study revealed that more than two thirds of the studied children were between the ages of 6: <9 years and the majority of the studied children were males. These findings were congruent with study of Schwartzman et al., (2022) who studied "Resilience Intervention for Parents of Children with Autism" and reported that the average age of children was 6: <9 years and the majority of autistic children were males.

This present study also came in line with Maenner et al., (2020) who studied "Prevalence of Autism Spectrum Disorder among Children Aged 8 Years Autism and Developmental Disabilities Monitoring Network" and found that boys make up four times the ratio compared to girls of autism. From the researchers' point of view, this finding may be due to elevated rates of autism in males in a general population and there is a recognized male predominance in autism and the physical differences between males and females.

Regarding child's birth order, the present study illustrated that, about one third of the studied children were the first ranking among their siblings. The present study is incompatible with Khudhair & Jassim, (2018) who studied "The Knowledge of Autistic Children's Mothers Regarding Autism in

Basra city" and found that the second child has a higher chance of having autism than the first child. From the researchers' point of view, this finding may be due to the birth order between siblings is a very important factor that affects the occurrence of autism.

Regarding place of residence, more than half of the studied children were living in urban areas. These results came in the same line with **Mohamed et al., (2020)** who studied "Knowledge Assessment among Autistic Children's Parents Regarding Autism Spectrum Disorder" and found that more than three quarters of the parents of autistic children were from urban area. From the researchers' point of view, this finding may be because of the environmental factors that lead to autism such as exposure to hazardous air pollution during pregnancy and early childhood may increase risk for autism, while hazardous air pollutants more in urban areas.

Regarding autistic children' level of education, the present study clarified that more than half of the studied children did not admit school. From the researchers' point of view, this finding may be due to the abilities and the educational needs of autistic children vary and can evolve over time. While some autistic children can live independently, others have significant difficulties and need life-long care and support.

Regarding parents demographic characteristics, the current study showed that more than two thirds of the studied parents were aged from 30:≤40 years with a mean age  $31.75 \pm 10.21$  years. These results were in accordance with **Talaat et al., (2023)** who studied "Assessment of Knowledge, Attitude and Practices of Parents having Children with Autism" and illustrated that the mean age of parents of autistic children ( $33.23 \pm 4.95$ ), and more than half of them were in age group  $30 \leq 35$  years old. From the researchers' point of view, this finding reflected that parents are mature enough at this age to be responsible for providing care for their children and several studies have linked advanced maternal and the possibility of more genetic changes in older fathers' and mothers' gametes is one factor linking parental age to an increased risk of autism.

Regarding educational level, more than one third of the studied parents were having diploma. This finding was supported by **Hoang et al., (2019)** who conducted a study on "Prevalence of Autism Spectrum Disorders and their Relation to Selected Socio demographic Factors among Children Aged 18–30 Months in Northern Vietnam, 2017" and found that most of the parents had completed secondary school education or higher. From the researchers' point of view, this finding may be due to that the mothers of autistic children spend most of time at

home for providing care to their children to meet their needs and have less time to work.

Concerning family income, more than two thirds of the studied parents did not have enough income. As well, half of the families were either nuclear or extended. These findings were contradicted with **Oneib et al., (2022)** who conducted a study of "The Socio-demographic and Clinical Profile of Children with an Autism Spectrum Disorder in the Oriental Region of Morocco" and found that the family income was enough to the family needs. From the researchers' point of view, these findings may be because of parents spending a lot of money to care for their autistic children and the majority of mothers do not work to support the family financially.

As well, more than three quarters of the studied parents had 3:<6 family members and the majority of the studied parents had 2:3 rooms. These results were in accordance with **Talaat et al., (2023)** who found that more than half of the studied sample had family members ranged from 4 to 5 persons in the family.

Regarding the studied children past medical history, the present study findings were supported by **Abu El-Soud et al., (2020)** who studied "Assessment of Knowledge, Strains and Coping of the Family Care Givers Having Autistic Children" and revealed that the majority of the studied caregivers had negative family history of autism. While this finding is disagreed with **Alotaibi et al., (2021)** who conduct the study entitled "Socio-demographic, Clinical Characteristics, and Service Utilization of Young Children Diagnosed with Autism Spectrum Disorder at a Research Center in Saudi Arabia" and found that the most common positive family history that was recorded involved intellectual disability, then speech delay.

In addition to, the current study clarified that more than half of the studied children had a consanguinity relationship between parents. The reason for the consanguinity rate seen in this study could be that most of parents were relatives and came from villages of different governorates to live in Cairo and the consanguineous marriage play as important factor in causing autism. This result came in line with **Alshaigi, (2020)** who studied "Stigmatization among Parents of Autism Spectrum Disorder Children in Riyadh, Saudi Arabia " and found that the majority of the parents were consanguineous.

Concerning the studied children medical history , half of the children were have the disease from 1:<5 years and had normal development during the first 3 years of life. This finding was in accordance with **Nguyen et al., (2021)** who carry out the study of "Clinical Characteristics and Associated Socio-demographic Factors of Autism Spectrum Disorder in Vietnamese Children" and discovered that the first aberrant sign's

average age was 24.8 months. From the researchers' point of view, these findings may be because of the physicians can diagnose autism during early childhood and the parents can observe children alterations in social interaction, attention and concentration, speech delays, and verbal and nonverbal communication. Additionally, prior to this age, social communication problems might exist, but distinctive behaviors and limitations might not show themselves until the child reaches three years old.

Concerning the age of diagnosis, more than three quarters of the studied children were diagnosed with autism at age 1:<5 years. The current study results were supported by **Talaat et al., (2023)** who reported that the mean age in which the children diagnosed with autism was  $3.07 \pm 1.17$  years. From the researchers' point of view, this finding may have been due to difficult diagnosis of autism before the age of 12 months and the importance of early detection that help parents in planning a proper and efficient intervention plan.

Regarding symptoms that lead to detection of the disease, nearly half of the studied children did not communicate permanently, more than half of the children did not interact with others and have anger and screaming as behavioral problems, more than one third of the children did not have nutritional problems and the majority of the children had bowel and bladder control and more than half of the children needed partial help to develop personal care skills.

Concerning kind of treatment the child received, more than two fifths of the studied children received many treatments as improving speech and language, behavior modification and improving skills. This may be due to parental educational level that was associated with early detection of problem and spending a lot of money to treat their children. These findings were agreed with study findings of **Oneib et al., (2022)** who reported that language disorders (absence or delay) were the primary reason for consultation, followed by stereotyping and social disengagement. Speech and language development, particularly when it comes to parents confusing language with social interaction also most three quarters of the children in the study received multidisciplinary care.

Regarding parents' total knowledge regarding care of autistic children pre/post family counseling program, the current study clarified that the majority of the studied parents had satisfactory total knowledge regarding care of autistic children post family counseling implementation, compared to more than one third of parents had satisfactory total knowledge pre family counseling program implementation. These finding was agreed with study of **Mofreh et al., (2023)** who studied "The Effect of Psychosocial

Program on Stress and Coping Strategies among Parents Having Children with Autism Spectrum Disorder" and indicated that the highest percentage of parents had an average level of knowledge about autism before implementation of the program. Meanwhile, after implementation of the program the majority of parents had a good level of knowledge about autism. From the researchers' point of view, these findings may have been due to the effect of the program that lead to parents were well knowledgeable about autism.

Concerning parents' total reported practices regarding care of autistic children pre/post family counseling program, the present study illustrated that the majority of the studied parents had competent total reported practices regarding care of autistic children post family counseling program implementation, compared to half of parents had competent total reported practices pre family counseling program implementation. These findings were contradiction with **Hutton, (2018)** who conducted a study about "Autism Spectrum Disorders and Diet in Children" and found that 65% of parents had unsatisfactory practices regarding caring of their children with autism. From the researchers' point of view, these differences may have been due to the effect of the program that leads to raising parents' awareness about autism. The implementation of family counseling program can improve care, social and communication skills, and wellbeing of parents and their autistic children.

Regarding parents' total stress regarding care of autistic children pre/post family counseling program, the current study illustrated that one third and nearly one third of the studied parents had no stressor and moderate stressor regarding care of autistic children post family counseling program implementation respectively, compared to more than half and nearly half of parents have moderate and severe stressor level pre family counseling program implementation respectively. This finding was agreed with the study of **Mofreh et al., (2023)** who showed that the stress scores are reduced after intervention for both parents and stress came down significantly.

From the researchers' point of view, these findings may have been because of discussing and sharing symptoms of the disease with the different physicians to reach a correct diagnosis and dealing with unfamiliar behavior compared to siblings or other children in the same age group, but post family counseling program implementation the parents' level of knowledge and reported practices improved and become more knowledgeable regarding how to deal with children problems that lead to decrease levels of parental stress.

Regarding to parents' total self-efficacy regarding care of autistic children pre/post family counseling program, the current study illustrated that more than half and nearly half of the studied parents had low and average total self-efficacy regarding care of autistic children pre family counseling program implementation respectively, improved to the majority and nearly one fifth of parents had average and high total self-efficacy post family counseling program implementation respectively.

These findings were similar to those obtained by **Higgins, et al., (2022)** who studied "Adaptation of Parents Raising a Child with ASD: The Role of Positive Perceptions, Coping, Self-efficacy, and Social Support" and reported that the positive contribution of parents' self-efficacy that represent possible targets in clinical service provision and increasing PSE for ensuring that parents feel confident in their role. Parenting their child with ASD is likely to be achieved directly and indirectly through skills training interventions. From the researchers' point of view, these findings may have been due to gaining sufficient skills through family counseling program that make parents more engaged in interacting with the children and positively affecting children's behavioral, emotional and cognitive development.

Regarding to correlations between parents' self-efficacy regarding care of autistic children and their knowledge, reported practices and stress post family counseling program, the findings illustrated that there were statistically significant positive correlations between parents' self-efficacy regarding care of autistic children, knowledge and reported practices post family counseling implementation. While, there were a high statistically significant negative correlation between parents' self-efficacy regarding care of autistic children and stress level.

From the researchers' point of view, these findings may have been due to gaining information and obtaining life skills about autism can enhance children and their parents' mental and physical health. Therefore, parents maintain, develop, and enhance chances for their children to engage in social interactions and foster their life so that, enhancing parents' self-efficacy to prevent harm and neglect as well as challenging behavior. Additionally, their participation in the family counseling program focused on their requirements and transferring knowledge and skills to decline the parental stress and improve self-efficacy.

## Conclusion

The current study concluded that family counseling program had a positive effect on psychological stress and self-efficacy among parents of autistic children.

The majority of the studied parents had satisfactory total knowledge regarding care of autistic children post family counseling implementation, compared to more than one third of parents had satisfactory total knowledge pre family counseling program implementation. The majority of the studied parents had competent total reported practices regarding care of autistic children post family counseling program implementation, compared to half of parents had competent total reported practices pre family counseling program implementation. Additionally, there were statistically significant positive correlations between parents' self-efficacy regarding care of autistic children, knowledge and reported practices post family counseling implementation. While, there were a high statistically significant negative correlation between parents' self-efficacy regarding care of autistic children and stress level post family counseling program.

## Recommendations

**In the light of the current study findings; the following recommendations are suggested:**

- Developing periodical family counseling and awareness programs for parents and family members of autistic children.
- Parental involvement in interventions is essential to maintain therapeutic gains for autistic children.
- Enhancing the current state of public services provided to autistic children.
- Further research is required involving a larger study sample of parents and their autistic children at different pediatric health care settings.

## References

- **Abu El-Soud, S., Ouda, W., Abdou, A., El Sayed, S., & Mohamed, M. (2020):** Assessment of Knowledge, Strains and Coping of the Family Care Givers Having Autistic Children. Port Said Scientific Journal of Nursing, Vol.(7), No.(2), Pp.202-219
- **Alotaibi, A., Katelyn A. Alshareef, T., AlQathmi, E.S, Aman, S., Aldhalaan, H., & Oandasan, C. (2021):**"Sociodemographic, Clinical Characteristics, and Service Utilization of Young Children Diagnosed with Autism Spectrum Disorder at A research Center in Saudi Arabia" Saudi Med J., Vol. (42), No.(8), Available at: <https://smj.org.sa>.
- **Alshaigi, K., Albraheem, R., Alsaleem, K., Zakaria, M., Jobeir, A. & Aldhalaan, H. (2020):** "Stigmatization among Parents of Autism Spectrum Disorder Children in Riyadh, Saudi Arabia" International Journal of Pediatrics and Adolescent Medicine Vol. (7) Pp.140-146. Available at: <http://www.elsevier.com/locate/ijpam>

- **Berry, J. & Jones, W. (1995):** The Parental Stress Scale, Initial Psychometric Evidence. *Journal of Social and Personal Relationships*, Vol.(12), No.(3), Pp.463-472.
- **Brown, M., Whiting, J., Kahumoku- Fessler, E., Witting, A., & Jensen, J. (2020):** A dyadic Model of Stress, Coping, and Marital Satisfaction among Parents of Children with Autism. *Family Relations*, Vol.(69), No.(1), Pp.138-150.
- **Coury, D., Murray, D., Fedele, A., Hess, T., Kelly, A., & Kuhlthau, K. (2020):** The Autism Treatment Network: Bringing Best Practices to All Children with Autism. *Pediatrics*, Vol.(145), No.(1), Pp. 13-19.
- **Di Renzo, M., Guerriero, V., Petrillo, M., & Bianchi di Castelbianco, F. (2021):** What is Parental Stress Connected to in Families of Children with Autism Spectrum Disorder? Implications for Parents' Interventions. *J. Fam. Vol.*(43), Pp.2456–2479. Available at:[doi:10.1177/0192513X211030735](https://doi.org/10.1177/0192513X211030735)
- **Gobrial, E., McAnelly, S., & Shannon, P. (2019):** Education of Children and Young People with Autistic Spectrum Disorders in Egypt. *British Journal of Learning Disabilities*, Vol. (47), No.(1), Pp:29-34.
- **Higgins, L., Mannion, A., Chen, J. & Leader G., (2022):** Adaptation of Parents Raising a Child with ASD: The Role of Positive Perceptions, Coping, Self-efficacy, and Social Support, *Journal of Autism and Developmental Disorders* Vol.(53), Pp.1224–1242 Available at: <https://doi.org/10.1007/s10803-022-05537-8>.
- **Hong, X., & Liu, Q. (2021):** Parenting Stress, Social Support and Parenting Self-Efficacy in Chinese Families: Does the number of Children Matter? *Early Child Dev. Care* 191, Pp.2269–2280. Available at:[doi:10.1080/03004430.2019.1702036](https://doi.org/10.1080/03004430.2019.1702036)
- **Hoang, V. M., Le, T. V., Chu, T. T. Q., Le, B. N., Duong, M. D., Thanh, N. M., Pham, V. T., Minas, H. & Bui, T. T. H. (2019):** " Prevalence of Autism Spectrum Disorders and Their Relation to Selected Socio Demographic Factors among Children Aged 18–30 Months in Northern Vietnam, 2017" *international Journal of Mental Health Systems*. Available at: <https://doi.org/10.1186/s13033-019-0285-8>.
- **Hutton, J., (2018):** Autism spectrum disorders and diet in children. *Mar*; Available at:<https://www.india-disease-allergies-and-medical-conditions/disability/491autism-spectrum-disorders-and-diet-in-children.html> cited. Pp.118-123.
- **Johnston & Mach, (1989):** A measure of Parenting Satisfaction and Efficacy. *Journal of Clinical Child Psychology*; Vol. (18), No. (2), Pp.167-75.
- **Khudhair, A. & Jassim, S. (2018):** "The knowledge of Autistic Children's Mothers Regarding Autism in Basra City". *American Journal of Nursing Research*, Vol.(6), No.(5), Pp.296–298. Available at: [https://www.researchgate.net/publication/327509707\\_The\\_Knowledge\\_of\\_Autistic\\_Children's\\_Mothers\\_Regarding\\_Autism\\_in\\_Basra\\_City](https://www.researchgate.net/publication/327509707_The_Knowledge_of_Autistic_Children's_Mothers_Regarding_Autism_in_Basra_City)
- **Li, F., Xu, M., Wu, D., Tang, Y., Zhang, L. & Liu, X. (2022).** From Child Social Impairment to Parenting Stress in Mothers of Children with ASD: The Role of Parental Self-Efficacy and Social Support. *Front. Psy.* 13. Available at: [doi: 10.3389/fpsy.2022.1005748](https://doi.org/10.3389/fpsy.2022.1005748)
- **Maenner, M.J., Shaw, K.A. & Baio, J. (2020):** "Prevalence of Autism Spectrum Disorder among Children Aged 8 Years Autism and Developmental Disabilities Monitoring Network", 11 sites, United States, 2016. *MMWR Surveillance Summaries*, Vol. (69), No. (1).
- **Mandal, I., Basu, I., & De, M. (2020):** Role of Nursing Professionals in Making Hospital Stay Effective and Less Stressful for Patients with ASD: A Brief Overview. *International Journal of Advancement in Life Sciences Research*, Vol.(3), No.(1), Pp. 1-9.
- **Miranda, A., Mira, A., Berenguer, C., Rosello, B. & Baixauli, I. (2019):** Parenting Stress in Mothers of Children with Autism without Intellectual Disability: Mediation of Behavioral Problems and Coping Strategies. *Front Psychol*, Vol.(10), No.(464)
- **Mofreh, E., Mohammed, Gh., Osman, W. (2023):** The Effect of Psychosocial Program on Stress and Coping Strategies among Parents Having Children with Autism Spectrum Disorder, *Helwan International Journal for Nursing Research and Practice*, Vol. (2), No.(1) Available at: <https://hijnrp.journals.ekb.eg/>
- **Mohamed, A., Mohammed, B. & Hassan, R. (2020):** "Knowledge Assessment among Autistic Children's Parents Regarding Autism Spectrum Disorder" *Mansoura Nursing Journal (MNJ)* Print ISSN: 2735 – 4121 Online ISSN: 2735 – 413X. Vol. (7), No.(2)
- **Muhammad, N., Baroi B. & Rathi, S. (2020):** "Mental Health of Parents with and without Autistic Children: A Comparative Study" *Jagannath University Journal of Psychology*, Vol.(10),No.(1), Pp.21- 32, ISSN 2225-4439.
- **Mujahid I., Abdullah., Minsih & Muhamad S., (2022):** The Role of Family Counseling in Handling Autistic Children During at-Home Learning Period *Psikohumaniora: Jurnal Penelitian Psikologi* Vol (7), No (1): Pp.103–116. Available at:

<https://journal.walisongo.ac.id/index.php/Psikohum-anior>

- **Nguyen, P., Tran, T., Tran T. Va., Pham, L., Van Do, D., Le, D., Ngo, T., Diep, H. & Nguyen, T. (2021):** Clinical Characteristics and Associated Socio-Demographic Factors of Autism Spectrum Disorder in Vietnamese children, *Curr Pediatr Res*; Vol. (25), No.(1), Pp.308-312. ISSN 0971-9032. Available at: [www.currentpediatrics.com](http://www.currentpediatrics.com).
- **Oneib, B., Fajou, Y. & El Ghazouani, F. (2022):** The sociodemographic and Clinical Profile of Children with An autism Spectrum Disorder in The oriental Region of Morocco Bouchra, Egypt *J Neurol Psychiatry Neurosurg* , Vol.(58), No.(7) Available at : <https://doi.org/10.1186/s41983-021-00437-7>
- **Sackett, C., & Cook, R. (2021):** A Phenomenological Exploration of Client Meaningful Experiences in Family Counseling. *Counseling Outcome Research and Evaluation* 1–18. Available at: <https://doi.org/10.1080/21501378.2021.1922076>
- **Schwartzman, J. M., Millan, M. E., Uljarevic, M. & Gengoux G. W. (2022):** Resilience Intervention for Parents of Children with Autism: Findings from a Randomized Controlled Trial of the AMOR Method. *J Autism Dev Disord*. Vol.(52), No.(2), Pp.738-757. Available at: [doi: 10.1007/s10803-021-04977-y](https://doi.org/10.1007/s10803-021-04977-y).
- **Stephenson, K., Fenning, R., Macklin, E., Lu, F., Norris, M. & Steinberg- Epstein, R. (2022):** Child Behavior Problems and Parenting Stress in Underserved Families of Children with ASD: Investigation of Family Resources and Parenting Self-Efficacy. *J. Autism Dev. Disord*. Vol.(22), No.(1) Available at: [doi: 10.1007/s10803-022-05681-1](https://doi.org/10.1007/s10803-022-05681-1)
- **Strauss, K., Servadio, M., Valeri, G., Casula, L., Vicari, S., & Fava, L. (2022):** Association between Child Behavioural Problems and Parenting Stress in Autism Spectrum Disorders: The role of Parenting Self-Efficacy. *Int. J. Dev. Disabil*, 1–10. Available at: [doi: 10.1080/20473869.2022.2052417](https://doi.org/10.1080/20473869.2022.2052417)
- **Talaat F., Mohammed Gh., Salah S., Osman W., (2023):** Assessment of Knowledge, Attitude and Practices of Parents having Children with Autism, *Helwan International Journal for Nursing Research and Practice* Vol. (2), No. (1), Available at: <https://hijnrp.journals.ekb.eg/>
- **Wang, Q., Han, Z., Hu, X., Feng, S., Wang, H., Liu, T., & Yi, L. (2020):** Autism Symptoms Modulate Interpersonal Neural Synchronization in Children with Autism Spectrum Disorder in Cooperative Interactions. *Brain Topography*, Vol. (33), No. (1), Pp.112-122.

- **Zeidan, J., Fombonne, E., Scolah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022):** Global Prevalence of Autism: A Systematic Review Update. *Autism Research*, 1–13. Available at: <https://doi.org/10.1002/aur.2696>

This is an open access article under

**[Creative Commons by Attribution Non-Commercial \(CC BY-NC 3.0\)](https://creativecommons.org/licenses/by-nc/3.0/)**

( <https://creativecommons.org/licenses/by-nc/3.0/>)