

Effect of Cognitive Behavioral Counseling Program on Psychological Distress, Coping Strategies, and Sense of Cohesion among Autistic Children's Mothers

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Abstract

Background: Parenting children with autism is often accompanied with high levels of psychological distress and negative psychological outcomes. **Aim:** to evaluate the effect of cognitive behavioral counseling program on psychological distress, coping strategies and sense of cohesion among Autistic Children's Mothers. **Research design:** The research design was quasi-experimental. **Subjects:** A purposive sample of 60 mothers of children with autism was included in this research. **Tools:** Three different tools were used; **Tool I: Part 1: Socio-demographic and clinical data structured interview sheet**, and **Part 2:** Psychological Stress scale used to assess levels of psychological stress of mothers. **Tool II:** sense of cohesion (SOC) Scale used to assess levels of cohesion of mothers, **Tool III:** Coping strategies scale used to assess coping strategies used by mothers. **Results:** Studied mothers had lower levels of stress, greater sense of cohesion and effective coping mechanism post program than at baseline pre-program. Also there were negative correlations between the studied mothers' sense of cohesion & coping strategies and their psychological stress post program implementation. **Conclusion:** These findings support the efficacy of the cognitive-behavioral counseling program in reducing stress and increasing mothers' sense of cohesion and coping mechanisms. **Recommendations:** Integration the current program in psychosocial rehabilitation centers for community mental health nurses to support caregivers in early stages of caring process of children with autism for effective management of their children.

Keywords: Autism, Cognitive behavioral counseling, Coping strategies, Psychological distress & Sense of cohesion.

Introduction

Autism spectrum disorder (ASD) is a developmental disorder that affects speech and communication, social interaction, play and imagination, restricted interest and repetitive behavior (Catherine Lord., 2020). It is estimated that one out of every 100 children in the world have autism (Zeidan., 2022). By 2022, Egypt's prevalence was 89.40 per 10,000 children (<https://www.google.com>) Such statistics simply demonstrate that there are more parents with autistic children. Parents usually notice a difference in their child by the age of 18 months or during preschool. Lack of eye contact, language delay, self-stimulatory behaviors such as sensitivity to certain noises, minimal social interaction, and a lack of play were frequently noticed (Georges & Dieter., 2017 & Robinson & Jonathan., 2020).

Parenting a normal child is regarded as an emotionally fulfilling experience. Having a disabled child adds new stressors and vulnerabilities to a parent's life, especially for mothers. Parenting stress was defined as a process that manifests physiological

reactions and negative psychology when parents fulfill their roles (Goedeke et al., 2019). According to some studies, parents of autistic children have significantly lower levels of mental health (such as stress, anxiety, hypersensitivity, frustration, and pessimism) than non-autistic children. Furthermore, parents report conflicts with their non-disabled children and more marital distress (like burnout and decreased family cohesion) and Robinson & Jonathan., 2020, Goedeke et al 2019 & Kartini et al 2018).

Several factors have been linked to psychological distress among parents especially mothers of children with autism. Factors related to condition of the child, like level of autism severity, the age of the child, problematic behavior that arises, the child's needs, and obstacles to self-regulation (Fairthorne et al., 2015). Parenting stress in children with ASD may also be related to parental acceptance of autism disorders, a lack of social and professional supports, and family acceptance of ASD. ASD can also disrupt the financial and familial situations of the affected

household (Autism is regarded as an "expensive disorder"). Individual factors that influence parenting stress include one's level of sense of cohesion (SOC) and method of coping with psychological distress (Falk et al. 2014 & Chong et al., 2016).

Sense of coherence (SOC) is defined as "a pervasive, enduring though dynamic sense of confidence that (a) the stimuli derived from one's internal and external environments in the course of living are structured, predictable, and explicable (comprehensibility); (b) resources are available to one to meet the demands posed by these stimuli (manageability); and (c) these demands are worthy of investment." (Siah & Tan (2015) Individuals with a high level of SoC tend to perceive environmental stimuli in a structured manner, allowing them to anticipate all possibilities and manage existing resources to meet the demands as challenges that must be faced. (Siah & Tan 2016)

Sense of coherence is associated with the effort to reduce stress levels because it was thought to be the source of a person's health and well-being. According to a study, parents with autistic children had lower SOC than parents with typically developing children. One study found that parents of children with autism spectrum disorder who have a high level of SOC have less parenting stress (Taylorl, & Tamara, 2016). A high level of SoC is associated with a positive development of parenting perception, particularly when parenting children with ASD. Another source of managing psychological distress of parents of children with ASD was coping strategies (Miyako & Yoshihiko, 2016)

Aside from the positive impact of a strong SoC, effective coping strategies have been developed to assist parents of children with ASD in overcoming their challenges. Individual factors that affect mothers' value of social acceptance and supports, in addition to the cause of stress, are coping strategies used by these parents (Lai et al 2015). Coping refers to "persistent changing cognitive and behavioral efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the resources of the person". Initially, two kinds of coping strategies were proposed: problem-solving coping (which entails taking action on the problem that is causing distress) as well as emotional coping (which focused on managing emotional distress associated with the problem (Luque, 2017 & Te Ana Pepperell et al, 2018).

Among coping strategies that was used by parents to deal with their child's autism include; social support from family and friends, joining support groups, connecting with other parents of children with autism, using service providers, and participating in cognitive behavioral therapies. A study comparing parents of children with intellectual disabilities and ASD

discovered that parents of children with autism were more stressed and sought more social support than the other group (Luque, 2017, Rayan & Ahmad 2017, Te Ana Pepperell et al, 2018 & Amire, 2019). Mothers who are caring for children with ASD sometimes have additional burdens, so community mental health nurses need to coordinate support services for children with ASD and their mothers. Then nurses need to quickly identify the parents' needs and help them sympathetically. In doing so, nurses will liaise with childcare workers and kindergarten teachers to assist and support parents to recognize their children's disorder as shown in "making observations of children at different times and places of providing services for children with ASD (Neyoshi, 2018).

Significance of study

Parenting a child with disabilities is a one-of-a-kind experience. Mothers who are stressed interact differently with their children and respond differently to their child's problematic behavior. Although there are intermediary and specialty level services available for children with ASD, but mothers are the "first therapist" for their child. They are an essential part of their child's ASD treatment team (Roffeei et al, 2015, Santoso et al., 2015, Tolmie et al., 2016 & Hodgetts et al., 2017) According to one study, parents whom experiencing stress reduces the efficacy of early teaching interventions for autistic spectrum disorders. As a result, the next stage of management for a child with ASD would be to address parental concerns and issues (Mazidi 2015). The researchers noted during field visits to autism care centers and meeting with autistic families, in which mothers need skills and strategies for improving sense cohesion and how to cope with the pressures resulting from this disorder. Hence the necessity of conducting counseling program to enhance mother's adaptive coping and sense of cohesion in facing stressors and subsequently reducing their psychological pressures.

Aim of the study

The current study's aim was to evaluate the effect of cognitive behavioral counseling program on psychological distress, coping strategies, and sense of cohesion among mothers of children with autism.

Research Hypothesis:

Cognitive behavioral counseling program would have positive effect on, reducing psychological distress, improving coping strategies and sense of cohesion among mothers of children with autism.

Operational definitions:

- **Psychological distress:** The psychological and physiological response that results from an individual's attempt to fit in the times he is exposed to.

- **Cognitive–Behavioral counseling** is a problem-focused approach to helping mothers identify and change the dysfunctional beliefs, thoughts, and patterns of behavior that contribute to their problems. Its underlying principle is that thoughts affect emotions, which then influence behaviors.
- **Sense of cohesion:** The amount in which the individual possesses a continuous, permanent and dynamic sense at the same time the ability to predict the world of his inner experiences and external,

Subject and Methods

Research design:

To accomplish the study's aim, a quasi-experimental design was used.

Setting:

This study was conducted at the Outpatient Clinic at Benha Hospital for psychiatric illness and addiction in Benha city, Qalyubia governorate. The outpatient clinics were in the ground floor (one for adult psychiatric and mental illness and other for children), which works two days/week (Monday & Thursday).

Subject:

Based on the previous studies that examine the same outcome and found significance differences, sample size has been calculated using the following equation: $n = (z^2 \times p \times q) / D^2$ at power 80% and CI 95%, so the sample of the study was purposive sample of (60) mothers of children with autism taken from the above-mentioned setting and fulfill the following inclusion criteria:

- Mothers' age ranged from 20 to 60
- Educated mothers.
- Accept to participate in the current study.
- Mother haven't any psychiatric or mental disorders.

Tools of the study:

Data was collected using three tools

Tool I: It divided into two parts

Part 1: Socio-demographic and clinical data structured interview sheet: the researchers developed this tool based on reviewing related recent literatures, it composed of characteristics data related to mother ; age, marital status, residence, educational level, and occupation. Characteristics related to child like :child age, sex, have sibling, number of sibling, and ranking of the child in the family.

Part 2: Psychological Stress scale: This scale was adapted from (2012 عصفور) to measure psychological stress in mothers of autistic children. It consisted of 56 items measures six aspects, namely organic and psychological symptoms (7 items), feelings of despair and frustration (10 items), psychological and cognitive problems (10 items), family and social

problems (13items), worrying about the future of the child (8 items) and burden of the autistic child care (8 items). Responses were assumed on five-point Likert scale ranged from 1 to 5 (5 = always occur, 4 = occur a lot, 3 =little occur, 2 =rarely occur and 1 = never occur. Reversed items were 24 and 36. Range of total score was from 56 to 280 with more score indicate high level of psychological stress.

Total scoring system was divided into three levels:

- Low level of psychological stress (56-130) degrees.
- Moderate level of psychological stress (131-205) degrees.
- High level of psychological stress (206-280) degrees.

Tool II: Sense of cohesion (SOC) Scale:

It was developed by Antonovsky (1988) to assess the sense of cohesion at either the family and community levels. The scale consisted of 13 statements divided into three components: Comprehensibility (5 items), Manageability (4 items) and Meaningfulness (4 items). The response options range from 1 to 7 points on a semantic scale. The questionnaire produces a total score that ranges between 13 and 91.

Total scoring system:

- Low level of cohesion $\leq 51.7\%$ (13-46) degrees.
- High level of cohesion $> 51.7\%$ (47-91) degrees.

Tool III: Coping strategies scale

It was adopted from Vitaliano et al., (1985) to measure coping mechanism of the individual. It was consisted of 27 items, divided into 3 subscales; coping toward problems (10 items), coping toward stress (9items),coping toward support (8 items). A response with yes was equal 2, and no equal 1. Total score ranged from 27 to 54.

Total scoring system:

- Low level of coping (1-37) degrees.
- High level of coping (38-54) degrees.

Tools reliability:

Cronbach's Alpha coefficient testing revealed that each of the three tools is composed of relatively homogeneous items indicated high reliability of each tool as the following:-

Cronbach's Alpha reliability analysis.

Tool	Items	Cronbach's Alpha
Psychological Stress scale.	54	0.89
Sense of cohesion (SOC) Scale	13	0.87
Coping strategies scale	27	0.90

Methods

Field of work: The study was conducted in four phases:

The preparation phase (assessment).

Development of tools: The researchers developed the study tool I (part 1) after conducting an extensive review of the current study's related literature.

Validity of research tools: Tools (II and III) was translated into Arabic, while tool I translated into English by researchers. After that all tools was tested for content validity through a jury of five psychiatric nursing experts and all tools were found to be valid and reliable on Egyptian population.

Administrative design: The researchers obtained official permission from Dean of the Faculty of Nursing and the directors of Benha University Hospital to collect the necessary data after explaining the purpose of the study and obtaining their cooperation.

The Pilot study: A pilot study was conducted on 10 percent of the sample's mothers (6 mothers) to test the feasibility and practicability of the study tools and to estimate the time required to complete the tools, time needed to fill tools was 25-30 minutes and no changes were made to the current study's tools. The pilot study sample was later excluded from the study sample.

Ethical Considerations: The researchers met with the eligible mothers to explain the purpose and nature of the study after obtaining official permission to conduct it. Furthermore, anonymity and confidentiality were ensured by coding the data, and the data were not reused in another study without their consent. Consent was obtained, and participants were assured that their participation in this study was entirely voluntary, and that they could withdraw at any time without penalty.

Planning and development phase: The researchers in this phase developed the program's content & sessions after a review of recent related literatures (international and local articles, text books and scientific magazines) and findings of pretest assessment using research tools.

Implementation phase: Data was collected over a 7-month and two weeks period from April 2022 to the half of 1st half of November 2022. This phase began with data collection, followed by the 13-session implementation of the program sessions for mothers who met the previously mentioned inclusive criteria. Each session lasted 45 minutes to 90 minutes. The studied mothers were divided into 10 subgroups (6 mothers for each subgroup). The researchers sit with six mothers together as a subgroup and carried out the program sessions in the rest area found in the Outpatient clinic. Each sub group participated into 13 sessions two days per week for 6 weeks for each (Monday & Thursday) at the morning. The

researchers implemented the sessions for two groups in the same day alternately. Each group lasted 6 weeks. The total period for all groups lasted 30 weeks which equal 7 months and two weeks. Every session started with revision and summarization of the content of last session and discussion of previous homework to ensure understanding. The sequence of sessions was as the following :

Sessions (I): Introductory session

Sessions (2): Autism (Definition, causes, signs and symptoms, complications of autism and methods of treatment)

Sessions (3): Psychological distress (definition, sources of stressors, types of stressors and signs of stress)

Sessions (4): Irrational beliefs as stressors (sources of irrational beliefs, examples of irrational beliefs and ABC model).

Sessions (5): Training on discipline and self-control skill.

Sessions (6): Training on of self-monitoring skill.

Sessions (7): Problem solving skill and its use in dealing with psychological stress

Sessions (8): Emotional release

Sessions (9): Coping strategies with psychological distress

Sessions (10): Relaxation training

Sessions (11): Sense of cohesion

Sessions (12): Strategies to improve sense of cohesion

Sessions (13). Closing session. Summary of the preceding sessions and posttest. The mothers' questions were discussed at the end of each session to clarify any ambiguity or misunderstanding.

Teaching methods:

Lecture, group discussion, role play and demonstration & re-demonstrations and homework

Media used:

Booklet which distributed on all the study sample, power point, pictures, video's, and pen& paper.

Evaluation methods: Taking feedback by oral question, re-demonstration and positive interaction & participation.

Phase IV: - Evaluation phase: The researchers take posttest immediately after implementation of the program using all tools. A line of communication was established between the researchers and mothers for feedback, monitoring, and providing any needed consultation and assistance.

Statistical design: For data analysis, the Statistical Package for Social Sciences (SPSS) program version 25.0 was used. Numbers and percentages were used to describe qualitative data, while mean and standard deviation were used to describe quantitative data. P equal to or less than 0.05 was chosen as the level of significance for this study.

Results

Table (1): Socio-demographic characteristics of the studied mothers (n=60) Socio- demographic characteristics

	No.	%
Age (Years)		
- 20 < 35 years	32	53.4
- 35 < 50 years	20	33.3
- 50 ≤ 60 years	8	13.3
Mean ±SD	35.27±7.584	
Marital status		
- Married	45	75.0
- Divorced	10	16.7
- Widowed	5	8.3
Residence		
- Rural	44	73.3
- Urban	16	26.7
Educational level		
- Read and write	10	16.7
- Primary education	18	30.0
- Secondary education	16	26.7
- University education	11	18.3
- Post graduate education	5	8.3
Occupation		
- Work	20	33.3
- Not work	40	66.7

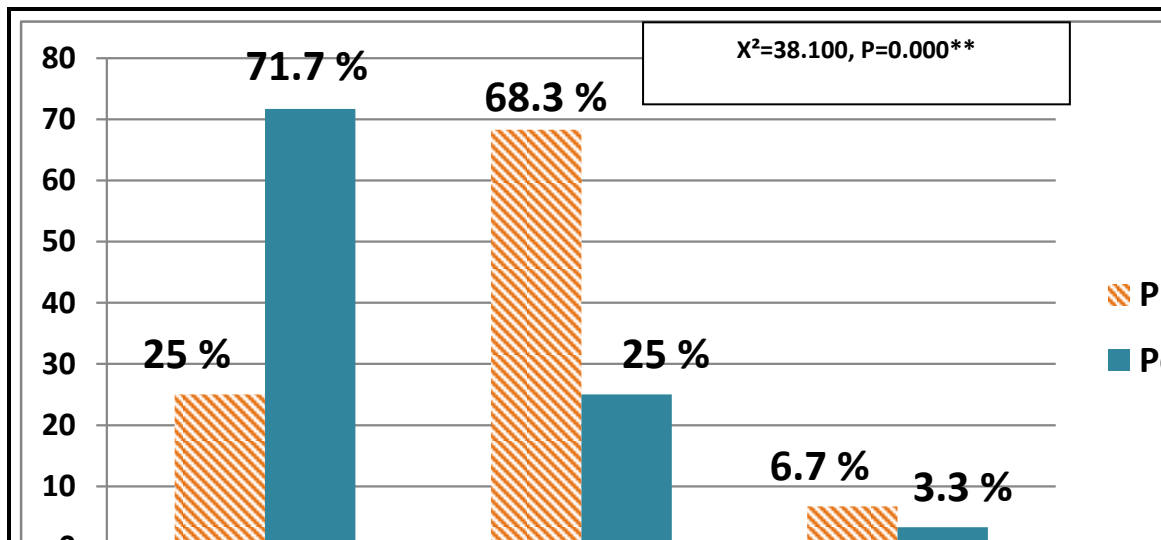
Table (2): Frequency and percentage distribution of socio- demographic characteristics of the studied children (n=60).

Socio- demographic characteristics	No.	%
Child age		
- 6 < 8	9	15.0
- 8 < 10	16	26.7
- 10 < 12	24	40.0
- ≥ 12	11	18.3
Mean ±SD	10.41±2.203	
Sex		
- Male	35	58.3
- Female	25	41.7
Have sibling		
- Yes	19	31.7
- No	41	68.3
Number of sibling (n=19)		
- One	3	15.8
- Two	7	36.8
- Three	4	21.1
- Four	3	15.8
- Five	2	10.5
Ranking of the child in the family		
- The only	41	68.3
- First	11	18.3
- Middle	5	8.3
- Last	3	5.1

Table (3): Mean and Standard deviation of the studied mothers according to their psychological stress' parts pre and post program implementation (n=60).

Items	Pre program	Post program	Paired t test	p- value
	Mean ± SD	Mean ± SD		
Psychological and organic symptoms	19.73±7.49	14.93±6.25	5.118	0.000**
Feelings of despair and frustration	26.28±7.95	21.23±6.73	5.973	0.000**
Psychological and cognitive problems	24.48±7.42	20.65±7.53	5.656	0.000**
Family and social problems	31.33±6.29	24.33±2.91	9.106	0.000**
Worrying about the future of the child	20.77±5.86	15.23±5.56	6.807	0.000**
Burden of the autistic child care	22.75±6.94	17.85±4.01	4.534	0.000**
Total	145.35±30.46	114.23±27.99	10.575	0.000**

A highly statistical significance differences ($p \leq 0.001$ **)



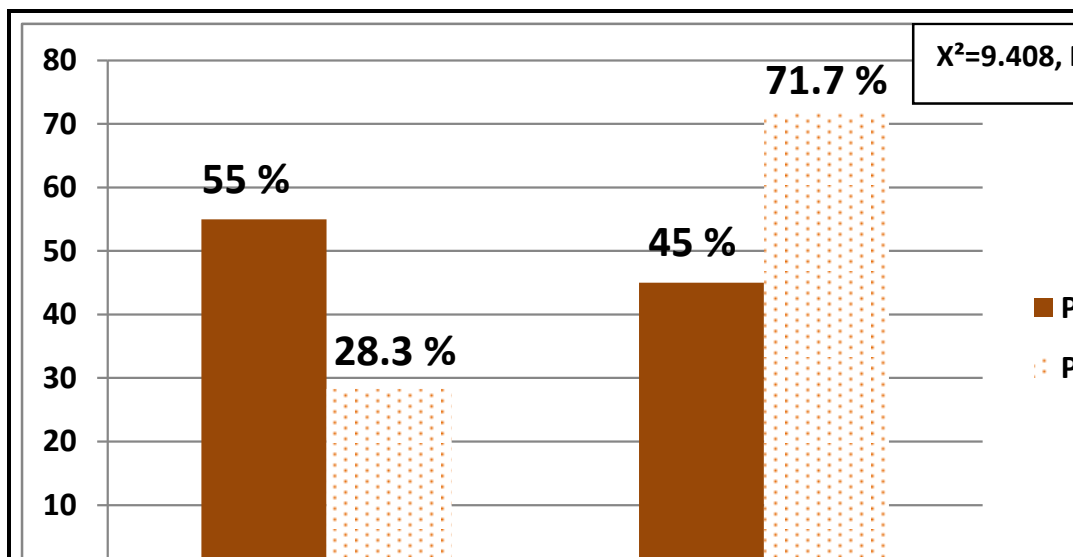
A highly statistical significance differences ($p \leq 0.001$ **)

Figure (1): Percentage distribution of the studied mothers according to their total psychological stress level pre and post program implementation (n=60)

Table (4): Mean and stander deviation of the studied mothers according to their sense of cohesion's subscales pre and post program implementation (n=60).

Sense of cohesion	Pre program	Post program	Paired t test	p- value
	Mean ± SD	Mean ± SD		
Comprehensibility	15.65±7.748	24.03±7.131	8.034	0.000**
Manageability	13.30±4.02	19.52±4.60	8.95	0.000**
Meaningfulness	12.98±4.09	18.98±4.01	13.09	0.000**
Total	41.93±13.94	62.53±15.0	11.19	0.000**

A highly statistical significance differences ($p \leq 0.001$ **)



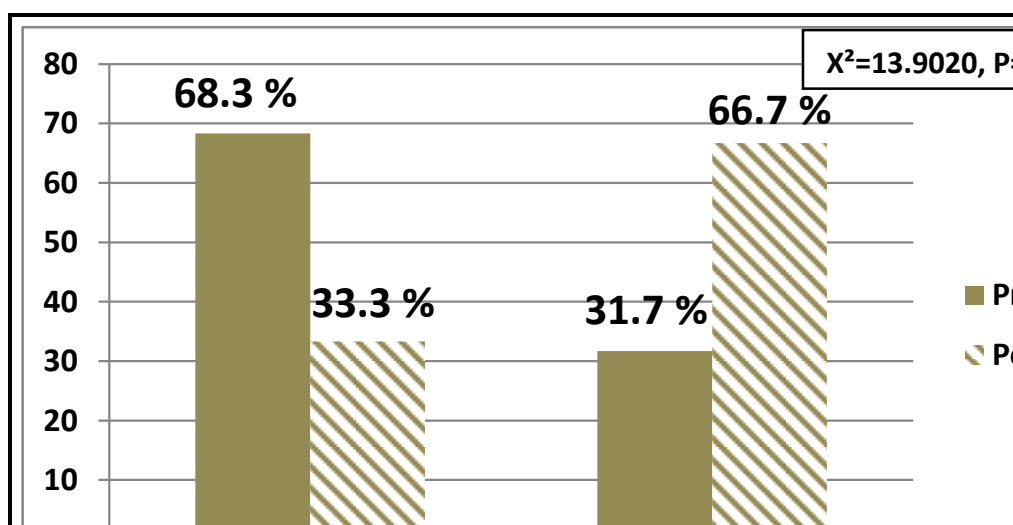
A highly statistical significance differences ($p \leq 0.001^{**}$)

Figure (2): Percentage distribution of the studied mothers according to their total sense of cohesion pre and post program implementation (n=60)

Table (5): Mean and standard deviation of the studied mothers according to their coping strategies' subscale pre and post program (n=60).

Coping strategies	Pre program	Post program	Paired t test	p- value
	Mean ± SD	Mean ± SD		
Coping toward problems	12.02±1.81	13.22±2.26	5.357	0.000**
Coping toward stress	10.97±1.63	13.10±1.91	9.138	0.000**
Coping toward support	10.47±1.39	11.52±2.28	3.944	0.000**
Total	33.45±3.85	37.83±4.92	9.942	0.000**

A highly statistical significance differences ($p \leq 0.001^{**}$)



A highly statistical significance differences ($p \leq 0.001^{**}$)

Figure (3): Percentage distribution of the studied mothers according to their total coping strategies pre and post program implementation (n=60).

Table (6): Correlation between the studied mothers' psychological stress, sense of cohesion and their coping strategies post program implementation (n=60).

Scale	Sense of cohesion		Psychological Stress	
	R	p- value	R	p- value
Psychological Stress	- 0.374	0.003*	-	-
Coping strategies	0.889	0.000**	- 0.421	0.001**

*A highly statistical significance differences ($p \leq 0.001$)** r- Pearson Correlation Coefficient*

Table (1): Shows that the studied mothers' mean of age were (33.27±7.584) years old, three quarters of them (75.0.0%) were married and less than three quarters of them (73.3%) were from rural area. Related to educational level, 30.0 % had primary education. Two thirds (66.7 %) of studied mothers were not work.

Table (2): Reveals that mean age of the children studied was 10.41±2.203, with more than half of them (58.0%) being male. Also, 31.7 % of children studied had sibling, more than one third of them (36.8%) had two sibling and more than two thirds (68.3%) of them were the only child in the family.

Table (3): Shows that there were statistically significant differences in all aspects of psychological stress among the mothers studied, as well as in a total mean of psychological stress both before and after the program implementation, P-value=0.000.

Figure (1): Demonstrates that one-quarter of the mothers studied (25 %) had low level of psychological stress at pre-program implementation, more than two-thirds of them (71.7%) had low level of psychological stress at post program implementation. A statistical significant difference was found between total level of psychological stress for the studied mothers at pre and post program implementation (P-value = 0.000).

Table (4): Demonstrates that there were statistically significant differences in all aspects of the studied mothers' sense of cohesion, as well as in a total mean of sense of cohesion at pre and post program implementation, P- value = 0.000.

Figure (2): Reveals that more than half of the mothers studied (55.0%) had a low level of cohesion at preprogram implementation, which increased after program implementation to 71.7. A statistical significant difference was found among total level of cohesion for mothers studied before and after program implementation at (P value = 0.000).

Figure (3): Reveals that more than two-thirds of the mothers studied (68.3%) had low levels of coping strategies prior to program implementation, while nearly two-thirds (66.7%) had high levels of coping strategies after program implementation. Such result was assured by presence of a statistical significant difference among total level of coping strategies for

mothers studied before and after program implementation (P value = 0.000).

Table (5): Demonstrates that there were positive correlations among sense of cohesion and coping strategies of mothers studied at P- value (0.000), while, there were negative correlations between the studied mothers' sense of cohesion & coping strategies and their psychological stress p- value (0.003 & 0.001) respectively.

Discussion

Psychological stress is one of the most common symptoms experienced by parents during the autism diagnosis process, and it can persist after the diagnosis (Jenabi et al., 2022). Autistic children face a variety of challenges that place a significant strain on their families, including financial hardship, job changes, the need for counselling, and care services (Luo et al., 2022). Mothers who care for children with ASD face psychological, social, and family stress, which necessitates specialist intervention to improve their sense of cohesion and coping strategies in the face of stressful life problems (Hidayah, & Lestari., 2019). So, the current research aims to examine the effect of a cognitive behavioral counseling program on psychological distress, sense of cohesion, and coping strategies in mothers' autistic children.

The current program check three dimensions including psychological stress, sense of cohesion, and coping strategies. According to total psychological stress, the findings revealed a significant difference between pretest and posttest parenting stress and parenting distress subscale scores. As a result of the current intervention, the mothers' parenting stress was reduced. It was supported by Bassam, & Tork., (2019) who conducted study entitled " Education Program for Mothers of Children with Autism Spectrum Disorder" who discovered a statistically significant difference in the level of psychological stress among the mothers studied.

To the best of our knowledge, such findings could be attributed to the program sessions' use of dialogue and discussion in defining psychological stress, its effects, and types, as well as encouraging mothers to explain their realistic pressures and urging emotional discharge without restrictions. Furthermore, the

researchers demonstrated empathy for mothers, which encouraged them to speak openly about their stress. These results matched also with study by **Zou et al., (2020)** who conducted research on "Research progress and strategies on family intervention of children with autism spectrum disorder" and discovered statistically significant differences of some of psychological items.

The current study discovered a significant difference in all aspects of psychological stress of studied mothers before and after the program. Such results was supported with study' findings of **Świerczyńska, & Pawłowska., (2022)** which entitled " impact of educational program for improving Coping with stress of mothers of children with disorders belonging to autism spectrum" and reported that that there was statistically significant difference in all aspects of psychological stress for the mothers studied before and after program implementation.

Regarding sense of cohesion of the mothers studied, the current study indicated that more than half of mothers studied had low level of cohesion before program implementation, while about three quarters had high level of cohesion after program. Also such results were confirmed by presence of statistically significant differences in all parts of the studied mothers' sense of cohesion before and after program. These findings agreed with **Khatua., (2021)** who conducted study about "Effects of Father-Based Intervention on Parental Style, Stress, Sense of Cohesion, and Coping in Parents of Children with Autism" and revealed presence of statistically significant difference between total level of cohesion and also the mean score of mother's all domains sense of cohesion for the studied mothers before and after program.

Related to coping strategies, the present study illustrated that, more than two thirds of the mothers studied had low level of coping strategies at preprogram implementation which increased to become two thirds of them high level after program. This may be related to incorporation of cognitive-behavioral techniques into program content (e.g., problem solving, management of dysfunctional thoughts) which adapted to the care context in mothers of ASD children. These techniques, most likely developed during the program, which increase the intervention's efficacy.

In addition, the researchers concentrated on the role of religious counseling in resisting pressures, as well as the link between pressures and affliction and the reward that comes with it, and that faith helps the individual endure patience, which strengthens the mother's immunity against psychological stress if she is unable to face it. This result was supported with **Hidayah, & Lestari., (2019)** who conducted study

entitled "effects of self-help groups intervention on coping strategies of parents of children with Autism Spectrum Disorder" and reported that there are significant increase in parents' coping strategies scores before and after group interventions.

The current results also revealed presence of a statistical significant difference between total all parties of coping strategies scale for the studied mothers before and after program implementation. This outcome was in harmony with **Sidig et al., (2022)** who showed that there was a statistical significant difference among all parties of coping strategies scale for the mothers of children with autism at pre and post program implementation. This may be because the comprehensive content of the program, which helps mothers deal with difficult situations through positive behavior and become role models for their children, who imitate their behavior.

The results of the present study indicated that there were positive correlations between the studied mothers' sense of cohesion and their coping strategies, while, there were negative correlations between the studied mothers' sense of cohesion & coping strategies and their psychological stress. This outcome in accordance with study by **Khatua., (2021)** who demonstrated that positive correlations among sense of cohesion and their coping strategies of mothers studied.

Overall, it appeared that the following factors were important in explaining why the intervention had such a positive effect on mothers' sense of cohesion, psychological stress, and coping strategies. The cognitive approach increased mothers' self-awareness and assisted them in recognizing their own strengths and weaknesses, resulting in numerous changes, particularly in their attitude and beliefs. The emotional management skills taught in this intervention improved mothers' abilities to deal effectively with their negative moods and subsequently become able to deal with their children with autism in an effective manner.

Conclusion:

The findings of this study support that cognitive behavioral counseling is an effective intervention for reducing psychological stress and improving sense of cohesion and coping mechanisms in mothers of autistic children, even after a relatively short period of intervention.

Recommendation

- Providing similar interventions to parents and other caregivers of children with other significant disabilities.
- Integration the program in psychosocial rehabilitation centers for caregivers in early stages

of caring process of children with autism for effective management of their children.

- Conducting courses and lectures for mothers on how to apply strategies to cope with daily life pressures.
- Psychological support should be provided continuously for the children's families to enable them to take effective care of the affected son.
- Merge children with low levels of intellectual disabilities with normal children.

Recommendation for future studies:

Conducting such interventions on fathers or even both parents using control group for more comparison.

Conflict of interest

The authors state that they have no conflicts of interest.

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