

DOI: 10.5505/ajfamed.2024.13471 AJFAMED 2024;7(2):48–54

# The Effect of Family Counseling on Anxiety, Depression, and Stress Levels in Mothers of Disabled Children: A Randomized Controlled Trial

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## ABSTRACT

**Objectives:** This study aims to assess the impact of family counseling on anxiety, depression, and stress levels in mothers of disabled children.

**Methods:** The study involved 80 mothers of disabled children, enrolled in a Special Education and Rehabilitation Center under the Ministry of National Education. The participants were randomly divided into two groups: 40 (50.0%) mothers in the study group and 40 (50.0%) in the control group. The study group received family counseling in six sessions, with eight mothers per session. The Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), and Perceived Stress Scale (PSS) were administered to both groups at three intervals: Precounseling, immediately post-counseling, and 3 months post-counseling. The control group completed the same assessments without receiving counseling.

**Results:** In the study group, mean scores for the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> assessments were as follows: PSS (17.9±4.9, 14.8±4.3, 14.4±4.4, respectively, p<0.001), BDI (13.6±5.8, 9.8±5.0, 10.1±6.1, respectively, p<0.001), and BAI (19.9±11.1, 17.2±10.3, 16.5±9.3, respectively, p<0.001). In the control group, mean scores for the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> assessments were as follows: PSS (15.9±5.6, 15.2±5.9, 15.2±5.9, respectively, p=0.197), BDI (14.4±6.8, 14.3±7.9, 14.5±9.4, respectively, p=0.777), and BAI (15.7±8.3, 15.2±7.6, 16.6±9.3, respectively, p=0.666). At the 3<sup>rd</sup> follow-up, there was a difference in BDI and PSS stress scores between the study and control groups; however, no difference in BAI and total PSS scores (p=0.014, p=0.009, p=0.927, p=0.132, respectively).

**Conclusion:** Providing psychological support to mothers of disabled children can help reduce depression and stress levels.

Keywords: Counseling, disabled children, social support

# INTRODUCTION

Disability is a difficulty in functioning at the body, person, or societal levels, in one or more life domains, as experienced by an individual with a health condition in interaction with contextual factors.<sup>[1]</sup> Approximately 15% of the world's population (around one billion people) is diagnosed with a disability. The "World Report on Disability" published by the World Health Organization in 2011 shows a disability prevalence of 15.6% in studies conducted in 59 countries.<sup>[2]</sup> The Turkey Disability Survey 2002 investigated the profile of disability in Turkey. Accordingly, disability prevalence is 12.3% (13.5 per cent among men and 11.1 per cent among women), making 8431937 people.<sup>[3]</sup>



Please cite this article as: Sarı T, Işık M, Kaya A, Gamsızkan Z, Sarı E. The Effect of Family Counseling on Anxiety, Depression, and Stress Levels in Mothers of Disabled Children: A Randomized Controlled Trial. AJFAMED 2024;7(2):48–54.

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Received Date: 16.01.2023 Revision Date: 01.11.2023 Accepted Date: 25.08.2024 Published online: 02.09.2024

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Independent of the disability degree, having a disabled child bears some unique difficulties. The associated problems can be listed as psychological and financial deprivations, barriers to formal education, interference with daily life, and weakened relationships with family and the social environment. <sup>[4]</sup> Other difficulties may include changes in parental roles; encounters with insensitive health professionals; and the reactions of other family members, friends, and the social environment.<sup>[5,6]</sup> Usually, the mother takes a more active role and personally attempts to solve all these difficulties.

Studies show that parents (especially mothers) with mentally or physically disabled children experience more stress and have increased anxiety levels than parents who do not have this condition.<sup>[7]</sup> Somatic complaints, depression, and anxiety disorders are observed more frequently in mothers with handicapped children.<sup>[8]</sup> Furthermore, Seltzer et al. reported that depression is more common in parents with mentally or physically disabled children.<sup>[9]</sup>

If the family (especially the mother) succeeds in combating these difficulties, the quality of life of the disabled child increases and the discomfort within the family is eliminated.<sup>[10]</sup> Parents of disabled children often expressed their need for family counseling to deal with problems within the family. These needs emerge, especially in dealing with grief, sorrow, and troubles brought about by living with a disabled child.<sup>[11]</sup> Family, counseling is a learning process between a specialist in disability and the child's parents. It focuses on developing the attitudes and skills necessary to solve the problems of the parents. During the counseling process, parents are given opportunities to freely express their feelings such as anger, guilt, and hostility that they refrain from speaking, and they are encouraged to make realistic plans for themselves and their children. It is among the counselor's goals to help parents take ownership and responsibility for their own skills and communicate more effectively in the social environment.<sup>[12]</sup>

This study aimed to examine the effect of family counseling on anxiety, depression, and stress levels of mothers with handicapped children.

## METHOD

This study was designed as a randomized controlled intervention study. The study population consisted of mothers of children with disabilities who were receiving education in a special education and rehabilitation center (Çizmelioğlu Special Education and Rehabilitation Centre) in Erzurum province between August 30, 2014, and March 31, 2015, under the supervision of the Ministry of National Education. The prerequisites of being a mother of a disabled child receiving education in Çizmelioğlu Special Education and Rehabilitation Centre and not having received family counseling services for her disabled child before were accepted as inclusion criteria. Failure to comply with the family counseling program, discontinuing the relationship with the rehabilitation center, having interactions that would strongly change the psychological state of the mother such as death, birth, and divorce in the last year, having another accompanying disease that may affect the stress level of the mother, and having any physical or mental disability that may constitute an obstacle to participate in the study were determined as exclusion criteria.

With a significance level of 5%, an effect size of 10%, and 80% power to detect differences between the two groups using independent t-tests, it was calculated that a sample size of 40 individuals in each group was needed. The research was applied to the mothers of 80 children randomly selected from 200 children with disabilities. The 200 children were numbered from 1 to 200. The randomizer program was asked to select 40 numbers in two groups from the numbers from 1 to 200.<sup>[13]</sup> The mothers of the children corresponding to the numbers in the first group were selected as the study group and the mothers of the children corresponding to the second group were selected as the control group.

A total of mothers randomly assigned to the study group received family counseling provided by a psychologist, consisting of six sessions. The mothers in the control group, on the other hand, completed the study questionnaires without any intervention. In the family counseling implementation plan, while creating the plan for family counseling to be given to mothers of disabled people, the main themes of the sessions were first determined. Afterward, the sessions were standardized by transcribing what would be discussed in each counseling session based on these themes.

## **Main Themes of Family Counselling Sessions**

**1**<sup>st</sup> **Interview:** A short introductory speech was made. Afterward, stories about their children's disabilities were taken from the mothers.

**2^{nd} Interview:** The aim of the second session was to enable the mothers to accept the fact that their children have disabilities. For this reason, the acceptance of the reality of the situation and how the mothers felt were discussed in the  $2^{nd}$  session.

**3**<sup>rd</sup> **Interview:** In the third session, the mothers talked about the best way to meet their child's needs. Mothers were made to realize that their children go through similar stages of physical development with their peers and that their needs are basically the same as those of other children. Moreover, their awareness was emphasized.

**4<sup>th</sup> Interview:** In this session, it was emphasized to the mothers that their children have normal developing char-

acteristics as well as disabilities. Moreover, these characteristics were discussed.

**5<sup>th</sup> Interview:** Mothers were guided to help other members of the family to recognize and understand the disabled child. The counselor also helped the mothers to see how their attitudes and feelings about disability affect their maternal behavior. The counselor also talked about how they could benefit from the available medical, educational, and financial support resources in the community to help the child and family solve the problems they face.

**6<sup>th</sup> Interview:** It was stated that the counseling process would end. A summary of what was discussed in the previous sessions was made.

The participating mothers were administered the Perceived Stress Scale (PSS), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI) 3 times: Before the start of the family counseling program, immediately after the program, and 3 months after its completion. The BAI is a 4-point Likert-type self-rating scale. The Turkish validity and reliability of the scale were made by Ulusoy et al.<sup>[14]</sup> The 0-7-point range obtained from the scale indicated "minimal anxiety," the 8-15-point range "mild anxiety," the 16–25 point "moderate anxiety," and the 26–63 point "severe anxiety".<sup>[15]</sup> The BDI is another 4-point Likert-type self-rating scale. The Turkish validity and reliability of this form were developed by Hisli.<sup>[16]</sup> The 0-9-point range indicated "minimal depression," the 10–16-point range indicated "mild depression," the 17–29-point range indicated "moderate depression," and the 30–63-point range indicated "severe depression."<sup>[16,17]</sup> The other inventory used in the study is the PSS, a 5-point Likert-type scale. The Turkish validity and reliability of the PSS were developed by Yerlikaya.<sup>[18]</sup> It has two subscales, namely Perceived Stress and Perceived Coping. The scale is evaluated on both total scores and subscale scores, the higher the total score, the higher the stress.<sup>[18,19]</sup>

Statistical analysis was performed with the SPSS version 23.0 statistic software package (SPSS, version 23X, IBM, Armonk, New York 10504, NY, USA). The skewness test and histogram graph analyzed the conformity of numerical variables to normal distribution. For descriptive statistical analysis, frequency and percentage for categorical data and means and standard deviations for numeric data were presented. The Student's t-test, repeated-measures ANO-VA, and Chi-square test were used as hypothesis tests. Statistical significance was accepted as p<0.05.

## RESULTS

A total of 80 mothers were included in the study, 40 (50.0%) of whom were in the study group and 40 (50.0%) of whom were in the control group. The mean maternal age was  $42.1\pm10.0$  years, and the mean age of the disabled children was  $13.5\pm8.8$  years. Sociodemographic characteristics of mothers and children according to the groups are summarized in Table 1.

	Study Group (n=40)	Control Group (n=40)	р
Maternal age (year)	42.8±9.6	41.5±10.5	0.504*
Age of the disabled children (year)	12.9±9.7	14.1±8.0	0.221*
Monthly income	1681.7±950.2	1330.3±553.1	0.129*
Educational status			
Illiterate	6 (15.0)	11 (27.5)	0.574†
Primary school	17 (42.5)	14 (35.0)	
Middle school	12 (30.0)	12 (30.0)	
High school	4 (10.0)	3 (7.5)	
University	1 (2.5)	0 (0.0)	
Disability type			
Physical	5 (12.5)	12 (30.0)	0.141†
Mental	21 (52.5)	15 (37.5)	
Physical and mental	14 (35.0)	13 (32.5)	
Number of disabled child			
1 children	35 (87.5)	38 (95.0)	0.235†
≥ 2 child	5 (12.5)	2 (5.0)	

Compared to the mothers' first PSS score in the study group, a significant decrease was observed in the second PSS scores (p<0.001). However, there was no significant difference between the second and the third PSS scores (p=0.123). On the other hand, there was no significant difference between the first and the second PSS scores or the second and third PSS scores of the mothers in the control group (p=0.197 and p=0.521, respectively). Compared to the mothers' first perceived coping scores in the study group, a significant increase was observed in the second perceived coping scores (p<0.001). However, there was no significant difference between the second and the third perceived coping scores (p=0.100). On the other hand, there was no substantial difference between the first and the second perceived coping scores or the second and the third perceived coping scores of the mothers in the control group (p=0.706 and p=0.195, respectively). Compared to the mothers' first PSS scores in the study group, a significant decrease was observed in the second PSS scores (p<0.001). However, there was no substantial difference between the second and the third PSS scores (p=0.491). On the other hand, no significant difference was found between the first and the second PSS scores of the mothers in the control group, nor between the second and the third PSS scores (p=0.271 and p=0.873, respectively). BDI, BAI, PSS, and subscales scores at follow-up between the groups are summarized in Table 2.

There was a significant decrease in the mothers' second BDI scores in the study group compared to the first BDI scores (p<0.001). However, there was no significant difference between the second and third BDI scores (p=0.500) of this group. On the other hand, there was no significant difference between the first and second BDI scores of the moth-

Table 2. BDI, BAI, PSS, and subscales score at follow-up between the groups				
	Study Group (n=40)	Control Group (n=40)	р	
BDI scores				
1 <sup>st</sup>	13.6±5.8	14.4±6.8	0.743*	
2 <sup>nd</sup>	9.8±5.0	14.3±7.9	0.041*	
3 <sup>rd</sup>	10.1±6.1	14.5±9.4	0.014*	
р	<0.001†	0.777†		
BAI scores				
1 <sup>st</sup>	19.9±11.1	15.7±8.3	0.086*	
2 <sup>nd</sup>	17.1±10.3	15.2±7.6	0.183*	
3 <sup>rd</sup>	16.5±9.3	16.6±9.3	0.927*	
р	<0.001†	0.666†		
Total PSS score				
1 <sup>st</sup>	17.9±4.9	15.9±5.6	0.669*	
2 <sup>nd</sup>	14.8±4.3	15.2±5.9	0.027*	
3 <sup>rd</sup>	14.4±4.4	15.2±5.9	0.132*	
р	<0.001†	0.197†		
Perceived stress score				
1 <sup>st</sup>	12.6±4.3	10.7±5.2	0.019*	
2 <sup>nd</sup>	10.5±3.9	10.0±4.6	0.143*	
3 <sup>rd</sup>	9.7±3.2	9.9±4.7	0.009*	
р	<0.001†	0.313†		
Perceived coping score				
1 st	6.7±1.3	6.6±2.2	0.025*	
2 <sup>nd</sup>	7.7±2.0	6.8±2.2	0.014*	
3 <sup>rd</sup>	7.4±1.9	6.4±2.3	0.435*	
р	0.002†	0.389†		

BAI: Beck anxiety inventory; BDI: Beck depression inventory; PSS: Perceived stress scale.

Data is presented as mean±standard deviation.

\*Student's t-test, †Repeated-measures ANOVA.

ers in the control group or between the second and third BDI scores (p=0.770).

Compared to the mothers' first BAI scores in the study group, a significant decrease was observed in the second BAI scores (p<0.001). However, there was no significant difference between the second and the third BAI scores (p=0.573). On the other hand, in the mothers of the control group, there was neither a significant difference in the first BAI scores compared to the second BAI scores nor a substantial difference between the second and the third BAI scores scores (p=0.666 and p=0.156, respectively).

## DISCUSSION

This study determined that family counseling positively affected depression and stress levels in mothers with disabled children. During the study period, significant changes were observed in BAI, BDI, and total and subscale PSS in both the study and control groups. On the other hand, there was a difference in BDI and PSS stress scores between the study and control groups, however, no difference in BAI and total PSS scores end of the study.

The decrease in BAI, BDI, and PSS scores in the second tests applied after family counseling compared to the first tests' scores indicated that providing family counseling services to mothers would reduce the anxiety, depression, and stress correlated with the care of disabled children. As a matter of fact, parents of disabled children frequently stated that they needed family counseling to cope with the family's problems.<sup>[11]</sup> In previous studies, the professional psychological support provided to parents with disabled children has been found to be beneficial.<sup>[20,21]</sup> A psychological support program effectively reduced the hopelessness levels and increased the optimism levels of mothers with disabled children in the experimental group.<sup>[20]</sup> Dilmaç et al. showed that compared to the study group, the anxiety levels of mothers with mentally disabled children decreased after having education sessions.<sup>[21]</sup> In Yıldırım and Conk's study, there was a significant decrease in depression and stress levels of mothers with mentally disabled children after receiving private education. <sup>[22]</sup> All these findings are consistent with this study.

In some study results, it was reported that mothers of children with mental disabilities experience the most stress in the group of mothers with disabled children.<sup>[23-25]</sup> Mothers responsible for the care of mentally disabled children were exposed to increased levels of stress more than healthy mothers; thus, their mental and physical health was impaired. In this study, there was no significant difference between mothers of mentally disabled children and physically disabled children regarding anxiety, depression, and stress levels.

Studies have also reported that mothers responsible for the care of disabled children are exposed to more stress than healthy children's mothers, causing subsequent impairment in their mental and physical health.[26,27] The first BAI scores in this study were compatible with moderate anxiety and the first BDI scores with mild depression. These means were higher than the total BAI, and BDI mean scores of the mothers of non-disabled children comprising the control group in the study conducted by Uğuz et al.<sup>[28]</sup> This supported the hypothesis that mothers with disabled children were exposed to more anxiety, depression, and stress than mothers in society.<sup>[24,29]</sup> It should also be noted that the mothers included in this study had disabled children receiving private education. Previous studies demonstrated a significant positive difference in depression scores of mothers of children receiving private education than those who were not.<sup>[30]</sup> This alludes to the idea that the mother of a disabled child who does not have a private education has a much higher depression.

In this study, the family counseling plan focused on accepting the disability, the needs of the disabled child, the typically developing characteristics of the disabled child, the acceptance of the child by other family members, and how mothers' with disabled children can receive support in dealing with problems. These are the topics that concern the mother, the handicapped child, and the family comprehensively. "Acceptance of the disability" is the most challenging period of the process.<sup>[31]</sup> Providing counseling services would be more beneficial for mothers' with disabled children when interacting with their disabled child for the 1<sup>st</sup> time. By establishing a feedback system on this issue, mothers who have a disabled child should be registered, and counseling should be provided. Mothers who are found to have a disabled child during pregnancy should be recorded on a database so that professional counselors can provide comprehensive care before and after birth.

The support of other parents is crucial for the parents of children with disabilities.<sup>[32]</sup> Mothers can express their feelings and thoughts more efficiently in a group environment than in a one-on-one conversation with a specialist. Group work with mothers can have various purposes. The group session's general goal is to allow the participants to share their problems and the members to provide mutual assistance and support to each other by transferring the ways of coping with the unique situation. Mothers participating in the group can realize what is happening in their lives with the feedback they receive from other mothers. Many studies emphasize the importance of group counseling and the social support created by disabled children's mothers.<sup>[33,34]</sup> solidarity within the group. A family with a disabled child sees and understands the troubles and fears experienced by another family in a similar situation.<sup>[35]</sup> In this study, the consultancy service provided to mothers included groups of eight members. This has probably increased the effectiveness of the provided counseling method. For the results obtained to be permanent, the consultancy service may need to be repeated as needed for years to come. Because one of the basic principles of family consulting is the continuity of the service, consultation may be a never-ending process that continues even after its formal end. This is called "open termination." Because families may need to be consulted again.<sup>[36]</sup>

The application of control questionnaires only once (3) months later) after the counseling service is considered a limitation. Conducting studies with larger samples and for a longer duration would better reveal the impact of family counseling services and its effect on mothers with disabled children in combating anxiety, depression, and stress. Furthermore, the inclusion of women who did not have disabled children could allow a comparison with the general population. The mothers who participated in this study were not encountering their children's disabilities for the 1st time. Therefore, the likelihood of having already accepted the problem was high. This can be considered as a limitation of this research. Providing counseling services solely to mothers in the family of disabled children is a limitation of this study. However, the mother's psychological well-being affects not only the disabled child but also all family members.<sup>[23]</sup> For this reason, working only with the mother does not mean ignoring the needs of the other family members and siblings. Helping the mother also means supporting the whole family.

## CONCLUSION

In this study, it was determined that family counseling is effective in reducing the levels of depression and stress in mothers of disabled children. This indicated that the positive impact of family counseling on the levels of depression and stress in mothers of disabled children continued to persist. Conclusively, counseling service implementation will empower the mother to overcome the difficulties that complement the uniqueness of parenting a disabled child with the least psychological damage possible.

#### Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors declare no conflicts of interest.

**Funding:** The authors declared that this study has received no financial support.

**Ethics Committee Approval:** The study permission was obtained from the Atatürk University Faculty of Medicine Clinical Research Ethics Committee (Approval date: July 24, 2014, Approval number: B.30.2.ATA.0.01.00/123). In addition, approval was taken from the private rehabilitation center where the study was conducted. Before the questionnaire was administered, a consent form was obtained from the mothers after written permission was obtained from the institution and information about the study was given.

Authorship Contributions: Concept – T.S., M.I., E.S.; Design – T.S., M.I., E.S., A.K.; Supervision – T.S., M.I., E.S., A.K.; Materials – T.S., E.S.; Data collection and/or processing – T.S., M.I., E.S.; Analysis and/ or interpretation – A.K., T.S.; Literature search – T.S., M.I., A.K., Z.G.; Writing – T.S., M.I., A.K., Z.G.; Critical review – T.S., M.I., A.K., Z.G.

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