

## Investigating the Effectiveness of Teaching Stress Reduction Program based on Mindfulness to Mothers on the Signs of Confrontational Disobedience in Children

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### Abstract

**Introduction:** Coping disorder is one of the most common reasons for going to a mental health clinic. Signs of coping disorder usually appear when a child is in primary school age. But in some cases, levels of the disorder also appear in people who are in preschool age.

**Research Method:** The present study was conducted with the effectiveness of parenting style modification training to mothers on the signs of coping disobedience in children aged 8 to 11 years in Shiraz. The present study was a quasi-experimental study in which the pre-test-post-test design was performed with the control group by baseline assessment after intervention and 3-month follow-up with the control group. A total of 20 mothers of male primary school students in the school year of 1399-99 in Shiraz, about 6789 students were studying in 32 public boys' primary schools, were randomly selected to test (correct parenting style)  $n = 15$  and control ( $n = 15$ ) were assigned. All participants completed the Demographic Questionnaire, the Symptoms of Disobedience Questionnaire on Achenbach's Behavioral Inventory in three stages. Hypotheses related to the effectiveness of research interventions were analyzed using mixed analysis of variance as well as Bonferroni post hoc post hoc tests.

**Results:** The results of the present study showed that the mean of the symptoms of disobedience disorder in the pre-test stage was not significantly different between the two groups, which indicates the homogeneity of the two groups in the pre-test stage, but the difference between the two groups in the post-test and follow-up stages was significant. Which can indicate the effectiveness of the intervention on the mentioned variables and the stability of effectiveness in the follow-up stage.

**Conclusion:** The results of this study showed that the mentioned treatment can be used as a psychological intervention in reducing the symptoms of confrontational disobedience in children aged 8 to 11 years. Due to the effectiveness of parenting style, this treatment can be prioritized.

**Keywords:** behavioral problems of children, Mindfulness-based stress reduction program, signs of confrontational disobedience

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## **Introduction:**

The family is the first and most durable factor that, if not in all societies, at least in most societies is known as the builder of the child's personality and subsequent behaviors, and even according to many psychologists, it should be the root of many personality disorders and mental illnesses. searched for in the primary upbringing of the family (1). Among the members of our family, the baby is the first person with whom the relationship is established, therefore, he plays the most important role in developing the mental and emotional characteristics of your child, and he is considered the center of health and illness. Research has shown that behavioral disorders in children are closely related to psychological problems of parents, especially mothers (2). Oppositional defiant disorder has the highest prevalence in families whose parents or caregivers are unresponsive or neglectful in taking care of the child (3). If this disorder coexists with attention deficit hyperactivity disorder, it is more likely to continue until adulthood and become an antisocial personality disorder. Experts believe that the identification of potential factors in the development and emergence of behavioral disorders, especially oppositional defiant disorder, has an undeniable role in the creation and use of interventions that are effective in improving this disorder (4).

Although many factors such as the interactions of parents, peers, socio-economic conditions, environmental context and child's temperament characteristics play a role in the creation, emergence and continuation of oppositional defiant disorder (5). But the theories of children's behavioral problems show that ineffective parenting (inefficient behavior of parents), such as irregular and unstable regulations and severe physical punishments of parents, has a stronger role in behavioral problems, especially oppositional defiant disorder in children and adolescents (6). There are various interventions for oppositional defiant disorder and different therapeutic approaches have been presented for this disorder, among them, parent training is preferable to other intervention methods due to focusing on the most central factor in the emergence of behavioral disorders, i.e. parents. and has superiority (7). Constant punishment and unstable regulations in the family are probably related to oppositional defiant disorder, which leads to the continuation of the vicious cycle of parent-child interaction. In fact, children show high rates of disobedience and aggression in response to punishment. Parents also use ineffective regulatory strategies to avoid this behavior of children, which causes the continuation of the parent-child vicious cycle (8). In a study that was conducted on 500 children, the results showed that parents with 6-year-old children who have strict and inflexible rules at home and adopt severe punishment for raising children, their children between the ages of 6 and 16 have a high rate of The symptoms of oppositional defiant disorder show(9). Oppositional defiant disorder is associated with high degrees of damage in social skills, family interactions and academic performance (10). Research shows that parents of children with behavioral problems, especially children with oppositional defiant disorder and attention deficit/hyperactivity disorder referred to the clinic, report more stress in their families and their parental role (11). They acknowledged the role of parents, especially mothers, in treating the behavioral symptoms of children with oppositional defiant disorder, and in addition, they emphasized that the inconsistency between parents in education and behavior control may lead

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to behavioral problems such as disobedience or stubbornness in children. Leads. Over many years, various treatment methods have been used to deal with the behavioral-cognitive and emotional problems of children with oppositional defiant disorder (12).

In this context, part of the treatments are focused on individual interventions and another part on family interventions; so that parent training programs to help manage their child's behavior, individual psychotherapy to manage anger, family therapy to improve communication, social skills training to increase flexibility and tolerance of failure among peers, and cognitive-behavioral therapy. It has been teaching problem solving and reducing negativity (13). The emergence of behavioral abnormalities in children and its unfortunate consequences for both the children themselves and their families and parents have caused the issue of child rearing to be raised as one of the most complex and ambiguous issues of daily life. Considering the role of parents in the emergence of these behaviors, one of the methods that can play a role in reducing this behavior is teaching parents, especially mothers (14). Marshall Linehan for the first time emphasized the necessity of including mindfulness as one of the basic components of psychological treatments (15). Although little attention has been paid to the mechanisms involved in the presence of mind, it seems that the presence of mind affects other cognitive operations. In the person's consciousness, it is related to the present time; In this state, the person is conscious of sight, hearing, smell, taste and touch and does not think about the past or the future (16).

Mind-awareness method is one of the meditation-based emotion regulation training programs. Mindfulness, as an emotion regulation intervention program, teaches patients to change the relationship between their negative thoughts and emotions and instead of attributing them to themselves with negative evaluation and intensifying them, treat them with a non-judgmental and compassionate attitude. accept (17). Mindfulness is often described as a "presence of mind" state, which is related to a clear awareness of the external and internal world of a person, such as thoughts, feelings, emotions, behavior, or the surrounding environment as it exists at any moment (18). Mindfulness is also defined as special and purposeful attention in the present time and free from prejudice and judgment. In mindfulness, a person becomes aware of his mental mode in a moment, and after becoming aware of two modes of mind, one of doing and the other of being, he learns to move the mind from another mode, which requires teaching strategies. Behavioral, cognitive and metacognitive is special for focusing attention process (19). Therefore, the main question of the current research is whether the group training of the stress reduction program based on mindfulness has an effect on internalized behavioral problems, externalized problems and general problems in the signs of confrontational disobedience in children?

### **Research method:**

Research method, statistical population and sample: The current research is a controlled quasi-experimental study in which the pre-test-post-test design was with a control group. - 2019 Yasuj city, where about 4259 students were studying in 12 boys' public primary schools, from which 40 people were selected and randomly replaced in experimental (20 people) and control (20 people) groups. The inclusion and exclusion criteria of this study were: having a child with a diagnosis of confrontational disobedience, having a middle school education or higher, being

between 25 and 45 years old, having no history of neurological and mental illness and hospitalization, the ability to participate in Group therapy sessions, willingness to cooperate, exclusion criteria for the experimental group: not attending intervention sessions for more than two sessions, unwillingness to continue attending intervention sessions. In order to collect the necessary demographic data as basic information including age, marital status, education, socio-economic status, Achenbach's Demographic Questionnaire and Child Behavior Checklist (CBCL) - parents' version was used by the mother of children with defiant disorder. completed the measurement tools were:

**Demographic Information Questionnaire:** The purpose of this questionnaire is to collect the necessary demographic data as basic information including age, marital status, education, socio-economic status, educational background and work experience, as well as questions about how to control general problems by the mother. The child had disobedience disorder.

**Achenbach's Child Behavior Checklist (CBCL) - Parent's version:** Achenbach's Child Behavior Checklist was translated and standardized for the first time in Iran by Tehrani Dost et al. (2008). The Achenbach Child Behavior Inventory is a collection of parallel Achenbach ASEBA forms and evaluates the problems of children and adolescents in 8 factors of anxiety/depression, isolation/depression, physical complaints, social problems, thinking problems, attention problems, ignoring rules and aggressive behavior. The two factors of ignoring rules and aggressive behavior form the second-order factor of externalizing problems.

**Achenbach's Child Behavior Inventory:** It assesses the emotional-behavioral problems as well as the academic and social abilities and competencies of children aged 6-18 years from the parents' point of view and is usually completed in 20-25 minutes (20). The above method of Achenbach's Child Behavior Inventory) has three broad-band scores including internalized behavioral problems, externalized problems, and general problems. The scale of internalized behavioral problems includes the items of withdrawal/depression (WD), physical complaints (SC) and anxiety/depression (AD) subscales. The scale of externalized behavioral problems includes subscales of law-breaking behavior (RB) and aggressive behavior (AG). The scale of general problems includes all items except items 2 and 4 (allergy and asthma) (20).

The overall reliability coefficients of CBCL forms (Achenbach Child Behavior Inventory) were reported using Cronbach's alpha of 0.97 and using test-retest reliability of 0.94. Content validity (choosing the logic of questions and using the analysis of a class of questions), criterion validity (using a psychiatric interview with a child and correlation with the CSI-4 scale) and construct validity (internal relationships of scales and group differentiation) of these forms are desirable. It has been reported (21). In the research of Darvishzadeh, Latifi, Soltanzadeh (2019). The range of internal consistency coefficients of scales using Cronbach's alpha formula is reported from 0.63 to 0.95. The time stability of the scales was checked using the test-retest method with a time interval of 5-8 weeks, and the range of time stability coefficients was obtained from 0.32 to 0.67. Also, the agreement between the respondents has been examined, and the range of these coefficients fluctuated from 0.09 to 0.67. In general, Darvishzadeh's research (2019) concluded that this questionnaire has good and high validity and can be reliably used to measure emotional-behavioral disorders in children and adolescents aged 6-18.

In the present research, after receiving permission from the university and obtaining approval from Yasouj City Education, with the coordination of the directors and respected teachers of the selected schools, the students were screened. After selecting these students, their mothers were selected based on the entry criteria, and then explanations about the research were given to them. After obtaining written consent from them to participate in the research, the subjects were randomly assigned to the study groups. All the participants completed the questionnaires of demographic characteristics, Achenbach's Child Behavior Checklist (CBCL) - parents' version before starting the interventions and then immediately after completing the course. The experimental groups were subjected to the mentioned interventions. According to the objectives of the research, 3 months after the intervention, a meeting was held with the aim of evaluating the effectiveness of the intervention. People in the control group did not receive any treatment intervention. Due to ethical considerations at the end of the research, people in the control group also entered the treatment. The treatment of the mindfulness-based stress reduction program of the 8 intervention sessions of this research is based on the protocol of the mindfulness-based stress reduction program, and each session is 90 minutes long and is as follows (22).

Table 1- Description of mindfulness-based stress reduction program sessions

First session	Introducing the group members and conducting the pre-test, discussing the behavioral limits and explaining the rules and principles and contracts governing the counseling sessions, the informed consent of the group members to carry out the treatment process, presenting the treatment goals and that change is possible. Introducing yourself and getting to know the group members with each other (30 minutes). Determining the rules of the group (punctuality, confidentiality, respect for each other's opinions, participation in discussions and discussions and no conflicts and insults, respect for others' turn in speaking), (20 minutes). Determining the goals and plans of the group (mindfulness training framework by practicing eating raisins), (15 minutes). Expectations and personal goals of members from participating in meetings (10 minutes). Education: The benefits and application of mindfulness in life were explained. The concept of mindfulness was introduced to the clients.
Second session	Welcoming the group members and establishing rapport (10 minutes) Training (training of physical examination exercises with audio recording: In the physical examination, we simply asked the participants to focus for a few minutes on the act of breathing that flows inside and outside the body. After that, we ordered a physical examination. We asked the participants to direct their minds to different parts of the body. Participants' participation in the discussion about the topic of the session (10 minutes) Feedback about the topics discussed in this session and their feelings. From this meeting (10 minutes).
Third session	Welcoming group members and establishing rapport (10 minutes). Training (review of past meetings and flexibility training to face obstacles: it was recommended to the participants. Participation of members in the discussion

	about the topic of the meeting (30 minutes). Feedback about the topics raised in this meeting and their feelings about this meeting (10 minutes)
Forth session	Welcoming group members and establishing rapport (10 minutes). Training and purpose of this session (review of past sessions and training of listening exercises: here we practice to be aware of distant and near sounds in our environment. Participation of members in a conversation about the topic of the session (30 minutes). Feedback on the topics discussed. In this session and your feelings from this session (10 minutes).
Fifth session	Welcoming the members of the group and establishing a relationship (10 minutes) Determining the purpose of this meeting (reviewing the past meetings and training clients on sitting meditation: let's start by paying attention to the way of sitting. Members' participation in the discussion about the topic of the meeting (20 minutes). Feedback about the topics discussed in this meeting and your feelings about this meeting (10 minutes)
Sixth session	Welcoming group members and establishing rapport (10 minutes). The training of this session (references to lake or mountain meditation or mindfulness meditation, using audio recording: for practice, we asked the participants to pay attention to their unpleasant memories, problems with their good memories, and remember the thoughts associated with them. Some people see their mind as the sky with clouds that move at a high speed, sometimes the clouds are small, sometimes they are dark, and sometimes they cover the whole sky, but the sky remains. The mind, which includes mountain and lake meditation, was presented to the participants. In these step-by-step meditations, there are beautiful images that are considered ways to connect with thoughts, such as a mountain that stands strong despite a storm. A lake or a lake that remains calm despite the disturbance of its water level (50 minutes). Members' participation in the discussion about the topic of the meeting (20 minutes) Feedback about the topics discussed in this meeting and their feelings about this meeting (10 minutes).
Seventh session	Welcoming group members and establishing rapport (10 minutes). In the seventh session, the clients were encouraged to take control of their own consciousness. They were suggested to practice mindfulness without audio recording. Clients were suggested to try different exercises and develop a scheduled exercise program that is effective for them. They were taught to combine some exercises: ways you can see your thoughts differently: here are some things you can do: There is something you can do with your thoughts: just watch them come and go, without feeling compelled to follow them. See your thoughts as a mental event rather than a reality. It may be true that this event often occurs with other emotions. It's tempting to think these thoughts are real. But it is still up to you to consider them as real or to dream about them in a different way. Write your thoughts on paper. With this method, you can see your thoughts less emotional and overwhelming. The time interval between the presence of these thoughts and the time they come into writing provides an

	opportunity to think about their meaning, for thoughts, especially problematic thoughts, maybe you can deliberately find another alternative. It is useful to do this as part of the exercise: release your "rational mind" and give it another chance), (50 minutes) Engaging members in a discussion about the topic of the meeting (20 minutes)
Eighth session	In the last session, past exercises were reviewed. The therapist talked to the clients about which exercises were most effective for them and gave them some advice on how to reduce stress: What we actually do every moment can help us cope with stress more skillfully and better. be effective. You might like to ask yourself these questions: 1. Among the things I do, which ones strengthen me and which ones stimulate me to be alive and present instead of just stimulating me? Does it increase (enhancing activities)? 2. Of the things I do, which ones wear me out, which ones reduce my sense of being alive and truly happy, which ones make me feel like I'm just excited? or am I getting worse (degrading activities)? Participation of members in the discussion about the topic of the meeting (30 minutes). Feedback about the topics discussed in this meeting and your feelings about this meeting (10 minutes).

### Results:

In this research, the effectiveness of training in a stress reduction program based on mindfulness on the components of the signs of disobedience disorder of Achenbach's child behavior list, including internalized behavioral problems, externalized problems, general problems on 30 mothers with children with disobedience disorder (15 in the control group, 15 people in the test group) were examined. Table (2) presents the frequency and frequency percentage of the demographic information of these mothers separately in two groups. Examining the frequency of marital status, education and income in the two groups indicated that the demographic variables were the same in the two groups (test and control).

Table 2: Descriptive statistics related to the age classification of the research participants


Group	Age	Frequency	Frequency percentage
<b>Experiment 2 of a mindfulness-based stress reduction program)</b>	25 to 30 years	5	35
	31 to 35 years	6	30
	36 to 40 years	5	35
<b>Control</b>	25 to 30 years	4	20
	31 to 35 years	7	35
	36 to 40 years	8	54

Group	Level of education	Frequency	Frequency percentage
<b>Examination</b>	cycle	5	40
	Diploma	4	25
	Associate degree	2	10
	Masters and Ph.D.	3	20
<b>control</b>	cycle	1	5
	Diploma	5	35
	Associate degree	5	30
	Masters and Ph.D.	1	5
Group	Marital situation	Frequency	Frequency percentage
<b>Experiment (mindfulness-based stress reduction program)</b>	married	11	80
	divorced	4	20
<b>control</b>	married	12	70
	divorced	3	15

Table 3- Kolmogorov Smirno and Shapiro-Wilk test to check the normal distribution for the experimental group of mindfulness-based stress reduction program

Variables	Kolmogorov Smirnoff			Shapiro-Wilk		
	statistics	Df	Sig	statistics	Df	Sig
<b>Externalized problems 1</b>	0.345	26	0.001	0.579	26	0.001
<b>Externalized problems 2</b>	0.185	26	0.014	0.927	26	0.024
<b>Externalized problems 3</b>	0.173	26	0.082	0.422	26	0.120
<b>Internalized behavioral problems 1</b>	0.148	26	0.200	0.973	26	0.431
<b>Internalized behavioral problems 2</b>	0.158	26	0.093	0.921	26	0.049
<b>Internalized behavioral problems 3</b>	0.192	26	0.039	0.971	26	0.641
<b>General problems 1</b>	0.222	26	0.005	0.790	26	0.009
<b>General problems 2</b>	0.189	26	0.074	0.934	26	0.084
<b>General problems 3</b>	0.144	26	0.062	0.937	26	0.044



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The results of the normal distribution test of Shapier and Wilk in the test group of the mindfulness-based stress reduction program showed that the assumption of normality of the data in the dimensions of externalized problems in the follow-up stage, general problems in the post-test and follow-up stage, internalized behavioral problems in the stage The pre-test and post-test in the pre-test and follow-up stages have a normal distribution ( $P < 0.01$ ), but for other dimensions and stages of the test, the data did not have a normal distribution ( $P < 0.05$ ). Due to the lack of normal distribution in these dimensions, caution should be observed in generalizing the results of this component.

Table 4 - Average results of pre-test - post-test - follow-up of externalized, internalized and general problems by group and test

The dependent variable	Externalized problems			Comparison of pre-tests in two groups
	Mindfulness-based stress reduction program			
<b>Test</b>	Pre-test	Post-test	Follow up	F=137.308 0.001
<b>Average</b>	31.46	16.26	22.50	
<b>standard deviation</b>	0.57	1.37	1.02	
<b>Test</b>	Control			Follow-up comparison in two groups
	Pre-test	Post-test	Follow up	
<b>Average</b>	31.38	30.42	31.69	
<b>standard deviation</b>	0.57	0.64	1.01	
The dependent variable	Externalized problems			Comparison of pre-tests in two groups
	Mindfulness-based stress reduction program			
<b>Test</b>	Pre-test	Post-test	Follow up	F= 1.08
<b>Average</b>	57.98	33.98	47.98	Sig= 0.344
<b>standard deviation</b>	2.34	2.34	2.34	
<b>Test</b>	Control			Follow-up comparison in two groups
	Pre-test	Post-test	Follow up	
<b>Average</b>	55.96	54.30	55.46	SIG= 0.001
<b>standard deviation</b>	5.99	10.02	7.98	
	General problems			Follow-up comparison in two groups
	Mindfulness-based stress reduction program			

<b>Test</b>	Pre-test	Post-test	Follow up	F= 130.820
<b>Average</b>	59.76	28.15	32.42	Sig= 0.001
<b>standard deviation</b>	2.92	3.43	3.43	
<b>Witness</b>	Control			Follow-up comparison in two groups
<b>Test</b>	Pre-test	Post-test	Follow up	F= 64.563
<b>Average</b>	59.42	59.26	58.88	Sig= 0.0001
<b>standard deviation</b>	3.70	3.09	3.02	

The results of Table 4 showed that there is no significant difference between the two groups in the variable mean of externalized problems, internalized behavioral problems, and general problems in the pre-test stage, but the difference between the two groups in the post-test and follow-up stages was significant, which can indicate of the effectiveness and stress reduction program based on mindfulness on the variable of externalizing problems.

In order to investigate the effectiveness of the mindfulness-based stress reduction program on the dimensions of externalized problems, internalized behavioral problems, and general problems of children with confrontational disobedience, multivariate repeated measurement variance analysis was used. Therefore, first the assumptions of this test were examined for each variable. The results of Bartlett's sphericity test ( $P < 0.001$ ,  $X^2 = 479.441$ ) indicated compliance with the default of this test (correlation between dependent variables), then the results of the Mbox test were checked to check the assumption of homogeneity of the covariance matrix, which showed that this assumption for The examined components are not established ( $P < 0.001$ ,  $1/413 = 7627/42$ ,  $231F$ ,  $BoxM = 603/75$ ), which of course considering the high sample size of the two groups, it can be said that this test is resistant to the violation of this assumption.

Then, the hypothesis of sphericity was implemented using Mochli's test for all the investigated variables, and the results of this test showed that this assumption was true for the variables of externalizing problems ( $P < 0.05$ ) and for the components of internalizing behavioral problems, general problems were true. It is not ( $P < 0.001$ ) and the corrected results of Greenhouse Geisser should be used. Then, the assumption of homogeneity of error variance was checked using Lon's test, and the results of this analysis showed that this assumption is valid for the components of externalized problems, internalized behavioral problems, and general problems ( $P < 0.05$ ).

Table 5- The results of Lon's test to check the homogeneity of the error variance

<b>Component</b>	<b>F</b>	<b>Dfi1</b>	<b>Dfi2</b>	<b>Sig</b>
<b>Externalized problems 1</b>	0.076	1	50	0.783
<b>Externalized problems 2</b>	5.417	1	50	0.024
<b>Externalized problems 3</b>	0.108	1	50	0.744
<b>Internalized behavioral problems 1</b>	4.389	1	50	0.041

<b>Internalized behavioral problems 2</b>	2.234	1	50	0.141
<b>Internalized behavioral problems 3</b>	0.980	1	50	0.327
<b>General problems 1</b>	1.752	1	50	0.195
<b>General problems 2</b>	3.612	1	50	0.063
<b>General problems 3</b>	8.729	1	50	0.005

The results of multivariate tests showed that the presentation of the stress reduction program based on mindfulness in the group factor ( $P < 0.001$ ,  $2\eta = 0.961$ ,  $F = 153.827$ , Pillais trace = 0.961) and in the time factor ( $985/985$ )  $0 = 2\eta$ ,  $P > 0.001$ ,  $F = 178.202$ , Pillais trace = 0.985) and the interactive effect of time and group ( $P = 0.976$ ,  $P > 0.2001$ ,  $F = 108.043$ ,  $0.976 =$  Pillais trace) is significant. These results show that the intervention of the stress reduction program based on mindfulness is effective on the investigated dimensions. The results of multivariate tests are fully presented in Table 6.

Table 6- The results of the test to compare the effect between groups in the two experimental and control groups

Variable	sum of squares	Df	mean square	F	Sig	$2\eta$
<b>Externalized problems</b>	171.131	1	171.130	511.163	0.001	0.911
<b>Internalized behavior problems</b>	2632.692	1	2632.692	141.282	0.001	0.739
<b>General problems</b>	323.335	1	323.335	23.799	0.001	0.322

Also, the results of the within-group effect test to compare the stages of the tests in two groups showed that the effect of the time factor for the variables of externalizing problems ( $\eta = 0.882$ ,  $P < 0.001$ ,  $FGG = 1.373 = 89$ ), behavioral problems internalized ( $2\eta = 0.83$ ,  $P > 0.001$ ,  $FGG = 1.244/277$ ), general problems ( $\eta = 0.916$ ,  $P > 0.001$ ,  $FGG = 1.29 = 546$ ) It is meaningful. The results of this analysis are fully presented in Table 7-4.

Table 7- Pairwise comparison of the experimental and control groups in the evaluation stages


Variable	Test	Group 1	Group2	mean difference	standard error	The significance level
<b>Externalized problems</b>	Pre-test	Mindfulness-based stress reduction program	Control	0.231	0.158	0.151
	Post-test	Mindfulness-based stress	Control	5.846	0.297	0.001

		reduction program				
	Follow up	Mindfulness- based stress reduction program	Control	4.808	0.283	0.001
<b>Internalized behavior problems</b>	Pre-test	Mindfulness- based stress reduction program	Control	-0.962	1.253	0.447
	Post- test	Mindfulness- based stress reduction program	Control	25.154	2.014	0.001
	Follow up	Mindfulness- based stress reduction program	Control	18.500	1.629	0.001
<b>General problems</b>	Pre-test	Mindfulness- based stress reduction program	Control	0.192	1.11	0.863
	Post- test	Mindfulness- based stress reduction program	Control	9.077	1.010	0.001
	Follow up	Mindfulness- based stress reduction program	Control	5.692	1.046	0.001

The results of this research showed that the intervention of the stress reduction program based on mindfulness was effective in the experimental group compared to the control group, and the comparison of the averages of the two groups in the post-test and follow-up stages indicated the stability of the intervention effect in the experimental group.

#### **Discussion and conclusion:**

This study was designed and implemented with the aim of investigating the impact of mindfulness-based stress reduction training on internalized behavioral problems, externalized problems, and general problems index in children suffering from defiant disorder syndrome. In the current study, it was observed that the results related to the individual characteristics of the research units, which include mothers of children with oppositional defiant disorder, in the two control and intervention groups, in terms of individual characteristics, did not have a

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statistically significant difference, and in other words, the two groups in terms of this the features were homogeneous; Therefore, the two groups were compared according to the intervention. In the experimental group, changes in internalized behavioral problems, externalized problems, and general problems index were better. Based on the hypothesis of the current research; Group training of stress reduction program based on mindfulness to mothers is effective in reducing signs of oppositional disobedience in children; And it has a lasting effect over time.

The results obtained from the present research showed that the mean of the variable components of signs of disobedience, including externalized problems, internalized behavioral problems, and general life problems in the pre-test stage, did not have a significant difference between the four groups, but the difference between the four groups in The post-test and follow-up stages were significant, which can indicate the effectiveness of the stress reduction program based on mindfulness of variables. According to the mentioned findings, there is no evidence to reject the mentioned hypotheses, the mentioned hypotheses have been confirmed. The mindfulness-based stress reduction program in the experimental group has been effective in improving externalized problems, internalized behavioral problems, and general problems in the signs of oppositional disobedience in children, and over time it has a lasting effect (sustainability) compared to the control group.

The results of Hepark research (2019) showed that with the training of the mindfulness approach, significant improvements were found in the executive performance and mindfulness skills of the experimental group. Also, the results showed that the level of anxiety and depression of the experimental group decreased significantly. In line with the results of the present study, the results of the research of Mitchell et al. (2013) showed that mindfulness is effective in improving the executive function and emotional regulation of adults. The results of Robbins et al.'s research (2012) showed that the mindfulness training program is effective in reducing mental distress and improving psychological adjustment in medical, psychiatric and non-clinical samples. In line with the results of the current research, the results of Gibson's research (2017) showed that the training of mindfulness techniques leads to the improvement of attention, mindfulness, internalizing and externalizing problems, social behavior/self-esteem and cognitive/executive performance of people. gets infected In a research, Shirazi et al. (2015) showed that mindfulness training was significant in improving the psychological well-being of children with attention deficit/hyperactivity disorder.

The results of the research of Vandrew Bogles (2012) showed that interventions based on the principles of mindfulness, including breathing exercises, body scanning and yoga, are effective in reducing attention deficit and hyperactivity. Therefore, it is consistent with the results of the present study. In explaining the results of the current research, it can be concluded that based on the mind-consciousness approach; Mindfulness-based exercises help people to get rid of ineffective thoughts and gradually develop the ability to get rid of disturbing thoughts without reacting to them. While practicing mindfulness, people learn to observe their thoughts, to consider them only as thoughts and not as reality, then step back and bring their attention back to the present moment, and so on to alternative thoughts. also pay attention Kabat-Zinn (2013) stated about the mindfulness approach that mindfulness is actually a tool for mental

reconstruction of subjects, through expanding their mental capacity to see their thoughts and emotions from an external perspective (23).


Suggesting screening and identifying children with defiant disorder in the early stages of diagnosis and treatment, referring them to a psychologist can also be effective in preventing and reducing the psychological problems of this group. Implementation of trainings and group interventions for parents suffering from disobedience disorder in such a way that the possibility of sharing the experiences of the participants is provided, in order to increase social support, both emotional and informational, on the agenda. Considering the effectiveness of group interventions in controlling the symptoms of disobedience disorder and also the impossibility of face-to-face implementation of interventions, it is recommended to inform parents about the content of intervention sessions in the form of booklets or brochures. Research proposals It can be pointed out that due to the prevalence of disobedience disorder in girls and boys and the importance of implementing psychological interventions to control this disorder, it is suggested to refrain from controlling the gender variable in future research and, if possible, to implement interventions in the group of mothers of girls with the disorder. disobedience and compare it with boys with disobedience disorder. It is suggested that the intervention carried out in the present study should be carried out on other coexisting disorders, including conduct disorder. It is suggested that these programs be evaluated with a larger sample size in groups of mothers with other comorbid disorders, including conduct disorder. It is suggested that re-tests be taken from the participants with an interval of 6 months, 9 months and 1 year from the first test and re-evaluation is done so that the long-term impact of the trainings can be checked. In order to determine the generalizability of these findings, it is suggested that this research be conducted in other provinces to increase the validity of the research.

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