

## **Efficacy of Mindfulness-based cognitive therapy (MBCT) on parenting stress, cognitive flexibility, in mothers of children with learning disabilities**

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### **Abstract**

The aim of this study was to examine the effectiveness of mindfulness-based cognitive therapy (MBCT) on parenting stress, cognitive flexibility in mothers of children with learning disabilities. Methods this study was a quasi-experimental design with two groups (test and control) and pre-test and post-test, the population of all the mothers of children with learning disability centers in Ahvaz in the second half of 2016 were.

### **Introduction**

A part of the population of any country always suffers physical and psychological injuries for various reasons. According to the estimate of the World Health Organization, the frequency of the population of exceptional children and adolescents in the world is currently 500 million people, and with the increase of the population in the world, this number will increase in the future (Arjamandania, Afrooz and Sadati, 2013).

One of the most important branches of psychology and the education of exceptional children is the branch of learning disabilities. Several generations ago, people could handle various jobs and social tasks without going to school, but in today's world, such a thing is

Among which 40 men and 20 women randomly assigned to the control group and 20 patients in the experimental group and the experimental group participated in eight sessions of mindfulness-based cognitive therapy control group did not receive any intervention. Both at the beginning and end of the intervention questionnaires, cognitive flexibility, Parenting Stress Index Scale, were evaluated. Data collected by descriptive statistics (mean and standard deviation) and inferential statistics (analysis of covariance) were analyzed. Analysis of data showed that mindfulness-based cognitive therapy improves cognitive flexibility and parental stress in the experimental group was. It is suggested that the results in health and education programs for parents with children with learning disabilities should be used.

**Keywords:** learning disabilities, parenting stress, cognitive flexibility, mindfulness-based cognitive therapy.

not possible. We live in a media where people must learn how to receive and use the necessary information. In DSM-IV classification, learning disorder is diagnosed when progress on standardized tests for reading, math, and written expression is significantly below the expected level in terms of age, education and intelligence level. (Fletcher and Morris, 2007).

In the Diagnostic and Statistical Manual of Mental Disorders, fifth edition, learning disability has been changed to specific learning disorder (SLD), the name and nature of the data has been changed, and reading disorder, writing disorder, and math disorder are known as a characteristic of specific learning disorder (Ganji, 2012).

In other words, learning disabilities are normal in the three areas of reading, writing and mathematics, unlike IQ. And it should be distinguished from the normal differences in cultural progress as well as academic problems caused by lack of opportunities, weak teaching, cultural factors, and visual and hearing issues (Kaplan, 2003). These disorders are usually caused by lesions of the central nervous system and have different manifestations depending on the region of the lesion (Girod, 2001).

So that the term learning disorder includes conditions such as perceptual disabilities, brain injuries, partial failure in brain work and developmental aphasia. According to this definition, learning disorder is a neurological deficiency and it is also considered as an expression of cognitive malfunctions such as understanding, reading, writing and math.

Special learning disability includes a heterogeneous group of children who have problems in various areas. These problems create lifelong effects for a person, which seem to be much more than reading, writing, and arithmetic, and deeply affect areas such as health, mental health, interpersonal relationships, continuing education, employment opportunities, and the like. (Raghavan-et-al)

On the other hand, special learning disability, unlike other disabilities, is a hidden disability because there are no obvious symptoms that can be immediately recognized in many cases. Therefore, it seems that some of these problems are caused by parents' lack of awareness of educational methods and the like. Knowing these factors can significantly prevent the occurrence of this failure.

The important point in the field of these deficiencies is that if it is diagnosed on time, it can create significant success in the lives of these people. And this is especially important now that new technologies can play a major role in the educational support and compensation of these people.

Currently, learning disabilities are known as the main cause of severe academic learning problems. Learning disabilities is still an integrated and dynamic field that reacts to the progress of education research and politics and important changes in society. The term learning disability is used by psychologists and education specialists, while medical professionals prefer learning disorder.

The problems of exceptional children are not only limited to educational issues, and the existence of such children can have significant effects on the functioning and relationships of the family and even changes in the daily issues of its members. The presence of an exceptional child in a family often causes irreparable damage to the family.

The degree of vulnerability of the family in front of this injury is sometimes to such an extent that the mental health of the family suffers severe damage. Studies show that parents of problem children experience restrictions such as hygiene, feelings of deprivation and high levels of anxiety, stress and depression compared to parents of normal children (Dyson; 2005, cited by Ganji et al., 2013).

In the meantime, because of the traditional role of caregiving, mothers assume more responsibilities for their exceptional children, and as a result, they face more pressures and psychological problems (McConkey, 2007). Because mothers have more interaction with

their exceptional children and witness their increasing limitations, they experience more anxiety and stress (Burack, Hodapp & Zigler, 1998).

In fact, the presence of an exceptional child in the family is a source of stress for mothers who deal with the child more than others, due to the special care needs of the child. And it affects their mental health and adaptation, and it affects their level of compromise and physical health, and it threatens their level of compromise and physical and mental health and has negative effects on them (Bahrinian, Haji Alizadeh, Ebrahimi and Hashemi Garji, 2011) .

Beresford (1996) describes that mothers experience more psychological pressure than fathers in caring for exceptional children for three reasons:

- 1) Mothers contribute more than fathers to raising children.
- 2) Because mothers give birth to children, they often feel more responsible for the child's disability.
- 3) Mothers are the providers of the child's needs (quoted by Ebrahimi Tashekand, 2009).

One of the types of stress experienced by mothers with exceptional children is parenting stress. Parenting stress results from the perceived mismatch between parental demands and individual resources, and such stress can be experienced in several areas of life that are related to parenting (Abidin, 1990; quoted by Rabiei Kanari, Jaedian and Selagi, 2014).

Giniri Kokosis, Rutsica, Skvington, Papavonglou, Maliuri, Tomaras, and Kokoi, (2012) found in a study that compared to

mothers with normal children, mothers with learning disabled children have lower emotional health moments, experience more stress and have less self-confidence.

Belcher, Begum, Markoulides, Bakker, and Bruce (2013) examined Black and Latina mothers' views of the positive effects of having a child with a disability and concluded that Latina mothers had a more positive view of their children (regardless of whether the children were healthy or had a disabled child.)

Also, the costs of treating these children are high and it increases the stress of the family. Relationships between family members may also be disturbed. It is possible that parents feel that they should spend less time with other family members, and other children in the family may feel isolated and neglected by their parents (Khodayari Fard and Parand, 2010).

Psychopathy caused by various environmental stressors, such as exceptional children, is the issue of cognitive flexibility. The flexibility of people is very decisive in the incidence of injuries and the level of their social performance. In general, the ability to change cognitive cues in order to adapt to changing stimuli is the main element in operational definitions of cognitive flexibility (Dennis and Vanderwaal, 2010).

Mothers with flexible thinking use alternative justifications, positively reframe their thinking, and accept challenging situations or stressful events, and are more psychologically resilient than those who are not flexible (Haglund, Nastadt, Cooper Sutwick, Charney, 2007)

The research done by Shin and Sim Kim (2004) on resilience and quality of life; They

found that increasing resilience can improve the quality of life (quoted by Karbalai Shirifard, 2006).

Tali Hieman (2002) in his research on resilience and overcoming future problems and expectations in families (with children with learning disabilities) concluded that parents of these children need models of adaptation and support, because parents are forced to make changes in their lives, and in their social life, they have high levels of frustration and dissatisfaction and try hard to maintain their normal and previous life.

Flexibility is related to several factors, among which family support, contact with friends and acquaintances have been found to be effective in determining the level of flexibility.

In the research of Siklos and Kerns (2006), it was found that by increasing social support and meeting the needs of parents, their psychological well-being increases and their stress and depression levels decrease.

Learning disorders in children change the bond between parents and children, because parents who have a child with a learning disorder suffer many problems, and this issue causes many problems in the caring and intimate parent-child relationship.

The studies conducted indicate that the negative effects of having an exceptional child cause tension and pressure in family members, especially the mother (Tajeri and Bahirai, 2017), because the mother is the first person who directly communicates with the child.

For the treatment of psychological problems, in addition to drug treatments, several psychological treatments have been developed over the years. One of the most

important therapeutic methods is mindfulness-based cognitive therapy (MBCT).

Mindfulness-based cognitive therapy (MBCT) originated from extensive research in the field of identifying factors and cognitive processes predicting the recurrence of depression, which was proposed by Segal, Williams and Teasdale in 1995.

Cognitive therapy based on mindfulness is a structured eight-session short-term intervention, which is based on Kabat Zain's mindfulness-based stress reduction model and the principles of cognitive therapy have been added to it. The main goal of mindfulness-based cognitive therapy is to help people choose the most skillful response to any unpleasant thought, feeling, or situation.

The goal of mindfulness training, like traditional cognitive therapy, is not to change the content of thoughts, but the goal is to create a different attitude or relationship with thoughts, feelings, and emotions.

Which includes maintaining full attention and having an attitude of acceptance and away from judgment. Mindfulness is a method of directing attention that originates from Eastern meditative traditions and is usually described as a person's willful focus on the event experienced in the present moment in a non-judgmental or accepting manner (Potek, 2012).

Mindfulness is defined as a state of aroused attention and awareness of what is happening in the present moment, and emphasizes the development of three qualities of refraining from judgment, intentional awareness, and focusing on the present moment in one's attention.

Mindfulness can be considered as the ability to self-regulate attention and direct it towards an experience. Hence, deliberate regulation of attention is a central component of mindfulness (McCarney, Schulz, and Grey, 2012). In short, MBCT is a treatment method that combines the characteristics of the following two approaches:

1-Cognitive therapy: whose purpose is to identify and correct cognitive distortions with incorrect and distorted thoughts.

2- Mindfulness: which is one of the practices of practicing mindfulness in Buddhism, the purpose of which is to help people to identify their thoughts moment by moment and without immediate judgment about thoughts.

In general, in cognitive therapy based on mindfulness, the goal is that the patient can consider his thoughts only as pure thoughts and see them as testable mental events. And be able to separate the occurrence of these negative mental events from the responses they usually evoke and ultimately change their meaning (Segal et al., 2002).

Researches have shown that interventions based on mindfulness are effective on anxiety and stress symptoms; And considering the chronic nature of autism spectrum disorder and its effect on parents' stress, mindfulness-based interventions will be useful for these parents (Conner and White, 2014). It can be said that mindfulness training increases a person's attention and awareness towards physical and psychological feelings.

And the feeling of trust in life leads to deep compassion, deep love for others and real acceptance of life events, it can make a person know his abilities, cope with life's stresses, be useful and productive in terms of career and as a member of the society should

have the necessary cooperation and participation with others.

Considering this issue, we decided to use this treatment method in this research to reduce parenting stress and cognitive flexibility of mothers with children with learning disabilities.

Although many researches have been conducted on cognitive therapy based on mindfulness, but as far as the researcher has investigated, the research that investigated the effectiveness of cognitive therapy based on mindfulness on parenting stress, cognitive flexibility of mothers of children with learning disabilities could not be found

Therefore, the researcher seeks to answer this question:

Is cognitive therapy based on mindfulness effective on parenting stress and cognitive flexibility of mothers with children with learning disabilities?

## **Method**

The current research is practical in terms of its purpose and is a quasi-experimental study with a pre-test and post-test design with a control group.

Population, sample and sampling method: The statistical population of the present study consisted of all mothers with children with learning disorders who referred to learning disorders centers in Ahvaz city in the second half of 2015.

The sampling method was available. In this way, 40 people were selected from the mothers of children with learning disabilities who referred to the centers of learning disabilities in Ahvaz city and considering the criteria for entering and exiting the study. And they were randomly divided into two



experimental (20 people) and control (20 people) groups.

Demographic information questionnaire (researcher-made form), Dennis and Vanderwal cognitive flexibility questionnaire (2010), and Abidin Parental Stress Index questionnaire (1990) were used to collect information and evaluate subjects.

### **Cognitive Flexibility Questionnaire (CFI)**

The Cognitive Flexibility Questionnaire was developed by Dennis and Vanderwal (2010) and is a short self-report instrument with 20 questions. Its scoring method is based on a Likert scale and tries to measure three aspects of cognitive flexibility:

- A) The desire to understand difficult situations as uncontrollable situations.
- B) the ability to understand several alternative explanations for life events and human behavior
- c) Ability to create multiple alternative solutions to difficult situations.

This questionnaire is used in clinical and non-clinical work to evaluate a person's progress in developing flexible thinking in cognitive-behavioral therapy.

Dennis and Vander Wall showed in a research that this questionnaire has a good factorial structure, convergent validity and concurrent validity. These researchers showed that this questionnaire has a good factorial structure, convergent validity and concurrent validity.

The concurrent validity of this questionnaire was 0.39 and its convergent validity was 0.75. These researchers obtained Cronbach's alpha reliability for the whole scale, perception of controllability, and different

Cronbach's perceptions, respectively, 0.81, 0.75, and 0.77.

In Iran, Share et al. 21 have reported the retest reliability coefficient of the whole scale as 0.71 and the subscales of perception, controllability, perception of different options and perception of justification of behavior as 0.55, 0.72, and 0.57 respectively. These researchers have reported Cronbach's alpha coefficient of 0.90 for the whole scale and 0.87, 0.89, and 0.55 for the subscales, respectively.

In Iran, unlike the main scale, which obtained only two factors, the cognitive flexibility questionnaire has three factors: perception of controllability, perception of different options, and perception of the justification of behavior. (Sultani, Share, Bahrainian and Farmani 2012).

### **Parental Stress Index Questionnaire (PSI)**

This questionnaire was created by Abidin (1990) and it is a questionnaire based on which the importance of stress in the parent-child system can be evaluated.

This questionnaire is based on the principle that parental stress can result from some characteristics of the child, some characteristics of the parents, or various situations that are directly related to playing the role of parents.

The subscales related to each domain as well as the number of their items are child's domain (47 items), adaptability (11 items), acceptance (7 items), extravagance (9 items), mood (5 items), inattention/hyperactivity (9). Article) Empowerment (6 articles) Parental domain (9 articles) Depression (9 articles) Attachment (7 articles), Role limitations (7 articles) Sense of competence (13 articles), Social isolation (6 articles) Relations with

spouse (7 articles) ) parent's health (5 items) and life stress (19 items) (optional scale).

The scoring method is the Likert method according to the answers from 1 to 5 (from completely agree to completely disagree) (Stora, 2007). The reliability and internal consistency coefficient was obtained by calculating Cronbach's alpha for the whole scale in a group of 248 Hong Kong mothers (0.93).

The discriminant validity of the instrument was 0.93 and the range of the simultaneous validity coefficient of the instrument with 5 different stress instruments was 0.38 and 0.36.

Tom Chan and Wong, 1994; Abidin (1991; cited by Dossant, 2005). He found the internal consistency reliability coefficient of this questionnaire to be 0.93 in a group of American mothers.

### **Implementation method**

By referring to the centers of learning disorders in Ahvaz city in the second half of 2016, mothers with children with learning disorders were identified, and after checking the criteria for entering and exiting the study, a pre-test was taken from 160 sample people. And 40 mothers who met the criteria of the questionnaire were selected, and they were randomly assigned to the experimental group (20 people) and the control group (20 people).

Then the experimental group underwent eight sessions of two-hour cognitive therapy based on mindfulness. Each of the mothers practiced daily at home according to the training items.

Also, at the beginning of each session, the assignments of the previous session were reviewed, and at the end, both groups were evaluated again with research questionnaires. After collecting the questionnaires, the data was analyzed using spss software version 24.

### Summary of cognitive therapy sessions based on mindfulness

Summary of meetings	Subject	meetings
Determining the objectives of the meeting - Setting the general policy – Practicing eating raisins – Physical examination practice – Homework – Ending the meeting by focusing on short breathing	Automatic guidance	1
Physical examination practice - Homework review – Thoughts and feelings practice (walking down the street) – Recording pleasant events – Sitting meditation for 10 to 15 minutes - Providing homework	Facing obstacles	2
Practice of seeing or hearing - 30 to 40 minutes of meditation – Reviewing homework – Practicing 3-minute breathing space – Lying down with presence of mind – Walking with presence of mind - Making a list of unpleasant events - Homework	Breathing with presence of mind	3
Five-minute practice of seeing or hearing - 40 minutes of meditation – revision of homework (including meditation / yoga, 3-minute breathing space) – 3-minute breathing space + revision - homework	Staying in the present	4
Forty minutes of sitting meditation - Breathing space and its revision - 3-minute breathing space, confrontation and revision - Distribution of fifth session pamphlets among the participants - Homework	Permission / permission to attend	5
Forty minutes of sitting meditation – Awareness of breath, body, sounds and thoughts - Homework review – Preparing to finish the course - Creating, thinking and practicing point of view or alternative thoughts - Breathing time and reviewing It – Homework	Thoughts are not facts	6
Forty minutes of sitting meditation - review homework – practice observing the relationship between activity and mood – making a list of enjoyable activities and activities that lead to a sense of accomplishment and planning for them – 3 minutes breathing space - identifying symptoms of relapse - homework	How can I take better ?care of myself	7
Physical examination practice - review of homework (including early warning systems and action plans) - review of the entire program - distribution of questionnaires to the participants to comment on the program – review and discussion about the programs and	Use what you've learned to deal with the next mood	8



find positive reasons to continue the exercise - distribution of handouts Session 8		
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**Results**

Descriptive characteristics (mean and standard deviation) of research variables are presented in the following tables.

In Table 1, the mean and standard deviation of parenting stress and cognitive flexibility scores in the pre-test and post-test phases are presented separately for the groups .

Table 1. Mean and standard deviation of parenting stress and cognitive flexibility scores in the research groups

Post-test	Pre-test	Group	Variable
Mean ± standard deviation	Mean ± standard deviation		
10/9 ± 273/9	9/5 ± 291/75	Experiment	Parenting stress
9/8 ± 289/3	10/9 ± 293/75	Control	
5/2 ± 84/65	7/01 ± 62/25	Experiment	Cognitive flexibility
4/12 ± 63/7	5/7 ± 65	Control	

As can be seen in Table 1, the average scores of parenting stress in the experimental group are (291.75) in the pre-test stage and (273.9) in the post-test stage.

Meanwhile, the average scores of parenting stress in the control group were obtained in the pre-test stage (293.75) and in the post-test stage (289.3).

And the average scores of cognitive flexibility in the pre-test stage in the two experimental and control groups are (62.25 and 65) respectively and in the post-test stage (84.65 and 63.7) respectively.

In order to test the hypotheses of this research, univariate analysis of covariance (ANCOA) was used to check the effectiveness of the intervention. In this regard, before analyzing the covariance and variance of repeated measurements, its assumptions were examined.

In order to comply with the assumptions, the normality of the data distribution (Shapiro-Wilk test), the homogeneity of variances (Levene test) and the homogeneity of the slope of the regression line were checked. Table 2 shows the results of the Shapiro-Wilk and Levene test.

Table 2. The results of the Shapiro-Wilk and Levene test to check the hypotheses

Levene test		Shapiro_Wilk test		
P	F	P	Statistics	Variables
0/75	0/102	0/24	0/965	Parenting stress
0/24	1/39	0/44	0/973	Cognitive flexibility

As can be seen in Table 2, the significance levels of Shapiro-Wilk and Levene test for the variables are greater than 0.05; therefore, the assumption of normal distribution of variables and homogeneity of variances is confirmed .

Another assumption of covariance analysis is that the regression lines for each group In the research should be the same. If the regression lines are heterogeneous, then the covariance analysis will not be suitable for the data.

It is necessary to explain that in this hypothesis, the post-tests of parenting stress, cognitive flexibility were considered as dependent variables and their pre-tests were considered as auxiliary variables (covariates).

The assumption of homogeneity of slopes will be established when there is equality between auxiliary variables and dependent variables at all levels of the factor (experimental and control groups).

Table 3. The results of the test of the presumption of homogeneity of the regression slopes of the research variables of the two research groups

Level: Pre-test – post-test		Source of changes Interaction	Variable
Meaningful	(Interaction)F		
0/056	3/897	Group * pre-test	Parenting stress
0/751	0/102	Group * pre-test	Cognitive flexibility

As can be seen in Table 3, equality prevails between auxiliary variables and dependent variables at all factor levels (experimental and control groups) ( $p>0.05$ ). Also, there is a non-significant interaction between dependent and auxiliary variables (covariates).

Table 4 shows the results of univariate analysis of covariance (ANCOVA) on the average scores of the post-test of parenting stress in the research groups with pre-test control.

Table 4. Summary of ANCOVA analysis results on the mean scores of the parenting stress post-test with pre-test control

Test power	Eta coefficient	P	F	mean square	Degrees of freedom	sum of squares	Indicators
0/99	0/41	0/0001	25/29	2037/22	1	2037/22	Between the group
				80/55	37	2980/28	Error
					39	6465/6	Total

As can be seen in Table 4, with the results obtained for parenting stress with ( $F=25.29$ ,  $P \leq 0.01$ ), It can be said that the difference in the amount of parenting stress between the research groups is significant.

This means that the amount of parenting stress has significantly decreased in the experimental group. Based on effect size or difference (eta squared), 41% of the change

in variance in parenting stress scores was due to mindfulness-based cognitive therapy. Statistical power is also 1.

Table 5 shows the results of univariate analysis of covariance (ANCOVA) on the average post-test scores of cognitive flexibility in the research groups with pre-test control.

Table 5. Summary of ANCOVA analysis results on the mean scores of the cognitive flexibility post-test with pre-test control

Test power	Eta coefficient	P	F	Mean square	Degrees of freedom	Sum of squares	Indicators
1	0/91	0/0001	365/37	4726/18	1	4726/18	Between the group
				12/94	37	478/6	Error
					39	5221/77	Total

As can be seen in Table 5, with the results obtained for cognitive flexibility ( $F=365.37$ ,  $P \leq 0.01$ ), It can be said that the difference in cognitive flexibility between the research groups is significant; This means that the amount of cognitive flexibility has increased

significantly in the experimental group. Based on the magnitude of the effect or difference (eta squared), 91% of the change in the variance of cognitive flexibility scores was due to mindfulness-based cognitive therapy. Statistical power is also 1.

## Discussion

This research was conducted in order to find the effectiveness of cognitive therapy based on mindfulness on parenting stress and cognitive flexibility of mothers with children with learning disabilities.

According to the results of the research, based on the first finding of the research and using the analysis of covariance test, the results show that the difference in the amount of parenting stress between the research groups is significant; This means that the amount of parenting stress significantly decreased in the experimental group ( $F=25.29$ ,  $P\leq 0.01$ ).

Therefore, the data analysis showed that cognitive therapy based on mindfulness is associated with significant effectiveness in improving the parenting stress of mothers with children with learning disorders.

This finding is in line with the studies of Conner and White (2014), Ryan and Ahmed (2016), Van der Oord , Bogels and Peijnenburg (2012), Goldin et al. (2010), and Bogles et al. (2014).

Conner and White (2014) in a research titled stress in mothers with autistic children and mindfulness therapy, which they conducted in 44 mothers with children for two months, showed that these mothers have high levels of stress. And the treatment of mindfulness and increasing the skills of the conscious mind is effective in reducing parenting stress and anxiety of these mothers.

Van der Oord , Bogels and Peijnenburg (2012) in a research titled the effectiveness of

mindfulness in parents of children with attention deficit hyperactivity disorder that they conducted in 22 parents over two months, reported that this intervention is associated with reducing parenting stress and mental health and depression symptoms. Also, the effectiveness of the treatment continued for two months after the end of the treatment.

Bogles et al. (2014) In a research titled the effectiveness of mindfulness in parenting stress and mental health, which they conducted in 44 mothers with children with medical problems in England, showed that this intervention is associated with reducing parenting stress.

In the explanation of this finding, it can be stated that the constant and non-judgmental monitoring of feelings related to parenting problems with children with learning problems without trying to escape or avoid them, it reduces the emotional reactions that are usually triggered by anxiety symptoms.

Based on the second finding of the research and using the analysis of covariance test, the results show that the difference in cognitive flexibility between the research groups is significant; It means that the level of cognitive flexibility has increased significantly in the experimental group ( $F=365.37$ ,  $P\leq 0.01$ ).

Therefore, the results of data analysis showed that cognitive therapy based on mindfulness improves the cognitive flexibility of mothers with children with learning disorders with significant effectiveness, this finding is in line with the studies of Pourmohammadi and

Bagheri (2014), Meliani et al. (2013). , Chiesa, Calati and Verratti (2011) and Moore and Malinowski (2009).

Chiesa, Calati and Verati (2011) in a research titled the relationship between emotional regulation, cognitive flexibility and attention regulation with mindfulness and academic success of 100 high school students, concluded that increasing attention skills in high school students is directly related to their academic success, and there is also evidence of the relationship between attention control, emotional regulation, and cognitive flexibility with academic and academic success.

Moore and Malinowski (2009) in a research titled "Capacity, hope and cognitive flexibility in children's self-stimulating behaviors with children between 8 and 11 years old" investigated the role of cognitive flexibility, hope and capacity in two studies and came to the conclusion that in half of these children, it can be predicted that some of their self-induced factors and behaviors have an effect in their adulthood. Meditation and mindfulness exercises lead to an increase in the ability of self-awareness and self-acceptance in patients.

Mindfulness is not a method or a technique, although many different methods and techniques have been used to do It. Mindfulness can be described as a mode of "being" or a mode of "understanding" that involves understanding personal feelings .

The field of mindfulness experience is very wide and includes feelings, perceptions, impulses, emotions, thoughts, speech, performance and communication and

therefore can help someone who is suffering from inflexibility.

The series of learned skills of attention control in mindfulness meditation can lead the mind to flexibility in accepting the problem, not judging and getting emotionally involved in it. Flexibility is actually avoiding rumination and previous solutions, a path that is the main goal in mindfulness .

A person who deals with the techniques of the conscious mind and learns them, actually learns a pattern of thought, emotion and behavior to choose with acceptance, non-judgment and awareness of all aspects, which are all the definition of cognitive flexibility. (Curtiss and Klemanski, 2014).

Mindfulness and cognitive and metacognitive exercises are special for focusing the attention process, which in turn leads to preventing the factors that cause negative mood, negative thinking, tendency to worrisome responses and the development of a new perspective and the formation of pleasant thoughts and emotions.

This type of cognitive therapy includes various meditations, stretching yoga, body review exercises, and several cognitive therapy exercises that show the connection between mood, thoughts, feelings, and bodily sensations (kangasniemi et al., 2014)

In mindfulness therapy, clients learn how to relate to their Irrational thoughts and feelings and focus on changing the content of thoughts and change them and see thoughts and feelings in a broader perspective.

The reason for the effectiveness of cognitive behavioral therapy based on mindfulness in



this research is that mindfulness therapy leads to a cognitive change in the patient's thinking and actions and benefits from the principles of conditional reinforcement

In this way, In order to go to the next step, the affected person tries to see himself in a higher step, and this desire continuously causes the gradual improvement of people step by step, and at the same time, he continues his individual treatment with peace and awareness. And he solves his shortcomings and problems in face-to-face meetings

It can also be said that because mindfulness moderates emotions without judgment and increases awareness of mental and physical feelings and helps to clearly see and accept emotions and physical phenomena as they happen, therefore, it can play a role in increasing cognitive flexibility. (Lee and Orsillo, 2014)

In general, according to the results obtained from this research, It can be said that in this method, mothers are taught that instead of

intellectually and practically avoiding social thoughts and situations by increasing mental and psychological acceptance towards having a disabled child, they try to give unconditional positive attention to these children and also improve their mental health. But these losses can be compensated and reduced to a large extent.

.Increasing mindfulness reduces stress and increases cognitive flexibility Among the limitations of this research is the impossibility of implementing treatment in sessions where both parents participate and the sample selection is only among mothers with children with learning disabilities in Ahvaz city, which limits the generalizability of the results.

Therefore, it is suggested that researches of this type be conducted on mothers of other groups with special needs, fathers and other cities.

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