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The Effectiveness of Cognitive Therapy based on Mindfulness Training on Reducing Social Anxiety and Increasing Self-esteem of Students with Learning Disabilities

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Abstract

Background: *This study aimed to investigate the effectiveness of cognitive therapy based on mindfulness training on reducing social anxiety and increasing the self-esteem of students with learning disabilities.*

Methods: *This study was a quasi-experimental trial with a pretest-posttest design along with a control group. The statistical population included all male students with learning disabilities in the 2018-2019 academic years, in the fourth to sixth grades of Isfahan. The sample consisted of 30 people who were randomly divided into two groups of control and experimental (15 people in each group). The research instruments included the Libovitz social anxiety questionnaire and Cooper-Smith self-esteem questionnaire. Data were analyzed using SPSS version 22 according to the analysis of covariance (ANCOVA).*

Results: *The results showed that mindfulness-based cognitive therapy was effective in reducing social anxiety of students with learning disabilities (Pvalue<0.01). Also, mindfulness-based cognitive therapy was effective in increasing the self-esteem of students with learning disabilities (Pvalue<0.01).*

Conclusions: *Based on the results, mindfulness-based cognitive therapy can reduce social anxiety in students with learning disabilities and increase their self-esteem.*

Keywords: Cognitive therapy, Social anxiety, Self-esteem, Learning disabilities.

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Introduction

Learning disabilities are one of the biggest and most controversial topics related to learning. Learning disabilities is a general term used for a heterogeneous group of disorders and is used as a major problem in learning and using listening skills. Making, reading, writing, reasoning, or mathematical calculations become apparent.[1] Students with learning disabilities succeed far below the age and level of intelligence expected of them. And in regulating information, visual and auditory perception, memory and attention are deficient.[2] Students with learning disabilities will face serious problems and consequences, which can be referred to as social anxiety disorder and self-esteem.[3,4]

Social anxiety is one of the most common mental disorders associated with significant disabilities. Students with severe social anxiety find it difficult to form a friendly as well as formal relationship. They also have a much lower sense of relationship satisfaction than others.[5] Social anxiety is defined as a persistent tension that leads to the avoidance of various social situations.[6] Students with this type of anxiety selectively recall negative aspects of themselves in social situations.[7]

Another variable that can be affected by learning disabilities is self-esteem. Self-esteem is defined as self-confidence in the ability to think and meet challenges, self-confidence for success and happy life, feeling valued, having the right to express one's needs and wants, and enjoying the results of one's efforts.[2] Positive perception creates a strong inner force that makes a person face life problems more effectively. On the other hand, there is a positive and significant correlation between students' self-esteem and academic achievement with learning disabilities.[8] Children with learning disabilities have lower self-esteem than normal students.[9] These children become disorganized due to failure due to learning difficulties and develop a sense of negative self-worth or the concept of poor self-esteem.[10] Negative consequences of low self-esteem and anxiety social in students with learning disabilities, the importance of paying attention to treatment approaches has doubled.

One of these therapeutic approaches is mindfulness-based cognitive therapy, which is a new promise in explaining the cognitive-behavioral therapy approach.[11] Mindfulness training requires metacognitive learning and new behavioral strategies to focus attention, prevent rumination, and tend to respond to anxious responses, and spread new thoughts, and reduce unpleasant emotions.[12] Today, this method is used in various fields of therapy, including social anxiety and self-esteem.[11,13] This method, through regular meditation exercises, raises the individual's momentary awareness of emotions, and emotions are directed to the body, which causes them to express these thoughts and feelings in a non-judgmental and calm manner by being aware of their thoughts and feelings.[14] Researchers state that mindfulness leads to emotional self-regulation,[15] reducing negative emotions, regulating mood and self-acceptance, and modulating depressive symptoms.[16] Tizdel and Williams considers mindfulness-based therapy to be effective in improving anxiety disorder.[17] Given the prevalence of learning disabilities and related outcomes, this study seeks to answer

this question. Is mindfulness-based cognitive therapy effective in reducing social anxiety and increasing self-esteem in students with learning disabilities?

Materials and Methods

The present study was quasi-experimental with a pretest, posttest design with experimental and control groups. The statistical population of the study included all students with learning disabilities in primary school from fourth to sixth grade in Isfahan in 2018-2019. The sample consisted of 30 students with learning disabilities who received the highest score on the social anxiety scale and the lowest score on the self-esteem scale. These students were then randomly assigned to two experimental groups (n=15) and a control group (n=15). Inclusion criteria were diagnosis of learning disability, fourth to sixth grade, and no specific disease. Exclusion criteria also were absenteeism for more than two sessions in treatment, IQ less than 90, and a history of psychiatric disorders. After treatment, pre-test and post-test were compared.

Social anxiety questionnaire: The social anxiety questionnaire was developed by Libowitz. This questionnaire has 24 items, 13 of which are related to performance anxiety, and the other 11 items are related to anxiety in social situations. The tool is based on a four-point Likert scale (basically, low, moderate, and severe) for performance anxiety and a four-point Likert scale (never, sometimes, often, and most often) for anxiety in social situations. The lower limit is 24 and the upper limit is 96, 32 to 64 indicates moderate social anxiety and higher than 64 indicates severe social anxiety. The content validity of this questionnaire was confirmed and its reliability was reported by the retest method of 0.83.[18]

Self-esteem scale: The self-esteem questionnaire was designed by Cooper-Smith. This scale has 58 items, 8 of which are lie detectors. A total of 50 articles are divided into 4 subscales of general self-esteem, social self-esteem, family self-esteem, and academic self-esteem. The scoring method of this test is zero and one (yes answer receives one score and no answer receives zero score). The reliability of this questionnaire was reported to be 0.88 with Cronbach's alpha test.[19]

In this study, the necessary permission was obtained to carry out treatment through the university and it was presented to 10 schools in the 4th and 5th districts of Isfahan, and all ten schools expressed their willingness to cooperate. The research method was that at first 90 people with learning disabilities were selected. After completing the questionnaires, 30 people who met the research conditions were selected for the research. Then, after explaining and justifying to the students about the purpose and manner of conducting the research and announcing the satisfaction of the students and their families, the researcher proceeded to conduct the research. The pre-test was performed for both groups. Subsequently, cognitive therapy based on mindfulness training was performed on 15 people in the experimental group in 8 sessions of 90 minutes and the other 15 people did not receive the title of the educational control group. In the end, the post-test was performed. The content of mindfulness sessions was as follows:

The first session introduces and explains the goals and rules concerning confidentiality and personal life, practice eating raisins, giving feedback and discussing the practice of eating raisins, homework in such a way that one of the daily activities such as brushing consciously do it moment by moment.

The second session of last week's homework review, bodybuilding exercises with a focus on breathing, talking about the practice of bodybuilding exercises, ending the session with 2 to 3 minutes of exercises to focus on breathing, homework: Practicing body exam with the help of parents and doing 5 breaths together focusing before bed.

Session 3 exercise with a focus on breathing, review of homework, muscle relaxation, end of the session with a few minutes of exercise concentration on breathing, homework: exercise with the help of parents and do 5 breaths with concentration before bed, pay attention to the good things that happen every day and the emotions and physical states at that moment.

Session 4 exercise with a focus on breathing, review of home exercises, exercise to see and hear, end of the session with a few minutes of exercise on focus on breathing, homework: practice examining the body with the help of parents and perform 5 breaths with focus before sleep pay attention to sounds or objects in the room.

Session 5 reviewing the previous session and homework, sitting meditation practice concerning body movement while breathing, focusing on body parts and their movements and searching for physical senses, sitting meditation homework, and breathing with concentration while facing unpleasant feelings and thoughts.

Session 6 reviewing the previous session and reviewing homework, mindfulness practice, positive and negative thoughts, pleasant or unpleasant thoughts, allowing negative and positive thoughts to enter the mind and easily remove them from the mind without judgment and deep attention to them. Homework 5 focused breathing before bed, do mindfulness exercises.

Session 7 review of homework, sitting meditation, and repetition of the fifth and sixth sessions, observation practice between mood and activity, 3-minute breathing space or walking with the presence of mind, homework 5 concentrated breathing before going to bed, doing breathing with concentration while dealing with unpleasant feelings and thoughts.

The eighth session of the body examination exercise, reviewing homework, reviewing the whole program and asking for opinions about these 8 sessions, and performing the post-test.

In this study, data analysis was performed using SPSS software version 22, and descriptive tests of mean and standard deviation and inferential test of analysis of covariance were used.

Results

The mean of social anxiety and self-esteem variables in experimental and control groups separately before the test and after

the test are shown in table 2. The mean of social anxiety variables in the experimental group decreased in the post-test. Also, the mean self-esteem variable in the experimental group increased in the post-test (Pvalue<0.05).

According to table 2, the interaction between the experimental conditions and the scattering variable is not significant, so the slope of the regression line is the same for both experimental conditions (Pvalue=0.05, F=7.27). Based on this, one of the assumptions of analysis of covariance was observed. According to table 3, the error variances are the same in different experimental conditions (Pvalue>0.05). Therefore, another assumption of analysis of covariance was observed.

The results of covariance analysis of social anxiety score and self-esteem are presented in tables 4 and 5. As can be seen in table 5, by removing the effect of pre-test social anxiety scores as the scattering variable, the main effect of the independent variable on post-test social anxiety scores is significant (Pvalue<0.05, F=53.601). In other words, mindfulness therapy is effective in reducing students' social anxiety. Also, according to table 6, by removing the effect of pre-test self-esteem scores as the scatter variable, the main effect of the independent variable on post-test self-esteem scores is significant (Pvalue<0.05, F=98.62), Meaning that mindfulness therapy is effective in increasing students' self-esteem.

Table 1. Mean and standard deviation of research variables

Variable	Group	Mean±SD		Pvalue
		Pre-test	Post-test	
Self-esteem	The first experiment	22.2±5.35	36.47±4.59	0.025
	Control	21.8±3.43	23.33±3.85	0.11
Social anxiety	The first experiment	54.46±12.07	42.6±7.54	0.04
	Control	50±8.39	52.46±7.99	0.09

Table 2. Same test of slope line regression

Source	SS	Df	MS	F	Pvalue
Fixed amount	11975.88	3	658.627	38.431	0.000
Width from origin	146.375	1	146.375	8.541	0.007
Group	22.794	1	22.794	1.33	0.259
Pre-test	1244.316	1	1244.316	72.606	0.000
Group interaction and pre-test	124.62	1	124.62	7.272	0.12
Error	445.586	26	17.138		
Total	70204	30			
Total revised		29			

Table 3. Levin F test (same error variances)

F	df2	df1	Pvalue
0.875	1	28	0.076

Table 4. Results of social anxiety score analysis of covariance

Source	SS	Df	MS	F	Pvalue	Eta
Fixed amount	1851.26	2	925.63	43.83	0.000	0.765
Width from origin	264.902	1	264.902	12.543	0.001	0.317
Pre-test	1121.126	1	1121.126	53.087	0.000	0.663
Group	1131.955	1	1131.955	53.601	0.000	0.665
Error	570.208	27	21.119			
Total	70204	30				
Total revised	2421.467	29				

Table 5. Results of covariance analysis of self-esteem score

Source	SS	Df	MS	F	Pvalue	Eta
Fixed amount	1454.68	2	727.34	57.42	0.000	0.810
Width from origin	370.11	1	370.11	29.22	0.000	0.520
Pre-test	161.053	1	161.053	12.714	0.001	0.320
Group	1249.243	1	1249.243	98.62	0.000	0.785
Error	342.014	27	12.667			
Total	28617	30				
Total revised	1796.7	29				

Discussion

This study aimed to investigate the effectiveness of cognitive therapy based on mindfulness training on reducing social anxiety and increasing self-esteem of students with learning disabilities. The results showed; cognitive therapy based on mindfulness training affects reducing students' social anxiety scores. This finding is consistent with the findings of Hoffman et al.[20], Beauchemin et al.[21], and Shamrtz et al.[22]. Foa et al.[23] found that extreme self-esteem plays an important role in social anxiety that can be reduced by treating mindfulness. According to Shapiro and Ross,[24] mindfulness therapy increased self-awareness, decreased anxiety, and increased children's sense of worth and helped adolescents identify. Explaining this finding, it can be said that constantly monitoring the feelings of anxiety without judgment, without trying to escape or avoiding them, can reduce the emotional reactions that are usually triggered by anxiety symptoms. The characteristic of the presence of mind method is that it informs the person about the roots of failure and its mechanism in the brain, prevents him from becoming anxious, focuses on his thoughts and desires in a state of consciousness, and allows the person to repeat actions. Or do not choose their thoughts and ruminants to reduce anxiety and think about the biological roots of the disorder.[25]

Mindfulness reduces dysfunctional attitudes related to social anxiety. Therefore, it can be said that mindfulness training affects the cognitive system and information processing by increasing people's awareness of the present, through techniques such as paying attention to breathing and body and turning consciousness to the here and now and reduces mental rumination and attitude. Inefficient people in social situations. Also, mindfulness skills, focusing thoughts from redundant thoughts to other aspects of the present, such as breathing, walking with the presence of the mind or ambient sounds, and thus reduce social anxiety.[26] One of the findings of the present study was the effect of cognitive therapy based on mindfulness training on increasing students' self-esteem. These results are in line with the findings of Bajaj et al.[27] Studies have shown that doing mindfulness exercises in students increases the power of concentration and naturally reduces mental wandering, strengthens short-term memory, and improves performance in exams. The feeling of being worthwhile comes from the sum of our thoughts, feelings, and experiences throughout life. The sum of perceptions, evaluations, and experiences can make one feel good and worthless, or, conversely, feel uncomfortable and inadequate. However, mindfulness through the growth of non-judgmental approaches, the growth of non-judgmental acceptance, and the focus at the moment now gives people the opportunity to organize their thoughts and feelings and reduce the tendency to increase negative feelings and thoughts. Therefore, mindfulness reduces critical thoughts about self and shapes and strengthens positive beliefs and evaluations about self, and increases self-esteem in students with learning disabilities. One of the most important limitations of the study was that the statistical population of this study was students with learning disabilities in primary school, so in generalizing the findings of this study to other educational groups, caution should be observed.

Based on the findings of the present study, it can be said that cognitive therapy based on mindfulness training can reduce social anxiety and increase the self-esteem of students with learning disabilities. Students with learning disabilities who suffered from social anxiety and low self-esteem got rid of these problems by receiving this treatment. Therefore, to reduce social anxiety and increase the self-esteem of students with learning disabilities, cognition based on mindfulness training can be used.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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