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## The Effectiveness of Stress Coping Skills Training on Mindfulness of Female students

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### Abstract

**Purpose:** The purpose of this study was to determine the effectiveness of Stress Coping Skills Training on Mindfulness of Female students. **Methodology:** This quasi-experimental study was carried out in a pre-test and post-test design with control group. Sixty-nine students were selected from among the girls of the 9th grade in Tehran during the academic year of 2017-18, and were randomly assigned to experimental and control groups. The Mindfulness Questionnaire (Baer & et al., 2006) was performed in the pre-test phase and after training the skills of confronting stress with the experimental group, the questionnaire was repeated on both groups. Data analysis was done by SPSS19 software in two parts: descriptive and inferential (covariance). **Findings:** The results showed that by controlling the effect of pre-test, the mind-consciousness scores of the experimental group significantly increased in the post-test phase. The results show that the teaching of skills to confront mind-tone stress increases students' awareness. Learning these skills will increase the decentralization and dare of students' exposure to stressful thoughts, which leads to higher awareness. Also, stress coping skills lead to cognitive reform and the ability to manage themselves, and subsequently their minds increase. **Conclusion:** Therefore, it can be said that teaching strategies for coping with stressful situations are an effective way to increase students' mindfulness.

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## 1. Introduction

Adolescence due to a specific developmental period is a critical period in which adolescents have to face a variety of biological, educational, and social events, and solutions to problems and effective coping. To find. If adolescents, especially adolescent girls, succeed in this path, they will ensure their mental health or they will be exposed to many psychological and social traumas (Laufer, 2018). Studies focused on adolescents' self-efficacy, depression, anxiety, and mental health have found that adolescents' success in the many challenges of this developmental period is related to their self-efficacy (Suld & Huebner, 2006; Eccles, Lord & Buchanan, 2018). Numerous studies on mindfulness over the years have also shown that mindfulness has been a determining factor in school success and transfer to university (Lynette Butler, 2011). On the other hand, research on mindfulness-based interventions to reduce depression and anxiety has also been increasing in recent decades. Mindfulness was rapidly expanding in Western psychology research and practice, due to the success of these interventions in reducing stress (Hofman & Gomez, 2017). Mindful individuals perceive inner truths freely and without distortion, and have the potential to deal with a wide range of thoughts, emotions, and distortions (Brown & Ryan, 2015).

In fact, mindfulness is a new style for more effective communication with life that relieves or relieves pain and enriches the life and its meaningful enjoyment (Siegel, 2010). On the other hand, despite the popularity of mindfulness-based interventions to reduce stress, the underlying evidence has not been fully established, which warrants further research in this area (Hofman & Gomez, 2017). Also, as adolescents are threatened with adverse factors such as anxiety, anxiety and anger, their success and academic achievement (Rio, 2017). Mindfulness is defined as paying attention to specific, purposeful ways in the present time without judgment and prejudice (Keng & et al., 2011). People who score higher on mindfulness scales are more aware of their daily activities and more likely to have automatic features of their mind (such as a tendency to flee from the present and into the past, and The future, the judgmental attitude of the species becomes familiar with the internal and external variable phenomena and fosters moment-by-moment awareness (Ghasemi Jobaneh & et al., 2016).

On the other hand, one of the issues that increase students' awareness is the training of coping skills. Stress has become associated with human life today. Lazarus & Folkman (1984) have defined this in the context of stress: stress is a specific relationship between a person and the environment in which stress is assessed, exceeds one's ability and endangers his or her health. Extreme and long-term stress, such as changes in life, can affect one's fitness, cause depression, and damage the body and destroy the enjoyment of life (Afshani & Abbasi, 2014). In the meantime, what is optimistic and hopeful is the "ways to deal with stress" that can affect the consequences of stress. Therefore, coping strategies refer to conscious and rational ways of coping with life's stressors (Banici & Dolfan azari, 2010). Brown & et al. (2015), in a study titled *The Role of Psychological Mindfulness on Students' Self-efficacy and Psychological Well-Being*, concluded that mindfulness enhances students' self-efficacy and psychological well-being. Down's research suggests that mindfulness training can help individuals identify their strengths and weaknesses, and improve mental health, personal well-being, and stress reduction.

Bumber & Schneider (2016) also conducted a study on the effectiveness of mindfulness training on reducing anxiety and stress. Results showed that there was a significant relationship between mindfulness training and reducing anxiety and stress and also mindfulness training reduced anxiety. Bakosh & et al (2018), conducted a study on the effectiveness of mindfulness education in schools on students' academic achievement. The results showed that mindfulness education in school's increases students' academic achievement and increases their success rate. Huffman and Gomez also found that mindfulness-based mindfulness reduction and cognitive therapy-based mindfulness can have a significant effect on reducing symptoms of anxiety and depression. Gilmartin & et al. (2017) found, in case studies, that in 5 out of 5 cases, an increase in mindfulness had a positive effect on stress and reduced it.

Due to the importance of the adolescent population and the need to provide contexts for the success of this group of people in the community, the present study aimed at enhancing community growth and enhancing the impact of coping skills on academic self-efficacy and mindfulness, both of which The key to success is to research. Despite previous research and emphasis on the psychological aspects of learning, and especially mindfulness, this post-learning still requires more extensive research. In this regard, considering the sensitivity of adolescence and the pressures of educational problems, the present study aims to investigate students' ability to deal with bodybuilding skills through the training of coping skills.

## 2. Methodology

The design of this study was quasi-experimental design with control group, with pre-test and post-test. The statistical population of this study was all the 9th grade female students in Tehran who were studying in the academic year of 2017-18. Sample size was determined based on the type of study. The minimum sample size for this type of study is 15 for each group (Delavar, 2017). However, in this study, this number was doubled for each group, so that in case of possible decrease of the subjects, the research would not be difficult. Sixty students were selected using available methods for research. The sampling method was available. Initially, a list of secondary schools for girls was prepared in Tehran and then one of the schools was selected as available for the research. Subsequently, sampling was made available from the selected school. The experimental group received eight 90-minute training sessions on coping with stressful events and the control group remained on the waiting list. The coping skill training package is one of the ten dimensions of life skills. It is adapted from the life skills training package. The Mindfulness-Based Stress Management Skills Training Package is designed by Kabat-zinn (2009), which includes a two-week 2-hour training program. At the end of each session, the students are given an assignment to perform until the next session. In this way, people are trained to observe their thoughts more widely. At the beginning of each session a syllabus is presented. A summary of the nature of each meeting is provided in Table (1). To collect the data of this study, Baer et al. (2006) Five-Dimensional Mindfulness Questionnaire was used.

This scale has been developed by Baer, Smith, Hopkins, Krietemeyer & Toney (2006) to assess mindfulness, which is a quality of consciousness and means to pay attention to the present moment. The creators of this scale were combined with items from Freiburg's Mindfulness Questionnaire (Walsh & et al., 2009), Mindfulness and Mindfulness Questionnaire (Brown & Ryan, 2003), and the Kenchuki Mindfulness Scale (Baer & Smith, 2004), the revised Cognitive and Emotional Mindfulness Scale (Kumar & et al., 2005) and the Southampton Mindfulness Questionnaire (Chadwick & et al., 2007) developed a comprehensive and new tool for measuring mindfulness. This questionnaire has 39 items. Responses to this questionnaire are answered on a 5-point Likert scale from never (1) to always (5). A number of items are scored in reverse. Scores in this questionnaire range from 39 to 195. The questionnaire consists of five subscales, namely observation, description, conscious action, non-judgment, and non-response. Neuser (2010) examined the internal consistency of this questionnaire and reported Cronbach's alpha for its subscales from 0.75 for inactivity to 0.91 for description. Also the correlation between subscales was calculated from 0.15 to 0.34 which was significant in all cases. These reports indicate acceptable validity and reliability of the five-dimensional mind-awareness questionnaire. Also within the country, Ahmadvand & et al. (2013) in a study of test-retest correlation coefficients calculated to evaluate its reliability of 57/57. 0 for the non-judgment subscale up to 0.84 for the observed subscale. Cronbach's alpha coefficients were calculated as 0.55 for non-response and 0.83 for description, indicating acceptable validity of the questionnaire. In the present study, Cronbach's alpha was 0.79 for the whole questionnaire and 0.81, 0.75, 0.71 and 0.77 for the subscales, respectively.

**Table 1.** Summary of training strategies for coping with stressful situations

Session number	Session goals
First	A) automatic guidance b) awareness of every moment
Second	More focus on the body
Third	Controlling daily events
Fourth	Abandon judgment
Fifth	A) Acceptance b) Pay attention to the surroundings
Sixth	A) change of relationship b) real understanding of thoughts
Seventh	A) Focus and mastery b) Discovering constructive activity
Eighth	A) repetition and practice b) using what is learned to deal with future stresses

Data analysis was done by SPSS software in two descriptive and inferential parts (covariance analysis). At first the homogeneity of regression slope was evaluated by F test. Also, the assumption of homogeneity of variance of groups was investigated using the Levin test.

### 3. Findings

Descriptive measures of the dependent variables of the study (academic self-efficacy and mindfulness) are presented in the pre-test and post-test stages, respectively, in Table 2.

**Table 2.** Descriptive indices of variables in both groups

Variable	group	pretest				posttest				Total			
		Min	Max	mean	Variance	Min	Max	mean	Variance	Min	Max	mean	Variance
mindfulness	Experimental	46	158	111/23	28/6	92	191	145/16	24/8	69	174	128/2	26/6
	Control	57	161	105/33	29/2	54	155	103/16	28/3	55	158	104/25	28/7
	Total	46	161	108/28	28/8	54	191	124/16	33/8	55	174	116/22	29/9

As can be seen in Table 2, the mean (and standard deviation) pre-test and post-test scores of mindfulness for the experimental group were 111.23 (28.6) and 14.16 (14.4). And for the control group is 10.53 (29.2) and 10/10 16 (28.3). Also, the assumption of homogeneity of variance was tested by Levine test, which was not significant for the dependent variable, indicating the assumption of equality of variances between groups. Table 3 summarizes the results of the multivariate analysis of covariance on the post-tests with pre-test control of dependent variables.

**Table 3.** Results of analysis of covariance on mean post-test of mindfulness by controlling their pre-test in experimental and control groups

Source	Test	Value	F	Df	Error Df	P	Beta
Group	The effect of a banana	0/77	5/68	8	72	0/001	0/38
	Wilks Lambda	0/26	8/24	8	70	0/001	0/48
	Hotelling effect	2/62	11/15	8	68	0/001	0/56
	The biggest root	2/56	23/1	4	36	0/001	0/72

As shown in Table 3, there was a significant difference between the experimental and control groups in at least one of the dependent variables (mindfulness). To investigate the differences, one-way analysis of covariance's in the Mancova text was performed on the dependent variables. The results of these analyzes are shown in Table 4.

**Table 4.** Results of one-way analysis of covariance's in the Mancova test on the post-test means of the dependent variables by controlling their pre-test effect in experimental and control groups.

Source	Dependent variable	SS	Df	Ms	F	Sig	Beta
Group	mindfulness	18984	1	18984	752	0/001	0/93

The results in Table 4 show that one-way analysis of covariance was significant in the mindfulness variable ( $F = 752, p = 0.001$ ). These results indicated that there was a significant difference in mindfulness variable between the experimental group and the control group after controlling for the pretest effect. But the

experimental group scores in the post test were significantly increased and the control group scores did not change significantly.

#### 4. Discussion

The findings of the present study in relation to the research hypothesis showed that after training strategies for coping with stressful situations, changes in the score of mindfulness are significant. That is to say, the methods employed by the experimental group were effective. Examination of the scores of the experimental group showed that there was a significant difference in this skill compared to the control group. The results are in line with the findings of Bakosh & et al. (2018), Hoffman & Gomez (2017), Brown & et al. (2015). According to the findings of the study, it can be concluded that recognizing and using effective coping strategies against stress and stress can help students to prevent mental disorders through proper control of life stressors. It also helps to raise students' minds, because it gives people a sense of mastery of the environment. Therefore, as stated, the main purpose of this study was to investigate the effectiveness of training strategies for coping with stressful situations on students' mindfulness.

The educational intervention used in this study was based on mindfulness and its purpose was to train stressful coping skills using mindfulness skills. Mindfulness-based interventions are applied to both mental and physical health (Grossman, Niemann, Schmidt & Walach, 2004) and aim to create a clear and non-judgmental mindset of what Perception occurs at every successive moment. According to Kabat-Zinn (1982) theory, it can be assumed that teaching mindfulness-based coping skills to the students in the experimental group in this study has in some ways increased their academic self-efficacy and mindfulness. As the first case, it can be noted that mindfulness training has given people a focus on them and has made the experimental group students able to focus on the present moment without judging their thoughts and feelings. Acquiring this ability by training consistent ways of coping with negative thoughts can reduce the amount of pessimistic thoughts and feelings and predictions (Hollis-Walker & Colosimo, 2011). Because by focusing on one's self, one can allow negative thoughts and moods and by accepting them reduce the negative effects on one's self-efficacy.

In addition, the increased mindfulness of the students in the experimental group has made them dare to face negative cognitions, emotions and behaviors and to pay attention to and be aware of their nature without making any judgments about them. And their effects on their academic performance. Because the ability to observe without judgment is associated with a decrease in negative emotions and even pain (Kabat-Zinn, 1982). Also, increasing the mindfulness skills of the students in the experimental group can cause cognitive changes in them and lead to modification of their intellectual patterns or attitudes about their thoughts. In other words, unbiased observation of thoughts and emotions, which are the main teachings of the mind, leads to the understanding that these are mere thoughts and do not necessarily represent truth or reality and should not escape the situation or Avoidance behavior (Kabat-Zinn, 2003). Achieving this understanding in the light of mindfulness and non-judgmental observation reduced the negative thoughts of the experimental group students on their abilities in the field of reading and exams and subsequently their tendency to approach their academic assignments and progress.

There has been a lesson associated with increased academic self-efficacy. That is, in the event of these cognitive changes, individuals learn to judge their thoughts and feelings without judgment and to view them only as subjective events that are transient and not a sign of reality. On the other hand, teaching mindfulness-based coping skills to experimental group students has made them able to manage themselves. As a result of their awareness of negative emotions and thoughts, and of the painful and distressing emotions associated with their homework and learning to make no judgments about them, they have been able to consciously and in a controlled manner respond to a variety of coping responses. Engage and reasonably select effective coping strategies. Because developing their observation skills during mindfulness training improves their understanding of strategies and thus increases their ability to observe and select these strategies.

One of the limitations of this study is its cross-sectional design and sample. Limitation of research on girls and lack of study in two groups of boys and girls in order to compare the two sexes, which limits the results. The lack of follow-up and self-reporting tools are other limitations of this study.



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