



## The effectiveness of stress reduction based on mindfulness on students' education self-concept and shyness

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### General Note

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### ABSTRACT

*Objective:* The purpose of this study was to evaluate the effectiveness of the program of reducing the effectiveness of Stress Reduction, Based on Mindfulness on Students' education Self-Concept and Shyness. *Method:* This research was experimental and based on pre-test and post-test design with control group. The statistical population of this study consisted of all 5th and 6th grade elementary school students in district 5 of Tehran in the academic year of 2015-16. Out of primary schools of boys in this area, a school was randomly selected and the fifth and sixth grade students of this school were given the Schick-Briggs Shyness Questionnaire and 40 of the students who were eligible for sampling were selected and the case group was randomly divided into two experimental and control groups (each group was 20). The experimental group received a "Mindfulness-Based Stress Management" program for 8 sessions of 2 hours that was performed once a week, but the control group did not receive any

intervention. After the end of the sessions, both the experimental and control groups performed a post-test and after one month followed up and both groups completed the questionnaire again. *Results:* The results of the covariance analysis showed that there is a significant difference between the mean scores of shyness, lack of determination and lack of confidence, distress and social exclusion and spatial range in relation to unfamiliar subjects in both the experimental and control groups. In the experimental group, the amount of shyness was significantly decreased. Also, there is a significant difference between the mean scores after academic self-concept and its dimensions including general, non-academic and non-teaching in the experimental and control groups, so that in the experimental group, the level of self-concept and its dimensions were significantly increased. *Conclusion:* The educational program for reducing mindfulness-based stress can reduce students' shyness.

**Key Words:** mindfulness-based stress reduction, Shyness, Students self-concept, Students

## 1. INTRODUCTION

One of the main problems that has a deterrent effect on the efficiency and dynamism of children and adolescents, and prevents the healthy formation of identity and the flourishing of their intellectual and emotional talents, is a problem in communicating with children and adolescents. Some do not have the ability to communicate correctly with others (Goldfried & Davison, 2000). The sense of shyness is one of the important discussions of psychology and psychiatry, which is now being considered by many scholars in the world. A large number of psychologists, sociologists and psychiatrists have tried to convey a "shyness", but shyness is a less defined term (Heiser et al., 2003). Shyness is generally defined as discomfort and inhibition in the presence of other people (Naimi et al., 2016). Although the shabby people appear to be very calm, they actually experience unrest, turmoil and a lot of mental work on how they are seen by others (Saunders & Chester, 2008). In fact, it can be said that shyness is one of the characteristics of personality that is heavily influenced by human relationships with the community and the surrounding. Generally, the shroud is a psychological structure and at the same time a social complication that appears in the aggregate and the person is incapable of encountering unfamiliar individuals and social connections (Afrouz, 2013).

Shyness is a psychosocial phenomenon that manifests itself through interpersonal misconceptions and compromise social abandonment at the first stages of development at home and at school. Undoubtedly, in today's complex world, in the age of communication and social affairs, the need for more and more collaborative and scientific partnerships, active cultural presence, is a shady phenomenon of a social disability (Jafari and Mehrafzoun, 2013). People with a lot of abilities and talents are not capable of acquiring their abilities because of their shyness. Shyness as a social disability, if not timely diagnosed and treated, may have adverse effects and seriously affects the cognitive, emotional and social development of a person (Jafari and Mehrafzoun, 2013).

On the other hand, various studies have shown that the attitude of the individual towards himself (the self-concept) has an effect on his failure or success. Hence, today the factors determining the behavior, including their own system and self-assessments, are of particular interest (Karimzadeh and Mohseni, 2005). Educational self-concept refers to the student's perception or imagination of his competence in relation to school learning, which affects academic achievement and is simultaneously influenced by it, and it seems that self-concept and academic performance have a two-way relationship (Seyf, 2017). Self-concept is a network of positive and negative beliefs about individual's acceptance or rejection.

The educational self-concept reflects the individual's knowledge and perceptions about our strengths and weaknesses in a given field of study and individual beliefs about our ability to successfully accomplish academic assignments at the levels and is one of the best predictors and mediators for effective and ineffective motivational variables, and is one of the effective factors in the learning process (Rana and Iqbal, 2005). Many of the educational problems of students, such as academic failure, dropout, maladaptive behaviors, are due to poor mental status and their negative attitudes towards oneself. One of the psychological interventions in reducing mood problems is the Mindfulness (Toufani et al., 2016). Mindfulness is the basis of the teachings of Buddha based on meditation and is the easiest and most effective way to educate the development of mind in doing homework and solving daily problems (Didonna, 2009).

The most common method for educating mindfulness is the Education for the Reduction of Substantial Mindfulness Stress (MBSR), formerly referred to as the program for reducing stress and tranquility (Kabat-Zinn, 1990). The reduction of Mindfulness-based stress is a behavioral intervention that is based on self-focus. In the MBSR, individuals learn to develop acceptance and compassion rather than judging their experience; they create current consciousness instead of automatic guidance and learn new ways of responding to situations (Masoumian et al., 2012).

Therefore, one of the effective methods for reducing shyness in people is mindfulness-based methods. Mindfulness is the momentary moment of consciousness, consciousness about the current reality and about what the person actually does (Harrington & Pickles, 2009).

Mindfulness requires the growth of the three components of refraining from judgment, targeted consciousness, and concentration on the present moment in individual attention that focuses on the present and the processing of all aspects of immediate experience, including cognitive, physiological or behavioral activities. Through awareness-based exercises and techniques, the individual becomes aware of his daily activities, becomes aware of the automatic functioning of the mind in the past and future world, and through instantaneous awareness of thoughts, emotions and physical states It is controlled by them and abandoned from the daily and automated minds focused on the past and future (Beirami et al., 2015; Ameneh Shaykh and Najla Anvari, 2018). Mindfulness based on reducing stress helps people to focus on mindfulness through exercises. In Kabat Zayn's view, this strategy is a one-dimensional, structured and focused approach that is successfully used in educational environments. Based on this approach, cognitive psychologists explain that most of the student's academic stresses come from their concerns about the future, and therefore, being in the moment of experience and being aware of the momentary processes of the mind can be a good alternative to these students (Zarei et al., 2016).

Mental interventions have shown their effectiveness in treating various psychological problems. Reducing depression, anxiety, stress and increasing awareness among students (Song & Lindquist, 2015), reducing emotional reactions to social stress (Britton et al., 2012), Reducing depression, anxiety, stress and raising the confidence of patients with type 2 diabetes (Vala et al., 2015) are among the issues that have responded well to the mindfulness. Researchers have shown that mindfulness can help rid people of auto thinking, habits and unhealthy behavior patterns and thus play an important role in behavioral regulation (Ryan & Deci, 2000). Tanay et al. (2012) in the study of educational outcomes of mindfulness stated that the training of mindfulness skills in both statistical and clinical terms significantly reduces the symptoms of vulnerable people and anxiety. Golpour Chamarkouhi and Mohammad Amini (2012) indicated that training on the reduction of mindfulness-based stress was effective in improving mindfulness, increasing self-expression and reducing test anxiety.

Also, Dehestani (2015) found that these results can be reduced by teaching stress management based on mind-awareness, depression, anxiety and stress in students. Arab Qaeni et al. (2017) also showed that the stress-reducing mind-awareness method has been effective in reducing anxiety and increasing students' venture. Considering the mentioned issues and considering the lack of internal studies on the effect of MBSR on shyness and self-concept, this study aimed to investigate the effectiveness of mindfulness-based stress reduction program Designed for students' educational self-concept shyness.

## 2. RESEARCH METHOD

The method of this research is a pre-test and post-test with a control group. In this method, the subjects are randomly assigned to two groups of tests and controls. At first, both the experimental and control groups are tested, then the experimental group is influenced by the independent variable. After that, again, from both groups, the test was performed and after a re-month, both groups were tested and the results were compared with each other. The statistical population of this study consisted of all male students of the 5th and 6th grade of the 5th district of Tehran in the academic year of 1969-97. From schools, a school was selected randomly and, based on the entry requirements, the willingness to participate in the research, the score above 42 in the Briggs (RSS) scale, the score below 38 in the RSS self-concept questionnaire, and the failure to receive any other educational program During the intervention, mindfulness; and withdrawal, including absence of more than two sessions in mindfulness training sessions, failure to follow the instructions and exercises in the sessions, and the reluctance to continue the training sessions, were selected by 40 people and randomly assigned to two The experimental and control groups (each group was 20 people).

### **Ethical committee approval**

The ethical committee of Payam Noor University, south Tehran, Iran has approved the study. Moreover, all cases gave their consent to participate in the study. IR.ZBMU.REC.1398.017

### **Information gathering tool**

#### ***Revised Shyness Scale (RSS)***

This study was used to measure the level of shyness of the Schick-Briggs spat projection scale (1990, quoted by Cruzier, 2005). The Chick-Brigade's Bridging Scale was made in 1990, consisting of 14 items and 3 subscales of lack of certainty and lack of self-esteem (4 questions), distress and social exclusion (7 questions), and shyness in relation to individuals Unfamiliar (3 questions). Participants

are asked to respond to each item on a Likert scale of five (1: completely disagree to 5: totally agree). At this scale, the range of grades can range from 14 to 70, which indicates a degree of shyness and shy of the subject. Also, Articles 6, 9 and 12 are graded in reverse (Rajabi and Abbasi, 2010). Cruzier (2005) obtained Cronbach's alpha coefficient of 0.79 (Cruzier, 2005). In the study of Rajabi and Abbasi, the Cronbach's alpha coefficient was used to assess the reliability of the shyness scale and its validity was verified by differential and confirmatory factor analysis. Cronbach's alpha coefficient was 0.71 in the whole sample and 0.18 in the first factors and 0.68 in the first factor, and 0.8 in the first factors. The correlation coefficients between each scale item and the total score of the females were between 10.10 and 60.0, and all (except for Article 12) were significant at  $P < 0.0001$ . Differential validity coefficient between this scale and Rosenberg self-esteem scale was significant at -0.23 and at  $P < 0.002$  (Rajabi and Abbasi, 2010).

### ***Yassen Chen self-concept questionnaire***

In this research, the self-concept questionnaire was used by Yessen Chen (2004) to measure self-concept. It was originally built by Yassen Chen in 2004 after running on 1,612 Taiwanese students. This tool has 15 questions and measures the individual's mental image of the individual and, accordingly, measures self-concept in three levels of general, school and non-teaching. This tool calculates both the overall score and the subscale scores individually. Scales on a 4-point Likert scale are fully supported (4), agree (3), opposite (2), and totally opposite (1), and include general, non-academic, and general level subscales. The minimum score for this test is 15 and the maximum is 60. The higher the score of the subject than the other subjects, it shows more positive self-concept than others. Marsh et al. (1984) have convergent validity with self-report questionnaire and self-concept questionnaire reliability of 0.89. In the research of Afsharizadeh et al. (2013), to determine the convergent validity of the self-concept questionnaire, Rosenberg self-esteem questionnaire was used. The correlation between the two questionnaires was 0.57 and at the level of  $P < 0.01$  was statistically significant. The total reliability of the self-concept questionnaire was 0.78 and each of the general, non-academic and non-academic sub-tests was 0.48, 0.72 and 0.47 respectively (Afsharizadeh et al., 2013).

### **Summary of training sessions on Mindfulness-based Stress Management**

Session 1: Introducing members to each other, the need to use mind-awareness training, explanations about stress and the causes of shyness and low self-concept, ration eating practice, weekly homework.

Session 2: Reviewing homework last week, meditating exercises, discussing body examinations, and barriers to practice, homework.

Session 3: Reviewing homework last week, seeing and hearing exercises, sitting meditating exercises, three-minute breathing exercises, exercising conscious mind movements, homework. Session 4: Reviewing homework last week, a 5-minute practice of seeing or hearing, sitting meditation with emphasis on attention to breathing, practicing conscious mind walking, homework.

Session 5: Reviewing homework last week, three-minute breathing exercises, sitting meditation (awareness of breathing, body, sounds, thoughts), awareness of pleasant and unpleasant events on feelings, thoughts and body feelings, homework.

Session Six: Reviewing homework last week, breathing space training for three minutes, discussing different ways of looking at thoughts or thoughts, sitting meditations (the presence of minds from voices and thoughts), homework.

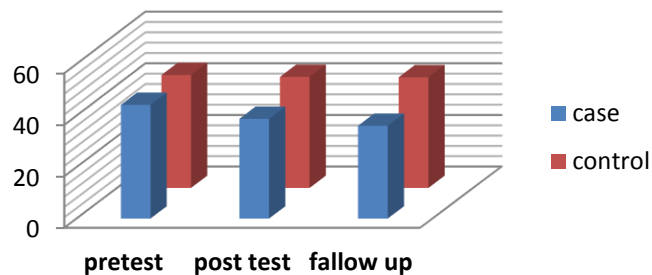
Session 7: Reviewing homework assignments last week, sitting meditation, listing of enjoyable activities, three-minute breathing space, homework.

Eighth Session: Reviewing homework last week, body examinations, 3-minute breathing exercises, reviewing the entire program, summarizing sessions, discussing programs, and continuing exercises.

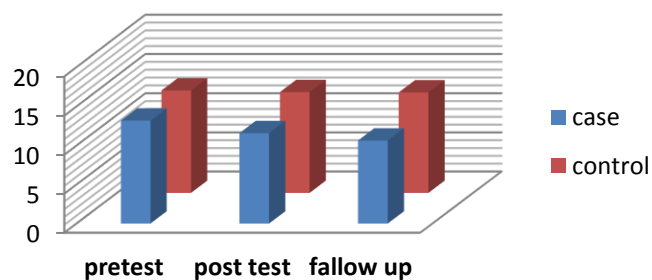
After completing the sessions, both groups completed the Shyness Questionnaire and Self-Concept Questionnaire. After a month, they were followed up and both groups completed the shyness questionnaire and the self-concept questionnaire. Finally, covariance analysis with repeated measure was used to test the hypothesis.

## **3. FINDINGS**

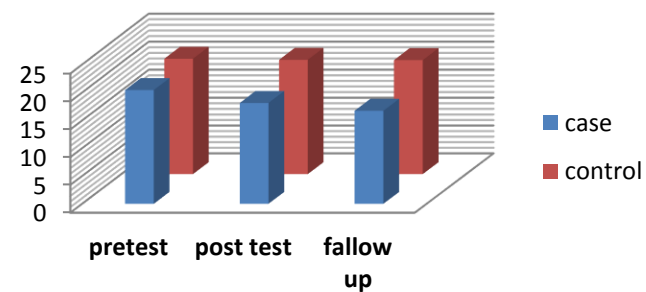
In the present study, 20 experimental and 20 control groups were evaluated before and after training with the research tool. Below are the mean and standard deviations of the underlying variable and the self-concept questionnaire is presented separately for each group (Figure 1, 2, 3, 4).



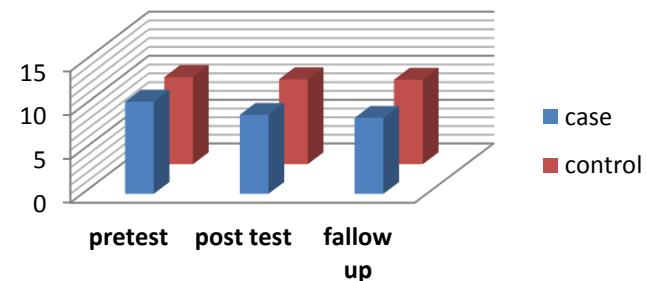
**Figure 1** Shyness



**Figure 2** Lack of determination and lack of confidence



**Figure 3** Distraction and social exclusion



**Figure 4** Shyness range in relation to unfamiliar people

As shown in Table 1, the mean scores of the experimental group in the pretest (44.20), post-test (38.88) and follow up (36.10), and control group in the pretest (43.80), posttest (43.10) and follow up (42.95), mean scores of lack of determination and lack of confidence in the experimental group in the pretest (13.20), post-test (11.66) and follow up (10.65), and in the pretest control group (10.10) 13), post-test (12/90), follow-up (12/85), and mean scores of distress and social exclusion in the pre-test (20.45), post-test (18.18) and follow-up (16.75) and in the group Pre-test control (20/70), post-test (20/50) and follow-up (20 45/2). Also, the mean score of distress and distancing the pre-test group (10.55), post-test (9.05) and follow-up (8.70) and control group is in pre-test (9/95), post-test (9/70) and follow-up (9/65).

Also, the mean of self-concept of the experimental group was pre-test (31.7%), post-test (36.50) and follow-up (36.10), and control group in pre-test (32.30), post-test (32.75) and follow-up (20/33 ), The mean score of the experimental group in the pretest (10/60), post-test (12/40) and follow-up (12/85), in the pre-test control group (10/75), post-test (10/85) and follow-up (00 / 11) and the mean score of the experimental group in the pre-test (16.77), post-test (18.65) and follow-up (19.20), in the pre-test control (16.85), post-test (16.95) and follow-up (30 / 17). The mean non-inferiority score of the experimental group in the pretest (4.40), post-test (5.45) and follow-up (5.65) and in control group the pre-testis (70/4), test (95/4) and follow up (90/4).

**Table 1** Descriptive indexes of minor variables and educational self-concept

Control		Test		the level	Variable
Standard deviation	Average	Standard deviation	Average		
10.05	43.8	10.81	44.2	pre-test	Shyness
8.58	43.1	9.57	38.8	Post test	
7.68	42.95	8.85	36.1	Follow up	
4.17	13.1	4.06	13.2	pre-test	Lack of determination and lack of confidence
4.07	12.9	3.6	11.6	Post test	
3.97	12.85	3.2	10.65	Follow up	
5.84	20.7	6.04	20.45	pre-test	Distraction and social exclusion
4.97	20.5	5.4	18.15	Post test	
4.68	20.45	4.63	16.75	Follow up	
3.18	9.95	3.17	10.55	pre-test	Shyness range in relation to unfamiliar people
2.61	9.7	3.2	9.05	Post test	
2.58	9.65	3.23	8.7	Follow up	
7.21	32.3	5.56	31.7	pre-test	Educational self-concept
6.15	32.75	6.12	36.5	Post test	
6.51	33.2	4.88	37.7	Follow up	
3.69	10.75	3.63	10.6	pre-test	General
4.35	10.85	3.66	12.4	Post test	
4.16	11	3.84	12.85	Follow up	
4.95	16.85	3.92	16.7	pre-test	Scholastic
4.03	16.95	4.17	18.65	Post test	

4.33	17.3	3.6	19.2	Follow up	Non-scholastic
1.8	4.7	1.31	4.4	pre-test	
1.82	4.95	1.6	5.45	Post test	
1.94	4.9	1.46	5.65	Follow up	

Covariance analysis with repeated measure was used to test the research hypothesis. Prior to covariance analysis with repeated measurements, its hypotheses were investigated.

The first hypothesis of the study: The curriculum for reducing mental stress reduces the students' shyness awareness.

**Table 2** The summary of the covariance analysis test for the study of Mindfulness-Based stress reduction Learning

Effect size	Significance level	F	Average of squares	Degrees of freedom	Sum of squares	Source of change	Variable
.39	0.001	24.90	177.51	1.52	270.51	Group effect	Shyness
			7.12	57.90	412.70	Error effect	

As shown in Table 2, the summary of covariance analysis indicates that the effect of educational program on reducing mindfulness-based stress on students' shyness ( $P < 0.01$ ,  $P = 0.01$ ,  $P < 0.01$ ) / 24 = (57.97 and 1.52) F, there was a significant difference between the scores of the factors (pre-test, post-test and follow-up) in the incidence rate ( $p \leq 0.01$ ). The magnitude of the effect value of 39.3 indicates that 39 percent of the variation in the scores of the difference in the two groups of the test and the evidence is due to the effect of the educational program on reducing mental stress, in order to determine that each of the variables in Which test stages have different meanings, the comparison of two and averages was carried out, the results of which are shown in Table 3.

**Table 3** Comparison of the two test steps for shyness at the end of training

Posttest-Follow up		Pretest-Follow-up		Pretest-Post test		←Steps
Significance level	Difference in averages	Significance level	Difference in averages	Significance level	Difference in averages	Variable
0.001	1.42	0.001	4.47	0.001	3.05	Shyness

Comparison of the two subjects in three different times (Table 3) shows that there is a significant difference between students in the pre-test with post-test, follow-up, post-test and follow-up ( $P < 0.01$ ). As a result, it can be said that the student's shyness level has been significantly reduced, and this decline has remained stable.

**Table 4** Summary of covariance analysis test for educational study of reducing mindfulness-based stress on shyness dimensions

Effect size	Significance level	F	Average of squares	Degrees of freedom	Sum of squares	Source of change	Variable
.25	0.001	13.16	16.25	1.65	26.86	Group effect	Lack of determination and lack of confidence
			1.23	62.80	77.53	Error effect	
.30	0.001	16.36	30.22	2	60.45	Group effect	Distraction and social exclusion
			1.84	76	140.36	Error effect	
.18	0.001	8.32	8.09	1.67	13.51	Group effect	Shyness range in

			.97	63.44	61.66	Error effect	relation to unfamiliar people
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As shown in Table 4, the summary of covariance analysis indicates that the effect of the educational program on reducing mindfulness-based stress is on lack of determination and lack of self-esteem ( $p < 0/2$ ,  $0/16$ ,  $13/16 = (62/80$  and  $1/65)$  F), social distress and social exclusion ( $0/30$   $0\text{Partial}\eta^2 =$ ,  $P0 / 01$ ,  $16/36 = (76$  and  $2)$  F) and scope Shyness in relation to unfamiliar subjects ( $P = 0.18$ ,  $P = 0.01$ ,  $P = 32.8$ ) ( $63.44$  and  $1.67$ ) F Students are meaningful between the scores of the factors (pre-test, post-test and follow up) In the lack of certainty and lack of self-esteem, distress and social exclusion, and shyness in relation to unfamiliar students, meaning differences Erie was observed ( $01 / 0p\leq$ ). The magnitude of the effect size of  $0.25$ ,  $0.20$ , and  $0.18$  indicates that 25% of the changes in the scores of lack of determination and lack of self-esteem, 30% of changes in distress scores and social exclusion and 18% of the variations in scar activity scores in Relationship with unfamiliar students in the two groups of experiments and evidence is due to the effect of the educational program on reducing mental stress. To determine whether each of the variables in each stage of the test has a significant difference, a comparison was made between the two methods. The results are shown in Table 5.

**Table 5** Bipartite comparison of test steps for shyness dimensions at the end of training

Posttest-Follow up		Pretest-Follow-up		Pretest-Post test		←Steps
Significance level	Difference in averages	Significance level	Difference in averages	Significance level	Difference in averages	Variable
0.02	0.50	0.001	1.40	0.001	0.90	Lack of determination and lack of confidence
0.03	0.72	0.001	1.97	0.001	1.25	Distraction and social exclusion
0.66	0.20	0.001	1.07	0.001	0.87	Shyness range in relation to unfamiliar people

Comparison of the two subjects in three different times (Table 5) shows that the lack of determination and lack of self-esteem and distress and social exclusion of students in the pre-test by post-test, follow-up and post-test and follow up is significant ( $P0.05$  and  $P0.01$ ). As a result, it can be said that the lack of decisiveness, lack of self-esteem and distress and social exclusion of students have been significantly reduced, and this decline has remained steady.

However, comparing the two subjects to three different times in the shyness range in relation to unfamiliar individuals (Table 7) shows that in the sphincter range in relation to unfamiliar subjects, a pretest with post-test and follow-up ( $01 / 0P$ ) have a significant difference with each other, and post-test and follow up do not have significant differences with each other ( $P > 0.05$ ). As a result, it can be said that the amount of shyness in relation to unfamiliar people has been significantly reduced, but this reduction has not been sustained in the long run, and follow-up to the post-test stage has not significantly decreased over time and remains constant.

The second hypothesis of the research: The educational program for reducing mindfulness-based stress increases awareness of students' self-concept.

**Table 6** Summary of the covariance analysis test for studying the reduction of stress based on mindfulness awareness on educational self-concept

Effect size	Significance level	F	Average of squares	Degrees of freedom	Sum of squares	Source of change	Variables
.28	0.001	15.35	75.82	2	151.65	Group effect	educational self-concept
			4.93	76	375.36	Error effect	



As shown in Table 6, a summary of covariance analysis indicates that the effect of educational program on mindfulness-based stress reduction on student's self-concept ( $P < 0.01$ ) There was a significant difference between the scores of the factors (pre-test, post-test and follow-up) in the amount of self-concept ( $P \leq 0.01$ ). The effect size value of 0.28 indicates that 28 percent of the changes in the self-concept scores between the two test and control groups are due to the effect of the Mindfulness-Based Stress Management Curriculum, in order to determine which of the variables at which stage of the test There is a significant difference between the two and averages, the results of which are shown in Table 7.

**Table 7** Bipartite comparison of the test stages for self-concept at the end of training

Posttest-Follow up		Pretest-Follow-up		Pretest-Post test		←Steps
Significance level	Difference in averages	Significance level	Difference in averages	Significance level	Difference in averages	Variable
0.30	-0.82	0.001	-3.45	0.001	-2.62	Educational Mindfulness

The comparison of the two subjects in three different times (Table 7) shows that students' self-concept in the pretest with post-test and follow-up is significant ( $P < 0.01$ ) and in post-test and follow-up, they have no significant difference with each other ( $P > 0.05$ ). As a result, it can be said that the amount of self-concept has increased significantly, but this increase has not been sustained in the long run and follow-up to the post-test stage has not increased significantly over time and has remained constant.

**Table 8** Summary of covariance analysis of the study of mindfulness-based stress reduction on the dimensions of Educational self-concept

Effect size	Significance level	F	Average of squares	Degrees of freedom	Sum of squares	Source of change	Variable
.23	0.001	11.84	13.70	1.69	23.26	Group effect	General
			1.15	64.49	74.66	Error effect	
.09	.01	4.18	12.77	2	25.55	Group effect	Scholastic
			3.05	76	232.06	Error effect	
.11	0.001	5.05	3.00	2	6.01	Group effect	Non-Scholastic
			.59	76	45.26	Error effect	

As shown in Table 8, a summary of covariance analysis indicates that the effect of educational program on reducing mindfulness-based stress on general self-concept ( $P = 0.23$ ,  $P = 0.01$ ,  $P = 0.01$ ) (64.49 and 69.1) F, school self-concept ( $P = 0.09$ ,  $P = 0.05$ ,  $F = 4.14$ , F) and non-educational self-concept ( $P < 0.02$ ),  $P = 0.01$ ,  $05.05 = (76 \text{ and } 2)$  F) Students have meaningful difference. There was a significant difference between the scores of the factors (pre-test, post-test and follow-up) in the amount of general, school and non-teaching students' self-concept ( $P < 0.01$ ).  $05/0$  and  $01/0$   $p \leq$ ). The amount of effect size of 0.23, 0.09 and 0.11 indicates that 23% of the changes in the general self-concept scores, 9% of the changes in the school self-concept scores, and 11% of the changes in the non-academic self-concept scores of the students between the two groups were tested and certified, is due to the effect of mental education-based stress reduction curriculum. In order to determine whether each of the variables is significant at each stage of the test, a comparison of the two and averages was carried out, the results of which are shown in Table 9.

**Table 9** Bipartite comparison of the stages of the test for the dimensions of self-concept at the end of the training

Posttest-Follow up		Pretest-Follow-up		Pretest-Post test		←Steps
Significance level	Difference in averages	Significance level	Difference in averages	Significance level	Difference in averages	Variable
0.35	-0.30	0.001	-1.25	0.001	-0.95	General
0.65	-0.45	0.001	-1.47	0.002	-1.2	Scholastic

1.00	0.075	0.002	-0.72	0.001	-0.65	Non-Scholastic
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The comparison of the two subjects in three different times (Table 9) shows that there is a significant difference between the students' general, scholastic and non-scholastic self-concept in the pretest with post-test and follow-up ( $P < 0.05$  and  $P < 0.01$ ), and post-test and follow up do not have significant differences with each other ( $P > 0.05$ ). As a result, it can be said that the level of general, scholastic and non-scholastic self-concept of students has increased significantly, but this increase has not been sustained in the long run and follow-up to the post-test stage has not increased significantly over time and has remained constant.

#### 4. DISCUSSION

In response to the first hypothesis, the results showed that between the mean scores of the three stages of the test (pre-test, post-test and follow-up), the experimental and control groups in the level of shyness, lack of determination and lack of self-esteem, distress and social disregard and scope There is a significant difference in shyness in relation to unfamiliar subjects, so that the amount of shyness in the experimental group is significantly reduced. The research carried out in this regard has had the results consistent with this finding. Brighton et al. (2012), Arana (2006), Arab Qaeni et al. (2017), Torkhan (2016), Vala et al. (2015), Golpour Chamarkouhi and Mohammad Amini (2012) have similar results in similar studies. Found findings.

In explaining this finding, it can be said that the mind of consciousness includes an informed and unconcerned knowledge of current events. The conscious minds understand the inner and outer realms freely and without distortion and have a great ability to confront a wide range of thoughts, emotions and experiences (both pleasant and unpleasant) (Davoudi and Nasimifar, 2012). Mindfulness reduces feelings without judgment and increases awareness of mental emotions and accepts negative emotions as they happen. Such situations on the one hand increase the awareness of individuals from the body, feelings and thoughts and provide effective counteraction to negative events and on the other improve spontaneity and realism. This, in turn, will control negative thoughts in interpersonal relationships and increase the compromise of individuals in their social relationships. This attention control training will make people lose their minds from any judgments that lead to shyness, and deeply contemplate the present and generalize it into their daily routine activities.

Mindfulness gives individuals the ability to limit, and often negatively, judgmental, and clear understanding of what is actually understood right now. Such ability allows individuals to have healthier and more logical behaviors before responding to concerns and irrational thoughts about social relationships. In different situations, this condition increases confidence in self and self-esteem and ultimately reduces the shyness, closeness and social exclusion of individuals. In response to the second hypothesis, the results showed that there is a significant difference between the mean scores of the three stages of the test (pretest, post-test and follow-up) in the experimental and control group in the amount of academic self-concept, general, school and non-teaching, Educational, general, scholastic and non-scholastic self-concept in the experimental group significantly increased. Research conducted in this regard, showed that cognitive-mindfulness-based cognitive therapy improved its self-esteem (Ghadampour et al., 2016), reduced Social anxiety and ineffective attitudes (Bairami et al., 2015), and cured depression, and increased self-esteem (Youssefian and Asgharpour, 2013, Eskandar, 2014, and the Fennell, 2004) has had a significant impact. Also, self-management method significantly increases the self-concept of students in secondary schools (Abiola & Akomolafe, 2013), which is in line with this finding.

In explaining this finding, it can be said that the reduction of mindfulness stress helps individuals to focus on mindfulness through a workout. In this approach, the individual becomes aware of mental methods at any given moment and identifies the skills of more useful methods (Kabat Zinn, 1990; quoted by Segal et al., 2002). Based on this approach, cognitive psychologists explain that most of the students' academic stresses come from their worries about the future, and therefore, being aware of the momentary processes of the mind can be a good alternative to these Students (Zarei et al., 2016). Mindfulness can help in ridding people of automatic thoughts, habits and unhealthy behavior patterns and thus play an important role in behavioral regulation (Ryan & Deci, 2000).

In the mind of consciousness, observation and monitoring of thoughts, emotions and body feelings are emphasized as transient events, not as real thoughts. This makes people more likely to view their thoughts as unsustainable rather than seek to change their self-critical thoughts and negative perceptions. This new kind of relationship with the wrong thoughts and beliefs leads to its control and thus improves emotions, perceptions and behaviors, and thus can have a positive effect on people's self-concept. Mentality exercises can cause changes in the patterns of thought, or attitudes of the individual about his thoughts. Mindfulness helps people

to identify false thoughts and evaluations, and to modulate negative thoughts and behaviors, and it leads to positive behaviors and makes people more aware of their personal values and abilities, and thus Individuals have a positive self-concept.

Finally, the study has been conducted with restrictions such as the limited statistical society of the 5th and 6th grade schoolchildren of Tehran, collecting information based on a self-reporting scale (questionnaire) that these reports due to bias in the response Tendencies are prone to distortion. It is better to use other tools such as interviews and research in other communities and samples, including female students and students from other regions, and compare their results with this study.

## 5. CONCLUSION

According to the results of the research, the educational program for reducing mindfulness stress can reduce the shyness and enhance the students' self-concept, general, scholastic and non-scholastic skills. Considering that shyness is the root of many educational and social problems for students, it is suggested that educators in schools teach training on how to reduce mindfulness-related stress as a program. To reduce the shyness of their students, it is also suggested that educators in schools teach the techniques of reducing mindfulness stress reduction as a training program to increase students' self-concept.

### Conflicts of interest

None to declare

### Financial resources of the study

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