Original Article

The effectiveness of emotional intelligence training on test anxiety and emotional intelligence among male students of fifth grade (second period) in the city of Shadegan

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Abstract

Introduction: Anxiety is regarded as a natural reaction to deal with the source of fear and threat. The present study aimed to assess the effect of emotional intelligence training on test anxiety and emotional intelligence among male students.

Materials and Methods: The present study consisted of 40 students of fifth grade selected randomly among two elementary schools using multivariate sampling method, who were assigned into control and experimental group (n=20). The experimental group received 10 sessions of emotional intelligence training. The research instrument consisted Beck anxiety questionnaire and Bar-On emotional intelligence questionnaire.

Results: The findings obtained from the present study indicated that emotional intelligence has a direct significant impact on test anxiety among the male students of fifth grade (*P*<0.05).

Conclusion: The results of the study revealed that emotional intelligence training plays a significant role in reducing test anxiety and increasing emotional intelligence of the students.

Keywords: Emotional intelligence, Students, Test anxiety

Introduction

Anxiety is a natural reaction to mental stress and a warning sign informing of imminent danger and preparing a person to deal with the source of fear and threat. During anxiety, a person has a diffuse and unpleasant, and often vague feeling of worry, which is accompanied by physical symptoms (such as tremors, headache, shortness of breath, heart palpitations) and psychological symptoms (such as feelings of fear and worry, problems in concentration, and hypervigilance (1).

During growth, children and teenagers experience different types of anxieties. One of these types of anxiety is exam anxiety. Exam

anxiety, as a common and important educational phenomenon, is closely related to children and adolescents' academic performance and progress (2). Exam anxiety in the school environment is a set of unpleasant cognitive, physiological, behavioral, and emotional reactions and concerns about possible negative results or the expectation of failure in the exam or similar assessment situations (3). Therefore, exam anxiety is a common and inhibiting problem. Various researches reported the prevalence of exam anxiety among students as 10-30% (4).

Therefore, test anxiety is a state of worry that creates negative cognitions and evaluations about the assignment in people and diverts cognitive resources from the test performance (5). In other words, instead of focusing exclusively on answering the test questions correctly, the anxious test-taker must constantly try to manage the interference of thoughts such as the fear of failing the test and the potential negative results of the test (6).

Today, emotional intelligence is considered the latest development in the field of understanding the relationship between thinking and emotion in various fields of psychology. So far, much research has been done about emotional intelligence, which shows the role of emotional intelligence and its components in various aspects of people's lives, such as educational progress, education, jobs, marriage, personal growth, and social relationships. Emotional intelligence expresses the emotional, personality, and social dimensions of intelligence often considered more important and prominent than the cognitive dimensions for everyday activities (7). Exam anxiety is a common phenomenon in any educational system that closely relates to students' academic progress and mental health. Exam anxiety includes the unpleasant experience of worry and unpleasant emotions in situations where a person feels that he is being evaluated (8). Exam anxiety often leads to negative cognitive evaluation, adverse physiological reactions, and a drop in academic performance, which has a destructive and inhibiting role on students' mental health (9).

Anxiety can be considered a common emotional state. We all remember periods or situations in life where we were more or less anxious, but during our studies, our most anxiety was probably related to exams. The feeling of worry and anxiety during the exam or the hours and moments before it is a natural part of a student's life, and it is expected that these people will face it many times during their studies. Even a certain amount of anxiety is necessary and beneficial; however, if anxiety exceeds a certain limit, it is only not useful but also disrupts a person's performance and takes on a pathological form, which is known as "exam anxiety" to be exam anxiety is a powerful and pervasive feeling of distress and fear that may appear before, during, or after the exam and result in reduced performance, poor learning, or lower grades. If anxiety is felt while reading lessons or when thinking about possible events during the exam, it can be called "anticipation anxiety," It is considered exam anxiety. Despite spending much time studying and preparing for the exam, most students with exam anxiety consider issues such as concentration, distraction, and "mental interruptions" to be their biggest problems (10).

Exam anxiety is an unpleasant emotional reaction to an assessment situation. This excitement is characterized by tension, anxiety, and excitement in the nervous system. As Weber stated, anxiety usually refers to an unpleasant and vague emotional state associated with distress, panic, fear, and confusion (11). Therefore, anxiety is one of the motivational and cognitive variables that significantly affect the academic progress, learning, performance, attention, concentration, and retrieval of information of learners (12), and its consequence is a reduction in the ability to deal with assessment situations, solving problems and reducing academic efficiency. Exam anxiety is the main factor contributing to various negative results, including mental discomfort, failure to complete school education, and insecurity (13). Students with high test anxiety use their study and learning skills below their ability and knowledge during the study and when participating in the test (14). Therefore, exam anxiety, with its negative effect on studying and retrieving information during the exam session, causes students to be unable to make the most of their abilities and not perform well in the exam. Therefore, for students' academic success, it is necessary to pay attention to the anxiety of the exam and think of measures to reduce it. It is also an unpleasant emotional

reaction to the evaluation situation, which is characterized by a kind of tension, confusion, and excitement in the automatic nervous system; and even threatens the mental health of students and has a bad effect on their efficiency, talent development, personality formation, and social identity. Also, as one of the pervasive and problematic phenomena among students, it can harm their academic self-efficacy and optimal performance, especially during evaluation (15).

The exam in the education system is the center of gravity of educational measurement and evaluation. Therefore, the exam is the best method to improve and measure students' academic progress. However, since different mental, physical and emotional conditions of students affect their exam results, and one of these mental conditions is the problem of students' anxiety during exams, this research aims to investigate the effect of emotional intelligence training on exam anxiety and emotional intelligence of elementary school students. It is the fifth grade of elementary school (second period) in Shadgan city.

The prosecutor and researcher (16) researched several students. First, they concluded that the test anxiety scale was correlated with the factors of other anxiety scales (such as the Kettle scale), and therefore the relationship between test anxiety and personality anxiety factors was confirmed. Secondly, the level of exam anxiety was significantly effective on the grade point average of all specific courses, and based on this, the effect of exam anxiety on the decrease in academic performance was clarified.

Van Roy, Weiss, and Zovaran state that excitement and its regulation contribute differently to physical and mental health. Research showed that high emotional intelligence in better understanding and management of emotions prevents the spread of maladaptive emotional states (which are related to mood and anxiety disorders) (17). Also, this research showed that higher emotional intelligence usually leads to a more positive mood and restoration of mood after induction of a negative mood (18).

Akbari and Miri's study also indicated a significant relationship between emotional intelligence and school anxiety. Also, there was a significant relationship between all components of emotional intelligence (self-awareness, self-control, self-motivation, social awareness, and communication skills) and school anxiety. In addition, all components of emotional intelligence significantly predicted the anxiety variable (19).

Materials and Methods
The current research is experimental-field with a pre-test-post-test design with a control group in a student community. The statistical population of this research included all fifth grade (second period) male students of Takhti School in Shadgan city who were studying in the academic year of 2014-2015. This research selected a sample of 80 students by multi-stage sampling. Of these, 40 people with the highest score were assigned to two groups experimental (20 people) and control (20 people).

Research instruments
A) Beck's anxiety test: This questionnaire is designed to measure the level of anxiety and contains 21 statements. Each phrase reflects one of the symptoms of anxiety usually experienced by people who are clinically anxious or placed in an anxiety-provoking situation. In scoring, the person must read the list of symptoms and mark the severity of each symptom in the columns (not at all), (mild), (moderate), and (severe).

B) Bar-On and Parker's Emotional Intelligence Inventory for Children and Adolescents: In the present study, Bar-Ann and Parker's Emotional Intelligence Inventory for Children and Adolescents (2000) was used to measure emotional intelligence. This questionnaire assesses emotional intelligence at ages 7-18. It is a self-report tool; it has 60 items, and its items are scored on a Likert scale from most of the time (4) to rarely (1). Also, this instrument has five components: (a) intrapersonal intelligence with six items (e.g., "I think I am the best at everything I do"), (b) interpersonal intelligence with 12 items (e.g., "When a friend is not happy, I understand"). (c) stress management with 12 items (such as: "I can stay calm when I am agitated and anxious"). (d) adaptability with ten items (such as: "I can give appropriate answers to problematic situations") and (e) general mood with 14 items (such as: "I am satisfied and happy with myself"). Also, this list has an indicator called positive affect that identifies a person who tries to make

themselves look good when responding. Articles 8, 18, 27, 33, 42, and 52 measure positive impact and are not considered subscales. The lowest and highest scores for intrapersonal subscales are respectively (6 and 24), interpersonal (12 and 48), stress management (12 and 48), adaptability (10 and 40), and overall mood (14 and 56). Bar-Ann and Parker (2000) reported the reliability of the emotional intelligence inventory for children and adolescents in Cronbach's alpha method for different subscales between 0.65 and 0.90 and in the retest method between 0.77 and 0.89. The reported correlation between this questionnaire's short and long forms is between 0.92 and 0.97, which is a high level. Also, the reliability coefficients of different subscales of children and teenagers' emotional intelligence inventory were obtained from 0.47 to 0.86 and 0.90 for the whole instrument by Cronbach's alpha method.

The intervention consists of teaching emotional intelligence components in 10 45-minute sessions, based on the Golman model, in a group and two sessions per week for the experimental group. The stages of teaching emotional intelligence in the book teaching emotional intelligence to children are based on the Golman model (1995, quoted by Mafini and Bahman, 2010, translated by Rastgarpour, 2019). Before starting the training, a pre-test was taken from both experimental and control groups. Then, ten training sessions were given to the experimental group on emotional intelligence skills, and no training was given to the control group. The researcher carried out the intervention in the city of Shadgan on the students of the experimental group, and 45 minutes was allocated to each training session; after the end of the training for the experimental group, the test and post-test certificates were taken from the two experimental groups. The stages of emotional intelligence training were based on Golman's model (1995, quoted by Mafini and Bahman, translated by Hasan Rastgarpour, 2019).
Summary of intervention sessions:

1- Conducting the pre-test to familiarize the group members with each other and with the general structure of the sessions, introducing the experimenter to the students by introducing himself and creating a positive interaction with them in order to know their personal, family, and academic characteristics and the pre-test

2- Emotional self-awareness training:S A-Using the concentration technique: We ask students to focus on each emotional state, such as (fear, sadness, anger, happiness, and surprise) and write it in sentence format. For example, the; I get angry if someone makes fun of me. B- Assigning the task of connecting the colors of candies to our emotional states, we draw red, green, yellow, and brown on one side. On the other side of the paper, purple candies face emotional states of anger, happiness, surprise, fear, and sadness that children have experienced. We place and ask children to connect red candy to anger, green to happiness, yellow to surprise, brown to fear, and purple to sadness. C- Group discussion about emotional states: forming four groups of five people and asking the group members questions from the student who made a sentence about each of his emotional states. For example, how do you know that angry? Or how did you feel when you got angry?

3- Teaching emotional self-perception: A- Naming emotions: We ask children to show different emotional states such as anger, fear, sadness, surprise, and happiness with their facial expressions, and we ask them to name their emotional states and then their answers. We compare them with the emotional states they have shown and give them feedback. Finally, we ask them to tell us which behavioral reactions these emotions may cause in us. B- We ask the children to write to us when they experience each of the emotions, what they feel, what they think and, what behaviors they show, what effect these behaviors have on our social relationships.

4- Identifying the emotions of others: A- We show the students pictures of emotional states (fear, sadness, surprise, anger, and happiness) and ask them to name the emotional states of these pictures. B- We show the children the short stories we made about different emotional states, and we ask them to write which emotions (fear, sadness, surprise, anger, and happiness) the main character of the story has and also mention the reason for their statements.

5- Understanding other people's emotions and empathy: A- We ask the students to discuss each other's emotional states in small groups. For example, form 5 groups of 4 people. In these groups, each member of the group describes the emotional states of two of his friends in writing,

gives his writings to the person in question, and evaluates these writings. B- Through role-playing, we ask one student to express his emotional feelings, and we ask the other student to listen to his feelings actively, to reflect on the feelings appropriate to his emotional state, to reflect on words appropriate to their words and honestly accept the other person, and then we ask other students to repeat this work in pairs. Finally, we show appropriate feedback about their exercises.

6- Managing your emotions: A- Training to consciously manage your emotions and reactions, identifying "hot buttons" or triggers of strong negative emotions and stopping their activity. B- We prepare situations in writing and ask the child to write appropriate behaviors to deal with them in front of him, for example: when someone forces you, you..., when your best friend has gone to another school. When you have homework, and you have not done it

7- Controlling one's own and others' emotions: A- First, we teach the students how to solve the problem, and then we ask them to write a play in which two of their friends are involved because of a certain problem, and they are asked to use the method of solving their problem to solve

8- Self-motivation: A- Putting students in situations where they have to choose between immediate and less important goals and far and more important ones. Then, there is a group discussion about the students' choices, and the selection of distant and important goals is encouraged.

B- Using the technique of positive self-talk to motivate students, for example: first, the teacher

says out loud, I will achieve the goal I have in mind. Then all the students repeat it out loud. In the next stages, the students' statements are repeated internally and encouraged by the teacher.

9- Teaching self-expression: A- Preparing a list of one's characteristics and expressing it to others, teaching courage and self-confidence in interpersonal communication while respecting others. B- Performing an example of self-expression behaviors and asking students to express the strengths and weaknesses of that behavior, as well as repeating this activity by students and giving them feedback on how to perform the activity.

10- Implementation of the post-exam: Thank you and appreciation to the students and executive staff of the school for their cooperation in the implementation of this research and the implementation of the post-exam

Results

The mean and standard deviation of the experimental group's pre-test and post-test scores for test anxiety and emotional intelligence were 24.36 (and 4.17) and 35.50 (and 9.94) in the control group, respectively. It is 12.45 (and 4.86) and 27.80 (and 7.67), respectively.

The results of the one-way covariance analysis in MANCOVA text are presented in Table 1. According to the results presented in Table 2, there is a significant difference between the test group and the control group in both test anxiety and emotional intelligence variables.

Table 1. Summary of the results of multivariate covariance analysis (MANCOVA) on the post-tests of test anxiety and emotional intelligence with the control of pre-tests

Test	Value	F	Error df	Hypothesis df	P	Effect size
Pillai effect	0.96	54.43	6	3	0.001	0.96
Wilks Lambda	0.036	54.43	6	3	0.001	0.96
Hoteling effect	27.21	54.43	6	3	0.001	0.96
Roy's greatest root	27.21	54.43	6	3	0.001	0.96

Table 2. The results of one-way covariance analysis in the MANCOVA text on the post-tests of test anxiety and emotional intelligence in groups with the control of pre-tests

Dependent variable	Sum of squares	Degree of freedom	Mean of squares	F	P	Effect size
Test anxiety	146.98	1	48.99	12.44	0.003	0.84
Emotional intelligence	590.48	1	590.48	20.32	0.001	0.73

Discussion

Emotional intelligence is a multi-dimensional structure and includes the interaction between emotion and cognition, which leads to compromised functioning.

The research conducted on emotional intelligence has shown that emotional intelligence is an effective and determining factor in fundamental life processes such as success in school and education, success in work and interpersonal relationships, and health performance. In addition, emotional intelligence has a positive correlation with mental health and a negative correlation with mental disorders.

In general, the ability to emotionally respond to appropriate emotional diagnoses, face daily events, expand the scope of insight and create a positive attitude about events and emotions play an effective role. As a result, people who can recognize, control, and use these emotional abilities will experience more social support, a sense of satisfaction, and physical and mental health (20). For this reason, the explanation of the findings related to the effect of emotional intelligence training on test anxiety and emotional intelligence, related to the hypotheses of this study, have been presented. The results of multivariate and one-way covariance analyses showed a significant difference between the post-test scores of emotional intelligence in the experimental group and the control group, and these results are consistent with the research of Thomas (21). Emotional intelligence develops through education that focuses on helping children develop emotional intelligence abilities, such as expressing, understanding, and managing emotions and using these skills to overcome everyday social problems. The emotional intelligence training program for the children participating in the experimental group implements a plan and program that enables them to recognize, understand and manage their emotions and thus increases their emotional intelligence.

Also, there is a significant difference in explaining the findings related to the test anxiety post-test scores in the experimental and control groups. These results are consistent with the research of Azor (22). Regarding the relationship between exam anxiety and emotional intelligence, the research results show no significant relationship between emotional intelligence and exam anxiety, which means that as emotional intelligence increases, exam anxiety decreases.

Conclusion

The structure of emotional intelligence and its components can play a key role in students' anxiety symptoms.

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