

The Relationship between Emotional Self-Regulation and Self-Concept and Test Anxiety in Pre-University Students in Tonekabon

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ABSTRACT: The aim of this study was the relationship between emotional self-regulation and self-concept and test anxiety in pre-university students in Tonekabon. The research design is descriptive and correlational. The population of the study includes 700 pre-university students. The sample volume was obtained 225 people and they were randomly selected. In this study, an emotional self-regulation questionnaire of Hoffman Kashdan and self-concept questionnaire and test anxiety questionnaire (TAI) were used. In order to analyze the data in descriptive statistics, the average standard deviation and correlation test and multiple regressions (step by step model) in inferential statistics were used. The results showed that there was a significant relationship between emotional self-regulation and self-concept and test anxiety in pre-university students in Tonekabon.

Keywords: Emotional Self-Regulation, Self-Concept, Test Anxiety of the Students.

INTRODUCTION

Test anxiety is defined as a state of stress and panic which is associated with worrying thoughts and autonomic nervous system activity and plays an important role in the development of psychological disorders in the students. The anxiety is a necessary response to stress and this prepares the person for the tension and action while facing with danger. In many cases, such a response is logical and even vital, but normal mode can affect a wide range of human functions (Dadsetan, 1997). A person is involved with a high level of the test anxiety through negative thoughts, which these thoughts are concentrated on the comparison of their performance with others, the results of failure and lack of success, the low level of confidence in the performance, more extreme concerns met, the lack of non-preparation for the exam and the lack of self-value. This is proposed theoretically that ruminations of test anxiety are associated with individual's knowledge of physiological changes in the body occurred while testing. This physical sensitivity shows it in increasing the rate of heart and breathing, digestive disorders, sweating, cold and wet palms, dry mouth and tremors, panic and fear and a need to urinate (Morris & Engle, 2006). The study of statistics and information show that the anxiety has been increased in the last few decades and much empirical evidence has shown adverse effects of the anxiety in the students. For this reason, it has attracted the attention of experts in psychology. In recent years, some researches have been performed to find the causes of the anxiety and its impact on the students and ways to control it.

There are various theories in relation to the anxiety which each of them explained in different ways, including:

1. Freud's psychoanalytic theories which states the anxiety is a warning from the existence of an unconscious danger. This means that this is considered the result of the conflict between the demands of unconscious psychological or sexual aggression and threats associated with them in the super-ego (superego) or the outside world. Ego mobilizes his defense mechanisms in response to the warning to prevent from unacceptable to conscious thoughts and feelings. From the perspective of psychodynamic, the purpose of treatment is not necessarily the complete elimination of the anxiety, but increases the individual's tolerance to it. This means that the aim is to increase the capacity of the individual to experience the anxiety and he can benefit from it in finding the underlying conflict of causing the anxiety. The anxiety is a reaction to various situations arising in the life cycle.

2. According to learning or behavioral theory, behavioral theories state that the anxiety is a conditional response to a specific environmental stimulus. In the model of classical conditioning, the girl who was raised by a father behaving badly, upon seeing him, might be anxious. This girl may be mistrustful of all men through the generalization. In social learning model, the child may show an anxious response by imitating the anxiety in the environment (such as anxious parents).

3. Existential theories state that the person feels that he lives in an aimless world. In fact, the anxiety is the reaction of the individual to this great gap which sees in the existence and the meaning of life (Kaplan et al., 2003).

One of the variables associated with the test anxiety is emotional self-regulation. In this regard, Garnefski, Kraaij and Spinhoven (2001) have introduced nine different cognitive emotion regulation strategies entitled self-blame (with the content of blame and self-blame), acceptance (thinking of acceptance and surrender to the content of the event), rumination (preoccupation about the emotions and negative thinking associated with the event), positive refocusing (thinking about the enjoyable and happy subject instead of thinking about the actual incident), refocusing on planning (thinking about the process of overcoming a negative event or a variation thereof), positive reappraisal (thinking about the positive aspects of the event or personality enhancement), putting in to perspective (the thoughts of the importance of the event or the emphasis on the relativity in comparison with other events), catastrophizing (thinking with horror of the event content) and other blame (thinking with the content of blame and blame others for what has happened). Among these nine strategies, self-blame other blame, rumination, catastrophizing, maladaptive cognitive emotion regulation strategies and acceptance, refocusing on planning, positive reappraisal and positive refocusing, positive reappraisal and adopting the perspective constitute adaptive emotion regulation strategies (Shahidi, 2012). Emotion regulation will be assessed more than two frameworks including: 1) emotion regulation styles which are activated before or at the beginning of the event. 2) Emotion regulation styles which are activated after an accident or excitement (Ochsner & Gross, 2005). Zimmerman defines self-regulated learning as a form of learning in which people begin and direct their efforts to learn the knowledge and skills without relying on teachers and others. In other words, people have some skills to design, control and guide their learning process in this learning and they tend to learn and they can assess the process of learning, active efforts that people show cognitively, motivationally and behaviorally in learning activities (Zimerman, 2002). Huit (quoted by Javier and Sanchez, 2005) states that self-concept is not inherent and this develops by people through interaction with the environment and thinking about this interaction. Therefore, self-concept involves mobility and this can be changed and modified. Self-concept is regarded as beliefs, feelings and memories which one person has about him and with the behaviors, abilities and a role which any person considers and represent him. Self-concept is developing the child affected the children and other family members in the early years and child development under the influence of friends, classmates and teachers (Salari, 2013). Hosseinzadeh (2013) in a research entitled the role of metacognitive and self-efficacy beliefs in students' test anxiety and academic achievement of Roudhen University in Iran concluded that metacognition beliefs play an important role in students' test anxiety and academic achievement and also self-efficacy beliefs were also effective on student achievement. Zokaee (2011) in a research entitled the role of metacognitive beliefs and self-efficacy beliefs on the test anxiety and academic achievement of high school students in Kermanshah concluded that there was a relationship between metacognitive beliefs and the test anxiety and academic achievement and there was also a significant relationship between self-efficacy beliefs and academic achievement but there was not a significant relationship between self-efficacy beliefs and the test anxiety. Takour Weaver (2013) in a research entitled the relationship between self-efficacy and the anxiety of high school students in India concluded that there was a negative relationship between self-efficacy and anxiety and also there was a significant relationship on the efficacy between male and female students but there was no the significant difference on the anxiety between male and female students. Gavra (2012) in a research entitled inefficient metacognitive beliefs and anxiety, depression and self-esteem in healthy people with experiences and similar to Psychiatry University of Medical Sciences of Warsaw in Poland concluded that people who have some regulations on negative inefficient metacognitive beliefs enjoy high anxiety and depression and low self-esteem compared to people who have not had such situations yet. Rana Mahmoud (2010) in a research entitled the relationship between test anxiety and academic achievement of students from Lahore in Pakistan concluded that there a significant and negative

relationship between test anxiety and students' academic progress and success. Therefore, the test anxiety leads to student's educational failure. Aolatvih (2009) in a research entitled students' test anxiety, motivation for examinations and academic achievement in secondary and high schools in Nigeria concluded that there was a negative relationship between the test anxiety and achievement in science, and there was a significant and positive relationship between motivation of test and achievement of science. Keogh et al (2010) in a research during the study of the effectiveness of stress management training on academic achievement and students' mental health showed that this increased both academic performance and mental health. Accordingly, the aim of this study is the relationship between emotional self-regulation and self-concept and test anxiety in pre-university students.

To achieve the goal of the research, the following questions were formulated and implemented.

1. Is there a relationship between secrecy and test anxiety of the students of pre-university?
2. Is there a relationship between compromise and test anxiety of the students of pre-university?
3. Is there a relationship between tolerance and test anxiety of the students of pre-university?
4. Is there a relationship between self-concept and test anxiety of the students of pre-university?

MATERIALS AND METHODS

This research is descriptive and correlational. The population of this study consists of 700 pre-university students of Tonekabon. The sample includes 225 pre-university students of Tonekabon who were selected randomly. The students were asked to study the questionnaires carefully and respond honestly. Then, data from the questionnaires by correlation statistical tests and multivariate regression of Inter model were analyzed. In this study, three types of questionnaires were used as follows:

1. **Emotional self-regulation questionnaire:** emotional self-regulation questionnaire of Hoffman and Kashdan contains 20 questions which answering to the questions based on 5-point Likert spectrum from an infinite spectrum about me is correct = 5, it is never correct about me = 1 and domain of scores is from 20 to 100. The questionnaire after translating and re-translating was at the possession of psychology experts in the terms of validity and content validity was confirmed. The questionnaire consists of three components or sub-scales of secrecy, compromise and tolerance which they have 5, 7 and 8 questions, respectively.

The questions of sub-scale of secrecy: 1-5-9-10-13-15-17-20.

The questions of sub-scale of compromise: 2-4-7-8-12-16-91.

The questions of sub-scale of tolerance: 3-6-11-14-18.

After collecting the data, to determine validity, factor analysis was used. The results of factor analysis implementation showed that the sample size was adequate and the factors were interpreted ($KMO=0/808$, $\chi^2=1409/076$, $p<0.001$). The results of factor analysis implementation showed that based on the special values, three factors could be derived (Table 1). Scree diagram test also showed this. 17.8% of variance is explained by the first factor (compromise), 14.97% of the variance is explained by the second factor (secrecy) and 8.43% by the third factor (tolerance). However, the questions 18 and 20 were deleted from the component of secrecy and the questions 3 and 14 from the component of tolerance due to operating loading weaker than 0.30. Cronbach's alpha reliability of the subscales of secrecy, compromise and tolerance was obtained 0.70, 0.75 and 0.50 and the total reliability was 0.81, respectively. In addition, indicators reliability and validity were satisfactory.

2. **Test anxiety questionnaire:** the test anxiety questionnaire contains 29 items which a participant respond it based on a four optional scale (never = 0, rarely = 1, sometime = 2 and often = 3). The minimum score in this test is zero and the maximum is 75. Whatever the person get a high score, this represents a high anxiety. Abolqasemi et al (1996) obtained the reliability 0.77 for all of the participants using retest. Also, based on the internal consistency, classification is reported 0.94 and 0.89, respectively. In this research, reliability coefficient was 0.92 using Cronbach's alpha.

3. **Self-concept questionnaire:** This questionnaire has six separate dimensions, self-concept, physical, social, intellectual, moral, educational and temperament. Also, the score of overall self-concept is achieved of them.

Operational definitions of self-concept dimensions measured in the questionnaire include:

1. Physical: imagination of the person from the body, health, physical appearance and his physical strength.
2. Social: a sense of personal value in social interaction.
3. Mood: imagination of the person from normal emotional state or dominance of a certain type of emotional response.

4. Educational: imagination of the person from himself in relation to the school, teachers and extracurricular activities.

5. Ethical: individual estimation of moral values, right and wrong things.

6. Rational: individual awareness from intelligence and problem-solving talents to his own judgments.

The method of scoring: the respondent has 5 selections and he should select one according to the description of his self-concept from maximum acceptance to the minimum. Choices or answers are in order that scoring system remains the same for all the questions, 1-2-3-4-5 whether the question is positive or negative. If the respondent marks the first choice, the score is 5, the score 4 is for the second choice and 3 is for the third choice and the score 2 for the fourth choice and 1 is for the fifth choice. Total scores show 48 questions of total score of the individual self-concept. High score on this scale indicate higher self-concept and low score indicates a lower self-concept. Answer any questions to the first page of the answer sheet against that number. Now, sum all grades of eight questions in that column which the score will be a certain dimension of self-concept. The reliability of the questionnaire was obtained using the method of test – test and it was 0.91 for total score of self-concept. The reliability coefficient of various dimensions was from 0.67 to 0.88. To determine the validity of the questionnaire, the opinion of the experts is used. 100 questions are given to 25 psychologists so that they can be classified based on various issues. The questions were selected that there had been at least 0.80 of agreements on them. In this way, content and construct validity of the questionnaire were determined.

RESULTS

In this study, the descriptive variables such as mean, standard deviation is are reported in Table 1.

Table 1. Descriptive statistical characteristics of the variables studied (n = 250).

Variables	Mean	Standard deviation
Self-concept	66.10	33.671
Secrecy	25.40	12.779
Tolerance	16.84	9.568
Compromise	15.14	10.256
Test anxiety	16.54	10.820

As it can be seen in the above Table, among the variables, self-concept had the most value with the mean 66.10 and standard deviation 33.671 and the variable of compromise had the lowest value with the mean 15.14 and standard deviation 10.256.

In this section, the inferential results are reported in the form of the study of the research questions. Before studying these questions in Table 2, the correlation matrix of the variables is reported. Then, based on this matrix, the research questions will be investigated.

Table 2. The correlation coefficient matrix of the variables of secrecy, compromise, tolerance, self-concept and test anxiety.

Variable	1	2	3	4
The criterion variable test anxiety	0.235**	0.361**	0.274**	0.176**
Predictor variables 1. secrecy	-	0.082	0.132*	0.150*
2. Compromise	-	-	0.406**	0.265**
3. Tolerance	-	-	-	0.328**
4. Self-concept	-	-	-	-

The results of Table 2 show the correlation among the variables. The results indicate that there a significant and positive relationship between the predictor variables and the criterion variable at the level 0.001 and 0.005. The results in Table 2 show that there is a significant and positive relationship between secrecy and test anxiety of the students in the pre-university. There is a significant and positive relationship between secrecy and test anxiety of the students in the pre-university. There is a significant and positive relationship between self-concept and test anxiety of the students in the pre-university.

Table 3. Multiple correlation coefficient and self-regulation and self-concept multi-variable correlation square on predicting test anxiety.

The criterion variable	Model	Predictor variable	Multiple correlation coefficient	Square of multiple correlation coefficient	Square of multiple correlation coefficient adjusted	F-coefficient	Sig.
Test anxiety	1	Emotional self-regulation	0.432	0.186	0.177	18.793	0.000
	2	Self-concept	0.433	0.187	0.174	14.115	0.000

The results of Table 3 show that first the variables of emotional self-regulation and then the variable of self-concept affects the test anxiety.

Table 4. Standard and nonstandard regression coefficients for the prediction of test anxiety.

The criterion variable	Model	Statistical indicator of predictor variables	Non-standard beta coefficients	Standard error	Standard beta coefficients	T	Significance level
Students' anxiety	1	Constant number	5.243	1.742	-	3.011	0.003
		Secrecy	0.164	0.049	0.194	3.334	0.001
		Tolerance	0.147	0.072	0.130	2.050	0.041
		Compromise	0.308	0.066	0.292	4.641	0.000
	2	Constant number	4.877	1.890	-	2.580	0.010
		Secrecy	0.161	0.050	0.194	3.253	0.001
		Tolerance	0.138	0.074	0.122	1.866	0.063
		Compromise	0.303	0.067	0.287	4.507	0.000
		Self-concept	0.010	0.020	0.031	0.503	0.615

Table 5. Bivariate and partial correlations of the predictors of test anxiety.

Variable	Dual variable correlation	partial correlations
Secrecy	0.235**	0.203**
Tolerance	0.274**	0.118**
Compromise	0.361**	0.277**
Self-concept	0.176**	0.032

As it was seen in Table 4 and 5 that the correlations of two variables between the values of secrecy, tolerance, compromise and self-concept and test anxiety in all the variables at the level ($p < 0.01$) was a significant relationship. All of partial correlations except self-concepts at the level ($p < 0.01$) and $p < 0.05$) were significant. According to the correlation analysis, the result can be that in total, useful predictors could predict test anxiety with the ability 19% but the variable of self-concept could not significantly predict the variable of the test anxiety.

DISCUSSION AND CONCLUSION

The aim of this study was the relationship between emotional self-regulation and self-concept and test anxiety in pre-university students. The main hypothesis of the research that there is a significant and positive relationship

between emotional self-regulation and self-concept and test anxiety in pre-university students of Tonekabon at the level ($p < 0.001$) and $p = 0.001$). The results of this hypothesis are consistent with the researches of Hosseinzadeh (2013), Zokaee (2011) and Gavra (2012). In explaining the findings, it can be said that emotional self-regulation is the experience of feelings and emotions without much influencing from the past events and the events which is now in progress in the world outside of us and in our relations with others. Our ability of emotional self-regulation requires that we do not deal with idealistically ourselves and with others and we accept our facts and others living in the wild as to what are going on. Our focus should not be on the results, but we should give value to our process and efforts and our expectations of life should be reasonable. We should consider to what is "here and now" passes. We should review our fear, sadness, anger and hatreds and stop unrealistic and unreasonable unpleasant emotions and we should not allow that feelings and emotions can encompass all our places. Self-concept is a set of features which the person perceives as an exclusive creature and in other words, it is the totality of the perceptions that the person has and these perceptions include individual attitudes on themselves and the language that is used when describing them. Imagination or thoughts that a person has are vital to him. This self-concept is learned and whatever the person knows about himself, originates from his past experiences among which social experiences are the most important. This self-concept is changed due to the person-environment relationship. Environmental failure leads to negative self-concept and the positive possibilities lead to self-esteem in the person. Test anxiety is a type of anxiety evaluation. This means that according to its development stage, assessment or self-threat are of the test position. Test anxiety reveals in cognitive in abnormal conditions (such as disturbing perceptions and thoughts unrelated to try) against educational stress. These abnormal responses lead to very stressful situations, to a reduction in performance and memory loss. According to discussions proposed, it can be concluded that there is a significant relationship.

The first hypothesis of the research showed that there was a significant relationship between secrecy and test anxiety. The results obtained are consistent with the researches of Takour Weawer (2013) and Rana Mahmoud (2010). In explaining the results, it can be said that self-learning theory is one of the theories that the researchers and educational experts are studying. Based on the theory of self – regulation learning, the cognitive, motivational and educational functioning components are intertwined as a set and they are concerned to each other. Therefore, the use of self-regulation of learning strategies is regarded as determining factors in educational success and we can predict students' academic performance by studying it. Predicting academic performance is one of the central topics of interest in educational psychology. Self-regulation of determining goals, completing a plan to achieve those goals, commitment to the program, active enforcement program and other measures which are performed to feedback and modifying or determining direction. In other words, people along with their socialization have less reliance on external rewards and punishments and they mainly regulate their behaviors. The anxiety is a vague and unpleasant emotional state characterized by confusion, fear, anxiety, palpitations, sweating, headache, restlessness, frequent urination and anxiety. When the person suffers from anxiety, worry and doubt to efficiency, performance, ability and talent in exams or in situations in which they are evaluated, test anxiety is stated.

The second hypothesis of the research showed that there was a significant and positive relationship between compromise and test anxiety. The results of this hypothesis are consistent with the research of Aolatvih (2009). The findings of the research showed that while taking a test, a large group of students in the exam suffer from widespread anxiety and lead to reducing their academic performance and diverse ways such as learning define self-regulation as a form of learning in which people personally begin their efforts to learn the knowledge and skills without relying on teachers and others and they direct. People show active efforts in cognitive, motivational and behavioral method in learning activities.

The third hypothesis of the research showed that there was a significant and positive relationship between tolerance and test anxiety of the students. The results of this hypothesis are consistent with the results of Keogh et al (2010) and Rana Mahmoud. Emotional regulation and self-awareness mechanisms that the person applies to cope with unpleasant conditions include: self-blame, other blame, rumination, regarding as disastrous, development prospects, positive refocusing, positive evaluation, acceptance, scheduling. Emotion regulation plays an important role in coping with stressful life events and extremes in emotions lead to conflict, aggression, anger, hatred and anxiety in people that they seriously threat mental and emotional health of people in a controlled manner. According to Gross model, emotional regulation includes all conscious and unconscious strategies applied to increase, keep and reduce emotional, behavioral, cognitive and emotional components of a response and they are to reduce and control negative emotions and how to use positive emotions and it can be said that test anxiety is a concern about performance (expected failure), their talents and abilities to the test and evaluation situations.

The fourth hypothesis of the research showed that there was a significant and positive relationship between self-concept and test anxiety. The results of this hypothesis are consistent with the results of Hassanzadeh (2013) and Takour Weawer. In explaining the findings of this research, it can be said that self-concept is a conceptual

system that determines a person's lifestyle and act consciously this is constituted from some areas such as understanding and personal abilities, in their relations with others, and understanding life goals. He considers self-concept as a way of thinking and relatively permanent imagination of every person on a value which he considers for himself and it can be said that adolescents with positive self-concept that they have sufficient self-confidence were faced with successful experiences and they have been accepted by others. Doeck and Carol studied the relationship among the impact of students' evaluations taking a test during some researches and they concluded that young people, who had higher self-concept, were more successful in reducing test anxiety compared to others.

Conflict of interest

The authors declare no conflict of interest

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