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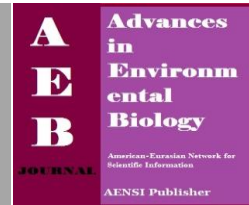
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### The Role of Self-Efficacy and Self-Perception Components on Students' Test Anxiety

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#### ABSTRACT

the current study aimed to examine the impacts of self-efficacy and self-perception components on the level of test anxiety of high school male and female students. In this descriptive- correlation study, a total of 340 male and female high school students were selected among the considered population using Morgan table sampling and multistage cluster sampling. To collect data, three questionnaires of test anxiety, self-efficacy and self-perception were applied. The results obtained from the analysis of the statistical test, correlation and regression analysis indicated that there was a significant negative correlation between self-efficacy and students' test anxiety and self-perception components (passivity, acting and aggression) were positively and significantly correlated with anxiety; However, components of assertiveness had no significant relationship with test anxiety. This is while the general components of passivity and acting respectively had the most important role in predicting the students' test anxiety. Test anxiety is not merely resulted from the screening process. The lasting variables, influenced by the overall process of growth, such as self-efficacy and self-perception components which are shaped with students' experiences in various fields of life, have a crucial role in this type of anxiety.

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### INTRODUCTION

Anxiety, as a part of daily life of each individual, at some moderate levels occur for everyone. It is considered as an adaptive response and a source of motivation and provocation. If it loses balance and becomes chronic and persistent, it would be treated as a source of failure and would cause widespread desperation and inadaptability which may deprive a person from using his or her capabilities [1].

Test Anxiety, as an important common phenomenon, refers to a set of cognitive, perceptive, physiologic and behavioral responses which is associated with being worry about negative consequences of possible failure in exams or similar evaluation situations, known to All economic-social groups worldwide [2,3,4,5].

Although this state is closely related to general anxiety, it is distinguished according to features and characteristics of the definition. In fact, test anxiety is a type of mental preoccupation identified with self-underestimation and uncertainty about one's own capabilities and often leads to negative cognitive appraisal, distraction, undesirable physical responses and poor academic performance [6].

Earlier research on test anxiety begun in 1914 [7], but serious research on the case was started by Sarason and Mandler in 1952 [3,7]. In 1998 the issue again has been the center researchers' attention as various topics, such as a basic variable major in social psychology research [8], applied psychology [9] and an important construct in different areas of psychology [10]. According to the researchers estimations in several studies, the prevalence of test anxiety among students has been reported 10 to 30% [1,11,12,13,14,15].

At first glance, test anxiety is observed as severe physiological arousal which interferes with examinees' performance. In this view, test anxiety is considered as a part of response system which prepares an individual

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to predict the risk and equip in order to avoid punishment or to escape from exigencies. At second glance, it is identified as a position-dependent trait which is revealed at times the individuals are evaluated. At third glance, worry, as a cognitive component, is added to test anxiety and is known as responsible for poor test performance[16]. Based on this cognitive component, test anxiety can lead to poor educational performance and drop-out and ultimately influence and undermine students' self-efficacy and perceptions of their skills. Students' success or failure on tests can influence their whole life through impressing their perception of "self" and chain process cognitive [1]. "Self" or self-awareness as the center of consciousness is part of psyche which is related to understanding, thinking, feeling, and remembering. Associating with normal activities when the individual is awake, it acts selectively and only allows for some part of the stimuli in conscious awareness. As an information processor, it has the ability to input, store and output and ideally, it behaves as a coordinating model with organized whole[16].

However, although all aspects of "self" attempt to coordinate, according to Bandura[17], skills can be easily influenced by self-doubt; as a result even in circumstances where very talented individuals have poor perception of self, they would not fully benefit from their own abilities therefore, self-efficacy, enables people to do extraordinary things by using their skills in dealing with barriers, When students expect favorable practice and positive evaluation of their own, their performance improves. On the contrary, expectations of poor performance and negative evaluation are associated with students' poor performance [18]. Therefore, self is a phenomenon that is both the product of past experiences and the producer of new experiences which one is able to. This means that understanding occurs based on referring to self; or, in other words, it is carried out through the channel of self. Test anxiety also as an important and common cognitive phenomenon in educational centers, is a type of mental preoccupation associating with self-underestimation and doubts about own abilities. So these two cognitive variables, self-perception and test anxiety, appear to be associated with each other [19].

Evaluation and testing conditions are among the situations where almost all people are exposed to. Such conditions are used for screening and selection of students and classify more talented ones for next levels of education. Therefore, they are considered as an important factor governing the fate of the students and the community. Hence question are raised that when the context of education necessitates testing, and based on the previously mentioned reports, about 10 to 30 percent of students suffer from test anxiety, is test anxiety merely due to such screenings or other category are also influencing students' test anxiety? Is the formation of various components of self-perception for the first time in development stage of adolescence is involved in test anxiety? And do students' beliefs about their abilities, in terms of the role of perceived self-efficacy contribute to test anxiety among the students? Accordingly, the aim of the present study was to investigate and understand the effect of self-efficacy and components of self-perception (passive, acting, aggressive and assertive behavior) on test anxiety of high school students.

#### *Method:*

The present study is performed as descriptive-correlation research. The population of the study included all (25,015) students of both genders attending the regular high schools of Zahedan. Total 10597 students were female and 14,418 were male. According to the Sampling formula, 320 respondents were randomly selected based on the multistage cluster sampling method among high schools in two districts of the town's administration of education, five schools from districts 1 and five school from district 2. In District 1, two girls schools and three boys schools and in districts 2, three girls schools and two boys schools, and in each grade in each school, one class and in each class, 12 students were randomly selected.

In this research, three different questionnaires including Philips Test Anxiety Questionnaire, self-perception questionnaire and general self-efficacy scale were performed.

General Self-Efficacy Scale containing 10 questions, is developed by Schwarzer[10]. At first it had 20 items and two subscales of general self-efficacy and social self-efficacy. In 1989 it was reduced to a 10-item scale. The scale was translated by Nezami and colleagues in 1996 and was validated and standardized in several studies. The Cronbach Alpha of the questionnaire was reported 81% in Moeini[20], and 82% in Rajabi's[21] study on Ahwaz University students. In this test that the subject answers the items on a five-point Likert scale, the lowest score and the highest score for each question were 1 of 5 respectively. Thus the minimum score of self-efficacy on the questionnaire was 10 and the maximum score was 50. The scale has no cut-off point. In the present study the reliability of the questionnaire was examined using Cronbach Alpha and the first question was excluded from the study due to inconsistency with other questions. With a sample size of 80 subjects, the Cronbach Alpha of 0.72 was obtained which indicates high validity.

Phillips test anxiety questionnaire was developed by Phillips [22]. It contains 26 yes-no questions. The maximum and minimum scores are 26 and 0 respectively. Scores higher than 15 indicate high anxiety, and low anxiety is represented by scores less than 15. The internal consistency of the test with Kuder-Richardson method is reported to be higher than 95%. Its test-retest reliability is 50%-67%. The Reliability of the questionnaire was obtained with Cronbach Alpha and sample size  $n = 79$  to be 0.82 that indicates high validity.

The Self-Perception Questionnaire was developed by Intanvand. The questionnaire contains the eighty items. Choices are yes or no. positive and negative answers are scored 1 and 0 respectively. The questionnaire consists of four components: assertiveness, aggression, acting and passivity, placed in four columns, each comprising twenty scores. After completing the questionnaire, the score is calculated referring to the scoring table. Scores between 14 and 20 per column (component) show individuals current and common way of thinking, feeling and behaving himself or herself and other. Scores between 7 and 13 demonstrate how the person mostly thinks about self and others. Scores between 0 and 6 show the attitudes, feelings and behaviors that a person rarely has towards self and others.

In this study with sample size of 80, using Cronbach alpha the reliability of this questionnaire was 0.75 and the reliability of components of passivity, aggression, assertiveness, and acting, was 0.62, 0.54, 0.57 and 0.66 respectively, which is indicative of high validity. The dimensions of this questionnaire, includes negative attitudes and passive behavior (I'm not good - you're good), negative attitudes and acting behavior (I'm not good - you're good), negative attitudes and aggressive behavior (I'm good- You're not good) and positive attitude and behavior of the firm (I'm good - You're good).

The interpretation of scores: Scores between 14 and 20 per column (component) show individuals current and common way of thinking, feeling and behaving himself or herself and other. Scores between 7 and 13 demonstrate how the person mostly thinks about self and others. Scores between 0 and 6 show the attitudes, feelings and behaviors that a person rarely has towards self and others.

Administration and ethical issues: For data collection students were completely assured confidentiality of data as well as being informed of the research objectives. Participation was not obliged. The three mentioned questionnaires were presented to students in classes. The students were told to answer the items which holds true about them, or draw a circle around the desired response; give spontaneous and honest answers as much as possible; the more that they are honest with themselves, the more results will be reliable and accurate.

The statistical methods used in this study included stepwise regression analysis and Pearson correlation method.

### Analyses and Result

**Table 1:** Demographic information of the sample

Sex	Number	mean age	Total
Male	160	16.73	320
female	160	16.56	

According to Table 1, total number of samples were 320, of whom 160 were male students with a mean age of 16.73 and 160 were female students with a mean age of 16.56.

Examining the relationship between self-perception components (passivity, aggression, acting and assertiveness) and self-efficacy belief with test anxiety, test results of Pearson correlation coefficient (Table 2) showed an inverse/negative relationship  $r = -0/36$  and significant ( $p < 0.001$ ) between test anxiety and student self-efficacy beliefs. It means that as self-efficacy increases, students' test anxiety decreases. Moreover, investigate the relationship between students' test anxiety and self-perception components showed positive and significant relationships ( $p < 0.001$ ) between components of passivity ( $r = 0/42$ ), aggression ( $r = 0/32$ ) and acting ( $r = 0/40$ ) with test anxiety. But a negative ( $r = -0/047$ ) and non-significant ( $p > 0.454$ ) between assertiveness and test anxiety was observed.

**Table 2:** the relationship of components self-perception and self-efficacy beliefs with test anxiety

Statistical index of the variable	N	R	Significance
Self-efficacy	320	-0/365	0/001
Passivity	320	0/428	0/001
Aggression	320	0/328	0/001
Acting	320	0/405	0/001
Assertiveness	320	-0/047	0/454

Examining the role of self-efficacy and the four components for the prediction of students' test anxiety, the result of the stepwise regression analysis (Table 3) showed that in the first step, the passivity alone predicted 25% ( $r = 0.25$ ) of the variance of the anxiety variable and in the second step by introducing the acting component to the regression model, the contribution of prediction of these two variables together reached 29% ( $r = 0.29$ ). Other variables including self-efficacy and the two other components, namely, assertiveness and aggression were eliminated from the equation.

**Table 3:** Summary of Results of the regression model in predicting test anxiety

Statistical index Variable	R	R <sup>2</sup>	F	Significance
Passivity	0.50	0/25	63/5	0/001
Acting	0.54	0/29	10/5	0/001

### *Discussion and Conclusion:*

The results indicated a significant positive relationship between the three components of self-perception including passivity, aggression and acting with test anxiety. In fact as the components of self-perception increased, the level of students' anxiety increased either. According to Town (1993, in Naziri,2002), individuals who have a strong passive component, mostly suffer from characteristics such as, lack of confidence and low self-esteem, lack of self-respect, negative feelings and thoughts about self against others, feelings of inferiority when comparing self to others, guilt feeling against others and lack of motivation.

On tests and evaluations, students with such attributes, in addition to feelings of threat and failure, may seek passivity, helplessness and abandonment of attempt. These students have a passive action to tests. A chain of such passive behavior causes acquired helplessness, anxiety and educational failure.

Students with the component of aggression in their self-perception, possess features such as lack of confidence and low self-esteem, disrespect for others, under-estimating others, feeling of superiority, the desire to dominate situations and others, indifference to opinions and feelings of others, feeling anger toward others and blaming them (Town, 1993, in Naziri, 2002). Students whose self-perception is mostly consisted of the aggressive component, demonstrate aggressive behaviors such as tearing apart or scratching the test sheet. Such behaviors, can be due to growth and consolidation of aggression within the students' self-perception .

People with negative attitudes and behavior possess attributes such as negative thoughts and feelings about self and others, cautiousness, being insincere and non-explicit, reluctant to believe the words of other, depression and lack of motivation. In fact, students with acting components when feel anxious with tests, due to lack of confidence in their ability, show acting behavior to try to divert proctors and even their own attention from the main issue of anxiety. Other people themselves are the main subject of anxiety.

Among the component of self-perception, assertiveness component had no significant relationship with test anxiety. Assertiveness is a positive attribute which is created by increasing self-confidence sense of responsibility in the students. When students are confident and have positive attitudes to their duties, decisively deal with problematic situations (test anxiety) solve their own problems[14] .

Results also showed an inverse relationship between students' anxiety and self-efficacy beliefs i.e. as beliefs of self-efficacy enhances, Students' test anxiety decreases. Self-efficacy effects on student's cognitive performance. Student with high beliefs of their abilities, are sure that they do well in exams, thus experience lower test anxiety. But individuals who feel less able, experience more anxiety and the relationship between their test anxiety and self-efficacy belief is negative. As self-efficacy increases, test anxiety declines and vice versa[23,24] .

Individuals with high levels of anxiety, have always doubts about their ability to provide appropriate efficiency. Such doubts may cause pessimistic evaluations about self, thus he or she would not be able to solve the problems. Bandura asserts skills can be easily influenced by doubts, thus even very talented individuals with poor perception of self, would not fully benefit from their own abilities, So, self-efficacy, enables people to do extraordinary things through operationalizing their skills in dealing with barriers such as test anxiety[17] .

It should be noted that among the four components of self-perception, as well as the variable of self-efficacy, passivity and acting components, respectively have the most effective role in predicting students' test anxiety. Bandura suggests that self-efficacy belief has a constructive power with which cognitive, social, emotional and behavioral skills for actualization of different objectives are organized effectively. He believes that having prior skills and achievements does not guarantee the future performance. The results here would not reject Bandura's assertion for predicting test anxiety by self-efficacy beliefs; however passivity and aggression components are better predictors than self-efficacy belief. Such superiority may be due to this that test anxiety is influenced by low self-confidence and aggression and passivity components are also closely related to self-underestimation and lack of confidence. Limitation of the present study included the effect of the limited number of population, implementing three simultaneous questionnaires and consequently long time of completion and possible fatigue of subjects on the results.

### *Conclusions:*

Test anxiety is not merely caused by temporary conditions of screening. Long-standing and impressed variables by overall process of growth/development such as self-perception and self-efficacy, along with individuals' experiences in various fields play a vital role. In particular in the sensitive period of adolescence this process is very important. This requires full attention of parents, teachers and other education professionals. Therefore, test anxiety is a variable affected by multiple variables. Overcoming this problem is only facilitated through the knowledge and cooperation of parents, teachers and other education stakeholders together.

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