

# Investigation the effect of regular physical activity on test anxiety and procrastination in students

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**ABSTRACT: Introduction:** Among the major emotions that play an important role in the life of every student are test anxiety and procrastination. Test anxiety is an unpleasant feeling or emotional state in formal tests be experienced, and the procrastination define as habit in carelessness or laziness and delay or unnecessary cunctation. **Purpose:** The purpose of this study was to investigate the effect of performing regular physical activities on test anxiety and procrastination in students. **Methods:** For these purpose 240 male and female students selected by randomly sampling, which 100 of them were selected from faculty of physical education and sport sciences, and the rest from the other faculties of University of Guilan. **Results:** the results of the present study indicated that there were significantly differences between the mean of test anxiety in athletes and non-athletes. Also, there were no significant differences between the mean of procrastination in athletes and non-athletes. In addition, there was a significant positive correlation between test anxiety and procrastination in subjects. **Discussion and Conclusion:** findings showed that amount of test anxiety among the athlete students is very less than non-athletes. Therefore, suggests that we should motivate the student to doing regular physical activity in order to decrease the test anxiety.

**Keywords:** Test anxiety, procrastination, Athlete and nonathletes students.

## INTRODUCTION

Anxiety is the main emotion that plays an important role in the life of every individual. One type of the anxieties is test anxiety or perception of academic evaluation, which is one of the most important aspects of negative motivation. Sarason (1990) suggested that test anxiety is a personality characteristic that shapes in interacts with the parents. If a student with hearing about test or seeing the examination program or during the exam session be anxious, this mode can be called test anxiety. Hill (1987) noted that according to the researchs, annually approximately 10 million students in the high schools, and 15 percent of American university students experience test anxiety. It seems that the older subjects and those students with lower socioeconomic status, experience higher test anxiety. Also, students in countries like Saudi Arabia and Egypt in comparison with China, Germany, Korea, Turkey, the USA and India when dealing with exam showed more anxiety.

Many investigations about test anxiety have been done; some studies anxiety feature in oneself has been introduced as a factor in anxiety (24). Based on these findings, the test anxiety in terms of individual differences in anxiety during the test and the other types of evaluation activation is formed. Existence high levels of test anxiety correlated with greater cognitive errors (Benson, 1987), more negative thoughts, and less positive evaluations (Prins, Groot & handewald, 1994). The test anxiety coupled with drowning in negative thoughts; compare themselves with others, lack of preparation for the exam, and lack of self-worth and strongly has negative effect on academic

performance. In fact, empirical findings show that there are strong relationship between high levels of test anxiety and academic fall (Mostafazade, Jahansir, Ashrafi, 2010).

Based on researcher's estimation in different studies, the prevalence of test anxiety in students is 10 to 30 percent (Mac Reynolds, Morris & Krach Will; 1983). Although, reported that prevalence of test anxiety among Iranian high school students was 17.20 percent (2). Poulman & Kennelly (1984) failure in study and exam answer have introduced as causes of test anxiety in students. According to this model, in these students anxiety is not the main cause of performance disorder, but their study and examination skills are weak. The relationship between exercise and mental health has been shown by various researchers; in this regard we can mention McGraw (2006) research. He believed that regular physical activities are effective in reducing anxiety and stress. Steptoe & Cox (1998) research about exercise intensities, and De Geus research about the relationship between fitness and health programs as well as Abbott J. Peters and gols (1990) studies showed that there is a significant positive relationship between mental health, depression, test anxiety, excitement and exercise. In addition, Narimani (2000), Abolghasemi (2002), BrisValter (2002), and McGraw (2000) showed that female athletes, who were performed regular physical activity, were less anxious than non-athletes females. Higher mean of anxiety in non-athletes female which is clearly visible in the present study is consistent with the results of the above mentioned investigation. Boni (2004) believes that healthy cardiovascular system which can be achieved by exercise with a number of useful properties such as good psychological mood; low levels of stress and anxiety are positively correlated, and provide appropriate conditions to reduce stress and anxiety levels and increase good mood. Comments of various researchers confirmed the positive effects of physical activity on reducing anxiety and stress.

The procrastination was the other variable that examined in present study. The procrastination in Latin composed of two parts: The «Pro» means "forward", "before" and "In support of" and «Crastinus» means tomorrow. And its literal meaning is "until tomorrow". Its synonyms include canctation, shilly-shally, dilatoriness and postpone tasks, especially because of habit of careless or lazy to postpone or unnecessary delay (Quote from WYK, 2004). Procrastination is art of continuing the yesterday and avoiding today; the decision to postpone the work that can be done in time. Also, in some texts the procrastination defined as a "deliberate delay" and believed that was a wise choice. But with the industrial revolution, this concept became significantly more negative and was considered the same to lazy (26). Generally, procrastination is a common phenomenon. Apparently, most of people with delay in carrying out some of the tasks stroll and some have made a stroll their lifestyle. The results of some researches estimated that frequency of procrastination in students is 80 to 95 percent. And among them, 75 percent consider themselves procrastination. In addition, half of the 75 percent generally involved procrastination. Apparently, these percentages are increased to 95 percent. So that seems to be about 25% of the students have chronic neglect low scores on the exams are taken (24). However, other studies have reported 23 percent prevalence of chronic procrastination (4).

Procrastination would be to do a fruitless job. It is the thief of time and makes one feel guilty; and others look towards him changed. The procrastination means postponed the work that we have decided to implement it, inappropriate behavior and faulty that gradually in the human being becomes a habit (11). Although, the defined range of procrastination takes the delay in initiating or delays in completing linkage a work with mental disorders (21), irrational delay behavior (Silver & Sabini), But in all, it has been defined as delay or postponement of the work that a person must do (21).

Psychologists have identified several factors as a cause of procrastination; that they can be placed in two general categories; internal and psychological factors: damages and abnormalities that related to neglect one's own; such as feelings of low self-esteem, localism, having high expectations of themselves, low threshold, absence of decisiveness, guilt and shame, depression (26). External and environmental factors: this means damages that when you communicate with other people or environment arises. Factors such as dissatisfaction form the current situation, feeling lack of responsibility toward the others, headstrong with others, trying to satisfy everyone, companion and friendship with colleagues, fun factor, and too expectation from others (Nennan, 2009, Quoted from Mostafazade, et el , 2010).

The main purpose of the present study was the comparison procrastination and test anxiety between athletes and non-athletes students. Also the other aim of this study was to investigate the relationship between test anxiety and procrastination among athletes and non-athletes students. In current study, athletes (Physical education students who were studying at least in fourth semester) and non-athletes students (students who did not have any regular physical activity) in terms of these two characteristics were compared with each other.

## MATERIALS AND METHODS

All students of the University of Guilan were subjects of the current study. 240 students (120 females and 120 males) using random sampling method were selected as subjects. Athletes, including 100 male and female BSc students (who were studying at least in fourth semester) and MSc student of physical education who have regular physical activities; and non-athlete group consisted of 140 male and female students of the University of Guilan who had no regular physical activities. After selection, the aim of the study was explained to them, and then all participants completed anxiety and procrastination questionnaires. To analyze the data of the present study T-test and Pearson correlation analysis were used.

### Measuring tool

Abolqasemi anxiety test scale (2002), this scale is a test with 25 questions that calculates subjects exam anxiety using a 4-point (never = 0; rarely = 1; sometimes = 3; often = 4) Likert scale. Minimum score in this test is zero and a maximum score is 75. Higher scores indicating greater anxiety, in one student sample Cronbach's alpha coefficient for test anxiety questions for the total of sample was 0.94; for female subjects 0.95, and for male subjects 0.92 were calculated that it represents the internal consistency of the scale. Correlation between subjects' scores on two occasions with an interval of 4 to 6 weeks for the total samples, 0.77, for female subjects 0.88 and male subjects were 0.67, which show satisfactory of Test-retest reliability of the scale.

### Takman procrastination scale

The questionnaire is consists of 10 multiple-choice questions which the scoring is as Pretty sure = 1; somewhat confident = 2; somewhat sure = 3; I'm not quite sure = 4. After scoring options, using the total scores of questions total scores will be calculated. Range of scores is varied from 16 to 64. Lower score means a lower tendency to procrastination. Questions 7, 12, 14 and 16 are reverse scored. The mean scores for students are 40 (takman, 1991). The internal consistency coefficient of scale from 0.8 to 0.9 has been reported (Takman&Hachinson; 2009).

## RESULTS AND DISCUSSION

### RESULTS

As shown in Table 1. The mean age of participants was  $25.55 \pm 2.14$ . 72.09 percent of participants were bachelor and 27.19 percent of them were married. In addition, 78.75 percent of participants were BSc students and 21.25 percent of them were MSc students. According to the significant amount that reported in the table 1, test anxiety in athletes' students significantly was less than non-athletes. Also, according to the amount of significant that reported in table 2, there were no significant difference between athletes and non-athletes among aspect of procrastination. Moreover, with respect to r that reported in Table 3, there is a significant and positive relationship between the procrastination and test anxiety. As a result of the increasing tendency to procrastination, the students' test anxiety also increases.

Table 1. Characteristics of subjects

characteristic	groups	Male/Athletes	non-athlete/Male	Athlete/women	non-athlete/women	sum	percent
age		25.14±2.18	26.32±2.43	25.33± 2.11	25.44±1.87	25.55±2.14	
Marriage status	bachelor	33	51	35	54	173	72/09
	married	17	19	15	16	67	27/91
Education status	BSc students	38	57	39	55	189	78/75
	MSc students	12	13	11	15	51	21/25

Table 2. Comparison of test anxiety between athletes and non-athletes

Variable	number	mean	SD	df	t	significant
Athlete	100	32.79	8.81			
Non-athlete	140	36	9.91	240	-2.1	0.037

Table 3. Comparison procrastination between athletes and non-athletes

Variable	Number	mean	SD	df	t	significant
Athlete	100	41.87	8.16			
Non-athlete	140	41.76	8.87	240	0.75	0.094

Table 4. Relationship between the procrastination and test anxiety

variable	number	r	significant
procrastination and test anxiety	240	0/51	0/001

**DISCUSSION AND CONCLUSION**

Procrastination and test anxiety are among the factors that play important role in the lack of student progress. The purpose of this study was to investigate the effect of performing regular physical activity on procrastination and test anxiety in college-aged students, and also, the relationship between them in athletes and non-athletes students, respectively.

First research hypothesis, that there were no significant differences between athletes and non-athletes in test anxiety, showed that athlete students rather than non-athletes had significantly lower test anxiety; due to the positive relationship between test anxiety and general anxiety, general anxiety can be as factor that used to predict it. In this regard, Narimani (2000) found that there is percent correlation between general anxiety and test anxiety. Abolghasemi (2002) also reported similar results. Therefore, investigation about the anxiety of athletes and non-athletes in this study suggests that there was significant difference between athletes and non-athletes among test anxiety.

The findings of the present study showed that there is significant difference between athletes and non-athletes students in test anxiety. The results of this study is consistent with the findings of Pires and pat (1994), Salminin (2000), Algin (1994), Boni (2004), Wiit (2009), and Bren (1994). They believe that anxiety in athletes and non-athletes is not alike, and that is significantly lower in athletes. The results of these studies showed that people who regularly do physical activity and exercise compared with those who did not have that, will be less affected by health problems such as symptoms of anxiety and depression. The results indicated that there was no significant difference between male and female athlete students in test anxiety, and according to these findings, we be said that gender has little effect on test anxiety in students. Issues beyond the gender influence on the prevalence of test anxiety. These finding are consistent with the findings of Rezazadeh and tavakoli (2009), and Kapol et al., (2005), which showed a significant difference between male and female athletes in test anxiety is incongruent. In explaining the observed differences should be noted due to the lack of gender differences in levels of anxiety can be attributed to changes in gender roles for boys and girls. Because girls always are encouraged to accept anxious, and know it is as a feminine property. On the contrary, boys deal with struggle to their anxiety, because it consider as a threat to their sense of masculinity. Positive relationship between exercise and mental health has been shown by various researchers. In this regard, can mention to Aryalner (2001), Estaphan and Goorik (1990) and McGraw (2002) researches. They believed that regular physical activity is effective in reducing anxiety and stress, which consistent to the results of current study that showed the superior athletes to non-athletes.

Stepito and Cooks (1998) research on exercise intensity, Dee Gooeus (1993) research about the relationship between exercise and health programs, also Eboot, Piter and Vogel (1990), King, taylor and Haskell and Deebosk studies all showed that mental health, depression, anxiety and emotions had positive and significant correlation with exercise, which all of them are fully consistent with the present results. Findings of present study also show that the average test anxiety in athlete's boys and girls significantly were more rather than non-athletes. This result is consistent with findings of Nariman (2000), Abolghasemi (2002), Krin and William (1994), Wiit (2000), Norol and Bless (1993), Bris and Walter (2002), McGraw (2002). They showed that females who have regular physical activity are less anxious rather than non-athletes girls and male athletes than non-athlete males, less face to test anxiety. The results obtained from different studies indicated that regular physical activity leads to students experience lower test anxiety. Therefore, we can put various sports and tailored to students' interests in their program, reduce the prevalence of test anxiety in them.

Second hypothesis showed that there is no significant difference in procrastination between athletes and non-athletes, and this result indicates that regular exercise has little effect on tendency to procrastination in the athletes, therefore can say that procrastination is a lifestyle that is more influenced by other environmental factors. In addition, the findings of the study that are conducted to compare the procrastination in male and female students showed no significant difference between them. These results, in line with the results of the Hill (1978), solbum and ratbolum (1984), ratbolum (1986), about the lack of gender differences in procrastination; vice versa with the findings as Plan and Pichel (1998), Paloodi, Franchel and Hawser (1986) suggests that, there are gender differences in procrastination is inconsistent.

Third hypothesis states that there is a relationship between procrastination and test anxiety in students, showed a positive and significant relationship between test anxiety and procrastination. In students with an increasing in tendency to procrastination, anxiety level increases too. The results obtained consistent with findings of Mac Caven, Pizel and Raport (1987), Mac Carty and Ski (1998), Braian&Mos (2004), An & Gaboozi (2004) and with the results of steel (2004) is inconsistent.

Finally it should be noted that the new century is the era of stress and anxiety. Today's stressful stimuli are growing and adversely affect the lives of people two of these negative side effects are anxiety and negligence. The advancement of technology and industrialization has led to a sedentary lifestyle in communities and they tend to be sedentary. According to results of the present study that indicated regular physical activity can reduce test anxiety, it is suggested that promotional and incentive programs for students to encourage them to exercise regularly considered.

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