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The effect of exercise on anxiety of college students

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Abstract

Physicians believe that physical fitness as a proper ground to achieve appropriate psychological conditions, accordingly the aim of this study was to investigate the effect of exercise on anxiety of college students. In this study 60 untrained male college students were randomly divided in to two groups. 30 male students participated in a 6 week physical fitness programme with a frequency of 3 session per week and 60 minutes per session. The average age of students in the experimental and control groups were 19.74 and 20.36 years respectively. Data were collected from students using a Sports Competitive Anxiety Test - (SCAT) consists of fifteen items which include 5 spurious items, 8 positive items and 2 negative items. The t-test was used to test the effect of anxiety level between experimental and control group. The significance level was determined as $p < 0.01$. The result of the study reveals that there was significant difference in 0.01 levels effect of exercise on anxiety among male college students.

Keywords: exercise, anxiety, male students.

Introduction

Psychological problem such as anxiety affects a life of million people in the world. It has a relationship with death increase and health services expenses^[1]. Anxiety is characterized as a strongly negative emotion with an element of fear, such as cognitive, neurobiological and behavioral manifestation. Anxiety an unpleasant mood characterized by thoughts of worry, is an adaptive response to perceived threats that can develop into a maladaptive anxiety disorder if it becomes severe and chronic^[2].

The meaning of anxiety in Persian is restlessness and confusion^[3]. In the most of psychological texts it is also synonym with words such as stress and excited^[4]. In fact anxiety is a kind of independent exciting. Which is accompanied feeling and receiving mental, so anxiety has both psychological and biological aspects and both aspects appear in person when he is anxious.

National Institute of Mental Health (NIMH) said that physical exercises have positive effect a decreasing psychological pressure for example anxiety. Also participating in physical activities has positive effect on feeling good and mental health. According to NIMH anxiety is related psychological problems which and decrease by exercises and physical activities and finally the clinical observation shows physical exercises as a treating method has positive effect on men and women of any age.

Findings of Narris R. R. *et al.*, (1999) an experiment on anxious and depressed person and the result showed that respiratory exercise for two time in a week, each time for 25 to 30 minutes which lasted 10 weeks caused fitness of body and decrease in anxiety^[5,6]. Another research by Gerra G. *et al.*, (2000) showed that aerobic exercise has anti-anxious effect^[7]. Peluso M. A. *et al.*, (2005) investigated the relationship between physical exercises in treating and prevention of physical and mental diseases such as anxiety, the result suggested the positive effect of regular exercise on mental health^[8].

Takly J. (1993) also reported physical fitness decreases significantly danger of mental disorders of both gender^[9]. Regular exercising strengthens the body and effects on feelings so life stress taken positively and bearded easily^[5]. Taylor S. (2005) showed that young athletes who wore thinking, they will lose and more anxious than others^[1]. The result of Lantz C. D. *et al.*, (2007) researchers indicated that those who exercise enough have less anxious^[10].

Materials and Method

Subjects

The purpose of this study was to examine the effect of exercise on anxiety of college male students. The present research is a kind of experimental half in which is two groups of male students is participated. In this study 60 untrained male college students were randomly chosen and divided in to two groups (experimental and control group). 30 male students participated in a 6 week physical fitness programme with a frequency of 3 session per week and 60 minutes per session. The average age of students in the experimental and control groups were 19.74 and 20.36 years respectively.

Measuring Tool

Sport competitive Anxiety Test (SCAT) of Marten *et. al.*,^[11] was used to measure the anxiety of college male students. The test consists of 15 items which include 5 spurious items, 8 positive items and 2 negative items. The odd-even reliability of the test in the present study was found to be 80. The lowest possible score on this test and the highest possible score is 27. A low score indicates higher anxiety and a high score indicates low anxiety.

Data Analysis

The t-test was used to test the effect of exercise on anxiety level between experimental and control group. The significance level was determined as $p < 0.01$. All calculations and statistical procedures were performed using SPSS statistical software.

Results

Table 1: The difference between the effects of exercise on anxiety of college male students.

Groups	N	Mean	S.D.	df	't' value
Control Group	30	11.20	5.84	29	4.017
Experimental Group	30	16.13	5.15		

*significant at 0.01 level

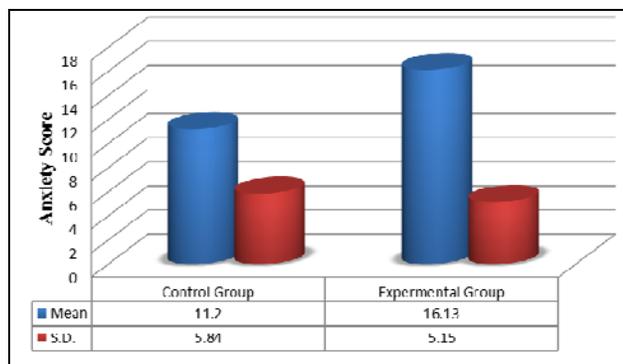


Fig 1: Bar diagram of differences among college male students

The average score of anxiety in the experimental group before and after exercise were 11.20 and 16.13 respectively. The t-value is 4.017 which were significant at 0.01 level of confidence. The results showed that there was significant difference the effect of exercise on anxiety between experimental and control group.

Discussion

Based on the results a significant difference of anxiety was observed between control and experimental group of college

male students. This finding is consistent with the result of Wyshak G.^[12] and Norris R. R. *et. al.*,^[5] who declares that exercising once a week can lead to the improvement of person's mood and decrease their anxiety and stress. Improving the exercises is related to the improving the psychological factors which are anxiety concentration, depression, mental preparation and personality. Another research of Mousa Jalili^[13] who reported that significant difference was shown among anxiety between two sexes (groups) and also suggested that people make great use of physical activities as a good means of decreasing anxiety. According to above table and figure shown that score of symptoms of anxiety of college male students (control and experimental groups). The mean score of control group is 11.20 with 5.84 standard deviation and experimental group is 16.13 with 5.15 standard deviation. The difference between control and experimental group is 4.93 with 0.69 standard deviation. Research result suggests that regular exercise can improve mental health.

Conclusions

According to the results of the study, it could be stated that regular exercise can cause gaining in physical and mental health and appropriate physical activity can maintain confidence and also one of the ways to control and treat anxiety in this vulnerable people, especially regular and aerobic exercises for example, long running, walking, swimming and cycling that can be almost done a long period of time and lead to psychological changes in the body and reduce stress-induced reactions. Therefore according to lower psychological problems in athletes, it could be suggested that students make great use of physical activity as a good means of decreasing anxiety.

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