



Research Article

Comparing the Effect of Running and Playing Football on the Level of Social Anxiety of Male Students

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Background: The way of life for the current century has produced manifestations such as anxiety, worry and fear, therefore this study was conducted with the aim of comparing the effect of running and playing football on the level of social anxiety of male students.

Materials and Methods: In this semi-experimental research that was conducted in the field, 20 male students aged 16 to 18 years, whose anxiety level was less than 10 using the Kettle test, were selected and randomly divided into two groups of football practice and running. The subjects ran and played football for 8 weeks and their anxiety level were measured again. In order to describe the demographic characteristics of the research, descriptive statistics were used, and in order to analyze inferential statistics, correlation t and analysis of covariance were analyzed using SPSS software version 21.

Results: The mean and standard deviation of the anxiety score in the pre-test and post-test stages in the running group were 5.5 ± 2.66 , 3.75 ± 2.38 and in the football game group 5.6 ± 2.42 , 2.39 respectively. It was ± 4.55 . The results showed that an eight-week training period of running and playing football has reduced the level of students' anxiety. Also, running caused a greater decrease in anxiety than the football training group ($p \leq 0.01$). The results showed that running and playing football significantly reduce anxiety symptoms.


Conclusion: The mechanisms through which exercise produces these effects probably involve a combination of biological and psychological factors. Physical activity may also be beneficial in reducing symptoms of comorbid mental illnesses and the risk of physical health complications over time. Promoting physical activity can be a way to prevent or treat anxiety disorders with a wide range of benefits. However, before these approaches can be fully implemented in mental health services, further research will be necessary to address important gaps in the background literature.

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1. Introduction

Anxiety is one of the consequences of the element of industry and technology, which is a natural reaction to issues and events, and what is identified as anxiety is the abnormal and excessive reactions of the body's internal systems to situations that may occur in all situations. The stages of human life disrupt the coordination and balance that is necessary for the activities of body systems [1]. Anxiety caused by tension is an inseparable part of human experience and nature. Throughout history, people have faced many changes in the social, economic and technological fields, which has caused a series of psychological and social reactions to stress [2]. Anxiety is a feeling of vague uneasiness combined with apprehension that is created in response to internal and external stimuli and can lead to cognitive, emotional, physical and behavioral symptoms [3]. Anxiety is one of the most common psychiatric disorders, so that in the United States of America, more than 23 million people suffer from it every year, and one out of every four people is involved with anxiety [4]. Women experience anxiety disorders twice as often as men [5]. In the etiology of anxiety, various causes have been mentioned from the viewpoint of psychological, biological, behavioral, genetic, and social-cultural theories. Since parents act in different ways when dealing with their children, the type of behavior with the child can be affected by their cultural issues, social class, and economic resources [3]. The evolutionary theories of anxiety state that the acceptance of children by parents is a type of Their control and behaviors are related to the emergence of anxiety symptoms in children, although there are many parental control behaviors, but in most of them, the three models of dictatorship, non-intervention and democracy are used [6].

In the course of growth, children and teenagers experience a wide range of anxieties, sometimes these anxieties are so intense that they make their daily life and education difficult. It is anxiety that destroys talents; It causes problems in concentration and memory and causes immature behaviors and the affected person cannot face and cope with the existing conditions and the environment [7]. Some people lose their control in these situations and suffer physical, behavioral and cognitive problems, and as a result, anxiety affects their academic performance and creates problems for them [8]. Therefore, balanced and proportionate anxiety frees a person from stagnation and stagnation and leads to his mobility. Anxiety is a part of every human's life, it exists in all people in moderation, and to this extent, it is considered as a compromised pass. In such a way that it can be said that if there was no anxiety, we would all fall asleep at our desks [9].

Scientists believe that a person's physical health is related to his psychological factors and social environment. Stress occurs when a person feels that there is no balance between his individual capabilities and what is required in a specific situation, while the outcome of the action is also unclear [10]. When worry and anxiety occur, the more fun work and activities are, the more effective they will be. Exercising will make a person calmer and calmer in the face of anxiety-provoking situations. Exercise has physiological effects on the body, and these physiological effects provide relaxation in people. Anxiety is one of the most common problems that people face, and since today the issue of healthy living and its relationship with physical activities has gained fundamental importance, exercise and exercise are one of the simplest tools that control anxiety [9]. Continuous physical exercise, if it is done correctly and does not conflict with a person's illness, is one of the most important factors in maintaining physical and mental health and well-being of a person and preventing many diseases. Physical activity effectively reduces emotional stress and neutralizes many of its unpleasant consequences. Certainly, because of the interactions that take place in the body, it helps

us to cope with mental stress and prevent it from becoming a chronic problem [4]. Examples include the researches: Rashidi et al.(2016) investigated the comparison of the effect of aerobic and anaerobic exercise on depression and anxiety in students, Esfandiari et al.(2016) investigated the effectiveness of an exercise training course based on autonomy on internal motivation, anxiety and fitness. organs related to the health of sedentary students in middle school, Chenj et al. (2021) in a study related to the level of physical activity of students with depression and anxiety, Zank et al. .

The various consequences of anxiety and tension in today's human life, in the current dynamic and changing society, where the pace of changes is fast, has caused great changes and transformations in health and treatment. It should be considered to know it better. Recently, researches have shown that many health problems and mental and emotional disorders have psychosocial roots. The purpose of conducting this research and choosing its topic is that among the topics of psychology, it is more important than other topics and neglecting it causes mental illnesses and is more applicable to students. Therefore, the research question was whether there is a difference between running and playing football on the level of anxiety of male students.

2. Materials and Methods

The current research was semi-experimental with two experimental groups with pre-test and post-test. The statistical population of this research was all male students aged 16 to 18 years old in Isfahan province, 200 of them were selected by simple random and from them the Cattle anxiety test was performed and their anxiety score was determined and then 42 people were selected by simple random

considering their anxiety score. and were compared to two groups of running practice and football game.

The criteria for entering the study were: students of the second secondary school, no history of physical illness, including mental disorders, cardiovascular diseases, lack of regular sports activity, and also obtaining a score below 10 in the Kettle test. Exclusion criteria: unwillingness to participate in sports sessions, absence of more than 2 sessions in exercises and failure to answer questionnaire questions. The participants were included in this research after filling the consent form by their parents.

Kettle Anxiety Questionnaire (CAQ) was developed by Raymond Bernard Kettle. This scale consists of 40 questions that make up the anxiety scale of the 16-factor Cattle personality test. The first 20 questions measure covert anxiety (attribute) and the second 20 questions measure overt anxiety (state). The reliability of this test, which has been repeated several times, has always been higher than 73%.

The subjects were subjected to the following exercises for 8 weeks (3 sessions per week and each session lasting 60 minutes) from 4 to 5 in the evening.

Protocol of the running group: 1-10-minute warm-up 2-running for 15 minutes (heart rate should be less than 70) 3-stretching and stretching movements for 10 minutes 4-running for 15 minutes (heart rate should be less than 70) 5-cold Do it for 10 minutes at the end of the workout

Soccer game group protocol: 1-10 minutes warm-up, 2-20 minutes of soccer game (heart rate should be above 70), 3-5 minutes of rest, 4-20 minutes of soccer game, 5-10 minutes of cooling down.

Then, after 8 weeks of training, the subjects were asked to take an anxiety test.

Finally, the data were analyzed using descriptive and inferential statistics such as t-correlated, and to eliminate the pre-test effect, covariance analysis was used to check the normality of the data distribution, and the Shapiro-Wilk test was used. All steps were performed using SPSS software version 21 at a significance level of 99%.

3. Results

In the present study, 40 students were investigated. In terms of age, 15 16-year-old students, 11 17-year-old students, 6 17-year-old students, and 8 18-year-old students formed the research sample.

Table 1. The effect of running and playing football on the level of anxiety of male students

| Groups | Step | mean ±standard deviation | number | t | p |
|---------------------|----------------|--------------------------|--------|------|-------|
| running group | Pre-test | 5.50±2.66 | 20 | 6.17 | 0.000 |
| | After the test | 3.75±2.38 | | | |
| football game group | Pre-test | 5.60±2.38 | 20 | 9.20 | 0.000 |
| | After the test | 4.55±2.39 | | | |

The results of the above table show that eight weeks of running and playing football have significantly reduced anxiety in children ($p \leq 0.1$).

Table 2. Comparison of running and playing football on the level of anxiety of male students

| Groups | analysis of covariance | p | coefficient | statistical power |
|----------------|------------------------|-------|-------------|-------------------|
| Pre-test | 31.41 | 0.000 | 0.459 | 1 |
| After the test | 116.40 | 0.000 | 0.968 | 1 |

According to the f observed at the level ($p \leq 0.1$), it was significant, so running had a greater effect than playing football on reducing the level of test anxiety, in other words, there was a significant difference between the two groups.

4. Discussion

The results of the present research showed that eight weeks of running and playing football on

the anxiety level of male students significantly reduced the level of anxiety in female students, and also running caused a greater decrease than playing football.

The results of the present research were consistent with the research of Esfandiari et al. (1400), Rashidi et al. (2016), Qolizadeh et al. Freira showed in his research that doing regular exercises reduces anxiety [11]. The reason for

the reduction of anxiety may be due to the implementation of aerobic exercises and choosing the length of the exercise in 8 weeks. Considering that the exercise exercises are performed with the implementation of deep breathing and frequent muscle contractions, it has reduced the students' anxiety. In their research, Segal and colleagues showed that doing sports does not reduce anxiety, which is not consistent with the current research [12], which can be explained by the intensity of the exercises, the age of the subjects, and the number of weekly sessions. Studies show that deep and diaphragmatic breathing in aerobic exercises control mental pressure and thereby reduce sympathetic nerve activity, which is effective in improving many health-related symptoms and reducing anxiety [13]. Studies have shown that during sports activity, the effect of deep and diaphragmatic breathing increases the level of energy consumption, because in addition to the active muscles, the involved respiratory muscles also consume more energy. and causes better oxygenation [14]. Also, doing physical activity increases the amount of progesterone and this increase reduces the symptoms of anxiety [15]. The therapeutic effects of sports activity on reducing anxiety have been shown in several studies and can be done as a result of aerobic, resistance exercises or create them at the same time. Probably, sports activity can improve depression and anxiety by releasing beta-endorphins and monoamines, reducing cortisol levels and increasing the feeling of self-efficacy in a person [16].

Research also showed that anxiety is caused by lack of self-confidence in people, considering that in group sports, people's social contacts increase, people's self-image improves and their self-confidence increases. And as a result, it reduces

anxiety [17]. Also, the anti-anxiety effects of exercise can be explained based on different mechanisms, among which we can mention the biological, physiological, and psychological mechanisms of exercise. From the biological aspect, exercise can have anti-anxiety effects by providing the possibility of physical fitness, the effect on the level of neurotransmitters involved in physical fitness, the effect on the level of stress hormones and the reduction of muscle tension following sports activities. have [9]. On the other hand, the highest goal of human creation is to achieve a feeling of satisfaction from life and then to experience happiness. Happiness is the common goal of all human beings, and everyone strives for that goal.

Although studies to investigate the positive effects of exercise and physical exercises on anxiety are growing, they should focus on the effects of the exercise clinic, the effect of standard treatment methods, and the details of the desired exercise type, intensity, repetition, and duration of exercise.

In the present study, it can be pointed out the time limits for the implementation of longer courses to evaluate the continuity of the effectiveness of the exercise in students with a larger population. It can also be pointed out the lack of control over all conditions and intervening variables. It is suggested that in future research, different sports in different intensities and in the samples of female students should also be done.

Conclusion

According to the results obtained, the sports activities of running and playing football can significantly reduce the level of social anxiety of students, therefore, based on the findings of the

current research, it can be suggested to therapists that to reduce anxiety in students from football sports and Running should be used.

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Compliance with ethical standards

Conflict of interest None declared.

Ethical approval the research was conducted with regard to the ethical principles.

Informed consent Informed consent was obtained from all participants.

Author contributions

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