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Comparison of depression between university athletes and non-athletes

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ABSTRACT

The purpose of this study was to compare the rate of depression among university athletes and non-athletes. Four hundred of Tabriz Islamic Azad university female and male students (18-32) were randomly chosen. Beck depression test (BDI) was used to evaluate the rate of depression. Data were analyzed by independent T test. By analyzing the proposed hypotheses at the $P \leq 0.05$ demonstrated significant difference between female and male athlete and non-athlete students in depression.

Key words: depression, Beck, athletes, non-athletes

INTRODUCTION

Nowadays, technology development has caused some problems for everybody; such as environmental pollution, traffic, family problems and some other social disorders. These problems have a great effect on declining of the spirituality, humanity and emotional feeling and finally made the man to be prone to mental disorders. One of these disorders is depression. Depression is the most common illness affecting many different aspects of mankind. As it is said depression may be the result of any number of different causes stemming from genetic, biochemical, environmental, or psychological sources [14]. In the most general terms, depression is a disorder of the brain and ability of body to biologically create and balance a normal range of thoughts, emotions, and energy [10]. Although depression is a serious illness that affects one in any five persons at some point in their lives, much of the population is not accurately educated on this disorder. When approached from a strictly scientific angle, depression is a chemical disorder which alters the function of normal brain behavior. Unusual levels of chemicals such as the neurotransmitters beta-endorphin, serotonin, and dopamine cause this disorder. It is believed that not only can depression arise from genetic makeup but also through the influences of the environment [10]. It might be resulted from a combination of factors, including endogenous causes such as a chemical imbalance in the brain, a family history of depression, personal or social problems, stressful situations, or traumatic events such as assault or the death of a loved one [7, 6, 14, 18, 23]. Depressive disorders result low mobility, leads to a profound social issues. Unfortunately, according to research conducted at the rate of depression among university students who will be future territory makers are growing fast [1]. University students may be at an increased risk of depression due to the pressure and stress they face. For example, Salehian et al. (2011) found a significant difference between university male athletes and non-athletes, as well as female athletes and non-athletes [21, 22]. Barghi (2012) found a significant reduction in students' depression rates between swimming, track and field, and football with control group [3]. This risk is of great concern because their health, safety, and sport performance may all be affected. In addition, they are more likely to turn to maladaptive coping behaviors and less likely to seek help for mental health struggles than other populations. It has been suggested that a greater understanding of personal experiences would

be helpful in increasing awareness and improving treatment. The experience of depressive symptoms in the university population should be of great concern for a number of reasons. The important one, the typical age of onset for depression is the mid-twenties, making depression a significant risk for this group [3]. Depression is a significant risk factor for suicidal ideations and attempts, highlighting the critical importance of appropriate attention and intervention [2, 14, 21, 22]. As the numbers appear to be on the rise during recent years, with colleges and universities reporting growing numbers of reports of depression and suicidal ideations and intentions at their mental health facilities [22]. Considering the fact that Iran's population is relatively young, authorities should pay more attention to the prevention and treatment of such illnesses. To find ways to maintain mental health, recognition, prevention and treatment of mental disorders and use of appropriate methods with low cost and the least side effects among this generation is a necessity. In addition to the numerous treatments for depression, exercise has become an appealing new alternative to alter one's mood. Many recent studies have been published supporting the belief that exercise has been proven effective in improving depression and in some cases has been able to prevent it all together. The basic reasoning behind this theory is that exercising has positive effects on one's body and mind. In support of the psychological benefits, it is argued that exercising increases one's self-confidence as well as provides a feeling of accomplishment and mastery, which in turn may raise an individual's overall outlook [1]. Epidemiological studies have shown that the lifetime prevalence of a major depressive disorder in women (21.3%) is almost twice that in men (12.7%). This ratio has been documented in different countries and ethnic groups. Sex differences relating to depression vary with age, with male and female children showing similar incidence rates. National comorbidity data reveal that sex differences in prevalence first appear around the age of 10 years and persist until midlife, after which they disappear. Therefore, women have the greatest risk for developing depressive disorders during their child-bearing years. Several biological processes are thought to be involved in the predisposition of women to depression, including genetically determined vulnerability, hormonal fluctuations related to various aspects of reproductive function, and an undue sensitivity to such hormonal fluctuations in brain systems that mediate depressive states. Psychosocial events such as role-stress, victimization, sex-specific socialization, internalization coping style, and disadvantaged social status have all been considered to be contributors to the increased vulnerability of women to depression. Women are more susceptible than men to stress-induced depression and to changes in photoperiod (more than 80% of individuals with seasonal affective disorder are women). Depression in women may develop during different phases of the reproductive cycle (premenstrual dysphoria disorder, depression during pregnancy, postpartum depressive conditions, and menopausal depression). Other reproductive events such as infertility, miscarriage, oral contraceptives, and hormone replacement treatment have been reported to cause depression in women [17]. A significant gender difference exists in the prevalence of depression, with women outnumbering men by nearly a 2:1 ratio [4, 5, 11, 15, 24]. Previous studies have reported a greater incidence of depression among female collegiate athletes compared to males [8, 25, 26]. In this regard, the researchers decided to compare the rate of depression among athlete and non-athlete female students among Tabriz Islamic Azad University in order to alert authorities the mental condition of youth to make correct planning, lower healthcare costs for treatment and prevention of depression and finally to prevent losses of emotional, familial and financial and human resources.

Nowadays, much attention should be done to the methods of treating mental disorders. Depression is commonly treated with antidepressants and or psychotherapy, but some people may prefer alternative approaches such as exercise. There are a number of theoretical reasons why exercise may improve depression [12]. There is a significant need for more research, in order to obtain a more complete understanding of the relationship between depression and sport participation [2]. It can be concluded that there is a significant lack of current research combining the fields of depression and sport, particularly focusing on the experiences of male university students. A number of studies have suggested that participation in sport is associated with psychological benefits and that it acts as a buffer against various sources of stress [1].

MATERIALS AND METHODS

Four hundred Tabriz Islamic Azad University female and male students were selected randomly. To measure the rate of depression, BDI (Beck) questionnaires test was distributed among individuals. T test was used to compare the difference between athletes and non-athletes at $P \leq 0.05$, using the software (19 SPSS) for analyzing the data.

RESULTS

As the below table shows the result of comparison of depression between female and male university athletes and non-athletes demonstrate a significance difference between them. The depression in non-athletes was 13.91 with 10.94 standard deviation and in athletes was 9.43 with 7.76 standard deviation. According to the results there was a significant difference between female and male athlete and non-athlete students in depression rate (0.000).

Table . Depression distribution comparison in female and male athlete and non-athlete students

Groups	N	Mean	St. dev.	Df	T	Sig.
Athletes	208	9.43	7.76	398	-4.71	0.000
Non-athletes	192	13.91	10.84			

DISCUSSION

The purpose of this research was to compare the rate of depression among Tabriz Islamic Azad University female and male athlete and non-athlete students. The results showed that there is a significant difference between them. Of course, it can be said a mood disorder like depression caused by different factors. Spence JC found that a small but notable increase in self-esteem was linked to the lowering of depression [9]. In addition to the increase in self-esteem, exercise can also provide a more grounded perspective on life. By participating in group exercise the individual is placed in an environment where it is more likely that he will interact with others. The interaction in itself offers a therapeutic affect for those who are so depressed that they choose not to even get out of bed. But even more convincing to some is the biological argument that supports the link between exercising and improved depression. Several studies have proved reduction, prevention of depression by performing sport and physical activities and its beneficial for human being. There is no doubt that sport activities give more resistant to human against problems of life, as some psychologists believe that endurance sport raises the level of serotonin in the blood. Serotonin is a feel-good hormone found naturally in the brain. It also tends to have a calming effect. As a neurotransmitter, serotonin is important in transmitting nerve impulses. Scientific research has shown that a lack of serotonin can be one of the chief causes of depression and many drugs designed to combat the illness work by reducing the amount of the hormone which is re-absorbed into the blood. Running, walking briskly, cycling and swimming are among the endurance sports shown to have the most positive effect in chasing away the blues. It is believed practicing these sports outside in the fresh air is particularly beneficial [14]. In this case physical activities reduce psychological disorders and can prevent depression in people, especially young students. Endurance sports are an antidote to depression, provided they are practiced between one and three times a week. So, sport often took on a new and complex role as the source of, or salvation from, depression [1]. More conclusive data has been gathered on the effects of exercise on the body. One of the possible explanations of how exercise affects physical activities is found in the monoamine hypothesis. As explained in a review by C. P. Ransford (1982), the monoamine hypothesis is based on the theory that exercise increases the brain's aminergic synaptic transmission. In other words, the monoamines in the brain, such as serotonin and dopamine, have an improved transmission rate when exercising occurs. This is beneficial for those depressed because such chemicals in the brain directly affect one's mood. Although this theory has received sufficient support from other studies and proven to be a defensible theory, it is still believed to be somewhat oversimplified [20, 16, 9]. The endorphin hypothesis is but another theory as to how exercise affects the body. This theory has not received very much scientific support except in the fact that extended exercise has been proven to increase the secretion of endorphins [13]. Yet, it has not been fully proven that such an increase plays a crucial role in the control of moods.

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