

A COMPARISON MENTAL HEALTH, PHYSICAL SYMPTOMS, ANXIETY AND SLEEPING DISORDERS AND DISORDERS IN SOCIAL FUNCTION AMONG MALE AND FEMALE ATHLETES AND NON-ATHLETES STUDENTS

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Annotation. *Purpose:* The purpose of this study was to comparison mental health, Physical symptoms, Anxiety and sleeping disorders and Disorders in social function among male and female athletes and non-athletes students. *Methods:* The target population consisted entirely male of female athletes and non-athletes students in University of Guilan. After translate of standard General Health Questionnaires (GHQ), and adjust of some question, questionnaires were evaluated by professors of faculty of physical education and sport sciences. The reliability guided Cronbach Alpha value of (0.83). Among them 90 male athlete and 90 male non-athlete with mean. The collected data was analyzed by t-test, one-way ANOVA. *Result:* There were significant difference mean scores between in four mental health scales, physical symptoms, anxiety and sleep disorders and impaired social functioning athlete and non-athlete in both groups. *Conclusion:* Therefore, with fewer psychological problems in an athlete, physical activity can be purpose strategies as appropriate, easy and inexpensive to improve mental health among male and female non- athlete students.

Keyword: mental health, male, female, athletes, non-athletes.

Introduction

By development of science and technology and abundance of recreational facilities and foods, compared with past years, people live more comfortably. So that very few people suffer from hunger and deficiency of main daily facilities; but in spite of development and material comfort, many nervous breakdowns such as; bewilderment, not objectiveness, anger, depression, moral weakness and thousands of many other problems come to the existence and affected most people. To the point that according, to specialist viewpoints, more than half of physical illnesses of patients who go to medical centers have mental bases. Mental health means feeling of comfort toward your-self and others, and its measures are success, social balance, state of being realistic, social agreement and feeling of value ability. Different studies proved that exercising and sport has good effects on body and mental health (Richard et al. 2001). Results of these studies showed that unwillingness about participation in exercising results in mental illnesses such as: decrease of personal will, decrease of efficiency and false beliefs about health (Richardson et al. 2005). Thirelaway reported that participating in physical activities result in preparation that this factor has positive relation with development of mental health, behavior and the more physical activity becomes the more mental and manner health scores become (Thirelaway et al. 1997). Hyper analysis considerations, reported a significant relation between the decrease of stress and exercising (Debra et al.2004; Teychenne et al. 2008), decrease of depression and exercising (Craft et al. 2008; Ostlie et al 2010) and increase of total time of sleep and exercising (Mailey et al. 2010). Furthermore (Plante et al. 1994), concluded that exercising causes better behavior, mental health, growth in self- esteem and self confidence. MacConille., (2003), knows many important factors for making happiness and mental health that one of its important ones are exercising and body activity. Lowry et al., (2000), showed realm of relations between exercising, mental health and social whole sameness that there is the close relation between physical health d improvement of mental characteristics. For example, when symptoms of mental hurt increases, aerobics are ability decreases, for this reason, having a weak body condition in mental patients is important (Lee et al. 2003). Knechtle., (2004), reports that exercising makes development of mental health and behavior disorders decrease after exercising. Is the result of production of happy making substances produce by the body because of exercising. Although expanding of new methods of exercising, for improvement of physical activities in people who have mental problems and illnesses like diabetes and vessel and heart despises is very useful and effective (Thirlaway et al. 1997); on the other hand, in some studies, it turned out that athletes have the fewer aggressive manner and more positive manners than non-athletes, in the point of customs (Nabkasorn et al. 2005). Brassington., (2003), reported that the level of mental health of high school athlete students is better than others (Brassington et al. 2003). Studies who focus on the comparison between mental health in athletes and non-athletes reported significant differences in two slight measures of stress and depression (Nabkasorn et al. 2005), difference in each for the measures (Esfahani. 2002), differences only in depression slight measure (Harris et al. 2006). Generally, about types of exercises and relation with the increase of mental health and decrease of mental pressure. Are many paradoxical theories? The opposite point of this view that is posed by foreign researchers and shows that totally more than useful effects, exercising can make some mental troubles too. In other words, physical activities can make troubles for mental health, especially when exercising is difficult and compressed (Stuart et al. 2011). A result of some studies showed that relation between doing exercises and improvement of a manner doesn't seem to be a certain and general thing (Peluso et al. 2005; Engels et al. 2006). Furthermore, very few studies deal with comparison between mental health in athletes and non-athletes students simultaneously and this

question is raising that whether exercising cause improvement of mental health in athlete students rather than other students? Whether doing some difficult exercises by athlete students for preparation of a competition, makes troubles for mental health? Hence, current research with the purpose of comparison between mental health, Physical symptoms, Anxiety and sleeping disorders and Disorders in social function among male and female students who are athletes or not, is done.

Materials and Methods

Current study is functional in a descriptive way from view of using attained results. The target population consisted entirely male of female athletes and non- athlete students in University of Guilan. For this reason 180 athlete and 180 non-athlete male and female students were chosen randomly.

Application of the Investigation and collecting the data

Purpose and necessity of study for every experiment have been explained. Then the questionnaire of general health (GHQ- 28) that for the first time was organized by Goldberg (1972) and is applied widespread for recognizing slight mental disorders in different situations, has been distributed. The 28- questions form of this questionnaire is the most common and best known among its types. In this research, we have used 28-questions from that have four measures and each measure includes seven questions. These measures include:

- A. Body symptoms.
- B. Stress and disorders in sleeping symptoms.
- C. Disorders in social function.
- D. Depression symptoms.

Way of grading is the simple grading system of Likert 0, 1, 2, 3 that the total grade of a person will be maximal. In this questionnaire, the more grade of an individual means less mental health of him/ her and the less grades of an individual mean more mental health. It means people with grade bellow 23 are not considering as patients and ill people. Different studies in Iran and the world confirm high validity and stability of the general health questionnaire, proved its perpetuity in high level (Kritz-Silverstein et al. 2001). Furthermore, in current research with correction of some questions by asking from some justifiability factitious specialists, and its stability was attained through Cronbach Alpha value of (0.83) that has a great credit. At the end data were attained and coded and for analysis of data descriptive and inferential statistics ANOVA and t- student was used.

Results

Anthropometric characteristics of tested things are reported in table 1. In table 2 and 3, mental health average in an athlete male and female students showed a significant differences with non- athlete male and female students ($P < 0.05$). As a result, athlete male and female students have better mental health than non- athlete ones. Furthermore, results of research showed that in comparison to averages, physical symptoms of athlete male and female students with non- athlete ones were a significant difference ($P < 0.05$) and athlete students had more physical symptoms than non-athlete students. In addition, in comparison with average rate of depression, athlete male and female students had less depression, and their difference was significant too ($P < 0.05$). While in comparison with an average of mental health rate, physical symptoms, disorder in social function and depression among an athlete male and female students and non-athlete one's differences weren't significant ($P > 0.05$) (Fig 1, 2).

Table 1

Subject characteristics

Testers	N	Age (year)	Height (Cm)	Weight (kg)	Body Mass Index(kg/m ²)
Female athletes	90	22.13±5.8	166.23±4	62±4.4	22.4±1.9
Female non-athletes	90	21.84±1.1	162±4.41	63±6.6	23.6±1.7
Male athletes	90	22.13±6.6	170.13±4.5	67±1.4	23.1±2.1
Male non-athletes	90	22.34±2.1	168±4.1	69±6.6	24.9±1.1

Table 2

Condition of female athletes and non- athletes mental health

Group studies realms Mental health	athletes	Non- athletes	P value*
	Mean and standard derivation	Mean and standard derivation	
Mind health	11.2±1.3	16.2± 2.3	*0.03
Physical symptoms	5.7± 2.7	11.3± 3.5	*0.05
Anxiety and sleeping disorders	2.3± 1.3	10.4± 1.8	*0.01
Disorders in social function	8.6± 2.1	13.5± 2.8	*0.03

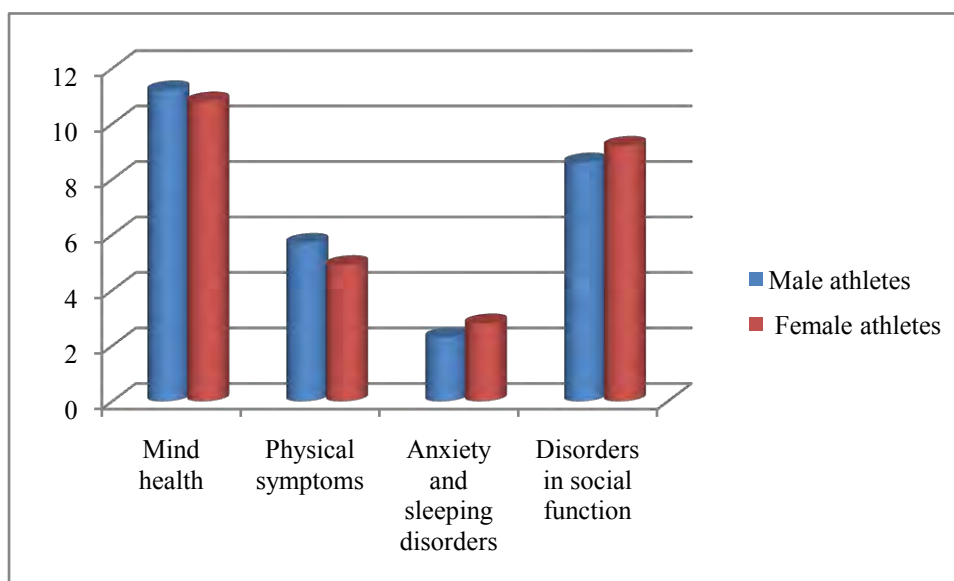
Significant in scale ($P < 0.05$)

Table 3

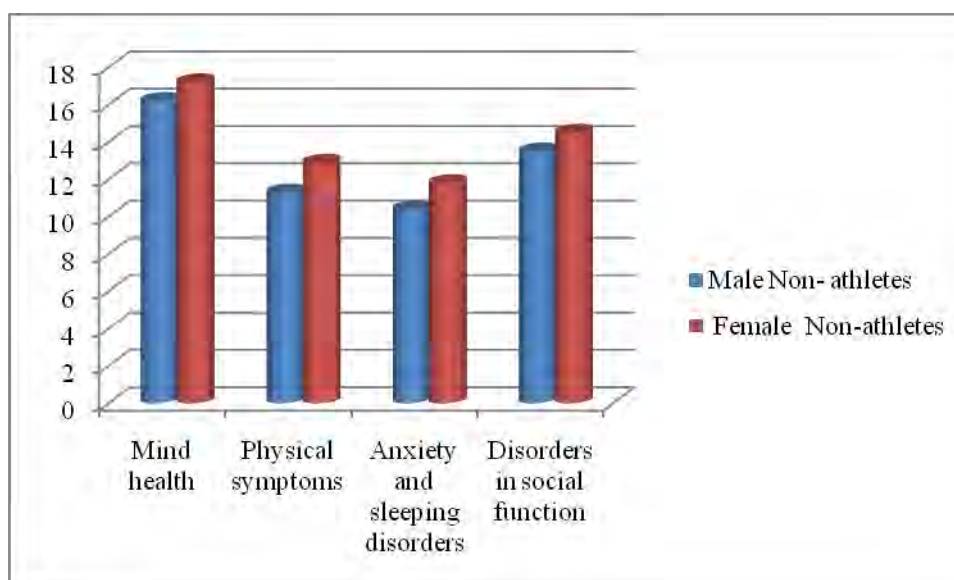
Condition of female athlete and non- athlete students mental health

Group studies realms Mental health	athletes	Non- athletes	P value*
	Mean and standard deviation	Mean and standard deviation	
Mind health	10.8± 1.8	17.2± 3.3	*0.04
Physical symptoms	4.9± 1	12.9± 2	*0.02
Anxiety and sleeping disorders	2.8± 1.8	11.8± 2.8	*0.02
Disorders in social function	9.2± 1	14.5± 1.2	*0.04

Significant in scale ($P < 0.05$)



Pic. 1. Comparison between male and female athletes mental health



Pic. 2. Comparison between male and female non- athlete's mental health

Discussion

The research has shown the average of scores in athlete male and female students is lower than the average of non-athlete male and female students in the case of mental health. This contrast is significant and it is the explanatory of better mental health in athlete students, comparing with non-athlete ones. Norvell et al., (1997), showed that exercising program has great affect in getting mental health. Macmahan., (1990), reported physical exercises have a good result in decreasing anxiety, depression and increasing self-confidence. King et al., (1993), found in his studies that exercise continuously is important and effective in making advantages for body and mind. Haddad has also

declared the relation between exercise and mental health in both negative and positive way. He showed that there is a positive relation between sport and depression, anxiety and stress. Result of heads research showed athlete students have better mental health in comparing with non-athlete students (Haddad.1994). Teychenne et al., (2008), reported that the differences in two criteria, depression and anxiety, are significant between the athlete students ordinary ones. Esfahani., (2002), also described the differences in four criteria in the case of mental health between the athlete and non-athlete females that were significant. In Harris et al., (2006), the relation between sport and mental health, difference are just in small scale. According to people resemblance in this research in the case of age, year of entering university, and marriage condition, we can say that the difference among the athletes and that make them to have positive feeling toward mental health, is regular exercising activity. According to physical complaint between male and female who are athlete and who are not, there is a significant contrast between them that is shows lower complaint and better healthy feeling in athlete and non- athlete students have suffered more from depression. The studies reported significant connection in decreasing depression, anxiety and exhaustion in males and females, increasing of brain Alfa (α) waves (Waves related to relaxation resulted in psychological advantages like decreasing depression and anxiety) (Motl et al. 2004), control slight mental sign to medium sign especially in depression and anxiety (Paluska et al. 2000), social- mental health increasing for individuals which are important (Rejeski. 1994). Results of studies represent that sport activities with low intensity cause to decreasing sensitivity in central receivers and it is because of increasing Serotonin made by exhaustion which depends on extreme sport activities. One of the possible mechanisms for improving behaviors under the sports activities is increasing of the Serotonin and metabolism (Rejeski. 1994). So it can be result of increasing Serotonin and using for depression treatment with making a proper exercising program. There is a significant contrast between the athlete male and female and non- athlete ones in social function disorders in comparison to non- athletes. Morgan statements also showed athletes in comparing with ordinary people gain more privileges in positive mental properties and these mental and spiritual healthy properties have significant differences between athletes and ordinary people (Harris et al. 2006).

In Landers studies some incoherent results conveyed that offer exercises with low intensity that has better effects on people's mental health while other studies assert that aerobic exercises with medium intensity is more useful and also other studies claim that aerobic exercises with high intensity is more effective these contradictions cause others to offer new method that according to it everyone select its own intensity for exercising (Lander et al. 1994). Tsutsumi et al., (1997), showed that a period of resistive sport activities with low intensity comparing to extreme exercises has significant improvement in mental and temperament condition in old people, that also has been reported in previous researches (Zervas et al. 1993; Raglin. 1990; Berger et al. 1992; Petruzzello et al. 1991), for example in the report of Petruzzello et al., (1991), an upside down relation between exercise intensity and behavior improving. It seems that different mechanism has effects in different intensities. For example based on Endorphins hypothesis there is a noticeable expectation in increasing Endorphins scales when actively is lower than 60-70% Vo_{2max} . On the other hand, same psychological mechanism like distraction hypothesis could be the result of digression of exhaustion and exercise pressure for improvement in the mental and behavior condition (Petruzzello et al. 1991; Berger et al. 1992; Clapp et al. 1999) claimed that physical exercises affect improvement of behavior in two ways. One way is releasing of Endorphins and the other one is decreasing Cortisol doze, (the hormone that releases by neurotic pressure in blood) (Clapp et al. 1997). Endorphins are natural drugs for decreasing pains that cause to making gracious feeling physical exercises have multiplier effects in Endorphins units. On the other hand Dilorenzo et al., (1999), and other researchers reach to this result that proper physical exercise has useful effects in serotonin increase (effective hormone in improvement of behaviors). Thus, it seems that exercises help to more Endorphins reach to the body and remains for long time during exercising (Clapp et al. 1997). Although the mechanism that causes regular exercise improve mental health, is not exactly transparent, a lot of different theories have been stated. Because of this, for example, the effect of mental health and physical activities is encounter with three hypotheses: distraction, self efficiency and social interaction (Tsutsumi et al. 1997). According to distraction hypothesis, one digression from undesirable motivator causes improvement in self efficiency hypothesis, exercise activity can be introduced as a controversial activity (Tsutsumi et al. 1997).

According to social interaction hypothesis, communication and inborn social relationships founded as much as the bilateral reciprocal protection between the people during the exercises. More ever two psychological hypotheses (monoamins and Endorphins) protect from the effects of exercising on mental health, too. Physical activities based on the first hypothesis a cause to increase the neurotic conciliators (monoamins) existing in Synapses play the role of anti-depression. Based on second hypothesis, exercises cause to release Endorphins and especially Beta Endorphins that its effects on the central neurotic system that cause to calmness feelings and improve behaviors after exercising (Mirzaei. 2007). According to the results of research, we can say that regular exercise activities can be the reason of the mental health and proper physical activities that cause increasing self confidence. It is also one of the ways of controlling and treating the anxiety and depression in the vulnerable group. Especially physical activities related to aerobics and durable activities such as: running, walking, swimming and bicycle riding which are done in almost long time, cause physiological changes and decreasing reactions made by mental pressure in body. Thus, according to the lesser psychological problems in athletes, we can claim that physical activities as strategies and proper guidelines and also an easy and cheap way, seems to be more essential for increasing mental health.

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