

## Comparing the Mental Health of the Athletic and Non-athletic Physically-disabled People

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Received 23 November 2010

Accepted 1 March 2011

### Abstract

Body movement in disabled people is one of the important problems due to their physical and motor limitations. For this purpose, the present study is conducted to compare the mental health of the athlete and non-athlete physically disabled people in the city of Rasht. The sample population was 183 (94 athletes and 89 non-athletes) disabled people from the city of Rasht, who were selected randomly. The measuring instrument of the study was The Multidimensional Health Questionnaire (MHQ) which includes 20 sub-scales of mental health. The collected data were analyzed using ANOVA test and t-student test. The results of the study indicated that there is a significant difference between mental health and sub-scales of the athletes and non-athletes physically disabled people ( $P < 0.05$ ).

The results of this study indicated that the mental health of the physically disabled people and the 20 sub-scales of the athletes were better than those of the physically disabled non-athletes. Therefore it seems necessary that sports and physical activities be more attended to in the daily schedule of disabled people.

**Keywords:** Mental health, Athletes and Non-athletes, Physically disabled people

### Introduction

Over the last centuries, human beings were most vulnerable to infectious diseases; however, today thank to developments occurred in health conditions in most parts of the world he may encounter less dangerous diseases of this type. Today, what is remarkable is mental disorders with different types and different intensities. On the other hand, the last century's developments have led to lower amount of work. Besides, works that required body movement and energy expenditure were performed by machines, and so the efficiency of body has been decreased.

Disabled people also face the same challenges. On the one hand, disabled people, due to physical disabilities, have movement limitations which prevent them from some sport activities. So the category of physical activities and exercise in relation to disabled people is important from two aspects. The first aspect is a medical issue and its aim is to provide health while the other aspect is the prevention of secondary problems and diseases [1,2]. Most researches that have been done

to investigate the physical activity and mental health of disabled people show that disabled people with athletic physical-movement are in better mental and physical health conditions than disabled people with non-athletic physical-movement. The results of Coyel's research in 1993, studying changes in leisure life style of disabled people with spinal cord injury and some of psychological variables such as depression, life satisfaction, social interaction and some of reliable relations suggests that people with an active lifestyle feel more satisfaction with their life and are less depressed and have more reliable relations than non-active people [3]. Foreman, Cull and Kirkby (1997), investigated the Factors associated with exercise in a sample of 121 people all of whom suffered spinal cord injury. Data analysis showed that there are significant differences between athletes (67 cases) and non-athletes (54 cases) concerning the aspects of psychological dimensions [4]. Kennedy et al (2003), also investigate the effects of sport activities in order to reduce anxiety and depression in people with spinal cord injury and observed that an exercise program during 6 weeks led to a reduction in depression and anxiety. This effect was located by comparing with the control group following a training program [5]. Latimer & et al

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(2004) have also studied disabled people with spinal cord injury. Exercise program includes two practice sessions in the week that was performed in experimental and control groups for 9 months. The results showed that depression and stress had decreased in the experimental group and mental health of people had increased [6]. Warm & et al (2004) conducted a study on 18 people with spinal cord injury with the purpose of studying the quality of exercise program and physical activity to investigate its effects on people with spinal cord injury. The results showed that there are significant differences between physical activity with values attached to health, health self-assessment, the increase in health-related behaviors, motivation for health, and muscle strength. The results also showed that physical activity could promote the quality of life and reduce depression in the group under study [7]. Golmohammadi (1993) studied and compared the Self-esteem level of athletic and non-athletic disabled people, and he achieved the following results [8].

A). There was significant differences between the self-esteem of athlete and non-athlete disabled people.

B). A significant difference was observed between the self-esteem of disabled people in individual and social sports.

C). A significant difference was observed between the self-esteem of athletic disabled people in contact and non-contact sports.

Salesi (1993) investigated the effect of sport activities on mental health of physical disabled people and found significant difference between athletic and non-athletic disabled people in mental health factors, including: physical symptoms, anxiety and sleep disturbances, depression and social function. "... The results showed the condition of athletes is better than that of non-athletes [9]. Poursoltani Zarandi (2003) has studied the public health of veterans and the physical-movement of disabled athletes and non-athletes in Iran. With hypothesis testing, it was clear that there was significant difference between the general health of veterans and athletic and non-athletic disabled people. Also, there was significant difference between the general health of two groups in individual and team sports [1]. In another hypothesis, there was found a significant difference between the general health of two groups with different disabilities. The results showed that exercise and physical activity can be effective in the direction of general health of physically-disabled people [10].

According to research records, ambiguities and uncertainties, there is still a question as to whether

there is a significant difference between the mental health of athletic and non-athletic disabled people, and whether there is a significant difference in the sub-scales of mental health between athletic and non-athletic disabled people,

## Method

The present research is a survey study conducted to examine the athletic and non-athletic physically-disabled people in Rasht. The Number of participants was 183 subjects 94 of whom were athletes and 89 were non-athletes. They were selected randomly. In this study, Athlete refers to disabled people that participated in individual sports (swimming, track and field, shooting and power lifting) and team sports (wheelchair basketball, football, and volleyball), and non-athlete refers to disabled people that did not participate in any physical activity or sports. Instruments used in this study were MHQ's mental health questionnaire designed by William Asnel and his colleagues. This Questionnaire evaluates 20 subscales of mental health. In order to make sure of correct translation and compatibility with the Iranian culture, proper and clear understanding of questions, and the adequacy of instruction, and the manner of completion of questionnaire, the questionnaire was piloted on a sample of 30 participants in Rasht. The independent t-test and ANOVA were used to test the research hypothesis.

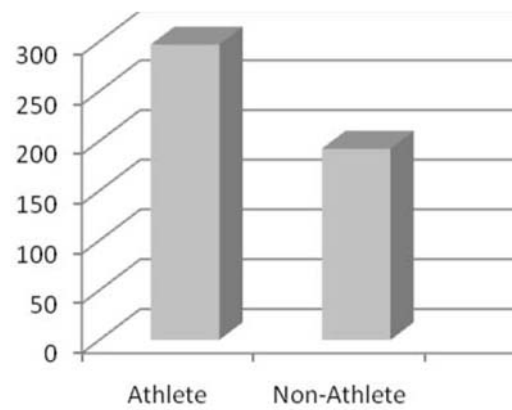
## Results

According to the information obtained, it was found that athletes enjoyed higher levels of mental health than non-athletes (figure 1).

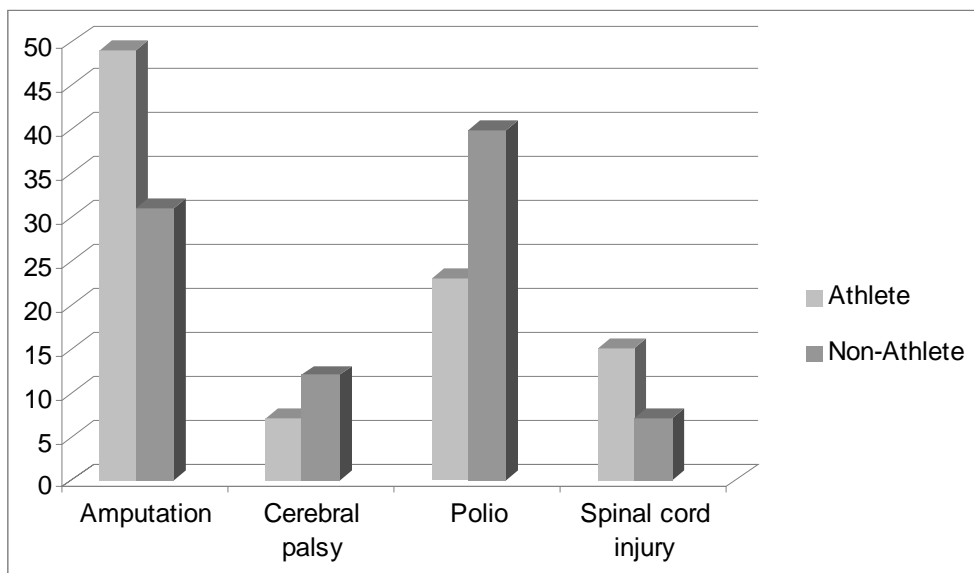
Figure 2, shows that the type of amputation disability in athletes group and type of polio disability in non-athletes group is more than other types of disabilities.

After the analysis of statistical findings and testing hypotheses, it was clear that the mental health of athletic physically-disabled people is better than non-athletic physically-disabled people and this superiority is established in all subscales of MHQ questionnaire.

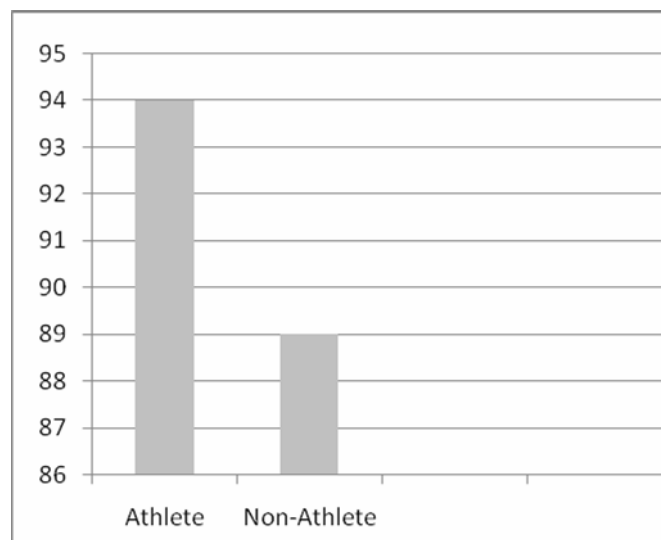
The results also showed that there is no significant difference between mental health of physically-disabled athletes in individual and team sports. The results of research concerning the mental health of physically-disabled people with different disabilities showed a significant difference. The results indicated a significant difference between amputation and polio disabilities, but among other types of disabilities, no significant difference was observed.



**Figure 1:** Mean of mental health of athletes and non-athletes



**Figure 2:** Comparison of disability condition in two groups of athletes and non-athletes



**Figure 3:** The amount of physical activity in athletic and non-athletic groups

On the other hand, there was not a significant difference between the mental health of athletic physically- disabled people who had different levels of physical activities .The results also showed that there is a significant difference between the mental health of physically- disabled people and the causes of disability .Other results of this study showed that there is not a significant difference between the mental health of physically- disabled people who have different levels of education and marital status.

## Discussion

After collecting information and analysis of statistical findings, the results indicated that athletic physically- disabled people have better mental health than non -athletic physically- disabled people .Also, in all subscales of MHQ questionnaire, athletes are better than the non-athletes with significant difference ( $P < 0.05$ ). The results of this research are consistent with similar studies. Green Wood and Dezoaltoski (1990) in a research showed that wheelchair athletes have positive psychological profile, better mood profile and less stress and anger, less depression and fatigue than non-athlete wheelchair persons [11]. A research by Forman and his colleagues (1997) has indicated that there are significant differences in the mental aspects of disabled athletes and non -athletes who have spinal cord injury [4].

Research results of Kennedy and his colleagues (2003) showed positive effects of sport activities in order to reduce anxiety and depression in people with spinal cord injury [5]. The research results of Campbell and Jones (1992) showed that the wheelchair athletes have a positive mental Welfare profile with the least tension, depression, and anger toward wheelchair non -athletes .The results also showed that wheelchair athletic group have better mental and welfare health than the control group[12].

On the other hand, the research of warms & et al (2004) on the disabled people with spinal cord injury showed that there is significant differences between physical activity with dimensions of mental health such as valuing health, health self-assessment, the increase in health-related behaviors, and motivation for health[7]. It seems that participation in regular physical activities have useful physiological and psychological effects for disabled people as healthy people [13]. The results showed that physical activity was effective not only in providing physical health but also in providing mental health. It seems that this effect may be due

to improvement of mental conditions, the acquisition of physical imagination, and positive imagination [14].

The researchers expressed the Probability of alleviating the mentioned causes using the theory of Bandura's self-capabilities according to which "exercise enhances the sense of personal mastery and enhances self-capabilities and will have behavioral changes .Such changes are effective in reducing depression".

Therefore, the improvement of self-concept is the main element of therapeutic change in exercise, the improvement of physical ability and the gain of physical imagination. Self-concept in a collection of sport experiences provides positive feedback and a sense of satisfaction .Such satisfaction and pleasure may be extended to other situations and aspects of life [15]. According to the results obtained, it was found that exercise and physical activity increased mental health and it's dimensions .In summary, we can conclude that physical activity has a significant effect in reducing the negative aspects of mental health such as stress, anxiety, and depression.

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