

Investigating the Role of Aerobic Exercise on Subjective Well-Being among High School Girls in Yasuj High School in 2017

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Abstract

The purpose of this study was to investigate the role of aerobic exercise on subjective well-being of high school female students in Yasuj. The present study is a semi-experimental and pre-test post-test design that was done as a field experiment using a control and experimental group. This study investigated the effect of six weeks aerobic exercise on the mental well-being of high school girl students in Yasuj. The statistical population of this study included all female high school students in Yasuj who were studying in 2017. For this purpose, a sample of 42 students was selected and divided into two groups of test and control. Sampling was random cluster. Data were analyzed using descriptive statistics and inferential statistics including covariance analysis or comparison of scores with SPSS-22 software. The results of covariance analysis showed that aerobic exercises affect various aspects of mental well-being, and created mental well-being of students in the experimental group.

Key words: aerobic exercise. Mental well-being

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Introduction

Kristensen states that one of the problems of the human community is the problem of unemployment and its complications. Part time work, especially for teens and young people, especially during the summer holidays of schools and educational centers, can be harmful and must be remedied, or occasionally filled with unemployment that is beneficial or at least harmless. Many deviations, such as drug addiction, theft and harassment, street fighting, sexual deviations, etc. are the result of idleness (1).

Exercise has many forms in the world, and many groups deal with it in various ways. Some people are professional athletes and part of groups of amateur athletes (2).

Physical exercise, can be gained during sport, especially sports that are continuous.. Open-air exercises such as cycling, walking, swimming, and so on relieve depression in a large number of cases. Research findings indicate that exercise and activity of the body affects mental health, self-efficacy, anxiety and depression and self-esteem. Medical science, in addition to screening and prescribing drugs and operations that deal with various diseases, also uses exercise as a means to improve patients' well-being. Some physicians encourage their patients to exercise for various conditions, such as to relieve numbness, weight loss and muscle weakness, such as low back pain, neural and muscular coordination in some forms of paralysis, rehabilitation, lack of appetite, having anxiety or emotional feelings, agitation, depression, feeling absurd, and many other conditions. (3).

The results of various studies have shown that performing different types of exercises, in addition to many physical benefits, has a beneficial effect on coping with neurological and psychological problems. Considering the positive effects of exercise on the health and well-

being of the human being, the culture of sport should be further addressed. On the other hand, in order to achieve sustainable development in any society, in addition to planning, proper management and the use of appropriate technology, the use of efficient human resources is very important. A society that has healthy human beings will have the opportunity to take a more immediate course for real development. (4).

The results of many studies have shown the beneficial effects of exercise. Meghdadi et al. (2003) in a study on students of Shahid Chamran University of Ahwaz, entitled "The Effect of Aerobic Exercise on Mental Health," showed that aerobic exercise has a positive effect on mental health, depression, and anxiety, whereas aerobic exercise has a significant effect on physical complaints and social function. Also, there is a significant relationship between aerobic fitness with depression and anxiety and the increase in aerobic fitness has been associated with decreasing depression and anxiety. However, there is no significant relationship between aerobic fitness with physical complaints and social function (5). Pour Ranjbar et al. (2003) in evaluating the effect of aerobic and anaerobic exercises on students' anxiety showed that exercise is an effective and safe way to reduce anxiety. It seems that both aerobic and anaerobic exercise can reduce effective anxiety. Therefore; it can be used to reduce anxiety depending on the physical condition of each type of exercise (6).

Exercise and sports are designed to enrich the hours of leisure and create happy moments and a sense of tranquility and comfort at the community level. In addition, it is considered as a solution to many of the physical and psychological problems of people in society. Correct and regular exercise as an important part of everyday duties of any person can affect the health and community health and fulfill the duties and responsibilities of the community (7). This mission becomes more important when it comes to the place of the school due to the role and dignity of this constructive center. If family settings, for any reason, do not provide a place for learning about the necessity of doing sports for students, school education will be a valuable opportunity, in addition to exercising leisure time and strengthening physical strength and optimal use of these times, with the most desirable possible activity, which ultimately brings health and well-being, and to enjoy its psychological and social benefits. Also, research has shown that exercises have beneficial psychological effects that include: high levels of general well-being, positive mood, and low levels of depression and anxiety.

The important psychological characteristic that healthy people should have is a feeling of well-being along with a sense of efficiency. The sense of well-being of this type is defined as: a positive feeling and a general satisfaction of life that includes self and others in different areas of the family, or occupation. From Rhine's point of view, there are two main approaches to the definition of well-being: pleasure and virtue. The predominant view of pleasure by psychologists is that well-being is equal to the mental happiness associated with the experience of pleasure

versus the dissatisfaction experience that affects the well-being. (8). In the twenty-first century, psychology has expounded that man has to spend his rational energy on the positive aspects of his experience. Subjective well-being is an important structure in the study of personality interpretation and is defined as a positive evaluation of life and the balance between positive and negative emotions (9), and given the fact that mental disorders are common in many modern societies, our society is no exception to this. Also, given the fundamental role that aerobic exercise plays in everyday life and the intellectual and personality processes of individuals, the researcher seeks to respond to the question as to whether aerobic exercise is effective on the mental well-being of high school girl students in Yasuj in 2017.

Research Method

The present study is a semi-experimental and pre-test post-test design that was done as a field experiment using a control and experimental group. This study investigated the effect of six weeks aerobic exercise on the mental well-being of high school girl students in Yasuj. The statistical population of this study included all female high school students in Yasuj, who were studying in the school year 2017. The community size was 525 people based on statistics. To determine the sample size in the current study, considering the significant level (0.05) and the effect volume (0.51) with the power of 0.8 for each group, 22 was selected. Sampling was a random cluster. The research tool is a questionnaire and descriptive statistics and inferential statistics including covariance analysis or comparison of scores were used to analyze the data. Statistical analysis was performed using SPSS22 software.

Research Findings

The main hypothesis:

Table 1 (next page) shows the results of a variance covariance analysis to examine the effect of aerobic exercise on mental well-being. According to the results obtained from the analysis of covariance in the table, the effect on the intervention (group) is significant (5.22). According to the results, it can be said that aerobic exercise has affected mental well-being and the research hypothesis is confirmed.

Hypotheses

In order to investigate the effect of intervention on the well-being components, multivariate covariance analysis of post-test scores with pre-test control was performed. Table 2 shows the results of multivariate covariance analysis on post-test scores of well-being components with pre-test control.

Table 2 shows that there is a significant difference between the test and control groups in terms of at least one of the dependent variables (components of mental well-being). Analysis of covariance in the text of MANCOVA on dependent variables was performed to examine the difference.

Table 1: Results of a variance covariance analysis to examine the role of aerobic exercise on mental well-being

Indicator	Sum of squares	Average squares	F	The significance level	Square Eta
Variable	384.29	384.29	5.27	0.001	0/26
pre-exam	482.21	482.21			
Intervention group	3824.72	92.28			

Table 2: Summary of multivariate covariance analysis for controlling the mean post-test of components of well-being with pre-test control in test and control groups

Effect	Test	Value	F	df hypothesis	error df	Significance level
group	Pillai's trace	0.85	10.98	3	1	0.01

Hypothesis 1: Aerobic exercise is effective on the social well-being of high school girl students in Yasuj.

Table 3 shows the results of covariance analysis in the text of MANCOVA to examine the role of intervention on the social welfare component. According to the obtained result, it can be concluded that the intervention on social welfare component was significant (P = 0.01; P = 5.71). According to Eta, it can be said that the effectiveness of this component was (0.29).

Table 3 shows the results of covariance analysis in the text of MANCOVA to examine the effectiveness of intervention on the component of social welfare.

Effect	The dependent variable	df	Sum of squares	Average squares	F	The significance level	Square Eta
group	Social welfare	1	512/13	512/13	5/71	/002	0/12

Second hypothesis: Aerobic exercise is effective on the psychological well-being of high school female students in Yasuj.

Table 4 shows the results of covariance analysis in the text of Mancova to examine the effectiveness of intervention on the component of psychological well-being. According to the obtained result, we can say that the intervention on the psychological well-being component was significant (P = 0.01; F = 4/58). According to Eta, it can be said that the effectiveness of this component (0.06) was.

Table 4 shows the results of covariance analysis in the text of MANCOVA to examine the effectiveness of intervention on the component of psychological well-being

Effect	The dependent variable	df	Sum of squares	Average squares	F	The significance level	Square Eta
group	Psychological well-being	1	454.28	454.28	4/58	/002	0.06

Hypothesis 3: Aerobic exercise is effective on the emotional well-being of high school girl students in Yasuj city.

Table 5 shows the results of covariance analysis in the text of MANCOVA to examine the effectiveness of intervention on the emotional well-being component. According to the obtained result, it can be concluded that the intervention on the emotional well-being component was significant (P = 0.01; P = 0.61 = 3.61). Considering the square Eta, it can be said that the effectiveness of this component was (0.05).

Table 5 shows (in Farsi) the results of covariance analysis in the text of MANCOVA to examine the effectiveness of intervention on the component of emotional well-being

Table 5 shows (in Farsi) the results of covariance analysis in the text of MANCOVA to examine the effectiveness of intervention on the component of emotional well-being

Effect	The dependent variable	df	Sum of Squares	Average Squares	F	The significance level	Square eta
Group	Emotional well being	1	466/39	466/39	3/61	/002	0/05

Conclusion

The findings of this study showed that aerobic exercise is effective on the mental well-being of high school female students in Yasuj. Therefore, the results of covariance analysis showed that aerobic exercises influence on mental well-being, as well as on different aspects of mental well-being, and caused mental well-being of students in the experimental group. Aerobic exercise, is best gained from sports that are continuous, usually creating a positive effect on people's creation and includes exercise in the open air such as cycling, walking, swimming, and so on. It relieves depression in a large number of cases. It also provides recreational opportunities, amusement and friendship for students, as well as the liberation from stress, anxiety and isolation through group participation in the above-mentioned sports programs and thus it determines the importance of sport and more attention should be paid to this.

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