

The Effect of Exercise on Symptoms of Depression and Positive Self-Behavior

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Article Info	Abstract
Article History	<i>When you are stressed or depressed, exercising seems to be the last thing you want to do. But once you get motivated, exercise can make a big difference. Which reflects on self-confidence and strength of character. Exercise helps prevent and improve a number of health problems, including high blood pressure, diabetes and arthritis. Research on depression, stress and exercise shows that the psychological and physical benefits of exercise can help improve mood and reduce stress. In this study, the effect of exercise on personal strength and self-confidence and its development to overcome the psychological effects of depression was recorded. The links between depression, stress and exercise are not entirely clear - but exercise and other forms of physical activity can definitely alleviate symptoms of depression or stress and make you feel better. Also, exercise may help to relief depression and anxiety and you feel better.</i>
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Introduction

Similar signs and symptoms of depression in children and teenagers are similar to those common in adults, but there may be some differences. In younger children, symptoms of depression can include sadness, irritability, excessive emotional attachment, anxiety, aches and pains, refusal to go to school, or thinness. (1) In adolescents, symptoms can include sadness, irritability, feelings of negativity and worthlessness, anger, poor school performance or lack of school attendance, feelings of misunderstanding and hypersensitivity, recreational drug or alcohol abuse, excessive eating and sleep, self-harm, and loss of interest. Do normal activities, and avoid social interaction. (2) Several studies have indicated that exercise affects depression, anxiety, and mental health in general for males and females of different age groups and from diverse ethnic backgrounds; And that exercise helps in dealing with life pressures and improves mental health. (3) Depression is an emotion that leads to a feeling of inadequacy, loss of hope, a decrease in the level of physical activity, energy and vitality, a feeling of pessimism about the future, lack of enjoyment of activity, and a feeling of worthlessness. (4) For children, depression occurs as a result of traumatic events or as a result of a loss of love, acceptance, security, belonging and family bonding. Depression in children is associated with manifestations of sadness and distress that dominate them and limit their ability to enjoy and show appropriate emotional reactions that lead to failure to form social relationships with others. (5) As for self-esteem, it refers to an individual's evaluation of himself with the mental, social, emotional, moral and physical characteristics it contains, and this evaluation is reflected in his self-confidence, his feeling towards it, his evaluation of the extent of its importance, and his expectations of it. (6)

It is a multi-dimensional concept that exists to varying degrees among individuals and is one of the elements of the self-concept and reflects the extent of the individual's sense of his worth and competence. When people have positive attitudes towards themselves, they have high self-esteem, and they have negative attitudes to themselves, their self-esteem is low, in other words, self-esteem is the individual's general self-evaluation (7). It can be positive, neutral or negative. Studies have indicated that physical self-image significantly affects self-esteem. This can play a fundamental role in the level of girls' growing interest in their stature, especially with early adolescence, and another study found that weight problems significantly affect the prediction of self-esteem and depression. (8) It is reasonable to say that depression is related to self-esteem, given individuals who have low levels of self-esteem have feelings of distress, frustration and possibly depression. (9)

Whereas, a person who has low levels of self-esteem can become depressed, which would be a mediating factor in causing depression, and in return, high self-esteem reduces depressive symptoms and reduces them. While other studies have shown that improved self-esteem influences the relationship between life stress and the appearance of depressive symptoms (10). Where studies indicated the existence of mutual effects from both self-esteem and the practice of sporting activity, and that sports activity creates many opportunities to raise the level of self-esteem. (11)

As it positively affects health and aspects of the social and psychological life of individuals as it improves mood and contributes to building a positive concept of self, improving the level of self-esteem, increasing self-efficacy, and accepting the negative psychological and physiological effects resulting from psychological tensions, and thus improving the quality Life. (12) A longitudinal study to find out the relationship between sporting activity and self-esteem in white American teenage girls. The study concluded that practicing sports activity contributes to raising the level of self-esteem, especially among girls in early adolescence Conducted. (13) A study on the relationship between sport activities, self-esteem and body fat percentage among university students. The study used a sample of 266 male and female students, half of whom were female. Among the findings of the study is that male students have higher levels of self-esteem than females and that they practice sports at higher rates than females who have been found to be more likely to gain weight and become more interested in sports activities. (14)

Also, a study to understand the relationship between the practice of sporting activity and the level of self-esteem among middle school students of Arab origin, and the researcher applied the Rosenberg scale of self-esteem and other measures on a sample of 147 American students of Arab descent. The most important results, which found that there are statistically significant differences between practicing sports activities and the level of self-esteem for females, while the results did not show a relationship between the practice of sporting activity and the level of self-esteem for males (15). Another study of the relationship between self-esteem and physical self-image, using a sample consisting of 177 mathematical and non-mathematical adolescent girls, and the study found a statistically significant relationship between self-esteem and physical self-image for athletic girls compared to girls who lead a sedentary life. (16) That participation in school sports teams is associated with an elevated level of self-esteem of American students who come from diverse backgrounds and ethnicities.

Finally, the researcher arrived

Which dealt with the study of self-esteem using a sample of 146 schoolgirls in Al-Jadriya area between the ages of 13-15 years. (17)

Importance of studying

Given the need for more understanding of the relationship between self-esteem and depression, and to investigate the impact of sporting activity in them, and since such a topic is preceded by addressing such a subject at the local level according to the researcher's knowledge, this study aimed at identifying the level of self-esteem and depression of a sample of Iraqi girls 10-13. Sunnah, as girls at this age are exposed to many physiological and psychological changes. It is hoped that this study will provide valuable knowledge about the prevalence of symptoms of depression among girls, as well as the level of their self-esteem, in addition to identifying the nature of the relationship of self-esteem and depression, as well as knowing the nature of the relationship between the level of practicing sports activity on the one hand and the level of self-esteem and underwriting on the one hand. a second. (18)

Objectives of the study

When Understanding the differences in depressive symptoms among the study subjects may be attributed to exercise Likewise, the differences in the level of self-esteem of the study sample individuals can be attributed to exercise Find out the relationship between self-interpretation and depression.

Method of sampling (19)

The study sample consisted of (146) Iraqi girls whose ages ranged between (10-16) years and they were selected from a total of (302) children and adolescents in the summer club program organized by the College of Physical Education and Sports Sciences, of whom (95) study in government schools and (51) study in private schools.

Research criteria

The following measures used the Self-Esteem Scale, which is a scale developed and standardized by the researcher and consists of (14) statements, including (6) positive (2, 4, 6, 8, 10, 12) and 8 negative (1, 3, 5, 7, 9, 11, 13, 14), and the average response for each girl is calculated by presenting the total scores she gets on the total statements (14). Thus, the average for each member of the sample ranges between (1-4) degrees, and with regard to calculating the grades, they are given according to For a descending four-graded scale (4-3-2-1) for positive expressions, while the grades of negative expressions are calculated according to an ascending four-gradient scale (1-2-3) and whenever the arithmetic mean level of the paragraph or the scale as a whole exceeds 2.5 point. (20)

It expresses a rise in the level of self-esteem, and whenever the arithmetic mean of the paragraph or the measure as a whole is less than (2.5) point, it reflects a decrease in the level of self-esteem. The validity of the content was used to ensure its suitability to measure what it was set for, while its consistency was (89%) and the method of re-testing on a random sample consisting of (31) girls with a time difference of 3 weeks. In the current study, the (Alpha Chronbach) coefficient was calculated for the responses of the respondents of the sample participants in the study, which numbered 146 girls, as it reached (0.55), indicating that the scale has As much internal consistency Child Depression in the Arab Region. (21) By helping the Iraqi environment. In our study, the Saudi version was adopted due to the great similarity between the Iraqi and Syrian environments, and a review process for the list was carried out with a number of specialists in psychometrics, and the internal consistency factor for it

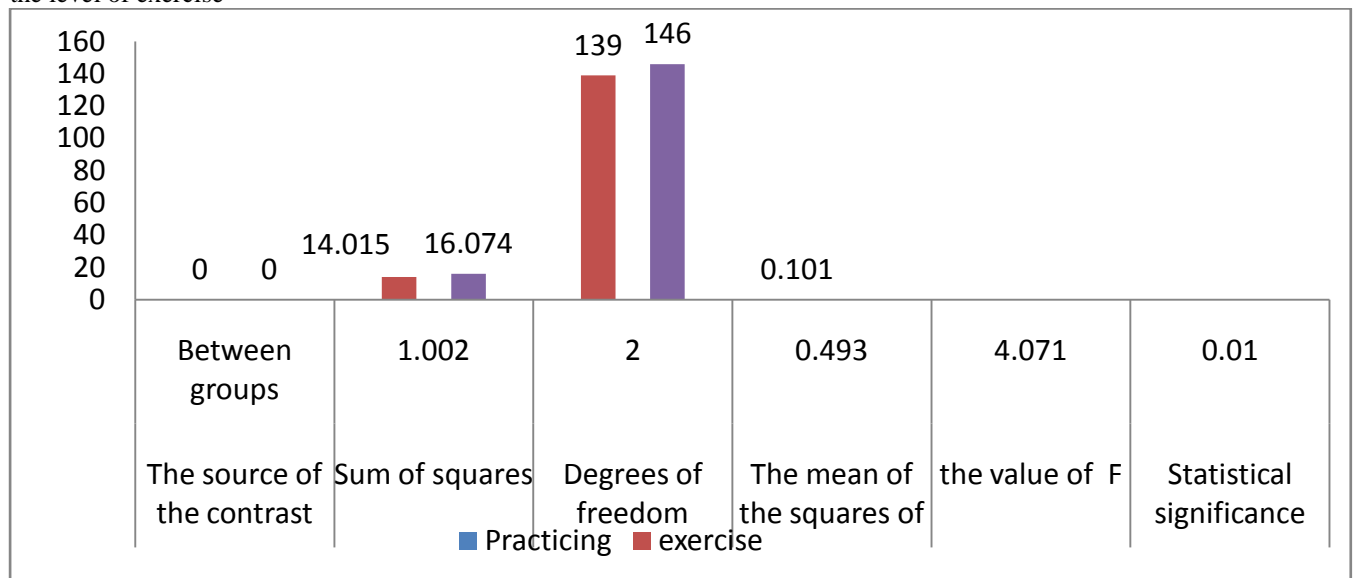
according to the responses of the members of the current study sample reached (0.88) and the list consists of (25) The phrase (9) of them is positive and indicates the absence of depressive symptoms, while the remaining expressions (16) indicate the presence of depressive symptoms. (22)

The girls participating in the study must determine the extent to which each statement applies to their condition within a three-step scale (rarely, sometimes, often). Positive expressions are given that indicate the absence of depressive symptoms (1, 2, 3) respectively, while negative expressions are given that It indicates the presence of depressive symptoms (3, 2, 1) and thus the upper limit of the total scores indicating the presence of the highest degree of depression is (81) while the lowest score, i.e. that indicates the absence of depressive symptoms at all, is (27) degrees.

Table (1) A mono-analysis of the differences between the mean scores of the study sample for depression in children according to the level of exercise

Statistical significance	the value of F	The mean of the squares of	Degrees of freedom	Sum of squares	The source of the contrast	
0.010	4.071	0.493	2	1.002	Between groups	Practicing exercise
		0.101	139	14.015	Within groups	
			146	16.074	Total summation	

Diagram (1) for differences between the mean scores of the study sample for depression in children according to the level of exercise



It is from Table (1) the differences between the averages of the exercise variable were statistically significant at the level of 0.05, as the value of F reached (**4.071**) with a statistical significance of (**0.010**). To determine the source of these differences, the Scheffé test for comparisons was used. The dimensionality that revealed these differences were between group of girls whom do not practice sports at all ($n = 49$, $x = 1.663$) and the group of girls who practice sports regularly $n = 38$, $x = 1.263$ noticed, this result seems logical and consistent with the literature on sports psychology and with the findings of many studies. Exercise is associated with joy and pleasure, freeing the soul from stored tensions, and improving mental health.

Discuss the second table

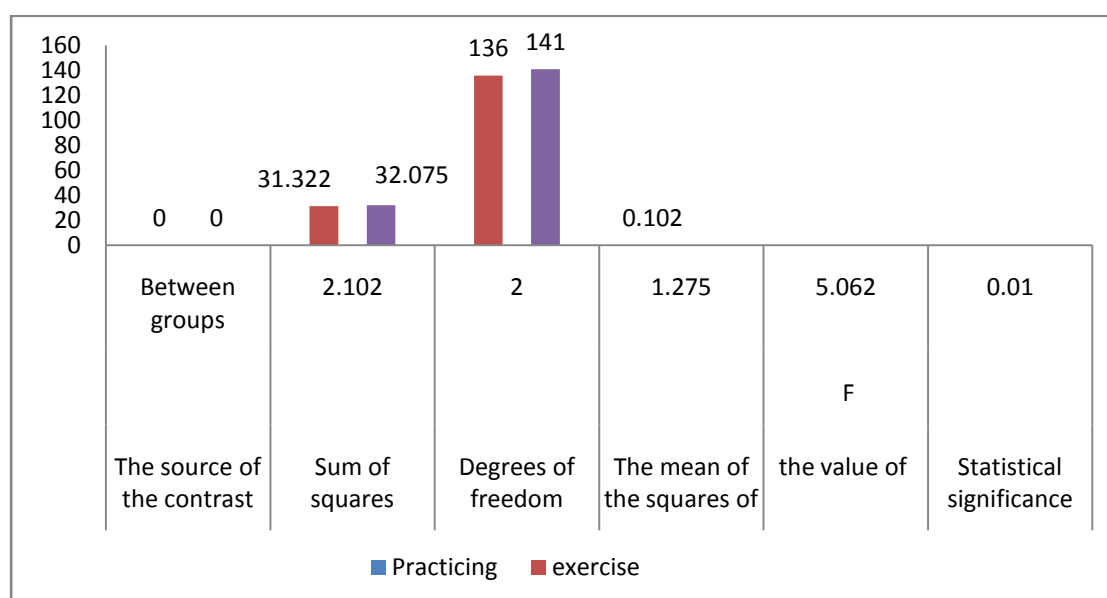
While the differences in the level of self-esteem of the study sample members can be attributed to exercise. Use of single-factor analysis of variance for ANOVA, and the following table (2) shows the results:

Table (2) An analysis of variance of the differences between the mean scores of the study sample individuals on the scale of self-esteem according to the level of exercise

Statistical significance	the value of F	The mean of the squares of	Degrees of freedom	Sum of squares	The source of the contrast	
0.010	5.062	1.275	2	2.102	Between groups	Practicing Exercise
		0.102	136	31.322	Within groups	
			141	32.075	Total summation	

* Statistically significant at 0.05 level

Diagram (2) for Differences between the mean scores of the study sample individuals on the scale of self-esteem according to the level of exercise



It is noticed from Table (2) the differences between the averages will change practice of sport were statistically significant at the level of (0.5), as the value of (F) for him was (5.062) with a statistical significance of (0.001). To determine the source of these differences, the Schefft test was used

For dimensional comparisons revealed:

These differences were between the group of girls whom not practice sports at all, $n = 49$, $x = 1.663$, and the group of girls who do sports regularly, $n = 38$, $x = 2.663$. This result is consistent with the findings of many studies conducted in multiple environments and used various samples. The effect of sport on self-esteem is attributed to the fact that enhances the perception of ability, control and achievement, improves their self-concept and their self-confidence. It is possible that girls at such a critical stage of development may be exposed to psychological and personal disorders and thus have an increased need to prove them and engage in a sporting activity that affects their self-esteem. Although the results found that the limited practice of sport didn't affect self-esteem, they failed to show that regularity in practice is a matter that requires much attention, just as the civic effects of sport require more time and effort, so the psychological effects require that, and do not overlook here, girls in at this stage are began to pay attention to body and appearance, and therefore the regularity in sports from this field, the view will lead to an improvement in their physical self-image and thus increase their self-esteem, which is confirmed by many studies

In general, the results of this study on the effect of mathematical practice on self-esteem are consistent with the findings of a study by Schimel and her colleagues. That sporting activity increases the self-esteem of teenage girls among white American girls, and it also agrees with the findings of Abdel-Hafez (30). When used a sample of American children and adolescents of Arab descent.

Depression and self-promotion relationship

Person Correlation coefficient was calculated (24). Between the degrees of the study sample on the scale of the Arab list Child Depression and Child Self-Esteem Scale, The following **table (3)** shows the results:

Table (3): The correlation coefficient between the scores of the study sample on the measures of depression and self-esteem

Self-esteem	Depression	
0.689 0.000 146	1 146	Correlation coefficient Depression Indication level Number
1 146	-0.689 0.000 146	Self-esteem Correlation coefficient Indication level Number

Table (3).Indicates a negative association between depression and self-esteem, meaning that children whom a high levels of self-esteem have fewer symptoms of depression and vice versa.

Conclusions

Engaging in regular sporting activity can lead to an increase in the level of self-esteem of adolescent girls and reduce the negative feelings that they may have at such a critical stage in life, and thus protect them from the symptoms of underwriting.

Recommendations

The results of this study deserve to receive the appropriate amount of attention, especially for educators and parents, who have become required to intensify their interest in directing children and adolescents towards practicing sports because it enhances their self-confidence and thus improves their self-esteem and works to achieve their psychological health.

Reference

- Depression (major depressive disorder) Diagnosis & treatment", www.mayoclinic.org, Retrieved 4-1-2019.
- What is depression and what can I do about it?", www.medicalnewstoday.com, Retrieved 5-1-2020.
- Depression Diagnosis", www.news-medical.net, Retrieved 27-12-2019.
- What causes depression?", www.health.harvard.edu, Retrieved 27-12-2019.
- The level of self-esteem of Omani mathematic girls and its relationship to their attitudes towards sporting activity. The Educational Journal, Academic Publication Council, Kuwait University. Volume 25 (99). 377-403, (33)
- Al-Shorbagy, Nabila (3 (2010), Children's Psychological Problems: Their Causes and Treatment, Cairo, Arab Renaissance House.
- The Arabic Language for Child Depression in a Sample of General Education Students in Makkah Al-Mukarramah, Journal of Psychology, Issue 57, Fifteenth Year, Cairo
- Abdul Khaleq, Ahmad Muhammad (1999) The Arab List for Children's IPO Presentation of Studies on Six Societies and the First International Conference on Kindergarten Children in Kuwait from April 13-15
- What Is Depression?", www.psychiatry.org, Retrieved 27-12-2019.
- Singer, R., Hausenblas, H.; & Janelle, C. (2001). Handbook of Sport Psychology, Second Edition John Wiley & Sons, 636-641.
- AbedAlhafiz, A. (2004). The relationship between physical activity and self-esteem in Arab-American students, Dissertations Abstracts International, 64(12-A), 4403.
- Lewis, O. (2006). Relationship between physical activity, self esteem, and percent body fat to grade point average in higher education students. Dissertation Abstracts International. 66 (8-A), 2857.
- Erkut, S. & Tracy, A. (2002). Predicting Adolescent Self-Esteem from Participation in School Sports among Latino Subgroups. Hispanic Journal of Behavioral Sciences, 24, 409-29.
- Brown, J.D., & Siegel, J. M. (1988). Exercise as a buffer of life stress: A prospective study of adolescent health. Health psychology, 7(4), 341.

- Norris, R., Carroll, D., & Cochrane, R. (1992). The effects of physical activity and exercise training on psychological stress and well-being in an adolescent population. *Journal of psychosomatic research*, 36(1), 55-65.
- Depression in Children", www.webmd.com, Retrieved 8-5-2020. [2016, Volume 13, Issue 50](#), Pages 421-448 University of Baghdad.
- Depression in Children", www.webmd.com, Retrieved 8-5-2020. [Journal Of Educational and Psychological Researches](#).
- Patient education: Depression treatment options for adults (Beyond the Basics)", www.uptodate.com, Retrieved 4-1-2019.
- MahfuzJudeh Edition: 1 Publisher: Dar Wael Publishing ISBN: 978-9957-11-709-2 . Applied Science Private University, January 2007.
- Peterson DM. The benefits and risks of exercise. <https://www.uptodate.com/contents/search>. Accessed Sept. 15, 2017.
- Schuch FB, et al. Exercise as treatment for depression: A meta-analysis adjusting for publication bias. *Journal of Psychiatric Research*. 2016;77:42.
- Exercise for mental health: 8 keys to get and stay moving. National Alliance on Mental Illness. <https://www.nami.org/Blogs/NAMI-Blog/May-2016/Exercise-for-Mental-Health-8-Keys-to-Get-and-Stay>. Accessed Sept. 7, 2017.
- Dr Florian D. Naal, MD, Hermes H. Miozzari, Bryan T. Kelly, ... Sports Activity Scale: The Hip Sports Activity Scale (HSAS) for Patients with Femoroacetabular Impingement, First Published March 28, 2013.
- Pearson, Karl (20 June 1895). "Notes on regression and inheritance in the case of two parents". *Proceedings of the Royal Society of London*. **58**: 240–242.

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