The effect of physical activity on the psychological development of adolescent females

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ABSTRACT

In this study, the positive contributions of regular physical activity habits to the social development and selfconfidence of young women are emphasized. In the search for scientific literature for this review, data from the US National Library of Medicine (PubMed), MEDLINE, and SportDiscus were used, and the terms "female adolescent health", "self-confidence", "physical activity", and "self-esteem" were used. The relevant literature has also taken its source from the research of relevant articles from reference lists derived from data searches. Self-esteem is defined as a person's general assessment of one's worth and is recognized as an important measure of psychological health. Since physical activity is any form of bodily movement performed to maintain or improve physical structure and general health, physical activity is thought to be associated with improved self-esteem in young adolescent females, and these two concepts are considered intertwined concepts. Regular exercise and physical activity are known to have numerous benefits for the physical and psychological development of young adolescent females. Exercise and sporting activities have been shown to help improve physical fitness, reduce depression, and increase self-confidence, and these positive effects help to create a psychological support system in young females. It is predicted that female adolescents who participate in physical activity during adolescence will have higher levels of self-esteem in adulthood compared to those who do not participate in physical activity. It is also accepted that female adolescents who develop physical activity habits during adolescence continue to carry positive sociopsychological and general health effects into adulthood.

Keywords: self-esteem, physical activity, female adolescent health, self-confidence

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INTRODUCTION

Physical activity and regular exercise habits are among the most essential components of a healthy lifestyle. Exercise can include various forms, such as cardiovascular, resistance, and flexibility training. Exercise in adolescents shows multifaceted physical, psychological, and social benefits. Physical activity is generally defined as any physical activity that is planned, structured, and repetitive and its purpose is to improve or maintain physical fitness [1,2].

Exercise has numerous physical and metabolic benefits, including improved cardiovascular health, weight control, and reduced risk of chronic disease, maintaining and promoting psychological health. Regular physical activity can reduce the risk of heart disease, stroke, and high blood pressure and protect vascular health [3]. Exercise can also improve blood sugar control in individuals with type 2 diabetes [4]. It has also been found that exercise has positive effects on bone density, which is essential for female adolescents, especially in terms of bone development [5]. In addition, exercise can help reduce and prevent the risk of being overweight and obese by providing weight control, a significant health problem in the adolescent population [6].

Regular exercise habits can improve body image, which is a vital component of selfesteem, especially for adolescent Preventing obesity and overweight contribute positively to their quality of life by physiological improving their psychological health. Regular physical activity habits can help adolescent females feel more confident and positive about their bodies by reducing body fat and increasing muscle mass [7]. It is worth mentioning that physical activity improves mood and this improvement indirectly increase self-esteem. particular, exercise has been shown to reduce and anxiety symptoms depression positively affect mood in adolescent females [8]. In addition, the fact that exercise increases endorphin levels, which are neurotransmitters that promote feelings of happiness and wellbeing, draws attention as a factor that improves mood [9].

In addition to its many physical benefits, exercise also has significant psychological

benefits. Regular physical activity has been shown to improve mood, reduce symptoms of depression and anxiety, and improve cognitive function [10]. Exercise can also have a positive impact on self-esteem, body image, and selfefficacy, which play a crucial role in character development [11]. These psychological benefits particularly important for female at high risk of developing adolescents symptoms and body depressive image concerns during adolescence [12,13].

It is noteworthy that a lack of physical activity habits during adolescence causes overweight and obesity problems in both genders [14]. In particular, adolescents cannot participate in physical activity due to some reasons such as spending too much time in technology-related activities, computer and internet addiction, inadequate family guidance on physical activity, limited time for exercise, and inadequate sports facilities [15, 16]. In addition, costs, lack of access to exercise opportunities, and inability to acquire physical activity habits increase the prevalence of overweight and obesity among adolescents [17,18].

DISCUSSION

A study by Gavin et al. emphasizes the substantial social benefits of exercise. They suggest that participating in exercise can provide opportunities for social interactions and communications, which can promote a sense of belonging and connection [19]. In another research study, it was emphasized that exercise also makes significant contributions to psychological health and can be a way to relieve stress and provide a positive outlet for managing stress and emotions [20]. It has also been shown that exercise can help develop

teamwork and leadership skills, which are vital for success in school and beyond [21].

Despite the many benefits of exercise, female adolescents may face some social and physical barriers to participating in regular physical activity. A study by Lubans and colleagues showed some common barriers such as lack of time, lack of motivation, and perceived lack of ability [22]. In another study, it was mentioned that female adolescents might also face gender-specific barriers, such as social pressure to conform to traditional gender roles and expectations [7]. Body image concerns have also been emphasized in different studies as an essential barrier to exercise, especially for adolescent girls [23].

According to another research study, the concept of body image is another aspect of psychological health that can be positively affected by exercise [24]. Research suggests female adolescents are particularly vulnerable to negative body image due to pressures related societal to physical appearance [25]. The fact that exercise can improve body image in female adolescents explains how it can positively affect their psychological health [26]. A study by Burgess and colleagues found that participation in a regular physical activity program reduced body dissatisfaction in adolescent girls [27]. This result indicates that regular exercise may cause positive and beneficial psychological reflections in adolescent females.

Many studies describe the positive psychological contributions of regular exercise habits. Regular exercise has been found protective against the development of mental health disorders such as depression and anxiety [28]. It is also emphasized that exercise can be an effective treatment for depression

and anxiety [29]. In a study conducted by Gómez-López and colleagues, regular exercise was shown to have a significant positive effect on the mental health of female adolescents, which is important for the existence of synergy between exercise and psychological health [30]. Furthermore, a meta-analysis by Mammen and Faulkner found that exercise had a moderate effect on reducing symptoms of depression in adolescents [31].

CONCLUSION

Regular exercise and physical activity are known to have numerous benefits for the physical and psychologically developing of young adolescents. Exercise and sporting activities have been shown to help improve physical fitness, reduce depression, and increase self-confidence. These positive effects help to create a psychological support system in young people. In addition, it has also been observed that these regular sporting activities can help adolescents to purify themselves from negative thoughts and emotions and help them to achieve their individual goals. Moreover, it has been shown that sportive activities and regular physical activity habits can have a positive effect on self-esteem by improving body image, reducing anxiety and depression helping adolescents to set and achieve goals. On the other hand, it has also been shown that physical activity helps the development of feelings of self-criticism and may lead to an increase in self-esteem by reducing possible experienced feelings of during stress adolescence.

Exercise has been widely recognized as a beneficial activity for physical and mental health. In particular, research has shown that

exercise can increase self-esteem in adults and adolescents. However, the contributions of exercise to the sociopsychological development of female adolescents are pretty remarkable. In this article, we present a scientific review of the literature on the relationship between exercise and self-esteem in female adolescents and highlight the potential benefits of exercise for self-esteem, improving particularly adolescent development. Therefore, regular exercise habits should be encouraged to improve self-esteem and promote healthy sociopsychological development in female adolescents.

Therefore, it is of great importance to examine in detail the morphological, physiological, and psychosocial effects of regular physical activity on adolescent females and to identify its positive effects on adolescent health. Therefore, the therapeutic properties of physical activity should be carefully evaluated in the prevention and treatment of possible sociopsychological and other metabolic issues in adolescent females and they should be motivated to participate more intensively in sports activities.

In conclusion, the habit of regular physical activity is an essential factor in the physical and psychological development of young adolescents and its impact on self-esteem is particularly important. Scientific research has

found that sports and physical activity can not only support the social development of young people but also contribute positively to their psychological well-being in terms of body image. Due to the positive interactions between physical activity, character development, and self-esteem in young adolescents, encouraging children and young people to engage in sporting activities will be a very healthy and effective step in raising a healthy young generation.

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REFERENCES

- 1. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. Public Health Rep. 1985 Mar-Apr;100(2):126-31.
- 2. Sallis JF., & Patrick K. Physical activity guidelines for adolescents: a consensus statement. Pediatric exercise science, 1994;6(4), 302-314.

- 3. Santos-Parker JR, LaRocca TJ, Seals DR. Aerobic exercise and other healthy lifestyle factors that influence vascular aging. Adv Physiol Educ. 2014 Dec;38(4):296-307.
- 4. Colberg SR, Sigal RJ, Fernhall B, Regensteiner JG, Blissmer BJ, Rubin RR, Chasan-Taber L, Albright AL, Braun B; American College of Sports Medicine; American Diabetes Association. Exercise and type 2 diabetes: the American College of Sports Medicine and the American Diabetes Association: joint position statement. Diabetes Care. 2010 Dec;33(12):e147-67.
- 5. Baxter-Jones AD, Faulkner RA, Forwood MR, Mirwald RL, Bailey DA. Bone mineral accrual from 8 to 30 years of age: an estimation of peak bone mass. J Bone Miner Res. 2011 Aug;26(8):1729-39.
- 6. Ortega FB, Labayen I, Ruiz JR, Kurvinen E, Loit HM, Harro J, Veidebaum T, Sjöström M. Improvements in fitness reduce the risk of becoming overweight across puberty. Med Sci Sports Exerc. 2011 Oct;43(10):1891-7.
- 7. Tiggemann M. The status of media effects on body image research: Commentary on articles in the themed issue on body image and media. Media Psychology. 2014;17(2):127-133.
- 8. Reed J, Buck S. The effect of regular aerobic exercise on positive-activated affect: A meta-analysis. Psychology of Sport and Exercise, 2009;10(6):581-594.
- 9. Craft LL, Landers DM. The effect of exercise on clinical depression and depression resulting from mental illness: A meta-analysis. Journal of Sport and Exercise Psychology, 1998;20(4):339-357.
- 10. McHugh JE, Lawlor BA. Exercise and social support are associated with psychological distress outcomes in a population of community-dwelling older adults. J Health Psychol. 2012 Sep;17(6):833-44.
- 11. Zimmerman MA., Copeland LA, Shope JT, Dielman TE. A longitudinal study of self-esteem: Implications for adolescent development. Journal of Youth and Adolescence, 1997;26:117-141.
- 12. Davison KK, Markey CN, Birch LL. Etiology of body dissatisfaction and weight concerns among 5-year-old girls. Appetite. 2000 Oct;35(2):143-51.
- 13. Wardle J, Haase AM, Steptoe A. Body image and weight control in young adults: international comparisons in university students from 22 countries. Int J Obes (Lond). 2006 Apr;30(4):644-51.
- 14. Goh YY, Bogart LM, Sipple-Asher BK, Uyeda K, Hawes-Dawson J, Olarita-Dhungana J, Ryan GW, Schuster MA. Using community-based participatory research to identify potential interventions to overcome barriers to adolescents' healthy eating and physical activity. J Behav Med. 2009 Oct;32(5):491-502.
- 15. Lassi ZS, Salam RA, Das JK, Wazny K, Bhutta ZA. An unfinished agenda on adolescent health: Opportunities for interventions. Semin Perinatol. 2015 Aug;39(5):353-60.

- 16. Oral, U. Political Perception Of Generation Z in Turkey. International Journal of Advanced Science and Technology, 2020;29(11s):493 500.
- 17. Allison KR, Dwyer JJ, Goldenberg E, Fein A, Yoshida KK, Boutilier M. Male adolescents' reasons for participating in physical activity, barriers to participation, and suggestions for increasing participation. Adolescence. 2005 Spring;40(157):155-70.
- 18. Dwyer JJ, Allison KR, Goldenberg ER, Fein AJ, Yoshida KK, Boutilier MA. Adolescent girls' perceived barriers to participation in physical activity. Adolescence. 2006 Spring;41(161):75-89.
- 19. Gavin J., McBrearty M, Seguin D. The psychology of exercise. IDEA Health & Fitness Source, 2006;3(2).
- 20. Penedo FJ, Dahn JR. Exercise and well-being: a review of mental and physical health benefits associated with physical activity. Curr Opin Psychiatry. 2005 Mar;18(2):189-93.
- 21. Eime RM, Young JA, Harvey JT, Charity MJ, Payne WR. A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. Int J Behav Nutr Phys Act. 2013 Aug 15;10:98.
- 22. Lubans DR, Foster C, Biddle SJ. A review of mediators of behavior in interventions to promote physical activity among children and adolescents. Prev Med. 2008 Nov;47(5):463-70.
- 23. Kopcakova J, Veselska ZD, Geckova AM, van Dijk JP, Reijneveld SA. Is being a boy and feeling fat a barrier for physical activity? The association between body image, gender and physical activity among adolescents. Int J Environ Res Public Health. 2014 Oct 27;11(11):11167-76.
- 24. Cash TF, & Pruzinsky T. Body image: A handbook of theory, research, and clinical practice. Guilford Press. 2020.
- 25. Mendelson BK, White DR. Relation between body-esteem and self-esteem of obese and normal children. Percept Mot Skills. 1982 Jun;54(3):899-905.
- 26. Brunet J, Sabiston CM, Dorsch KD, McCreary DR. Exploring a model linking social physique anxiety, drive for muscularity, drive for thinness and self-esteem among adolescent boys and girls. Body Image. 2010 Mar;7(2):137-42.
- 27. Burgess G, Grogan S, Burwitz L. Effects of a 6-week aerobic dance intervention on body image and physical self-perceptions in adolescent girls. Body Image. 2006 Mar;3(1):57-66.
- 28. Craft LL, Perna FM. The Benefits of Exercise for the Clinically Depressed. Prim Care Companion J Clin Psychiatry. 2004;6(3):104-111.

- 29. Kilpatrick M, Hebert E, Bartholomew J. College students' motivation for physical activity: differentiating men's and women's motives for sport participation and exercise. J Am Coll Health. 2005 Sep-Oct;54(2):87-94.
- 30. Gómez-López M, Gallegos AG, Extremera AB. Perceived barriers by university students in the practice of physical activities. J Sports Sci Med. 2010 Sep 1;9(3):374-81.
- 31. Mammen G, Faulkner G. Physical activity and the prevention of depression: a systematic review of prospective studies. Am J Prev Med. 2013 Nov;45(5):649-57.