

The Effect of Physical Activity and Gender on Self-Esteem of Shiraz University Students

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Abstract

Introduction: Many studies have shown that social interactions resulting from participation in physical activities lead to an optimal state of self-esteem. The findings of previous research on gender differences regarding this factor, however, have not been consistent. In an attempt to fill this gap, this study is designed to investigate the effect of physical activity and gender on students' self-esteem in Shiraz University.

Methods: Random-Comparative method was employed to conduct this research. Population included all undergraduate students of Shiraz University. Participants were selected through random cluster sampling. 332 students filled out a Cooper Smith and Colleague's Questionnaire and the scores of 218 of them were analyzed. Two-way analysis of variance was administered for the analysis ($P \leq 0.05$).

Results: The results conveyed that the major impact of gender ($P=0.05$) and physical activity ($P=0.02$) on self-esteem were both significant. Active students had higher self-esteem compared to inactive ones ($P=0.02$) and the self-esteem scores of female students were higher than male students ($P=0.05$).

Conclusion: The results of this research indicate that participation in physical activities may improve the self- esteem of bachelor students studying in Shiraz University. Furthermore, the analysis of the results showed that female students enjoyed higher self- esteem.

Keywords: Self-esteem, Physical Activities, Gender

Introduction

Self- esteem is an individual's steady and consistent judgments and ideas about his/her values; in other words, it is how an individual evaluates, approves of, and endorses himself/herself (1). Researchers believe that self-esteem is a predictive factor that affects different outcomes including academic achievement and behavior. Thus, self-esteem can be claimed to be one of the major factors of social psychology. High self-esteem creates a sense of empowerment and worth in people. Other positive changes might include increasing efforts to succeed, ambition and enjoying better health (1). Self-esteem is an individual's emotional experience and evaluation of self-worth (2). There is a common belief that physical activities, including exercise, increase self-esteem in

youngsters. Exercise creates a feeling of competence and ability that may potentially boost self-esteem (1). Cooper Smith (1967) analyzed the merits, impact, significance and magnitude of self-esteem (3). Several factors such as social competence, physical appearance, athletic competence, age groups, social acceptability, peers, parental relationships, wittiness, occupational competence, mental ability, participation in sports, and body composition affect self-esteem (4). Santrock (2005) reported that physical appearance is also an important and contributing factor in the growth of self-esteem, resulting from school competitions, social acceptance, vis-a-vis and behavioral communications and fitness. Physical activity plays an important role in physical fitness and social acceptance (5). A number of researchers

including Mayorga *et al.* (2012) and Motl *et al.* (2005) believe that people will experience a higher level of self-esteem and their physical and mental status will also improve by exercising (6, 7). This is despite the decrease in the physical activities of children, especially men, during their growth time (8). Physical activity is described as any kind of bodily movement, originated by skeletal muscles, that requires energy expenditure (6). Physical inactivity is the fourth risk factor, and in general, one out of every three adults does not have enough physical activity (7). Level of physical activity in adolescents and young people is reduced due to a transition from secondary education to a career, job seeking, or pursuit of tertiary education. Although the physical activity level in men is generally higher than women, it tends to decrease in both during early and late adolescence. Studies have shown that physical activity and athletic participation contribute more to physical appearance, sport and social fitness (8). Physical activity and athletic participations, as factors influencing psychological variables, have been employed in several studies, but the results seem to contradict with the findings of previous studies. In the studies of Legrand *et al.* (2014), Zamani Sani *et al.* (2016), Abou Elmagd *et al.* (2015), Whitelaw *et al.* (2010), McClure *et al.* (2010), Bardel *et al.* (2010), Frost & McKelive (2005), Kristjansson *et al.* (2010), the role of physical activity as a positive factor affecting self-esteem is confirmed (9- 15). For example, in the study of McClure *et al.* (2010), decreased physical activity led to a decrease in self-esteem scores. Hemayattalab *et al.* (2003) showed that athlete students obtained higher grades than non-athletes (16, 17). On the contrary, Fazel *et al.* (2011) observed no significant difference between the self-esteem scores of athlete and no-athlete students (18, 19). The study of self-esteem in different lifetimes can have different results. This study focuses on adolescence and youth as spent in an academic environment. Camoes life is exciting and challenging when

many students have to handle stress and adapt themselves to the new environment. So they require special physical and mental coping abilities to gain accomplishments (13, 15). In their review, Biddle and Asare (2011) have shown that physical activity can improve self-esteem, but research on this topic is scarce (20). Changes of Self-esteem in different age groups, especially in adolescence and youth, were studied by Erol & Orth (2011), McClure *et al.* (2010), Basich (2006), (16, 21, 22). For example, Erol and Orth (2011) showed that self-esteem increases during the adolescence, but it decreases afterwards and no difference was observed in among men. But Basich (2006) concluded that active teenage girls' self-esteem was greater than that of inactive girls (21, 22). Most studies that have been conducted to investigate the relationship between gender and self-esteem, including Arens & Hasselhorn (2014), Walters and Martin (2000) (23, 24), did not show any significant differences in self-esteem scores between men and women. Still, Bleidorn *et al.* (2015), and Mir-Haydari *et al.* (2010) reported higher self-esteem in men (18, 25). On the other hand, studies conducted by Fazell *et al.* (2011), Bhardwaj and Agrawal (2013) showed that the women's self-esteem is far higher than that of men (19, 26). Due to these inconstancies, the present study seeks to examine the gender differences in self-esteem in university students by considering their physical activity. It is designed to investigate the effect of physical activity and gender on the self-esteem among the students of Shiraz University.

Methods

First, Ethics Committee of Shiraz University was consulted before collecting information from the students. The data were taken from the students studying in the Department of Education. The participants consisted of all students of Shiraz University with the average age of active men (21.30) and standard deviation (1.83), the average age of inactive

men (20.26) and standard deviation (1.82), and the average age of active women (19.52) and standard deviation (1.41), the average age of inactive women (20.39) and standard deviation (1.42) who were students of Shiraz University during the academic year of 2010-2011. Based on the size of sample, 332 of Shiraz University students were selected through random cluster sampling. Subjects were categorized into two groups based on physical activity and gender variable based on the definition presented by Malina and Bouchard (2004), they are called as active and inactive groups. Then, they were asked to complete Cooper Smith Questionnaire (1967) (3, 8). According to the Cooper and Smith questionnaire, only 218 students crossed this filter and the data of their questionnaire was used in the study. Individual characteristic questionnaire was used to determine the level of physical activity and gender of subjects. Cooper smith questionnaire (Rev. 1967) was the instrument that was used for revision. The questionnaire has 58 items, all of which are scored as zero or one. If the participant provides an affirmative response, the score is one, otherwise it is zero. The rest of the questions are scored in reverse order. It should be noted that 8 out of 58 items of the questionnaire are lying, in such a way that if a subject of these eight elements of a liar has scored more than 4 points, this means trying to better out what it is, and if the subject is not eligible (Score more than 4 in these 8 items) it should be excluded. So the score ranges between zero and fifty. The higher an individual's score, the higher their self-esteem.

The reliability of this questionnaire is confirmed in many studies. Mahdavi, Enayati and Nisi (2008) calculate it to be 0.6, Pourfarji (2001) 52.0 and in Cooper Smith's (1981) foreign studies (27-29). Finally, the collected data were analyzed by using SPSS version 16 and two way analysis of variance ($P \leq 0.05$).

Results

Statistical indices including mean and standard deviation of age and self-esteem scores according to the level of activity of the participants are presented in Table 1. The application of two way analysis of variance for analyzing the data was based on the gender of the participants and the levels of activity/inactivity. The findings are presented in Table 2. The results convey that the effect of gender variables ($P=0.05$) and level of student activity ($P=0.02$) on their self-esteem scores were significant. However, the interactive effect of these two variables on self-esteem is not significant ($P=0.74$). the comparison of mean score in self-esteem, obtained by active male students (32.8) with that of inactive students (29.89) and that of self-esteem scores in active students (36.1) with inactive ones (32.2) showed that active students possess higher levels of self-esteem. Also, the mean score of self-esteem in active women (36.1) was higher than active men (32.8). In addition, the total mean of self-esteem scores of women (active and inactive) was higher than the average of total self-esteem scores for men (active and inactive).

Table 1. Mean and standard deviation of age and self- esteem scores of active and inactive men and women

Gender	Level of Physical Activity	Number	Mean Age	Standard deviation Age	Mean Self esteem	Standard deviation Self Esteem
Women	Active	36	19.52	1.41	36.1	6.47
	Inactive	86	20.39	1.42	32.2	7.09
Men	Active	32	21.3	1.83	32.8	7.7
	Inactive	64	20.26	1.82	29.89	9.3

Table 2. Results of two factor analysis of variance

Factor	Sum of squares	df	Mean of squares	F	Sig
Gender	24.4	1	24.4	3.9	0.05*
physical Activity	343.7	1	343.7	5.5	0.02*
Interaction of physical activity and gender	6.8	1	6.8	0.11	0.74
Error	9217	149	61.8		
Total	167594	153			

* Significant difference at the level of $p \leq 0.05$

Discussion

The purpose of this study was to investigate the effect of physical activity and gender on the self-esteem of Shiraz University students. The findings convey that there is a significant difference in self-esteem with respect to gender. Women scored higher (68.3) than men (62.6) in their self-esteem evaluation. This is inconsistent with the findings of Arens and Hasselhorn (2014), Walters and Martin (2000), where there was no significant difference between men and women (23, 24). Likewise, Erol and Orth (2011) showed no significant difference in the self-esteem scores of men and women while McClure *et al.* (2010), and Mirhaydari *et al.* (2010) showed higher self-esteem scores in men (18, 20, 24). This can be attributed to factors such as the presentation of a training program, disparities in age groups, employment of different self-esteem questionnaires, and the control of specific factors, including socioeconomic status. However, the findings agree with those of Fazel *et al.* (2011) and Bhardwaj and Agrawal (2013) who observed higher self-esteem scores in women (19, 26). In connection with the previous factors, level of education similar to those of the subjects and, more recently, paying particular attention to the education of women were pointed out. Also, our findings showed a significant difference in self-esteem score with varying levels of activity. So that

active students scored higher self-esteem (69.9%) as compared to inactive students (62.09). This is consistent with the findings of Sonstroem *et al.* (1994), Kristjánsson *et al.* (2010), Frost and McKelvie (2005), Bardel *et al.* (2010), McClure *et al.* (2010) and Whitelaw *et al.* (2010) (9, 11, 12, 14, 16) who maintain the impact of physical activity on the self-esteem. However, the findings contradict those of Mirhaydari *et al.* (2010), and Fazel *et al.* (2011) (18, 19). This inconsistency may have resulted from the application of different programs such as physical fitness, lack of regular participation in physical activities, socio-cultural differences, different self-esteem measurement instruments, different age groups, the maturity status of subjects, and subjects' academic achievement. Finally, our findings showed a significant difference in the interactive effect of physical activity and gender. What is evident so far, is not resulted from a comprehensive study on the effects of various factors on self-esteem. Obviously, self-esteem is influenced by factors beyond physical activity. These factors consist of other psychological, socio-economic and physical aspects, and further research is required to determine their impact.

However, more coherent research should be conducted to confirm these important results. Considering the importance of self-esteem in young students, authorities, managers and

coaches are recommended to pay closer attention to educational, cultural, research, and sport environments to increase the students' self-esteem, especially among men.

Conclusion

The results of this study demonstrated that women's self-esteem are higher than that of men, which is not consistent with the results of the previous studies. Considering the potential impact of some of the factors that affect self-esteem, such as academic environment and dormitories, academic contexts and spaces, especially in the case of men, should receive further attention. Also, considering that women are more prone to benefit from social interactions than men, the attention of authorities to aspects affecting self-esteem and interventions to improve the self-esteem of male students is necessary. The results also confirm the importance and role of physical activity as an effective factor on self-esteem. A closer look at the score of active women and men is re-observed. The effect of physical activity on the role of gender in women has been more effective in self-esteem than men.

Ethical issues

Not applicable.

Authors' contributions

All authors equally contributed to drafting and revising this paper.

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