

Original Article

Sport as an effective goal to increase self-concept and hope: a comparison study between athlete and non-athlete women with visual impairments

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Abstract

Background: Nowadays, improving the quality of life for individuals with physical disabilities is a goal of rehabilitation. Among these, one of the most common and important physical disability groups is the Visual Impairment (VI). The aim of the present study was to compare the VI in athlete and non-athlete women in terms of self-concept and hope.

Methods: In the present case-control study, 120 blind athlete and non-athlete women, resident of Tehran (60 participants in each group), were selected using simple random sampling method, according to the list provided by Goal Ball and Track-and-Field teams of the Blind and Visually Impaired Federation (60 blind athlete women) and Association of the Blind, Visually Impaired, and White Cane (60 blind non-athlete women) from March 2015 to August 2016. Both groups responded to Rogers' self-concept and Snyder's hope scales. Data were analyzed using t-test for independent measures.

Results: The results showed that there was a significant difference between two VI groups of athletes and non-athletes in terms of real self-concept ($t=6.02$, $P<0.001$), ideal self-concept ($t=3.6$, $P=0.005$), and hope ($t=4.4$, $P<0.001$). Therefore, the VI athlete women had better self-concept and higher hope compared with the non-athletes.

Conclusion: According to the findings, it seems that the exercise and physical activity, as a facilitating and health-promoting factor, plays a significant role in two variables of self-concept and hope in blind women. Hence, the inclusion of sport activities in programs for disabled people, especially for the VIs, can significantly be helpful to improve their psychological state.

Keywords: Athletes; Blindness; Self Concept; Visually Impaired Persons

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Introduction

Globally, 283 million people are visually impaired, of whom 36 million are blind. Over 90% of these people live in the developing and poor countries (1). In Iran, 600-700 thousand people have visual impairments (VIs) and 115,000 are blind (2). Blindness and VIs cause problems in the psychological-social adjustment and, as a result, low self-esteem (3).

In addition, several studies have suggested that individuals with VIs have less physical activity and their low social activities make them have lower self-esteem compared with their counterparts (4). Physical activity is an important factor for physical health and psychological well-being (5).

Accordingly, lack of psychological well-being and low self-esteem lead to lower life expectancy and negative self-perception in individuals (6).

Generally, self-concept refers to the individuals' perception of themselves, and its comparison with that of others, which greatly influences their thinking, emotions, and desires (7). Physical self or physical self-concept, self-esteem, and self-image are components of self-concept. Physical self-concept is synonymous with physical self. Physical self-concept has elements including body awareness, schema, and image (8).

Body image is a mental picture of the person as a physical appearance, and includes body fitness indices according to the physical performance indicators (7). Physical self-concept as one of the dimensions of non-academic self-concept indicates the individuals' attitudes toward their own physical abilities and skills, such as body appearance, body fat, flexibility, coordination, endurance, and strength (8).

Self-concept enhances with readiness, strength, and good appearance. With exercises and physical activity, there is a lot of desire for life and self-censorship. One of the most important rehabilitation activities for blind people is to encourage them to do sport activities, which will be effective not only in fostering physical fitness but also in providing their mental health (9).

A previous study has revealed that physical activity and self-concept can have a positive effect on body image and body mass index of the athletes with VIs (10). Exercise, compared to other therapies, has more positive effects on blind and visually impaired people, and blind athletes, compared with their non-athlete counterparts, have more positive perceptions and attitudes toward their own body and self-esteem (11).

High self-esteem is associated with hope, optimism, and health (12). For example, hope increases the self-esteem (13). According to Snyder, hope is a positive

motivational state resulted from the individual's interaction with the environment and indicates the person's ability and imagination in creating new routes toward desired goals (14). Due to low social participation, lack of participation in groups, and little communication interaction, children with VI often have lower meaning of life and hope compared with their counterparts (6, 15). Having to deal with their psychosocial barriers, lack of regular sport-recreational programs, and the very nature of disability, the blind have less chance of participating in sport and entertainment programs; hence, they have lower self-concept and poorer self-efficacy (16).

In brief, considering the effect of participation in sport activities, they have positive impact on physical self-concept, the feeling of vitality, and physical and mental health among VI persons. Therefore, the present study was conducted to compare the athlete and non-athlete VI women in terms of self-concept and hope in Tehran. Another aim of the present study was to clear the role of sport as an important source of support for more physical and mental health in helping the VIs persons.

Methods

The research method chosen for the present study was case-control. To collect the data, 120 blind athlete and non-athlete women (60 participants in each group), were selected using simple random sampling method, according to the list provided by Goal Ball and Track-and-Field teams of the Blind and Visually Impaired Federation (60 blind athlete women) and Association of the Blind, Visually Impaired, and White Cane (60 blind non-athlete women) from March 2015 to August 2016. The inclusion criteria were a) being resident of Tehran, b) interest in participating in the study, c) blindness and low vision according to the definition of World Health Organization (WHO), d) age of 20-35 years, e) degree of blindness and VIs confirmed by the Physician of the Blind Sport Board,

f) regular exercises in a certain sport, and g) membership in the Blind Sport Board. In addition, non-athlete participants were the visually impaired persons registered in Association of the Blind, Visually Impaired, and White Cane. Exclusion criteria were the blind who were unwilling to participate in the current study and had physical disabilities or psychological problems diagnosed by a physician.

Carl Rogers' self-concept scale was used to measure the self-concept. The scale was designed to measure the individuals' self-awareness, including two separate forms of A and B. Form A assesses the actual self, meaning who we are based on our self-concept score and Form B measures the ideal self, indicating who we wish we were as a person. In each form, 25 positive and negative polar traits were placed. The participants had to first respond to Form A based on images they had about their features and traits, and then Form B according to their wishes and ideals. Against each trait, the opposite was written too and the participant had to evaluate herself according to the two traits and give herself a score between 1-7. The validity coefficient of the test was 0.80 using the split-half method. This questionnaire was translated into Persian and the internal consistency of the test was measured and validated using test-retest method and reported to be 0.84 (15). In the present study, the reliability of this questionnaire was measured using Cronbach's alpha test and found to be 0.81.

Snyder's hope scale was used to measure hope. This 12-item scale, containing two pathway and agency subscales, was designed by Snyder et al. for the respondents older than 15 years, and the questionnaire took only a few minutes (about 2-5 minutes) to complete. A 4-point continuum scale ranging from 1 (definitely false) to 4 (definitely true) was considered for responding to each question. Items 3, 5,

7, 11, the distractors, were not scored. Items 1, 4, 6, 8 were related to pathway subscale and items 2, 9, 10, 11 were associated with agency subscale. Therefore, the total score varied from 8 to 32. Snyder et al. also reported its validity to be 0.85 after three-week retest (6). In Persian, the reliability of Hope questionnaire was calculated via test-retest method and reported to be 0.81. The Cronbach's alpha of this questionnaire was 0.86 (16).

Demographic information included VIs' age, marital status, occupational status, and Educational level.

A number of people introduced by the Association of the VIs were classified in non-athlete group and those introduced by the Blind Sport Board were allocated in athlete group. Then, the research goals were explained for the selected VIs women and the written consent was obtained from them. Then Rogers' self-concept and Snyder's hope scales were distributed among the participants. Due to the blindness of the participants, the questionnaires were read and completed by the researcher. In order to observe the ethical considerations, in addition to describing the research objectives for the authorities of the relevant centers and participants, participants were allowed to have full authority to enter and exit the present study and to receive the test results, if desired. Finally, the questionnaires completed by the participants were coded assuring the participants about the confidentiality of the results. Data were analyzed using t-test in IBM SPSS Statistics for Windows, Version 22.0. P value of lower than 0.05 was considered as statistically significant.

Results

The mean (SD) ages of VIs athlete group and VIs non-athlete group were 29.6 (7.92) and 30.7 (7.14) years, respectively. Other socio-demographic characteristics of the participants are illustrated in Table 1.

Table 1. Socio-demographic characteristics of participants

Variable		Athlete VIs	Non-Athlete VIs	P
		N (%)	N (%)	
Marital status	Married	13 (21.7)	14 (23.4)	0.61
	Single	47 (78.3)	46 (76.6)	
Education	High school	26 (43.3)	28 (46.7)	0.54
	Diploma	27 (45)	26 (43.3)	
	Higher than diploma	7 (11.7)	6 (10)	

Table 2. Comparison of real self-concept, ideal self-concept and hope between athlete VIs (group 1) and non-Athlete VIs (group 2)

Variable	Group	Mean±SD	t	df	P
Real Self-concept	1	7.6±1.96	6.02	1	<0.001
	2	5.5±2.23			
Ideal Self-concept	1	6.2±2.56	3.6	1	0.005
	2	3.9±2.55			
Hope	1	30.4±1.08	4.4	1	<0.001
	2	24.4±1.03			

The results of t test showed that Athlete VIs had significantly higher scores in real self-concept ($t=6.02$, $P<0.001$), ideal concept ($t=3.6$, $P=0.005$), and hope ($t=4.4$, $P<0.001$) in compare with non-Athlete VIs (Table 2).

Discussion

The present study was conducted to compare the self-concept and hope of VIs athlete and non-athlete women. The results demonstrated that the VIs athlete women achieved higher self-concept and hope scores compared with those of the VIs non-athlete, which is consistent with the findings of the previous studies. In those studies, the researchers concluded that self-concept was significantly more positive in the VIs athlete females than in their non-athlete counterparts (17-19). Naturally, as the age of children increases, they tend to socialize with peer group more than with their parents and siblings, but among VIs persons, the growing up process to adulthood is different. They have the physical and movement limitations; therefore, the probability of participating in social activities is much lower for them than for their sighted counterparts. As a result, lack of individual autonomy and

psychological well-being damage their self-esteem and self-concept (20).

Hadidi et al. pointed out that the visually impaired people have lower self-esteem compared with sighted ones, because the challenges they encounter in life differ from those of sighted people (22). The challenges faced by blind people must be recognized to better understand how their self-esteem and self-concept is to be developed (23). Tuttle et al. emphasized that the psychological principles involved in the development dynamics of the self-concept and self-esteem are equal for sighted and blind people, while the blind individuals have lower self-esteem and negative self-concept because their problems in life and the way of dealing with them are different from those of the sighted individuals (24).

Having a positive self-concept, the blind and visually impaired people need positive compatibility with the demands of life, and participation in sport and recreational activities and in community can give them greater ability for compatibility in society and, as a result, positive self-concept. Consequently, participation in sport activities can help to develop these abilities and the well-being of the blind people,

and thus can allow them to encounter with new challenges and to assess their capabilities (23). Moreover, participation in sport activities can result in psychological health, formation of friendly relationships, positive evaluation of self-esteem and self-concept, healthy habits, and life satisfaction (17).

In this study, compared with non-athletes, VIs athletes achieved higher life expectancy scores. In general, self-concept, self-esteem, and emotional and social adjustment in humans are important aspects of psychological well-being, and have a close relationship with quality of life and ultimately hope. People with more positive self-concept have higher hope (23).

Self-esteem and self-concept of a person depend on the psychological compatibility, quality of life, compromised behavior, friendship, motivation, academic performance, and success in life (25). In fact, self-concept and hope play an important role throughout the developmental stages of a person's life from childhood to adulthood (23, 26-28).

The current study had some limitations, which need to be taken into consideration. First, the statistical sample of blind and visual impaired athletes was merely the ones registered by the Sports Federation, and blind non-athlete women were solely selected from the registered females of blind and visual impaired institutions and associations in Tehran. Second, this is a causal-comparative study and has been carried out only at a given point in time so that no cause and effect results could have been obtained.

Finally, it is suggested that the rehabilitation specialists should pay special attention to the role of sport activities, as it is important to improve the level of self-concept and life expectancy in the blind and visually impaired people, the level of the community participation and the effective social communication. In addition, the municipalities should attempt to remove the physical barriers and movement constraints, and create suitable urban

spaces for more effective social participation of the blind and visually impaired people.

To create positive self-concept and life expectancy in the VIs, participation in recreational and sport activities, a more extensive presence in the community and encouragement of individual autonomy are valuable points to remember. In so doing, exercise as an important variable in promoting positive self-concept and hope in the blind and visually impaired people plays a pivotal role. Thus, rehabilitation-counseling specialists must pay more attention to exercise programs for participation of the blind and visually impaired people.

Conflict of interest

Authors declare no conflict of interests.

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