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RESEARCH ARTICLE

Physical Self-Concept Among Deaf and Hard-of-Hearing People Practicing Swimming

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Abstract
Purpose: to identify the level of physical self-concept among deaf and hard of hearing people who practice swimming, as well as identifying the differences according to the variable (management and training/sports rehabilitation). The study sample consisted of ten deaf and hard of hearing people studying physical education at Hashemite University their average age (21 year), average weight (60 k.g.) average length (157 c.m.). **Methods:** The research used a descriptive approach using the questionnaire for its suitability to the nature and objectives of the study. The researchers also conducted transactions of honesty and stability on the study tool to ensure its suitability for the study, where the data were processed statistically using (Frequency, Percentage Means, SD, t-test). **Results:** The results indicated that the level of physical self-concept among deaf and hard of hearing people practicing swimming came with average (4.65) and SD (0.27) wich means high level of self-consept. The results showed no statistically significant differences according to specialization .**Conclusion**: The researchers recommend conducting more studies on other categories of people with disabilities.

Keywords
Physical Self-Concept, Deaf And Hard of Hearing, Swimming

INTRODUCTION

Sport reflects the development of society and is the spacious field through which a person can integrate into society. Sport is an effective tool in guiding individuals in maintaining their physical health and mental well-being through the development of their physical and intellectual abilities and capabilities. Sport is for all, and society should provide “the opportunity to practice various sports activities for each individual in society according to his potential and abilities” (Ahmad, 2021). Sports should not be exclusive to one segment or group in society, given their positive effects that benefit practitioners.

The practice of physical activities has become a necessity associated with preventive health care, as studies have confirmed the positive effects of physical activities on various body systems. For persons with disabilities, physical activity may be doubly important, as it is not only preventive but also rehabilitative (Goodman, 2002).Swimming is a beautiful, purposeful, and useful sport, which has remarkable health impacts. Swimming enhances muscle development, body coordination, and joint flexibility. As an activity that engages all the muscles of the body, especially the muscles of the spine, swimming often helps with body deformities, such as curvature of the back, curvature of leg bones, and rickets. It also

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regulates the breathing process, activates the circulatory system, and helps with digestion. Hence, swimming is unlike any other sport in terms of promoting the growth of the ideal body composition (Hussein, 2000).

Another benefit of swimming is that it develops courage. In descending to an environment different from the land to which they are accustomed, swimmers learn to trust in their ability and later develop a sense of pleasure and comfort during practice. Indeed, swimming has many psychological benefits. It helps increase self-confidence and develop personal and psychological traits, forming among swimmers a special positive concept of themselves as well as contributing to increasing relaxation (Abu Eid, 2004). However, given that the sport of swimming needs its practitioners to have a great degree of mental, psychological, and physical development, researcher believes that it is necessary for swimmers, especially deaf and hard of hearing swimmers, to enjoy the concept of high physicality for them to perform swimming skills with high efficiency.

Hence, the importance of the physical self-concept of deaf and hard of hearing people and its impact on their integration into society merit investigation. Researcher believes that the physical self-concept of the player can develop and improve the level of performance, as a swimmer's lack of self-confidence would hinder their performance of swimming skills to the fullest. In view of the importance of the physical self-concept of the deaf and hard of hearing in various sports in general and swimming in particular, and through our work at Hashemite University, we considered the idea of highlighting an important element affecting the psychology of deaf and hard of hearing people, namely, self-concept, which may have the largest role in improving the level of skill performance in their swimming practice.

The concept of self, as discussed by Sherrill (1998), has two meanings. The first is the traditional definition of the sum of all beliefs and intentions that a person holds. The second relates to the observational and measurable knowledge that a person holds about himself/herself. The individual's awareness of their appearance, physical ability, and role in life is of great importance in determining the self. Positive self-perception makes the individual more confident and optimistic about future expectations.

Manning (2006) believed that "the individual always seeks to form an ideal image of himself by him and others, through his actions and relationships with them, and positive consideration of the self is a need that the individual seeks." El-Shennawi, et al. (2001) proposed that self-concept is one of the important dimensions of human personality because of its great impact on the behavior and actions of the individual. Self-concept begins to develop from the first years of a child's life and is affected by many factors, such as experience, maturity, practice, perception, and heredity. Harafsha et al. (2010) pointed out that self-concept is also affected by internal factors, such as mental and physical ability, which affect the individual's self-assessment, and external factors, such as the perception of others.

We believed that the concept of a high physical self can give internal support to individuals' physical ability, influence the manifestation of abilities and capabilities during physical activity, and thus affect the level of performance. Moreover, the concept of physical self is the sport enthusiasts' appreciation of the physical characteristics and qualities that they possess and their awareness of the strengths and weaknesses of their physical abilities during the practice of sports activities. Indeed, Levy and Ebbeck (2005) argued that a positive self-concept leads to high physical efficiency and, thus, good athletic returns. The more an individual knows the limits of their abilities, the more effective they are and their ability to interact with different situations during play (Karaki & Mahmoud, 2009). Individuals with a negative self-concept tend to have poor confidence in their motor abilities and psychological compatibility (Al-Hamdani, 2018).

We reviewed previous studies related to swimming and its association with social, psychological, and physical concepts among deaf and hard of hearing people. We also reviewed previous studies and related to the study variable of physical self-concept.

Hassan (2012) studied the concepts of physical and skill self and their relation to skill performance in the game of five-a-side football. Hassan (2012) used a descriptive approach and a survey method, and their research sample included 25 students of the Department of Sports Education One of the most important results was that the physical self, the third stage, has a positive significance and statistical significance in the five-

a-side football lesson in sport. Hassan (2004) had earlier conducted a study on physical self-esteem and its relation to the accuracy of the performance of offensive skills in volleyball. The study sample consisted of 12 volleyball team players. The results showed a positive relationship between the physical self and the accuracy of offensive skills in volleyball.

Al-Sorour (2003) conducted a study aimed at building an educational program for training teachers in the implementation of exercises that develop the self-concept of students. After applying the program, which included 126 training modules on various topics, to a number of schools in Jordan and Bahrain, Al-Sorour (2003) concluded that the self can be developed through the educational program. The program helped in the formation of a personality and in preparing the individual for life.

Owainat (2001) identified the impact of practicing sports activities, gender, sports level, and experience on self-concept among secondary school students in Tafila Governorate, Jordan. The study included 733 students practicing sports activities and 535 students who did not practice sports activities. Using the Pierce–Harris Self-Concept Scale, Owainat (2001) reported statistically significant differences between the two groups in favor of practitioners of sports activities. The study also found that the athletic sample had a higher level of self-concept compared with the rest of the sample.

Therefore, our study aimed to measure the physical self-concept of deaf and hard of hearing people practicing swimming. To the best of our knowledge, no previous studies have dealt with the topic of physical self-concept among deaf and hard of hearing people. We hoped to fill the research gap on the measurement of the self-concept of deaf and hard of hearing people. Our findings could contribute to the literature on the important topic of the relation between swimming and physical self-concept of deaf and hard of hearing people.

Researchers and psychologists have become increasingly interested in self-concept as a personality trait that expresses an individual's self-perceptions and experiences. Self-concept has been defined as "a psychological term used to express a hypothetical concept that includes all opinions, ideas, feelings and attitudes that an individual has about himself, and also includes the individual's beliefs, convictions, past experiences and future ambitions" (Dowidar, 1992). Moreover, the concept of physical self-concept is an important element of deaf and hard of hearing swimmers, affecting their performance and technical level. We have observed that swimmers with a high physical concept are characterized by distinctive performance, which prompted us to study this factor for deaf and hard of hearing swimmers.

Specifically, our study aimed to identify the level of physical self-concept of deaf and hard of hearing swimmers and to assess differences in the level of physical self-concept among deaf and hard of hearing people according to specialization. We addressed the following study questions: What is the level of physical self-concept among deaf and hard of hearing people practicing swimming? Are there statistically significant differences (at $\alpha \leq 0.05$) in the level of physical self-concept due to the variable of specialization?

MATERIALS AND METHODS

We used a descriptive approach to suit the nature of the study and its objectives. Our study population consisted of deaf and hard of hearing students in the Faculty of Physical Education and Sport Sciences at Hashemite University, numbering 18 male students, according to the 2023 records of the Admission and Registration Unit at the university. We then deliberately selected the study sample to include 10 male students who practiced recreation swimming 3 days aweek/ 2 hours each day. One was excluded due to sports injury. Our independent variable was specialization, whereas our dependent variable was the level of physical self-concept. Table 1 indicates the distribution of the sample according to the study variables. Ethical Approval was received by the Ethics Committee at Hashemite University no. 27/4/2022/2023).

Table 1. Sample Distribution by Study Variable

Study variable	Age average	Length average	Weight average	Department	N	%
Specialization	21 year	175 cm	60 kg	Management & Training	7	70
				Sport Rehabilitation	3	30

Data Collection Tools

We adopted the physical self-description scale (Al-Hamdani, 2018). The scale consists of 10 fields: external appearance (1-6), obesity (7-12), muscle strength (13-18), endurance (19-24), flexibility (25-30), compatibility (31-36), health (37-42), physical activity (43-48), sport proficiency (49-54), and comprehensiveness of the physical aspect (55-60).The scale contained 60 items; 40 were positive items (1,4,5,6,8,9,10,13,14,16,17,18,19,20,21,23,25,29, 30,31,32,35,36,38,39,40,43,44,46,47,50,51,53,54, 56,57,58,59,60) and 20 were negative items.(2,3,7,11,12,15,22,24,26,27,28,33,34,37,41,42,45, 48,49,52) Participants were asked to answer the questionnaire according to the degree of applicability of the statements on a scale from 5 ("it applies to me to a very large degree") to 1 ("it does not apply to me at all").

Tool Validity and Reliability

We consulted with a group of (6) professors in the field of physical education and special education and asked them to review the questionnaire. After considering the questionnaire with respect to the purposes of the study, they confirmed its validity.

Next, we verified the reliability of the physical self-concept scale for deaf and hard of hearing people using the Cronbach's alpha (0.91).The final form of the scale consisted of 60 items, and the level of physical self-concept was divided into three categories: 1–2.33, low; 2.34–3.66, average;3.67–5, high.

Statistical analysis

To process the statistics, we used arithmetic averages, standard deviation, and *t*-test.

RESULTS

Regarding the first question on the level of physical self-concept among deaf and hard of hearing people practicing swimming, we calculated the arithmetic averages and standard deviations of the responses of the study sample on the self-concept scale (Table 2). Table 2 shows that the level of self-concept among the study sample was high, with an arithmetic mean of 4.400 and a standard deviation of 0.277.

Table 2. Arithmetic averages and standard deviations of the level of physical self-concept among the study sample

Variable	Mean	SD	Level
Physical self-concept	4.400	0.277	High

Table 3 gives the arithmetic averages and standard deviations of the responses to the physical self-concept scale.

Table 3. Arithmetic averages and standard deviations of the responses to the physical self-concept scale (External Appearance, Obesity, stringth, endurance, flexebility, compatability, health, physical activity, sport proficiency, and comprehensiveness of the physical aspect)

	No.	Statement	mean	SD	Level
External Appearance	1	My external appearance is better than that of those my age.	4.24	0.55	High
	2	I'm obviously fat.	3.11	0.45	Medium
	3	I can't easily carry heavy stuff.	4.10	0.75	High
	4	I can easily run long distances without stopping.	4.04	087	High
	5	My body is flexible.	4.21	0.66	High
	6	I feel confident in myself when I make some movements that need neuromuscular coordination	4.54	0.54	High
Obesity	7	I don't have strong immunity to a lot of diseases.	3.98	0.12	High
	8	I do physical activity several times a week.	4.47	0.41	High
	9	Most of my colleagues think I'm good at sports.	4.32	0.22	High
	10	I feel good about my body.	4.31	0.81	High

	11	My face is not very acceptable.	4.12	0.74	High
	12	I have a very wide middle.	3.45	0.84	Medium
	13	I'm a physically strong person.	4.54	0.41	High
stringth	14	I can do well in any test.	4.42	0.41	High
	15	I think I don't have enough physical flexibility for most sports activities.	4.36	0.77	High
	16	I'm good at performing matching movements in swimming	4.56	0.31	High
	17	I rarely get sick.	4.12	0.71	High
	18	I often do physical activities that require obvious effort.	4.31	0.87	High
endurance	19	Most sports activities seem easy to me.	4.49	0.41	High
	20	I'm proud of my physical self.	4.41	0.66	High
	21	My body looks better than that of most of my colleagues.	4.12	0.55	High
	22	I weigh too much.	3.54	0.45	Medium
	23	I have a great degree of strength.	4.65	0.21	High
	24	When I do physical activities, I get tired quickly.	3.65	1.01	High
Flexability	25	I can easily bend my body parts and move them in different directions.	4.31	0.75	High
	26	It's hard for me to control my body when performing some agility or coordination movements.	4.32	0.65	High
	27	I feel that I have immunity to many diseases	3.74	0.12	High
	28	I feel that I have immunity to many diseases.	4.50	0.71	High
	29	I engage in physical activity several times a week.	4.45	0.67	High
	30	I'm better at sports than most of my colleagues.	4.44	0.74	High
Compatability	31	I'm happy with my physical self.	4.21	0.66	High
	32	My physical appearance looks good.	4.41	0.54	High
	33	My body is not strong and my muscles are not toned.	3.31	1.37	Medium
	34	I feel unable to practice sports activities that require physical endurance.	4.22	1.16	High
	35	I think I can do well in tests that measure body flexibility.	4.50	0.41	High
	36	I find that my body responds to movements that need harmony and agility.	4.46	0.52	High
Health	37	I get sick more than most people my age.	4.00	0.66	High
	38	I regularly do a variety of physical activities.	4.32	0.49	High
	39	I have good sports skills.	4.66	0.41	High
	40	I am completely satisfied with the nature and state of my body.	4.32	0.51	High
	41	Many believe that my physical appearance is not good.	4.08	0.67	High
	42	Owing to my obesity, it is difficult for me to buy suitable clothes.	4.53	0.79	High
Physical activity	43	I can do well in any muscular strength test.	4.52	0.67	High
	44	I think I can run long distances without feeling tired.	4.41	0.75	High
	45	My body is not flexible.	4.32	0.77	High
	46	I can easily perform movements in most sports activities.	4.41	0.31	High
	47	I don't get sick as much as most of my colleagues do.	3.83	0.71	High
	48	I don't have more free time to exercise.	3.83	1.11	High
Sport profeciance	49	I think I'm not good at sports.	4.02	0.66	High
	50	I feel good in terms of my physical abilities.	4.58	0.56	High
	51	I have a very acceptable face.	4.25	0.85	High
	52	Most of my colleagues think I am fat.	3.62	0.47	Medium

	53	I'm physically stronger than most people my age.	4.98	0.90	High
	54	I have good abilities at activities that require physical endurance.	4.24	0.62	High
Comprehensiveness aspect	55	I can easily bend, stretch, and rotate my body in various directions.	4.45	0.77	High
	56	I am agile and have the ability to get along when playing sports or any other activity.	4.65	0.66	High
	57	When I get sick, it takes a long time for me to recover.	3.82	0.71	High
	58	I do sports activities every day.	4.41	0.54	High
	59	I'm good at many sports activities.	4.50	0.52	High
	60	I feel a sense of acceptance and satisfaction regarding the nature of my body.	4.52	0.52	High
	Total		4.65	0.27	High

Table 3 shows that item 53 ("I'm physically stronger than most people my age.") was scored the highest, followed by items 39 ("I have good sports skills."), and item 56 ("I am agile and have the ability to get along when playing sports or any other activity."). Meanwhile, item 2 ("I think I look fat.") was scored the lowest. The high score for item 53 may be explained by the self-confidence and high physical self-concept among deaf and hard of hearing people, acquired and developed through participation in swimming activities.

Table 4. Arithmetic averages, standard deviations, and *t*-test results of the physical self-concept scale according to the exact specialization variable

Variable	Specialization	mean	SD	Degrees of freedom	*t* value	Significance
Physical self-concept	Sports Management & Training	4.43	0.21	9	0.59	0.50
	Sports Rehabilitation	4.31	0.14			

DISCUSSION

We believed that through the swim practice of deaf and hard of hearing people, they gained different experiences, which directly affected their personalities, whether in the psychological, physical, or social aspects, given that sports activity, in general, and swimming, in particular, has many benefits and directly affects the physical, psychological, and social aspects of practitioners. Indeed. It also develops the physical fitness of the physically disabled swimmer in general." Our results also coincided with those of Al-Sorour (2003), which indicated statistically significant differences in self-concept in the experimental group .Abu Eid (2004) confirmed that the individuals may be affected by the sports activities because of its competitive nature which improves their personality and their appreciation to their own selves, beside improving their experience, soical spirit, comunications with others and their physical health, in adetion it may have a recoganized impact on individual's self-concept.

As for item 2, the ranking may be because people engaged in swimming often have ideal athletic bodies. The high physical effort required in swimming helps swimmers stay in shape. Abu Eid (2008) had earlier pointed out the same; swimming promotesthe development of muscle strength and raises the level of physical fitness among swimmers .Regarding our second research question, we calculated the arithmetic averages and standard deviations of the responses to the scale according to the specialization variable (sports management and training, sports rehabilitation). To determine the significance of the differences, we used the independent sample *t*-test (Table 4). As shown in Table 4, we found no statistically significant differences ($\alpha \leq 0.05$) in the level of physical self-concept among the respondents with respect to their specialization.

Conclusions

Our findings showed that deaf and hard of hearing swimmers had a high level of physical self-concept. Moreover, By presenting and discussing the results, we conclude that the level of physical self-concept among deaf and hard of hearing whom practicing swimming was high. As the swimming skills they learn increase their self-confidence and make them have a high self-concept among their fellow practitioners of swimming, and this is what makes them integrate into society, whether inside or outside the university. Also, the self-concept of the deaf and hard of hearing practitioners of swimming is not related to the type of specialization studied by the student, whether management, training, or sports rehabilitation.

Recommendations

Based on our findings, we formulated the following recommendations. First, in the swimming training of deaf and hard of hearing people, the focus should be on the development of physical self-concept, as it was shown to be one of the main factors in raising the level of skill performance.Second, researchers should conduct more related studies on other categories of disabled people. For instance, scholars may determine the impact of gender on the concept of the physical self. Third, studies should also pay attention to other psychological measures, such as burnout, and personality traits in deaf and hard of hearing people.

Declaration of interest

The authors report there are no competing interests to declare**.**

Conflict of interest

No conflict of interest is declared by the authors. In addition, no financial support was received. *Ethics* ***Ethics Statement***

This study is approved by the Hashemite University Human Research Ethics Committee (Approvel Nummer: 27/4/2022/2023).

Authors Contribution

Study Design, FA, MH; Data Collection, FA, SA, IH, MH; Statistical Analysis, FA; Data Interpretation, SA, IH; Manuscript Preparation, FA, MH; Literature Search, FA, MH, IH,SA. All authosr have read and agreed to the published version of the manuscript.

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