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Adapted sports physical activity and its relationship with the social self-esteem among people with motor disabilities: A field study of the Teams in the Algerian Professional Sitting Volleyball Championship

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Abstract:

This study examines the relationship between practicing adapted physical activity and levels of social self-esteem among individuals with motor disabilities. The study sample consisted of (70) participants with motor impairments: (35) practiced adapted physical activities, and (35) did not. The sample was purposively selected from athletes participating in the Teams Algerian Professional Sitting Volleyball Championship.

To achieve the study's aim, a descriptive research approach was adopted. The researcher used a physical self-esteem scale developed by Dr. **Abdelrahman Saleh Al-Azraq** as a tool for data collection. The data were analyzed using a specialized statistical software program, and a "t-test" was used to compare the two groups.

The results showed statistically significant differences in social self-esteem between the two groups, in favor of individuals with motor disabilities who practice adapted sports physical activity.

Keywords: Adapted sports physical activity; Social self-esteem; motor disability.



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1. Introduction and Problem Statement:

The development of thought among peoples and the scientific progress that spread in the modern era changed the view of people with physical disabilities and brought about great interest in this group at all levels of disability, with the aim of providing the most appropriate services in accordance with the type and nature of their disability. Sport is one of the important rights for individuals with physical disabilities, as it is one of the most important good interventions to solve many disability-related problems. Practicing sports activities by persons with physical disabilities contributes to developing physical, psychological, and social well-being, which is considered a fundamental basis in preparing the physically disabled individual and rehabilitating him for integration into society, through providing adapted sports programs suited to his abilities and capacities.

Adapted physical and sports activity is considered, in its educational form, and according to sound principles and rules, an important field—indeed one of the most prominent and most effective fields—in preparing and strengthening the physically disabled person and helping him progress, in terms of its physical components, as well as his acceptance of his body and his self-reliance, in addition to social integration. (Touhami, 2014, p. 5). Therefore, adapted physical and sports activity has great importance and an effect on the psychology of the physically disabled person, because it is an effective means to develop his mental health; consequently, it reduces the intensity of pressure and tension that a person may experience due to problems in his daily life. Among these problems is "disability," especially among those with acquired disabilities.

Motor and physical disability is considered one of the types of disabilities that affect the individual's relationship with those around him. The disabled person may be less well-adjusted than his non-disabled peers, as they are affected by society's negative attitudes toward them (Dr. Tarek Abdelraouf Amer, 2022, p. 5).

Motor disability is a deviation or abnormality characterized by a deficiency in the functions of one organ or several organs, and it varies in degree from one person to another.

Through scientific studies, it appears that people with motor disabilities experience feelings of inferiority, personality disturbance, and disruption in social relationships. They live a life full of frustration, which leads the individual to tendencies toward individualism, introversion, and isolation—traits that cause poor adjustment with oneself and with others. This is what psychologists refer to as poor physical self-esteem, which may make the person not free in various daily behaviors, confirming their dependence on others in their surroundings. Thus, the person is found in a struggle to seek ways that make them independent and able to meet their motor desires and satisfy their psychological and social needs, stemming from their physical independence and a good psychological appraisal of themselves.

Self-esteem, according to Z. Alwani, is the extent of the psychological image through which the person with a disability views themselves, and it can be either high or low.

Therefore, adapted physical and sports activity is used as a tool to affirm oneself and improve self-esteem in order to reach the highest levels. A number of researchers in the field have adopted the development of special adaptive programs for people with motor disabilities to help them develop their self-competencies and a positive self-evaluation. Adapted physical and sports activity is considered one of the methods of active, positive relaxation, occupying an important place in making use of free time, promoting cooperation among people, and getting rid of aggression—channeling it instead into sporting challenges, which are considered among the most important factors in any sports activity for bringing out the maximum abilities and skills of the person with a motor disability. (Alwani Zainab, 2017, p. 10).

Physical activity and adapted sports programs are considered among the most important factors that help reduce the negative effects of disability and support a person with a disability in developing their personality, self-confidence, and social integration (Sahjimeh Mohammed, approx. 2010). This motivated us to conduct this study to find out the impact of adapted physical-sport activity on self-esteem among individuals with motor disabilities, which leads us to the following general research question:

General research question:

Is adapted physical-sport activity related to improving physical and social self-esteem among individuals with motor disabilities?

2. Sub-questions

- Do adapted physical-sport activities affect the level of physical and bodily self-esteem among individuals with motor disabilities?
- Do adapted physical-sport activities affect the level of social self-esteem among individuals with motor disabilities?

3. Research hypotheses

3.1 General hypothesis

Adapted physical-sport activity is related to improving physical and social self-esteem among individuals with motor disabilities.

3.2 Specific hypotheses

- Adapted physical-sport activity affects the level of physical and bodily self-esteem among individuals with motor disabilities.
- Adapted physical-sport activity affects the level of social self-esteem among individuals with motor disabilities.

4. Study objectives

This study aims to achieve the following objectives:

- Identify the reality of adapted physical-sport activity practice within disability centers and sports halls for people with disabilities, and the shortcomings they face.

- Recognize the importance of adapted physical-sport activity in improving physical and social self-esteem among this group.
- Encourage individuals with motor disabilities to engage in physical and sports practice and highlight its importance in their lives.
- Highlight the place/role of a person with a motor disability in society and the family.
- Detect differences in self-esteem levels (physical/bodily and social) among individuals with motor disabilities and the importance of physical and sports practice in that.

5. Importance of the study

The importance of this topic lies in shedding light on the levels of physical/bodily self-esteem and social self-esteem among individuals with motor disabilities.

- Contributing to practical knowledge about the importance of such changes, and about the possibility of applying the results that can be reached and trying to translate them into reality.

6. Defining concepts and terms

6.1 Concept of adapted physical activity

It is a type of sports activity designed specifically to meet the needs of individuals with particular abilities and special needs, such as persons with disabilities or those with certain health conditions. This concept aims to improve the level of physical fitness and motor ability.

6.2 Physical self-concept

It is a dimension of overall self-concept that refers to an individual's perception and evaluation of their physical capabilities, bodily abilities, and appearance. This concept represents the cognitive and psychological aspect of how a person views their body and how they see themselves in physical and motor contexts, such as strength, fitness, motor skills, and bodily control.

6.3 Social self-concept

refers to an individual's perception and evaluation of themselves within the context of social relationships and interactions with others. This concept includes how a person perceives their social status, their ability to interact with others, acceptance by peers, and competence in social dealings. It is considered one of the dimensions of overall self-concept and has a direct impact on psychological well-being, self-confidence, and social integration. Recent research indicates that physical self-concept is influenced by environmental, social, and activity-related factors and is closely associated with levels of participation in physical activity, psychological well-being, and overall health.

6.4 Concept of persons with special needs

Persons with special needs are defined as individuals who deviate noticeably from the average—whether in their physical, emotional, mental, educational, or social abilities—such that their needs require special types of services and care to enable them to achieve

the maximum possible level that allows their abilities to develop (Tariq Abd al-Hamid, 2023, p. 12).

6.5 Definition of motor disability

Motor disability is generally defined as a condition that affects an individual's motor ability, which in turn impacts their movement, mobility, or ability to perform daily physical tasks. It may result from injuries to the nervous system, such as cerebral palsy or spinal cord injuries, or from disorders of the musculoskeletal system, such as joint inflammation or bone deformities. The severity of motor disability can range from mild to severe, and it may require the use of assistive devices such as wheelchairs or physical therapy.

7. Previous and similar studies

1)The first study:conducted by Khouja Adel (2009) — PhD dissertation, University of Algiers
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"Impact of proposed sports programs on improving body image and the concept of self-esteem, and on developing health-related physical fitness among the group of persons with special needs (motor disability): a field study at the rehabilitation institution in the city of Yaghmoubi Zmir (El Achour district), Algiers."

- Aim of the study: An attempt to identify the effect of the proposed sports programs on improving body image and the concept of self-esteem, and on developing health-related physical fitness among persons with special needs (motor disability), and to determine the relationship between body image and the concept of self-esteem in this group.
- Study sample: The sample consisted of (20) males with motor disabilities and hemiplegia, representing 37.73% of the study population (which was estimated at 53). The selection was by purposive method, and the participants were divided into (10) experimental and (10) control.
- Study tools: The researcher relied on the Body Image Scale (prepared by the researcher), the Rosenberg Self-Esteem Scale (1965), and the Health-Related Physical Fitness Test by Lynda and Short for persons with special needs (Winnick & Short, 1999), as well as the proposed sports program (prepared by the researcher).

Study results

Khouja's study showed that the proposed sports programs contributed to improving body image and self-esteem among the study sample. This was done by calculating the arithmetic means and the value of the T-test in the pre- and post-measurements for the experimental sample. It also found that the sports programs led to the development of health-related physical fitness for this group (in the post-measurement). The study also concluded that there is a correlational relationship between body image and self-esteem within the sample.

02)The second study: conductedby Harbi Salim (2008), titled: "Practice of adapted physical-sport activity and its relationship to the level of self-esteem among individuals with motor disabilities"

This study focused on the type of relationship between sports practice among individuals with motor disabilities and adapted physical-sport activity, in order to reach a topic related to the extent of their self-esteem. The researcher used the descriptive method.

The study sample consisted of (80) male athletes with motor disabilities. The researcher selected them purposively according to the type and nature of disability (lower-limb motor disability), then also considered other variables: type of disability, age, sex, educational level, and social status. The researcher divided the sample into two groups:

- The first group: those who practice wheelchair basketball; their number was (40) males with motor disabilities. They belonged to: the amateur sports club for persons with disabilities in Baraki, the sports association for persons with disabilities in El Harrach, and the sports star (club) for persons with disabilities in El Mouradia.
- The second group: non-practitioners; their number was (40) males with motor disabilities. They belonged to the following centers: Bentalha center, vocational rehabilitation center in Birkhadem, and Al-Amal Association for persons with motor disabilities in Bab El Oued.

The researcher found statistically significant differences between the two study samples in: physical self (bodily), general appearance, social self, educational self, and family self, as well as the overall score related to self-esteem and self-confidence. All results favored the group of practitioners at the significance level (0.05). Consequently, there is a correlational relationship between the practice of adapted physical-sport activity by individuals with motor disabilities and their degree of self-esteem; practitioners had a higher level of self-esteem compared to non-practitioners.

8. Field procedures of the study

8.1 Research methodology

Because this study is descriptive, we used the descriptive method, since it is the approach that studies social and psychological phenomena and events, and collects facts and information about individuals and groups.

8-2 Study sample

- The study sample consisted of (70) individuals with physical disabilities, including (35) athletes and (35) non-athletes. The participants were purposively selected according to the type of disability and gender from among individuals with physical disabilities participating in the Algerian National Sitting Volleyball Championship.

8-3 Study tools and instruments

- It was designed and put in its final form by Dr. Abdelrahman Saleh.
- It included (39) statements, formulated as reporting sentences expressing what the respondent feels.
- It is divided into two parts: the first is positive and the second is negative, representing five dimensions on which the study hypotheses were based, as follows:

1. Dimension (01): Physical self and general appearance.
2. Dimension (02): Personal self and self-confidence.
3. Dimension (03): Mental and academic self.
4. Dimension (04): Social and recreational self.
5. Dimension (05): Family self.

In our study, two of the five available dimensions were used: the “physical self and general appearance” dimension and the “social self” dimension. They are divided into two axes, as shown in the table below.

Table 01: Shows the statement numbers and the axis they belong to

Axis	Statement numbers
Physical self and general appearance	3, 10, 15, 18, 22, 25.
Social and recreational self	4, 8, 11, 17, 26.

8–4 Validity of the scale

8–4–1 Internal consistency

(a) Item validity

- The item–total correlation coefficients were computed by correlating each item with the overall (total) score of the scale.

Table (No.02) below presents these results.

See Table (02): Item–total correlation coefficients (correlation of the items with the total score of the scale).

Table (2): Item–total correlation coefficients

Item number	Correlation coefficient	Item number	Correlation coefficient	Item number	Correlation coefficient
1	0.55	12	0.64	23	0.53
3	0.58	14	0.68	25	.065
4	0.57	15	0.67	26	0.57
5	0.57	17	0.56	27	0.59
7	.071	18	0.54	29	.045

8	.071	19	0.74	30	0.72
10	0.56	21	0.72		
11	.065	22	0.70		

Significant at 0.01

Significant at 0.05

It appears (through the correlation coefficients for internal consistency) that the self-esteem scale has a high degree of validity.

8-4-2 Reliability of the scale:

The reliability of the self-esteem scale was calculated using Cronbach's Alpha formula, and the results were as follows:

Cronbach's Alpha coefficient for the self-esteem scale = 0.71

(See Table No. 02)

9- Analysis and discussion of the results:

9-1-1 Analysis and discussion of the results of the first hypothesis:

Adaptive physical-sport activity affects the level of physical and bodily self-esteem among people with motor disabilities.

Table No. (03): Shows the statistical values for the two samples in the dimension of Physical Self.

Scale Dimension	Self-Esteem Scale Type of Practice			Critical t-value	t-value	Significance Level	Significante
Physical Selfesteem	Practicing	Mean	30.82	0.98	2.21	0.05	Significant
		Sample	35				
		Standard Deviation	12.98				
	Non-Practicing	Mean	25.10				
		Sample	35				

		<i>Standard Deviation</i>	9.89				
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Table (No.03) shows the mean scores of participants with motor disabilities on the dimension of physical self-esteem and general appearance. The mean for those who practice physical activity is 30.82, with a standard deviation of about 12.98. The mean for those who do not practice sports activity is 25.10, with a standard deviation of about 9.89. This indicates a difference between the means in favor of those who practice. The tabulated t value is about 0.98, which is less than the calculated t value of 2.21. At the significance level (0.05), this is statistically significant, meaning there are differences between the two groups in favor of those who practice physical-sport activity.

9-1-2 Discussion of the results related to the first hypothesis:

The results of the first hypothesis indicate that there are statistically significant differences attributable to people with motor disabilities who practice adaptive physical-sport activity. They show clear improvements in physical performance and in the way muscles work, as well as the impact of adaptive sport activity on them. In comparison with individuals with motor disabilities who do not practice physical activity, the latter show a negative view of their bodies, which reflects the negative outlook held by those who do not practice sport activity.

These results can be explained through what Bint Al-Qadi (2009, p. 194) pointed out in her study titled "Future Anxiety and Its Relationship to Body Image and Self-Concept among Girls after the War in Gaza". She found that acquiring a motor disability leads to a self-view related to self-concept, which is formed on the basis of one's beliefs about one's personality, mental, physical and emotional traits. Motor disability affects the individual's ability to adapt to society and leaves negative repercussions on personality and one's perception of oneself.[Attachment]

The study also indicated that there is a relationship between body image and future anxiety among people with disabilities, since an individual's beliefs about their disability influence their view of themselves and their self-image. These results confirm the importance of adaptive sport activity in improving self-image and strengthening social adjustment for people with motor disabilities.[Attachment]

9-2-1 Analysis and discussion of the results of the second hypothesis:

Adaptive physical-sport activity affects the level of social self-esteem among people with motor disabilities.[Attachment]

Table No. 04: Shows the statistical values for the two samples in the dimension of social self-esteem.

Scale Dimension	Self-Esteem Scale Type of Practice			Critical t-value	t-value	Significance Level	Significante
social self-esteem	Practicing	Mean	37.19	0.98	2.30	0.05	Significant
		Sample	35				
		Standard Deviation	12.78				
	Non-Practicing	Mean	28.09				
		Sample	35				
		Standard Deviation	12.60				

The table (No.04) shows the arithmetic mean scores of motor-disabled individuals on the social self dimension: those who practice sport scored higher than non-practitioners, and the difference is statistically significant at the 0.05 level.[Attachment]

Table (05) presents the arithmetic mean scores of motor-disabled individuals on the social self dimension. The mean for those who practice sport was 37.19 with a standard deviation of about 12.78, whereas the mean for non-practitioners was 28.09 with a standard deviation of about 12.60.[Attachment]

This indicates a statistically significant difference between the two groups' results, in favor of those who practice sport. As for the tabulated t-value (about 0.98), it was less than the calculated t-value, which came out at 2.30.[Attachment]

At the 0.05 significance level, the calculated value (2.30) indicates that there are statistically significant differences between the two samples in favor of those who practice physical/sport activity.

9-2-2- Discussion and interpretation of the results related to the second hypothesis:

Based on the results related to the second hypothesis, it is clear that the level of social interaction—i.e., the social-self dimension—among persons with motor disabilities who practice sports activities was higher than that of non-practitioners. These results confirm the positive role of practicing sports activities in strengthening social relationships and interaction among persons with motor disabilities and within the social environment in which they live.[Attachment]

These findings are consistent with what was indicated by Abdel-Fattah Dweidar in his book *Psychology of the Relationship between the Self and Attitudes* (1992), where he emphasized the importance of the social role in shaping the concept of the self. He explains that an individual derives their self-image from the roles they perform in society, within the framework of the social structure in which they live. He also notes that social interaction and healthy social relationships contribute to developing and reinforcing a positive self-concept; thus, a person can evaluate the world around them and perceive it materially, which helps the individual adapt to their surrounding environment and achieve balance between their personality and the external world.[Attachment]

Based on what researcher Mari-Françoise Crouzier concluded, "it is time to stop talking about the school integration of persons with disabilities, because it cannot be imagined by a person who believes that they are a stranger to society"; that is, a person with a disability feels a lack of belonging to society, which becomes burdensome for them (Crouzier, 2006, p. 123). Therefore, Crouzier proposes establishing centers for adapted sports activities for this group.

So that her self-image may improve in the eyes of those around her—something that ultimately reflects to a very large extent her ability to integrate into this society and her feeling that she is not a stranger and that she has a place in it. This confirms the validity of the second hypothesis proposed in the study.[Attachment]

10- Conclusions:

Physical and sports practice, for a person with a motor disability, contributes to developing their various hopes by giving the motor-disabled person an opportunity to express the self well. This occurs as a result of the psychological satisfaction the person with a disability may feel regarding their body image toward the different motor hopes connected to the functioning of the limbs, especially those related to the limbs affected by chronic injury or a permanent disability. This makes the motor-disabled person feel that they are performing an action and moving, which is of great importance and is positively reflected in their personality, increasing their self-confidence.[Attachment]

This may directly contribute to improving athletic performance, which in turn serves as a motivation for work, seriousness, and effectiveness within the group or sports team. At the same time, it represents one form of cooperation and solidarity shown by the motor-disabled athlete, and it is expressed in sporting behaviors such as a sense of responsibility, team spirit, sportsmanship, and other social goals that physical activity seeks to achieve in general, and disability sport in particular.[Attachment]

Perhaps one of the most important aims of adapted physical and sports activities is to change those negative physical and social images of the self that cast shadows over the motor-disabled person's general life—especially regarding the loss of a limb or an organ in their body. Adapted physical and sports activities play an important role in shaping that positive, uplifting self-image, which is formed by the person's good feeling about the value of physical practice and everything related to it, including acquiring different physical

qualities that enable the person with a disability to adapt better to different situations and circumstances in their sports life and in general life.

11- Suggestions and recommendations:

It becomes difficult when it comes to work and research in the life of a person with a disability, as many researchers consider the field of psychology to be extremely complex—especially in the sports domain. Given the importance of such sports research, it is necessary to investigate the justifications for protecting/assisting the person with a disability so that they can fulfill their role in public life. This, in general, is consistent with the positive role of sports practice. Therefore, it is necessary to pay attention to sports for persons with disabilities through media institutions, so that it is promoted due to its utmost importance in the lives of this group in society.[Attachment]

Looking at the practice of adapted sports activities, we find that it is among the most successful methods and approaches for enabling persons with disabilities (motor disability) to acquire a variety of skills and competencies. It helps activate, support, and strengthen the limbs of the body that remain, with the aim of achieving independence, overcoming the obstacles and difficulties that may face the motor-disabled person in daily life, and meeting their sports challenge.[Attachment]

- Encouraging individuals with motor disabilities regarding the importance of practicing adapted sports activity in developing functional, physiological, psychological, and social abilities that have been affected by chronic injuries and the handicaps resulting in their disability.[Attachment]
- Emphasizing the role of the family in encouraging and accompanying their children to join clubs and associations dedicated to sports for persons with motor disabilities, along with raising awareness of the importance of sports games at different levels and their role in motivating and guiding persons with motor disabilities toward practicing physical activities and recreational sports.[Attachment]

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