



# Adapted Sport Activities for Students with Intellectual Disability: A Review of Literature

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## Abstract

Support services play a critical role in assisting students with intellectual disability and developing their skills. This paper discusses various topics of sport activities for students with intellectual disability including: adapting sport activities, designing activities, sport services, teachers' competencies in relation to adapting sport activities, and strategies for providing sport activities and services for student with intellectual disability. The paper also provides a thorough discussion of what adapted sport activities are, the types of adapted sport activities, and how such activities would benefit students with intellectual disability and develop their social skills and overall mental health. Further, a number of recent studies on the use of adapted sport activities among students with intellectual disability are provided and discussed.

**Keywords:** students, intellectual disabilities, adaptive sport activities, teachers, review.

**Received** 20-5-2024

**Accepted** 25-6-2024

**publish** 29-7-2024

## Introduction

Sports have become an integral part of the culture of nations due to their significant role in preparing various aspects of individuals—mental, psychological, intellectual, social, and physical. Based on this, it is essential to foster sporting and recreational habits and attitudes that ensure individuals engage in these activities. It is worth noting that sports activities represent one of the best and most effective tools societies use to combat social and psychological problems. They also serve as a foundation and a pivotal element of the educational process, given their crucial role in preparing productive and morally sound individuals. These activities provide individuals with experiences and skills that help them adapt to the conditions of their society. Accordingly, organized and adapted physical and sports activities aimed at developing individuals' physical, social, and mental aspects are crucial. They align with both individual and societal needs (Raash, 2016).

Childhood and adolescence, in particular, are vital stages in human life. Therefore, caring for the children and youth of society reflects concern for the community and its progress. Considering that individuals with disabilities make up at least 10–15% of the population, there is now a general trend to pay more attention to this group by supporting them and providing care in all areas (Al-Malki et al., 2020). Among the key areas of interest for individuals with intellectual disabilities is the provision of recreational and leisure activities to occupy their free time and overcome social challenges. These activities are incorporated into individualized educational programs, modified and adapted to meet each individual's needs. Such activities include adapted or modified sports, which stimulate individuals with disabilities to harness and employ their motor skills. They also contribute to their upbringing, skill development, and sensory training.

Moreover, these activities help boost their energy levels during the school day, thereby combating lethargy, inattentiveness, and distraction (Bahrawi, 2022).

Given these indicators, physical and sports activities have transcended the boundaries of merely benefiting the body and health. They now encompass personal motivations, emotions, and feelings while broadening intellectual horizons and perceptions. Thus, the concept of physical and sports activity has expanded beyond its traditional focus on muscles and the body to include fostering proper and holistic growth of an individual's personality (Lazenk & Abdulrazak, 2021). Additionally, adapted sports activities significantly enhance the quality of life for individuals with intellectual disabilities, fostering self-sufficiency and reducing behavioral issues (Zengin, 2019).

### **Support Services for Individuals with Intellectual Disabilities**

Support services play a critical role in assisting individuals with intellectual disabilities and developing their skills. These services benefit both the individual and their family, helping to compensate for limitations caused by the disability, integrating the individual into public life, and enabling them to perform various roles within their abilities. They also assist families in adapting to and addressing the challenges associated with the disability, alleviating the difficulties they may face in educating their children with intellectual disabilities. Recreational services, including adapted sports activities, fall under the umbrella of support services for individuals with intellectual disabilities. These recreational services aim to help individuals make productive use of their leisure time in enjoyable and beneficial ways. They are delivered through multidisciplinary team collaboration tailored to the individual's condition and needs (Abdulkareem, 2017).

### **Designing Activities for Individuals with Intellectual Disabilities**

The failure of individuals with intellectual disabilities to succeed in general education programs is often attributed to the fact that these programs and curricula exceed their capabilities. These programs are typically designed for students without disabilities. Therefore, individuals with intellectual disabilities require specialized services and the allocation of a dedicated team within the school. This team includes a special education teacher, an assistant teacher, the school principal, a guidance counselor, a psychologist, a social worker, and the student's guardian. It is important to note that designing and adapting activities suitable for individuals with intellectual disabilities can pose challenges for teachers due to the significant variation in their abilities (Al-Mubriz, 2010).

Several considerations must be applied when designing activities for individuals with intellectual disabilities, as outlined by Al-Mubriz (2010): (a) clearly define primary objectives and design purposeful, engaging educational activities, (b) ensure the educational activities are clear, contain minimal elements, and build on the individual's prior experiences, (c) Keep the activities concise, straightforward, and simple, ideally lasting between 15 to 30 minutes, (c) sequence the steps of the activity in a structured manner, building on previously acquired knowledge, (d) design activities in an accessible and smooth manner to facilitate goal attainment, encouraging students to continue participating, (e) incorporate various games and recreational exercises, (f) align activities with students' daily life skills, (g) provide intervals between activities, offering encouragement and stimulating enjoyment, (h) deliver activities either individually or in groups, considering individual differences among students, and (i) strive to transform educational and instructional activities into recreational and entertaining ones wherever possible. Numerous studies have demonstrated that learning through play and entertainment is among the most effective methods for teaching individuals with intellectual disabilities. These approaches help students acquire skills in an enjoyable way while ensuring knowledge retention and minimizing forgetfulness.

### **The Educational Competencies Required for Teachers of Individuals with Intellectual Disabilities in Relation to Adapting Sport Activities**

The role of special education teachers differs significantly from that of general education teachers, as they work with students who have diverse disabilities varying in severity and characteristics, as well as differing psychological, social, and educational needs. Consequently, special education teachers must be well-versed

in methods and strategies that align with the unique needs, abilities, interests, and readiness of children with disabilities. Teaching children with disabilities in general—and those with intellectual disabilities in particular—poses significant challenges. As a result, teachers must develop a broad range of competencies to meet these students' daily needs effectively (Al-Jalamdeh, 2017).

Notably, there are essential competencies that teachers of students with intellectual disabilities and special education teachers, in general, must possess. According to Al-Rawi (2018), these include:

- (a) competencies for modifying and adapting teaching methods to meet the needs of students with intellectual disabilities,
- (b) lesson planning skills and the ability to set learning objectives for students with intellectual disabilities,
- (c) classroom management expertise and the ability to modify the behavior of students with intellectual disabilities,
- (d) proficiency in selecting, adapting, and using appropriate teaching aids for students with intellectual disabilities,
- (e) the ability to employ educational technologies effectively for students with intellectual disabilities,
- (f) skills in identifying and addressing behavioral issues among students with intellectual disabilities,
- (g) professional, cultural, and academic growth of the teacher.
- (h) the ability to identify areas of weakness in students and evaluate them appropriately,
- (i) skills in connecting new vocabulary to tangible experiences for students, thereby enriching their linguistic repertoire, and
- (j) the capability to train students in using their skills and senses to achieve sensory integration.

### **Adapted Sports Activities for Individuals with Intellectual Disabilities**

The Kingdom of Saudi Arabia guarantees the rights of individuals with disabilities, as outlined in the *Disability Welfare Law* issued in 2000. This law ensures access to care, prevention, and rehabilitation services through specialized agencies across various fields, including cultural and sports activities. Saudi Arabia has also issued a constitutional document affirming that “the state protects human rights in accordance with Islamic law,” emphasizing equality, justice, and non-discrimination among all societal groups, including individuals with disabilities. This commitment includes providing all educational, social, and rehabilitative services tailored to their abilities and needs, ensuring continuous service improvement, and facilitating their integration into society (*Disability Welfare Law, 2000*).

Sports play a critical role in the rehabilitation of individuals with disabilities in general and those with intellectual disabilities in particular. Participation in physical training and motor competitions enhances the functionality of vital organs, corrects postural deviations, and improves motor coordination and performance. These benefits contribute to better engagement in daily life activities. Additionally, the sense of achievement experienced by individuals with disabilities helps them overcome fears, build self-confidence, and maintain motivation to achieve success. This encourages them to participate in a wide range of activities—both sports and social—ultimately increasing their opportunities for social integration and achieving a fundamental goal of the rehabilitation process (Al-Kufi, 2017). Physical education is a rehabilitative approach that fosters the development of physical and motor skills, promotes essential social traits, and helps modify individual behavior. It also instills moral values through physical activity and play. The provision of sports activities aims to enhance the knowledge of individuals with intellectual disabilities, encourage interaction with others, and create healthy communities and environments (Al-Maliki et al., 2020).

### **Definition of Adapted Sports Activities**

Sports are generally defined as activities involving the training of oneself or others to perform specific movements, behaviors, and activities, often to acquire new physical traits. These activities are practiced for fun, recreation, and enjoyment (Ra'ash, 2016). Another definition describes sports as “diverse programs for development through games, sports activities, and rhythmic movements tailored to suit the interests,

abilities, and limitations of children with reduced capacities, enabling them to participate safely and successfully in general educational programs” (Adwani & Bouzid, 2018). Adapted sports activities, in particular, refer to sports, games, and programs modified and adjusted to accommodate various disabilities based on their type and severity. These adaptations align with the interests of individuals with disabilities and their capabilities (Ben Abdulrahman & Zwaq, 2018). The Process of Adapting Sports Activities involves developing and modifying sports activities to suit the abilities of individuals with disabilities. It ensures compatibility with the type and degree of disability, enabling safe and effective participation (Salwa & Badruddin, 2019).

### **Methods for Modifying and Adapting Sports Activities**

Sports activities are governed by rules designed to organize their practice. However, teachers or trainers working with individuals with intellectual disabilities may adjust these rules, such as the following examples suggested by Uqba (2022):

- (a) changing the number of players by increasing or reducing participants as needed,
- (b) modifying motor performance and incorporating technical methods that help individuals with intellectual disabilities meet requirements within their capacities,
- (c) adjusting tools used in sports activities or altering spaces by resizing them to meet specific needs.

### **General Principles for Designing Sports Activities for Individuals with Intellectual Disabilities**

The objectives of physical sports activities for individuals with disabilities stem from the overall goals of sports, including fostering growth in physical, neurological, psychological, and social domains. Since the needs of individuals with disabilities differ from those of the general population, adapted sports activities include all elements of standard programs but with adjustments tailored to the strengths and weaknesses of individuals with disabilities. The ultimate goal is to maximize the capabilities of individuals with disabilities, promote self-acceptance, encourage self-reliance, and integrate them into various sports activities. According to Al-Kufi (2017), essential considerations for adapted sports activities include:

- (a) using stable, non-rigid tools with attention to safety,
- (b) incorporating diverse auditory and visual stimuli to attract individuals with intellectual disabilities,
- (c) including rest periods within activities, based on the complexity of the skills involved,
- (d) developing and improving balancing skills,
- (e) introducing skills that help overcome fears, such as swimming,
- (f) providing encouragement and opportunities for success by accounting for individual abilities and capacities, and
- (g) correcting errors consistently to prevent accumulation and ensure improvement.

### **The Role of Sports Activities in Developing Social Skills**

Sociologists agree that the social relationships and interaction opportunities provided by sports—such as competition, training, and teamwork—significantly contribute to developing socially acceptable values and acquiring distinctive social standards. Sports foster critical social processes, including conflict resolution, cooperation, and adaptation, all of which enrich interactions within a sports team. Consequently, educators view sports as a vital opportunity to train children and youth in effective social adaptation (Uqba, 2022).

### **The Impact of Adapted Physical Activities on the Mental Health of Individuals with Intellectual Disabilities**

Sports activities have a positive impact on various aspects of mental health, such as reducing aggressive behavior by fostering healthy integration, promoting relaxation, and relieving tension. By participating in sports, individuals experience therapeutic benefits, improving emotional responses and enhancing feelings of joy, harmony, and social connectedness.

Additionally, sports help alleviate psychological disorders and contribute to a sense of mental stability, which aids in building a balanced, successful personality that aligns with societal values. Adapted sports activities play a significant role in creating socially integrated individuals who are less isolated, more self-accepting, and better equipped to handle societal pressures. They help reduce feelings of inferiority and increase intrinsic motivation for achievement (Adwani & Bouzid, 2018).

### **Types of Adapted Sports Activities**

According to Uqba (2022), adapted sports activities are generally divided into two main types:

1. **Individual Sports Activities:** These include sports and games practiced individually by individuals with disabilities, such as running, swimming, jumping, cycling, tennis, yoga, and archery. These activities are adapted to suit the individual's abilities and can vary across cultures and climates.

2. **Team Sports Activities:** These involve group participation and can serve as an excellent means of integrating individuals with disabilities into society. Examples include basketball, volleyball, goalball, handball, and team sports championships.

### **Barriers to Adapted Sports Activities**

Several factors can impede the development and practice of adapted sports activities, including:

- **Social Environment:** Customs and traditions may influence recreational and sports activities. For instance, in some societies, sports may be predominantly practiced by males, limiting opportunities for females (Abdul Jalil, 2017).

- **Age:** Sports activities differ with age. As children grow older, their interest in play decreases, and their recreational preferences evolve. For example, older children and adolescents may prefer watching TV, listening to music, or engaging in specific sports activities, reflecting their age-specific recreational behaviors (Abdul Jalil, 2017).

- **Gender:** Recreational preferences often differ between boys and girls. Girls may prefer playing with dolls or simulation games related to household tasks, while boys are drawn to physical games, electronic games, and activities like tag and soccer. Physical games are typically less prioritized by girls (Uqba, 2022).

- **Education Level:** The level of education can influence individuals' recreational preferences. Training received during schooling often shapes lifelong interests. A lack of education or poor-quality training can lead to negative attitudes toward recreation and sports (Darar, 2016).

### **Study on the Effectiveness of Recreational and Entertainment Skills Training Programs**

A study conducted by Bahravi (2022) aimed to evaluate the effectiveness of remote training programs for teaching recreational and entertainment skills to individuals with autism spectrum disorder and intellectual disabilities in Al-Ahsa. The study considered the perspectives of teachers, parents, and guardians. Using a descriptive survey methodology, the study selected a stratified random sample of 67 students and their parents or teachers. The results indicated significant differences in the effectiveness of the programs depending on the providers of recreational training services.

### **Studies on the Impact of Adapted Sports Activities on Developing Social Skills**

In a study conducted by Esenturk and Gungo (2020), the effects of peer-led adapted physical activity programs on the social behaviors of students with intellectual disabilities was investigated. The research used a mixed-method sequential descriptive approach and involved a sample of 16 children (8 with intellectual disabilities and 8 without). Data were collected through semi-structured interviews with parents and teachers and by implementing a peer-led adapted physical activity program. The peers were educated on how to work with children with intellectual disabilities before starting the program. The results revealed significant improvements in the ability of students with disabilities to engage in physical tasks like pushing, pulling, maintaining physical effort, and following team instructions.

In another study carried out by Qarad and Fadli (2020) focused on the effectiveness of an adapted sports program in enhancing verbal communication skills in children with autism aged 4–6 years. Using an experimental pre-post design on a sample of 15 children (selected intentionally from both genders with moderate autism), the study implemented a training program consisting of adapted sports activities. These activities aimed to develop verbal communication skills, supported by a verbal communication assessment tool developed by the researchers. The study found that the program was highly effective in improving verbal communication skills among the sample group. The results emphasized the importance of continued use of adapted sports programs as therapeutic tools to support interaction, communication, and social engagement for children with autism.

Al-Maliki and Colleagues (2020), conducted a study aimed to explore the role of participation in sports activities in enhancing national identity among children with special needs compared to their typically developing peers. The study used a random sample of 100 students (59 typically developing and 41 with special needs) from primary and middle schools in Taif, including schools for children with special needs. Using a descriptive methodology and a specially developed questionnaire on national identity, the researchers found that typically developing children scored higher in aspects of national identity compared to children with special needs. However, the study also revealed that participation in sports activities significantly enhanced psychological and social adaptation, promoted social integration, and fostered citizenship values in children with special needs. These studies collectively underscore the importance of adapting sports activities to enhance the social, verbal, and psychological well-being of individuals with disabilities while fostering their integration into society.

### **Studies on the Impact of Adapted Sports Activities on Sensory and Psychological Aspects**

A study carried out by Boudina Study (2019) examined the impact of adapted physical and sports activities on the level of self-esteem among individuals with physical disabilities. It employed a descriptive survey methodology and aimed to identify the effects of adapted sports and physical activities on various aspects of self-esteem, including physical, personal, and social self-confidence. The study targeted a purposive sample of 46 individuals with intellectual disabilities, divided equally into two groups: 23 participants who engaged in adapted sports activities and 23 who did not. Data collection was conducted through questionnaires. The findings revealed that individuals who participated in adapted sports activities demonstrated significantly higher levels of positive self-esteem and personal confidence compared to those who did not engage in these activities.

In another study by Salwa and Badruddin Study (2019) focused on the role of adapted physical and sports activities in developing sensory-motor perception among individuals with mild intellectual disabilities. It aimed to highlight the role of these activities in enhancing motor and sensory skills among children with mild intellectual disabilities. The researchers used a purposive sample of 20 children with mild intellectual disabilities and adopted a descriptive methodology. Data were collected through tests and analyzed using the Statistics program. The results indicated that adapted sports and physical activities positively influenced sensory-motor perception among individuals with mild intellectual disabilities. The study concluded that while adapted sports derive their principles from mainstream sports, they are tailored to the type and degree of disability, making them more accessible for individuals with disabilities.

Al-Atrash et al. (2020) conducted a study investigating the impact of physical education lessons—both curricular and extracurricular—on aggressive behavior and certain physical fitness components among high school female students. It aimed to develop sports activities, assess their impact on students' physical fitness, and measure their effects on aggressive behavior. Using an experimental one-group design, the study targeted a purposive sample of 177 female high school students. Data collection tools included personal interviews and an aggressive behavior scale. The results demonstrated that physical education lessons significantly reduced aggressive behavior and improved physical fitness components among students. Statistically significant differences in aggressive behavior were observed, favoring post-test results.

## Discussions of Previous Studies

Upon reviewing previous studies, the researchers observed the diversity in their objectives. Some studies, such as those by Bahravi (2022), Aslan (2018), and Isik & Serarslan (2017), focused on the effectiveness of applying sports activities for individuals with intellectual disabilities and autism, as perceived by their teachers and parents. These studies examined the impact of these activities on motor skills and physical development, highlighting their importance in overcoming challenges faced by these groups. Other studies, like those by Shaaban and Al-Jadani (2021), aimed to understand the reality of adapted sports activities for individuals with intellectual disabilities. The majority of studies explored the impact of adapted sports activities on social skills and behaviors. For example, Al-Maliki et al. (2020) investigated the role of sports participation in enhancing national identity among children with special needs compared to their non-disabled peers.

Additionally, some studies explored social aspects in depth. For instance, Esenturk and Gungo (2020) analyzed the impact of a peer-led adaptive physical activity (APA) program on the social behaviors of students with intellectual disabilities, particularly their ability to understand and follow team instructions. Similarly, Qarad and Fadli (2020) examined the effectiveness of adapted sports programs in developing communication skills among children with autism, highlighting the importance of these activities in fostering communication and interaction.

Several studies addressed the psychological aspects of adapted sports. For example, Boudina (2019) investigated the impact of adapted sports on self-esteem and physical and personal confidence among individuals with physical disabilities. Al-Atrash et al. (2020) analyzed the influence of curricular and extracurricular sports activities on aggressive behavior and physical fitness among high school female students. Other studies delved into societal perceptions. Kardas and Sadik (2018) examined university students' attitudes toward the participation of individuals with intellectual disabilities in sports. Salwa and Badruddin (2019) explored the role of adapted physical activities in developing sensory and motor skills among children with mild intellectual disabilities, emphasizing their contribution to improving these skills.

These studies collectively illustrate the multifaceted benefits of adapted sports activities, including improvements in sensory, motor, social, and psychological aspects, while emphasizing their importance as tools for integration and skill development among individuals with disabilities.

## Acknowledgments

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through Small Group Research Project under grant number RGP1/274/45

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