Practice of physical-sports activities for athletes of the Ecuadorian Federation of Sports with Visual Impairment: an integral approach for inclusion and performance

Práctica de actividades físico-deportivas para atletas de la Federación Ecuatoriana de deportes con discapacidad visual: un enfoque integral para la inclusión y el rendimiento

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ABSTRACT
This study addresses a fundamental issue in the field of sports: the inclusion of athletes with visual impairment in Ecuador and how a comprehensive approach in the practice of physical activities and sports can improve both the inclusion and performance of these athletes. The objective of the article is to promote a comprehensive approach in the practice of physical activities and sports for athletes with visual impairment in Ecuador, in order to promote their full inclusion in the sporting arena and improve their athletic performance. The importance of promoting the inclusion of people with visual impairment in sports is highlighted, underlining the physical and psychological benefits that this process can provide. Then, the current situation of visually impaired athletes in Ecuador is analyzed and the obstacles they face to fully participate in physical and sporting activities are identified. Various strategies and programs that can be implemented to improve the inclusion and performance of athletes with visual impairment in Ecuador are explored. These include adapting sports facilities, training coaches and health professionals, and promoting an inclusive mindset in

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society. In conclusion, the article advocates for a comprehensive approach in the practice of physical-sports activities for athletes of the Ecuadorian Federation of Sports with Visual Impairment, emphasizing that inclusion and performance are not mutually exclusive goals, but can coexist and benefit each other. 

**Keywords:** physical activities, sports, athletes, visual impairment and inclusion.

**RESUMEN**

El presente estudio aborda una cuestión fundamental en el ámbito deportivo: la inclusión de atletas con discapacidad visual en Ecuador y cómo un enfoque integral en la práctica de actividades físicas y deportivas puede mejorar tanto la inclusión como el rendimiento de estos deportistas. El objetivo del artículo es promover un enfoque integral en la práctica de actividades físicas y deportivas para atletas con discapacidad visual en Ecuador, con el fin de fomentar su inclusión plena en el ámbito deportivo y mejorar su rendimiento atlético. Se destaca la importancia de promover la inclusión de personas con discapacidad visual en el ámbito deportivo, subrayando los beneficios tanto a nivel físico como psicológico que este proceso puede proporcionar. Luego, se analiza la situación actual de los deportistas con discapacidad visual en Ecuador y se identifican los obstáculos que enfrentan para participar plenamente en actividades físicas y deportivas. Se exploran diversas estrategias y programas que pueden implementarse para mejorar la inclusión y el rendimiento de los atletas con discapacidad visual en Ecuador. Esto incluye la adaptación de instalaciones deportivas, la formación de entrenadores y profesionales de la salud, y la promoción de una mentalidad inclusiva en la sociedad. En conclusión, el artículo aboga por un enfoque integral en la práctica de actividades físico-deportivas para atletas de la Federación Ecuatoriana de deportes con discapacidad visual, destacando que la inclusión y el rendimiento no son objetivos mutuamente excluyentes, sino que pueden coexistir y beneficiarse mutuamente.

**Palabras clave:** actividades físicas, deportes, atletas, discapacidad visual e inclusión.
INTRODUCTION

The practice of physical-sports activities represents an essential component in the life of any individual, as it not only promotes health and well-being, but also fosters values such as discipline, teamwork and self-improvement. However, for people with visual impairment, access to these activities can present unique challenges that require adaptive and specialized approaches.

(Bacigalupo, Benavides, Gauthier, Salinas, 2017, p88), state that people with visual impairment who practice a high performance sport point out that participation in a sport has been favorable, since they have acquired greater mobilization independently, given the motor skills acquired as a result of the sport. They also point out that they have noticed a significant change related to social inclusion since it has changed the vision that society has towards them as people, as they feel that they are now seen with admiration.

The Ecuadorian Federation of Sports with Visual Impairment (FEDEDEDIV) has emerged as a fundamental pillar in the promotion and development of sports for athletes with visual impairment in Ecuador. Through innovative programs and projects, FEDEDIV has sought not only to facilitate the participation of these athletes in various disciplines, but also to optimize their performance and competitiveness at the national and international level.

This research seeks to provide a comprehensive view of the experience of athletes affiliated to FEDEDIV, highlighting the importance of these activities in their personal and social development. In addition, it aims to identify areas of opportunity for the optimization of programs and policies aimed at the inclusion and performance of these athletes.

(Muñoz, Garrote & Sánchez, 2017, p7), state that the design of effective programs for individuals with disabilities represents an ongoing challenge in university settings and sports federations. These must provide services and support both in leisure time and in sports practice, promoting environments that integrate, normalize and include, leading to situations that stimulate growth and personal development.

The general objective of this scientific article is to promote a comprehensive approach in the practice of physical activities and sports for athletes with visual impairment in Ecuador, in order to promote their full inclusion in the sports environment and improve their athletic performance.

Visual Impairment and Physical Activity

Visual impairment affects a large percentage of the population in Ecuador, encompassing a wide range of visual problems that vary in the degree of impairment and limitation, this creates challenges that require trained professionals to implement programs aimed at physical activities, recreation and sport. People with visual impairment rely heavily on other senses, such as touch, hearing and balance, to participate in physical activities safely and effectively. (Traba and Quizhpe, 2019; Castillo and Romero, 2020).
The physical sports activities of athletes with visual impairment, leave positive conclusions regarding motivation, fun and positive feelings that produce the realization of sports programs, although many express the difficulty of transportation and adequate and close spaces for the constant practice of physical activity and sport has allowed them to overcome many of these limitations (Borja; Iturricastillo; Castillo; Romaratezabala; Rodriguez; Irati & Yanci, 2021).

**Inclusion and Adapted Sport**

People with disabilities who intend to participate in sport encounter many barriers to participation, they may experience a lack of support, and concerns about safety may arise when participating in non-adapted environments. These challenges can impact confidence and motivation to participate in physical activity (Mocha, et al., 2019; Nuñez, Professor, & Palacio, 2020).

To overcome the challenges associated with visual impairment, it is crucial to implement specific adaptations and strategies. This may include the use of assistive technology, such as screen readers or auditory navigation systems, as well as the modification of sports spaces and equipment to ensure safety and accessibility. The training of professionals specialized in the inclusion of people with visual impairment in physical activity and sport plays a key role. "Adapted sport represents a real importance in the personal and social development of the individual who practices it. One of the main benefits to be taken into account is that of a psychological nature." (Zucchi, 2001)

**Adaptations and Strategies to Facilitate Participation of Persons with Disabilities**

The World Health Organization stresses the importance of physical activity, considers that its constant performance by people is a factor that positively influences their health and considers it as a strategy to prevent obesity. This ranges from daily activities such as household and work tasks, to activities that require effort, such as doing high performance sports. (Tuqueres and Vaca, 2020; Avalos et al., 2021).

The creation of strategies to include people with disabilities in physical activity and sports programs is the responsibility of governmental, sports, educational entities and society in general. These adaptations can be of various kinds, ranging from adjustments in the physical environment to the implementation of assistive technologies (Caballero and Aguilar, 2019; Olmedilla, 2020).

It is necessary that according to the population group with which we work, so that they can progress in the personal and social order, to attend to their possibilities and potentialities obtained in the evaluation and characterization carried out, and according to these, the need to make more significant and individualized adaptations will be greater, therefore, adaptations must be made to the basic elements of the curriculum, these are: the objectives, contents and methodology (Muñoz, Fleitas, Tamarit & Figueredo, 2021, p914). (Muñoz, Fleitas, Tamarit & Figueredo, 2021, p914).

Physical and environmental accessibility creates a safe environment for the participation of all people with various types of disabilities, modification of infrastructure to ensure access for people with reduced mobility (ramps, elevators, wide corridors), signage and
tactile guides to facilitate the orientation of people with visual disabilities. Rest spaces and accessible areas in sports and recreational facilities (Toaquiza, 2020; Zambrano and Hincapié, 2022).

Assistive technology are also key strategies in promoting physical and cognitive activities such as chess and various board games, use of devices such as screen readers, voice recognition software and adapted keyboards for people with visual or motor disabilities. Augmentative and alternative communication (AAC) technology for those with speech difficulties.

Appropriate sports adaptations, such as implements that meet the necessary characteristics for physical activity for people with various types of disabilities. Adapted sports equipment and materials, such as sport-specific wheelchairs or hearing balls for sports such as goalball. Modification of rules or sports modalities to accommodate the needs of participants with disabilities (Hernández, Gámez and Gamonales, 2021; Díaz, Pozo and Romero, 2023).

In the case of the visually impaired happens that this pathology are many diseases related to vision, which suffer many people, some of these have the ability to perform physical activities passively and others with the possibility of practicing a sport with the controlled demands of the same (Perez & Perez, 2009).

**Challenges in Sports Practice for People with Visual Impairment (FEDEDIV).**

The sports federation for the visually impaired aims to develop sports programs and activities focused on visually impaired people that reflect its commitment to the inclusion and well-being of this population. First of all, its intention to encourage the practice of sports and combat sedentary lifestyles among blind people is crucial. This not only contributes to physical health, but also promotes independence and self-confidence, which is fundamental to the integral development of each individual. The focus on the different phases of sports practice, from recreational to high performance, demonstrates comprehensive attention to the needs and aspirations of the participants, providing them with opportunities to grow and excel in the sports environment. (Correa et al., 2021; Cardona et al., 2022).

FEDEDIV stands out for its programs and projects with a participatory and empowered vision by constantly involving people with visual impairment where it gives them an active role in their environment, where they are trained with high-level professionals to influence issues that affect them directly. The sustainability of the services and advances established during the projects is ensured, as well as their progressive integration into public policies.

Personalized support from trainers and assistants trained in the inclusion of people with disabilities, who can provide individualized support. Accompaniment of companions or guides in activities that require additional guidance or assistance. FEDEDIV seeks awareness, education and training to promote inclusion and understanding of the needs of people with disabilities. (Neptali and Rodriguez, 2021).

Inclusive communication ensures that information, such as instructions and announcements, is available in accessible formats, such as braille, large text or descriptive
audio. Encourage verbal and non-verbal communication to accommodate different communication needs. Be prepared to adjust and adapt strategies according to the individual needs of people with disabilities. Foster an environment open to suggestions and feedback to enhance participation. (Muñoz et al. 2021). The challenges are constant for people with visual impairment, but these challenges only encourage the sports federation for people with visual impairment to continue developing programs and projects that seek the massification of all sports modalities in which people with disabilities participate, promoting health, sportsmanship, motivation and education, with adequate and trained personnel to meet the demands of the characteristics of this segment of the population. (Sánchez and González, 2020; Palacio et al., 2021).

MATERIALS AND METHODS
The research adopts a comprehensive approach that combines a thorough review of scientific literature with the collection of testimonies and specific data from the Ecuadorian Federation of Sports with Visual Impairment (FEDEDEDIV). The importance of the practice of physical-sports activities for people with visual impairment is supported through authors such as Bacigalupo, Benavides, Gauthier, Salinas (2017) and Muñoz, Garrote & Sánchez (2017). In addition, a qualitative approach is employed by collecting testimonies from individuals with visual impairment who participate in FEDEDEDIV programs, providing valuable information about the benefits and effects of sport practice in their lives. The relevance of specific adaptations and strategies to facilitate the participation of people with visual impairment in physical activities and sports is emphasized. The research is supported by quotes from authors such as Borja, Iturricastillo, Castillo, Romaratezabala, Rodríguez, Irati & Yanci (2021), Zucchi (2001), Pérez & Pérez (2009), Muñoz, Fleitas, Tamarit & Figueredo (2021) to support the need to implement these adaptations and strategies in inclusive sport environments. In summary, the study integrates contributions from the scientific literature with concrete experiences of FEDEDEDIV, demonstrating the importance of approaching sport practice in people with visual impairment in a comprehensive and adaptive manner.

RESULTS
The year 2023 The University of Guayaquil and the (FEDEDEDIV), develop a project for the study of the practice of physical-sports activities for athletes affiliated to the Ecuadorian Federation of Sports with Visual Impairment (FEDEDEDIV), reveals an active participation in various disciplines, such as athletics with a number of 35 athletes, male Goalball with a number of participants of 70, female Goalball with a number of participants of 30, Adapted Soccer, number of participants of 45. These numbers demonstrate a significant interest on the part of the visually impaired community in the practice of sports. It is encouraging to observe high participation in both individual and team sports, reflecting the diversity of preferences and abilities within this community. (Perez et al., 2022).
Goalball, in particular, emerges as a particularly popular discipline, with a total of 100 participants (70 male and 30 female). This sport adapted specifically for the visually impaired has gained recognition and acceptance among the community, providing a valuable platform for active participation and competition.

It is important to note that these results are a testament to FEDEDIV's success in the promotion and development of adapted sports in Ecuador. The federation has managed not only to attract a large number of participants, but also to maintain an equitable participation between men and women in Goalball.

**DISCUSSION**

The high participation in these disciplines highlights the importance of inclusion and the creation of accessible sports environments. The testimonies collected during the research support the idea that the practice of sports not only benefits physical health, but also has a positive impact on the personal and social development of athletes with visual impairment.

Goalball, in particular, has proven to be a particularly relevant and attractive sport for this community. Its popularity can be attributed to its specific design that allows for the active participation of people with visual impairments and promotes a sense of competitiveness and camaraderie.

**REFERENCES**


