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Original article

*Sports training in students with disabilities, an experience in the
special school "28 de Enero"*

*Formación deportiva en estudiantes con discapacidades, una experiencia en la
escuela especial "28 de Enero"*

*Sports training for students with disabilities, an experience at the special school
"28 de Enero"*

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ABSTRACT

Adapted sport, referred to as the term physical activity with children who have some type of disability, has a relevant historical evolution, since from its origins it has faced high challenges. It is recognized that in international level schools and specifically in Cuba, efforts are made to promote inclusion in sport; however, it is considered that the proposals that, from the scientific and methodological point of view, support the use of skills and the development of skills in people with disabilities are still insufficient. For this reason, the objective of this work is to visualize the recruitment of children with the potential to practice sports, from Physical Education, in the special school "28 de Enero". In this research, a survey was applied to students about their likes in sports and a characterization was carried out, based on the application of a test that measured intellectual disability and physical-motor disability in them. The data, in general, revealed that with dedication, improvement and teamwork, satisfactory results can be obtained not only in sports performance, but also in self-esteem and quality of life in these students.

Keywords: Adapted sport, students with disabilities, Physical Education, inclusive.

RESUMEN

El deporte adaptado, referido al término de actividad física con niños que presentan algún tipo de discapacidad, tiene una evolución histórica relevante, pues desde sus orígenes enfrenta altos retos. Es reconocido que en escuelas de nivel internacional y específicamente en Cuba, se realizan esfuerzos por potenciar la inclusión en el deporte; sin embargo, se considera que todavía son insuficientes las propuestas que, desde el punto de vista científico y metodológico, sustentan el aprovechamiento de las competencias y el desarrollo de habilidades en las personas con discapacidad. Es por ello, que se propone como objetivo de este trabajo visualizar la captación de niños con potencialidades para practicar deportes, desde la Educación Física, en la escuela especial "28 de Enero". En esta investigación, se aplicó una encuesta a los estudiantes sobre sus gustos en materia de deporte y se realizó una caracterización, a partir de aplicación de test que midió la discapacidad intelectual y la discapacidad físico-motor en ellos. Los datos, de forma general, revelaron que con



dedicación, superación y trabajo en equipo se pueden obtener resultados satisfactorios no solo en el rendimiento deportivo, sino en la autoestima y calidad de vida en estos estudiantes.

Palabras clave: Deporte adaptado, estudiantes con discapacidad, Educación Física, inclusivo.

RESUMO

O esporte adaptado, referente ao termo de atividade física com crianças que apresentam algum tipo de deficiência, tem uma evolução histórica relevante, pois desde suas origens tem enfrentado grandes desafios. Reconhece-se que nas escolas, em nível internacional e especificamente em Cuba, estão sendo feitos esforços para promover a inclusão no esporte; no entanto, considera-se que as propostas que, do ponto de vista científico e metodológico, apoiam o uso de competências e o desenvolvimento de habilidades em pessoas com deficiência ainda são insuficientes. É por essa razão que o objetivo deste trabalho é visualizar o recrutamento de crianças com potencial para a prática esportiva, a partir da Educação Física, na escola especial "28 de Enero". Nessa pesquisa, foi aplicado um questionário aos alunos sobre seus gostos pelo esporte e realizada uma caracterização, a partir da aplicação de um teste que mediu a deficiência intelectual e a deficiência físico-motora neles. Os dados, em geral, revelaram que, com dedicação, autoaperfeiçoamento e trabalho em equipe, é possível obter resultados satisfatórios não só no desempenho esportivo, mas também na autoestima e na qualidade de vida desses alunos.

Palavras-chave: Esporte adaptado, alunos com deficiência, Educação Física, inclusão.

INTRODUCTION

If there is a subject that harmonizes the development of thought and the organic activity of the body with intellectual and academic activity, it is Physical Education (PE). It has been shown that when physical exercises are carried out or a sport is practiced, the mind is better



prepared to assimilate new knowledge; this is the case both in children with normal conditions and in those with a certain physical or mental disability.

It is considered important to determine what the concept of sport consists of and what is the most appropriate terminology to use, according to contemporary trends that address disability. According to Zucchi (2001) sport:

(...) is part of the agents of Physical Education together with gymnastics, recreation and life in nature. In this way, sport has the pedagogical support provided by Physical Education and with it the didactic instruments (Fundamentals, achievement expectations, methodology, resources and evaluation / feedback) for its implementation. (p.1)

On the other hand, the term disability is associated with a decrease, deficiency or simply different capacities and this has brought as a consequence that the forms of treatment are diverse and above all, the way that physical activities are adjusted to disabled people; that is why, when representing physical activity with children who have some type of disability, it is very pertinent to use the term sport adapted for people with disabilities. According to Zucchi's (2001) conception, these people with disabilities are classified into the following groups:

- People with motor disabilities.
- People with intellectual or mental disabilities.
- People with sensory disabilities.

Any person, be it a child, adolescent or adult who presents any of them can practice sports, you just have to look for the one that corresponds, according to the pathology, the degree of affectation, like and qualities. The previous medical certificate is important, because in some pathologies the sport is contraindicated; for example, in acute heart failure, infectious diseases in their critical period and rheumatoid arthritis, among others.



Garel *et al.* (2007) and Hernández (2007) monitored the treatment of these people with disabilities, from the creation of documents and manuals that guide the PE teacher to enhance skills, especially motor skills, at school ages. The impact of this work also led to the improvement of the pedagogical process, since in correspondence with the advancement of motor skills, mental and sensory skills also benefit.

Ocete *et al.* (2015) launched a proposal for those teachers interested in advancing in the area of inclusive PE, as an instrument that promotes the insertion of children with disabilities; the program had a theoretical foundation designed to guide instructors or trainers who wish to apply it. In it, not only these types of tools were included, but also resources that help compile data that take the impact of its application. This proposal recognizes the diversity of each context and the different indicators and variables that are used for its evaluation, among them the geographical location, the type of center, the type of schooling and the characteristics of the teachers and students; in addition, the obstacles encountered in the implementation can be foreseen

From the researches, diagnoses, strategies and methodological treatments arise aimed at preparing the teacher of primary and secondary education in order to apply the concept of inclusion that is so demanded in education, especially in the Cuban pedagogical reality and its aspirations for equality of opportunities for all (Gómez and Roba, 2016 and Abellán, *et al.* 2017) (a).

Specifically, the studies by Abellán *et al.* (2017) (b) refer to the possibility of inserting children with disabilities in the practice of Paralympic games, what type of sports is adjusted to the physical abilities and the limitations that these children who receive PE in primary schools have.

It is proposed that para-sports, such as Boccia, be included in school programs, fulfilling a triple function: as sports content to be taught, as a possibility of innovation within school programs and as possible awareness towards disability; and always trying to achieve significant learning, so it is advisable to follow a methodology through research such as the comprehensive teaching of sports. (p.141)



Once it is understood that children with disabilities must receive programs with adjustments, especially from the potential of PE, it is continued to refine the strategies that specify how to attract these children and group them according to their treatment. Ocete *et al.* (2017) pursued this objective focused on the resilient particularities of sport and, above all, on the follow-up of treatment at an early age and once inserted in general secondary education.

Other researchers focus on inclusive education practices, not only on sports performance techniques and standards, but on a paradigm that responds to their values; in addition, they present a practical theoretical framework that guides the followers of inclusive sports towards a trend that watches over the health and the formation of values of these disabled people (Aguilera, 2017).

As a claim of modernity, the use and abuse of technologies, the growth of autism in urban and rural areas, as well as other disorders that affect thought and behavior at school ages, authors such as Abreu and Twuemulilatyi (2017) propose a treatment from PE that is aimed at strengthening the work with children who suffer from attention deficit and hyperactivity.

In the same line of thought, Contreras (2018) presents, as a diagnosis, a scale of attitude towards students with disabilities in PE; using this instrument, the possible improvement in social and civic competence was evaluated, according to two dimensions of the questionnaire, to find out the opinion of the students on the use of adapted sports in PE. As a result, insufficiencies are revealed in the work with these children in order to convert PE into an efficient way to work on inclusion and improve affective degrees.

Subsequently, it was shown that the application of the accompanying intervention program, based on the application of a series of sensitizing games such as boccia: Contreras-de-la-Osa (2018),

(...) It was a positive experience, which managed to modify the attitudes towards disability in PE of the participating sixth-year students of Primary Education, in addition to perceiving the importance of this when it comes to improving aspects related to social and civic competence in EF. (p.12)



Regarding the evaluation of the impacts of these instruments, Abellán *et al.* (2018) took care of creating a platform classified by sex, previous contacts and capacities on the results studied, exhaustively, in previous researches. These authors incorporate the perception of skills and competence into the studies.

In this sense, Páez *et al.* (2019) dealt with proposing dimensions and indicators to corroborate progress in children with intellectual disabilities, through EF. From this experience, the indicators pointed out that with due treatment, a proposal of didactic games that motivate their interests and an increase in their potential can be implemented, in order to compensate for their insufficiencies in the intellectual order.

In order to show with evidence how a didactic unit can be conceived to work with children, in order to improve their motor and intellectual disabilities, the suggestions of Hernández, *et al.* (2020) are taken as referents:

For example: with the subject of Technology, playgrounds with reduced dimensions can be designed for Goalball or Soccer for people with visual disabilities. In the Plastic, Visual and Audiovisual Education subject, masks can be made and even paint shirts to identify the different participating teams, and in the Scientific Culture subject videos of the different sports for people with disabilities can be projected, as well as cite the research topics in these disciplines. (p.94)

It is considered that, to develop physical activity in sport, in people with disabilities and to form positive qualities, values, abilities and skills for life, the work of Martínez (2021) is a guide; in it, the intention to improve motor skills through the PE class in people with hearing disabilities prevails. For this, a group of tasks were carried out in the form of a circuit, based on work with coordination capacities, with implements and materials that made systematization possible, where aided by the game and connected in action through movement, they He went from fine motor skills to gross motor skills and the right combination between dynamic balance and static balance.



The referents of the study that is presented are mainly focused on primary and secondary schools, internationally and specifically in Cuba; however, in order to achieve the establishment and sustainability of these educational influences it is necessary that these studies and approaches also come from the universities, as it is the case of Valdés *et al.* (2021) who make an analysis of the contents of the study plan of the Faculty of Physical Culture, of the University of Pinar del Río and update the pedagogical model according to the characteristics and demands of the sport adapted from PE classes. As contributions of this research to work with training for disabled people from the curriculum, the following contributions are proposed:

- In the Rhythmic and Playful Education subject, incorporate adapted games in PE class in topic #1.
- In the Basic Gymnastics subject, incorporate, among other aspects, the organizational procedures in Inclusive Physical Education (IFE).
- In the subjects of the sports motives PE classes (athletics, basketball, soccer, baseball, handball) incorporate the generalities of the practice of adapted and inclusive sports (p. 432).

In addition to this sequence on the development of adapted, inclusive PE that promotes Paralympic sports at an international and national level, it is essential to show examples of how the process of recruiting and monitoring children with disabilities to practice sports is carried out. ; so the goal of this work is to visualize the situation related to the recruitment of children with the potential to practice sports from Physical Education in the special school "28 de Enero".



MATERIALS AND METHODS

The universe of this research is assumed to be the 184 students of the "28 de enero" Special School, located in the province of Pinar del Río, Cuba. The instruments used (test) for measurement coincide with the number of the sample 92 students, for 50%. Sampling was random in different grades.

Brief characterization of the students of the special school "28 de enero". In the year 2023 the school has an enrollment of 184 students, 112 male and 70 females; 123 white, 37 black and 24 mixed race. Most of the students reside in the city of Pinar del Río, although due to their internal living conditions, 15% live in the school. The school also offers outpatient care services to 27 general enrollment students. To carry out the characterization, based on taking advantage of their volitional, motor, sensory and intellectual potentialities, a diagnosis was made and the following methods and instruments were applied:

To determine the type of intellectual disability (which is the predominant type of disability in this school) the intelligence test was implemented.

To identify how many students, have a significant degree of physical motor disability, the Gidikov test was implemented. The Gidikov test evaluates cardiovascular functional adaptation to the application of loads where speed and endurance predominate, which allows determining the effect of these on the organism and make modifications to the training, does not have a quantitative evaluation, but allows comparisons between two paired samples in the period that needs to be studied.

These tests are generally applied in order to diagnose physical-motor capacity in athletes, together with others such as the Yuhasz test, the Falkner test and the Letunov test; however, due to the importance of the treatment to capacities such as speed and endurance at different moments of the child's life, the Gidikov test is the one that is considered the most capable of contributing to this study. A preference test is also applied where the preferred sport modality is chosen and grouped, based on the physical-motor potentialities or capacities.



On the other hand, a survey was applied to 92 students to assess the degree of knowledge they have about the practice of sports, in PE work sessions.

RESULTS AND DISCUSSION

According to data obtained through the intelligence test applied to 100% of the universe, the results were as follows:

- Mild Intellectual Disability (DIL): 118 students.
- Moderate Intellectual Disability (DIM): 50.
- Severe Intellectual Disability (DIS): 12.
- Intellectual Disability (Undefined Depth): 3.
- In respect to the data obtained according to the Gidikov Test, it was possible to verify that, of the 184 students, 14 of them have Physical-Motor Disability.

And of these 14 students:

- Mild Intellectual Disability (DIL):4.
- Moderate Intellectual Disability (DIM):6.
- Severe Intellectual Disability (DIS):4.

After applying the preference test, the students could be grouped into different Paralympic sports. (Table 1)



Table 1. - Preference of students by sport

Sports	Number of students who prefer this sport
Weightlifting	1
Athletics	1
Badminton	2
Basketball	2
Table tennis	2
Soccer	1
Rhythmic gymnastics	1
Total sports chosen: 7	Total students in sports: 10

In the test, not only information on preferences was obtained, but also information referring to the achievements and medals they obtained in the implementation of these sports, specifically in the Paralympic games that are held annually (Table 2).

These teams were formed in the province by specialists from the National Directorate of Education and with the advice of Inder (National Institute of Sports, Physical Education and Recreation) and they prepare all year round to hold Paralympic tournaments in different sports.

Table 2. - Medals obtained by students

Gold	Silver	Bronze
7	1	-
Rhythmic gymnastics Athletics Badminton Weightlifting	Weightlifting	

These medals show dedication, time and quality in training despite difficulties not only in terms of disability, but also deficiencies. It is important to add that the resources that were used to carry out the sports events were the result of the innovation and solidarity of many people, in Cuba and the world, who accompany children with disabilities. It became evident how the blockade against Cuba directly affects the success and permanence of the training sessions and the planned games.



As results of the survey, it was possible to verify that the motivation of students with disabilities towards sports is significant, the training activity of the school staff is also meritorious, since they have managed to impact a good state of opinion in the students. The following results are revealed in the applied survey (Table 3).

Table 3. - Results of the survey applied to students

Survey aspect	Student response		
	Yes	More or less	No
1. Do you like to play sports?	62	10	20
2. Do they teach you how to play sports at school?	50	2	20
3. Does your PE teacher promote the practice of sports during class?	40	12	40

In the research, it was possible to obtain very useful information related to the potential of students with intellectual or physical-motor disabilities to practice a sport from PE. Instruments already applied in research such as Videa *et al.* (2016) that verified the intelligence coefficient or, failing that, the degree of intellectual disability presented by the students. One of the tests used in the work by De las Mercedes *et al.* (2015) to have a measure of the physical-motor capacities that the students under study have.

CONCLUSIONS

As referents in the scientific literature, various works on adapted sports were found; however, few of them are the ones that propose a methodology that guides how to achieve it.

Perseverance, self-improvement and dedication to work were fundamental elements to encourage, in students with disabilities, the desire to form sports teams from PE.

In general, it was possible to appreciate that, although most of the students have a type of intellectual or physical-motor disability, the faculty knew how to insert them into a sport modality, by identifying their preferences and the results obtained were satisfactory.



REFERENCES

- Abellán, J., Sáez-Gallego, N., & Reina, R. (a) (2017). Explorando el efecto del contacto y el deporte inclusivo en Educación Física en las actitudes hacia la discapacidad intelectual en estudiantes de secundaria. *RICYDE. Revista Internacional de Ciencias del Deporte*. doi: 10.5232/ricyde, 14(53), pp. 233-242. <https://recyt.fecyt.es/index.php/RICYDE/article/view/66455>
- Abellán, J., & Sáez-Gallego, N.(b) (2017). Los para-deportes como contenido de educación física en primaria: El ejemplo de la boccia. *Didacticae: Revista de Investigación en Didácticas Específicas*, (2), pp. 134-142. <https://dialnet.unirioja.es/servlet/articulo?codigo=6130725>
- Abellán, J., Sáez-Gallego, N. M., & Reina, R. (2018). Evaluación de las actitudes hacia la discapacidad en Educación Física: Efecto diferencial del sexo, contacto previo y la percepción de habilidad y competencia. *Cuadernos de Psicología del Deporte*, 18(1), pp. 133-140. <https://revistas.um.es/cpd/article/view/282581/225151>
- Abreu, B. P., & Twuemulilaty, H. M. (2017). Tratamiento de la Educación Física a los escolares de la educación primaria con trastorno de déficit de atención e hiperactividad. *PODIUM: Revista de Ciencia y Tecnología en la Cultura Física*, 12(1), pp. 31-41. <https://dialnet.unirioja.es/servlet/articulo?codigo=6173968>
- Aguilera, J. Á. C. (2017). Un nuevo paradigma para un futuro más saludable y con valores. -Deporte Inclusivo, Actividad Física Inclusiva y Educación Física Inclusiva. *Revista de Educación Inclusiva*, 9(2). <https://revistaeducacioninclusiva.es/index.php/REI/article/view/51>
- Contreras-de-la-Osa, M., & Abellán, J. (2018). Mejorando las actitudes hacia la discapacidad en Educación Física a través del deporte adaptado. *E-motion: Revista de Educación, Motricidad e Investigación*, (11), pp. 3-15. <https://dialnet.unirioja.es/servlet/articulo?codigo=6738666>



- De las Mercedes Saínz-Reyes, I., Gordo-Gómez, Y. M., & Labrada-Rojas, Y. N. (2015). Evaluación de las capacidades físicas condicionales en atletas con limitaciones físico-motoras. *PODIUM-Revista de Ciencia y Tecnología en la Cultura Física*, 10(2), pp. 160-170. <https://podium.upr.edu.cu/index.php/podium/article/view/627>
- Garel, J. P., Blanc, C., Chevrier, J., Collet, D., Claude, J. P., Dizien, H., & Tournebize, A. (2007). *Educación Física y discapacidades motrices*. Barcelona: INDE, 2007. https://books.google.com.cu/books/about/Educaci%C3%B3n_f%C3%ADsica_y_discapacidades_motr.html?id=Mq2XRrQLdnwC&source=kp_book_description&redir_esc=y
- Gómez-Valdés, A., & Roba-Lazo, B. D. L. C. (2016). Tratamiento metodológico de los contenidos de la educación física inclusiva dentro de la asignatura actividades físicas adaptadas. *PODIUM-Revista de Ciencia y Tecnología en la Cultura Física*, 11(2), pp. 53-61. <https://podium.upr.edu.cu/index.php/podium/article/view/658>
- Hernández, M. R. (2007). *Manual de educación física adaptada al alumno con discapacidad* (Vol. 43). Editorial Paidotribo. <https://paidotribo.com/products/manual-de-educacion-fisica-adaptada-al-alumno-con-discapacidad>
- Hernández-Beltrán, V., Gámez-Calvo, L., & Gamonales, J. M. (2020). Propuesta de Unidad Didáctica para Educación Física: "Conociendo los deportes para personas con discapacidad visual". *E-Motion: Revista de Educación, Motricidad e Investigación*, (15), pp. 77-101. <https://dialnet.unirioja.es/servlet/articulo?codigo=7699198>
- Martínez, P. Y. O. (2021). Experiencia didáctica en educación física para la mejora de actitudes hacia la discapacidad auditiva en futuros profesionales de la actividad física y deporte. *Retos: nuevas tendencias en educación física, deporte y recreación*, (40), pp. 174-179. <https://recyt.fecyt.es/index.php/retos/article/view/81296>
- Ocete Calvo, C., Pérez Tejero, J., & Coterón López, J. (2015). Propuesta de un programa de intervención educativa para facilitar la inclusión de alumnos con discapacidad en educación física. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 27, pp. 140-145. <https://recyt.fecyt.es/index.php/retos/article/view/34366>



- Ocete, C., Lamata, C., Coterón, J., Durán, L. J., & Pérez-Tejero, J. (2017). La percepción de los alumnos de Secundaria y Bachillerato hacia la inclusión de compañeros con discapacidad en Educación Física. *Psychology, Society & Education*, ISSN 1989-709X, ISSN-e 2171-2085, 9, (2) 2017, pp. 299-310. <https://dialnet.unirioja.es/servlet/articulo?codigo=6360181>
- Páez Basabe, M., Sánchez Quintero, N., & Miló Dubé, M. (2019). Evaluación formativa en Educación Física, a escolares con discapacidad intelectual. *Podium. Revista de Ciencia y Tecnología en la Cultura Física*, 14(2), pp. 153-164. <https://podium.upr.edu.cu/index.php/podium/article/view/831>
- Valdés, A. G., Lazo, B. D. C. R., Mite, K. D. H., & Candeaux, L. E. (2021). Inclusión en la Educación Física, su perspectiva desde la formación del profesional de Cultura Física/Inclusion in Physical Education, its perspective from the formation of the Physical Culture professional. *PODIUM: Revista de Ciencia y Tecnología en la Cultura Física*, 16(2), pp. 423-435. <https://podium.upr.edu.cu/index.php/podium/article/view/1052>
- idea, P., & de los Ángeles, R. (2016). Comprendiendo la discapacidad intelectual: datos, criterios y reflexiones. *Revista de investigación psicológica*, (15), pp. 101-122. http://www.scielo.org.bo/pdf/rip/n15/n15_a07.pdf
- Zucchi, D. G. (2001). Deporte y discapacidad. <http://www.efdeportes.com/> *Revista Digital - Buenos Aires*, 7(43). <https://www.efdeportes.com/efd43/discap.htm>



Conflict of interests:

The authors declare not to have any interest conflicts.

Authors' contribution:

The authors have participated in the writing of the work and analysis of the documents



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