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Original article

Inclusive recreational activities for students with intellectual disabilities in the physical education classroom.

Actividades recreativas inclusivas para estudiantes con discapacidad intelectual, en la clase de Educación Física

Actividades recreativas inclusivas para alunos com deficiência intelectual nas aulas de Educação Física

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ABSTRACT

Improving inclusion at different educational levels is the basis of quality education. This article started from the identification of difficulties in the inclusion and participation of students with intellectual disabilities in Physical Education classes, so the objective was to

propose a system of inclusive recreational activities for students with intellectual disabilities in the Physical Education class, in Higher Basic Education, at the "Adolfo María Astudillo" Educational Unit, in Babahoyo, Ecuador. To do so, theoretical methods such as analysis-synthesis, structural-functional systemic and modeling were applied. As empirical methods, document analysis, observation and survey were used, which allowed to characterize and contextualize the intentional sample, made up of two students with intellectual disabilities and four teachers; the information processed showed limitations in the curricular adaptations. The main result was a system of inclusive recreational activities, whose design proposed actions based on developing fundamental physical skills, maintaining an optimal state of health, achieving emotional well-being, reducing stress and promoting social inclusion, which led to great acceptance by teachers, students and families, expansion of extracurricular participation, and increased willingness of all students to enjoy the scheduled activities.

Keywords: recreational activities, intellectual disability, inclusive education, Physical Education

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RESUMEN

Mejorar la inclusión en los diferentes niveles educativos es la base de una educación de calidad. El presente artículo partió de la identificación de las dificultades en la inclusión y la participación de los estudiantes con discapacidad intelectual en las clases de Educación Física, por lo que el objetivo radicó en proponer un sistema de actividades recreativas inclusivas para estudiantes con discapacidad intelectual en la clase de Educación Física, de Educación Básica Superior, de la Unidad Educativa "Adolfo María Astudillo", en Babahoyo, Ecuador. Para ello, se aplicaron métodos teóricos como el análisis-síntesis, el sistémico estructural-funcional y la modelación. Como métodos empíricos se empleó el análisis de documentos, la observación y la encuesta, que permitieron caracterizar y contextualizar la muestra intencional, conformada por dos estudiantes con discapacidad intelectual y cuatro docentes; la información procesada arrojó limitaciones en las adecuaciones curriculares. Como principal resultado se presentó un sistema de actividades recreativas inclusivas en

cuyo diseño se propusieron acciones, en función de desarrollar habilidades físicas fundamentales, mantener un estado de salud óptimo, lograr bienestar emocional, reducir el estrés y promover la inclusión social que provocaron gran aceptación por docentes, estudiantes y la familia, expansión participativa extracurricular, y aumento de la disposición de todos los estudiantes para disfrutar de las actividades programadas.

Palabras clave: actividades recreativas, discapacidad intelectual, educación inclusiva, Educación Física

RESUMO

Melhorar a inclusão nos diferentes níveis educativos é a base de uma educação de qualidade. Este artigo partiu da identificação das dificuldades na inclusão e participação de alunos com deficiência intelectual nas aulas de Educação Física, portanto o objetivo foi propor um sistema de atividades lúdicas inclusivas para alunos com deficiência intelectual nas aulas de Educação Física, Ensino Básico Superior. Na Unidade Educacional "Adolfo María Astudillo", em Babahoyo, Equador. Para isso, foram aplicados métodos teóricos como análise-síntese, sistêmico estrutural-funcional e modelagem. Como métodos empíricos foram utilizados análise documental, observação e levantamento, que permitiram a caracterização e contextualização da amostra intencional, composta por dois alunos com deficiência intelectual e quatro professores; As informações processadas revelaram limitações nas adequações curriculares. O principal resultado foi um sistema de atividades recreativas inclusivas em cujas ações de design foram propostas, baseadas no desenvolvimento de habilidades físicas fundamentais, na manutenção de um ótimo estado de saúde, na obtenção do bem-estar emocional, na redução do estresse e na promoção da inclusão social que provocou grande aceitação por parte dos professores, alunos e famílias, expansão participativa extracurricular e aumento da disposição de todos os alunos para desfrutar das atividades programadas.

Palavras-chave: atividades recreativas, deficiência intelectual, educação inclusiva, Educação Física

INTRODUCTION

Disability is a condition in which certain people have some lasting physical, sensory, intellectual or mental deficiency, and this frequently limits their participation and social inclusion. There is still no consensus on how to call people who experience some degree of functional limitation, the most common expressions commonly accepted are disabled and disability.

According to Cáceres-Rodríguez (2021), different terms can be addressed according to the meanings of deficiency such as disability and handicap, based on the need to address not only the disease, but its consequences in all aspects of human life. Regarding disability, he points out that it is a generic term that includes deficits, limitations in activity and restrictions in participation and indicates the negative aspects of the interaction between an individual with a health condition and their contextual factors, whether environmental or personal.

Intellectual disability was called mental retardation a few years ago, so a change in terminology was suggested. The main reason for this is the pejorative nature of the term. It also reduces the understanding of people with intellectual disabilities to diagnostic categories that emerge from a psychopathological perspective. People with intellectual disabilities today, like other people in society, must be viewed from an approach that prioritizes the human being.

The criterion on intellectual disability is agreed upon, stating that it is mainly used to define those people who have limitations in the intellectual abilities of reasoning, planning, problem solving, abstract thinking, comprehension, speed in learning, among others. A set of conceptual, social and practical skills in everyday life is also of vital importance (Andreucci and Morales, 2019, p. 199).

The above allows to understand that the degree of intellectual disability can vary from very mild to very severe. People with intellectual disabilities may have difficulty communicating what they want and need to others in order to care for themselves; having an intellectual

disability can cause them to learn and develop more slowly than others of their age, take longer to learn to speak, walk, dress and eat without help, and may have learning problems at school.

In practice, different world organizations have considered the solution to this problem, based on the UNESCO Convention against Discrimination in Education (1960), as well as Sustainable Development Goal 4 and the Education 2030 Framework for Action, which highlight that inclusion and equity are the foundations of quality education.

The United Nations Educational, Scientific and Cultural Organization defines inclusive education as "(…) the process of identifying and responding to the diversity of needs of all students through greater participation in learning, cultures and communities, and reducing exclusion in education" (UNESCO, 2009, p.38) . There is no doubt that inclusive education is important in today's multicultural society.

In this same line of thought, UNESCO (2009) states that educational integration implies changes and modifications in content, approaches, structures and strategies, with a common vision that includes all children of the appropriate age groups, and that it is the responsibility of the normal educational system to ensure that everyone receives education.

In short, the simplest definition of inclusive education is that each person (children, adolescents, adults) has different characteristics, interests, abilities and learning needs, and educational systems must be designed to take into account these diversities, characteristics and needs.

Thus, for Clavijo and Bautista (2020), it is essential to conceive a diverse school that adjusts to the requirements of students, prepared to provide a diversity of educational options, methods and procedures, adjusted to their possibilities and potentialities, and prepares and facilitates their development.

In the second half of the 20th century, education in Ecuador was characterized by the emphasis on public schools. However, the school model was exclusive, only so-called "normal" children were accepted and those with disabilities did not have access to this type

of school, nor to social and educational policies designed to transform the curricula of the educational system. Over time, significant changes were made to the education system, which make a difference from a legal point of view.

This approach is not only a fundamental human right, but is also essential to achieving a more just and equitable society. Educational inclusion involves a change in the culture, policy and practices of educational institutions, in order to adapt to the diversity of the student population and ensure that each student has the opportunity to learn and thrive.

As regards the legal framework of inclusive education, the constant changes in legal matters in education have not significantly affected this issue at present:

Inclusion recognizes the diversity of people, peoples and nationalities, individual and collective differences as an opportunity for the enrichment of society, through active participation and interaction in the family, social, educational, and work dimensions, in general in all social, cultural and community processes. (Organic Law Reforming the Organic Law on Intercultural Education. Official Register, 2021, p. 434)

Inclusive education in Ecuador aims to develop human resources with democratic sensitivity and to foster a critical and cooperative spirit. Learning is inclusive, critical and interdisciplinary in nature, so teachers become an important resource, supporting and guiding students and considering their motivations and needs.

Physical activity programs at school help students with intellectual disabilities develop their bodies, grow, and improve their health.

Physical activity is a right of every human being, it has an impact on the strengthening of conditions for work, on the transformation of nature, on the fight and preservation of peace, on the physical-functional development of the individual and on the formation of character, ethical, moral and volitional qualities at the individual and social levels (Valdés and Reyes, 2024).

On the other hand, Physical Education (PE) classes help students with intellectual disabilities to gain a sense of security and confidence, allowing them to engage in physical activities not only as a spectator but as a participant, which awakens a sense of achievement when sharing with others.

Physical activity allows the development of a wide range of skills and qualities such as cooperation, communication, leadership, discipline, teamwork, concentration and memory. (Rodríguez, et al., 2020). One of the subprocesses within the inclusion of students with intellectual disabilities in the PE class is the adaptation of recreational activities. This adaptation involves modifying the planned recreational activities so that they are accessible and appropriate for the needs and abilities of students with intellectual disabilities.

This may include simplifying instructions, reducing the complexity of activities, using visual or verbal supports, and individualizing learning goals and objectives.

Ensuring inclusive, equitable and quality education and promoting learning opportunities presupposes a curricular conception and the implementation of curricular adaptations that adjust to both the needs and the level of intellectual functioning of the students. (Estévez, et al., 2022, p.527)

Fleites, Pérez and González (2023) indicate:

(…) In studies carried out, results have been obtained on the responses of students with intellectual disabilities in Physical Education classes and it is that these students, due to their functional limitations, are hindered from systematically carrying out physical and recreational activities. This causes a certain setback in most of them and they generally decide not to carry out these activities, which affects their health in the long term. Therefore, it represents a challenge for Physical Education teachers to identify their needs, expectations, interests and potentialities to motivate them to participate in each of the physical and recreational activities. (p. 59).

Adapting activities is essential to ensure that all students, regardless of their abilities or disabilities, can participate in and enjoy PE in a meaningful way, so it is necessary to be

aware of the characteristics of intellectual disability and the different levels of support for each student.

The inclusion of students with intellectual disabilities in PE classes reveals several challenges; it was observed that teachers often exclude these students, they are assigned different activities than the rest of the class, classmates showed no interest in collaborating with them and students with intellectual disabilities spent most of their time inactive.

Given this situation, the objective was to propose a system of inclusive recreational activities for students with intellectual disabilities in the PE class of Higher Basic Education (EBS) at the "Adolfo María Astudillo" Educational Unit in Babahoyo, Ecuador. The social impact of the proposal lies in offering, through a system of recreational activities, an improvement in the quality of life of students with intellectual disabilities, through the development of basic motor skills, balance, coordination and learning stress control techniques, which contributes to improving their emotional well-being.

MATERIALS AND METHODS

The research was classified as pre-experimental, an intervention was implemented and its effects were observed, without a control group or random assignment, which allowed for the assessment of changes in the variables before and after the intervention. A mixed approach was adopted, with quantitative and qualitative methods to obtain a more complete understanding of the phenomenon studied, which increased the validity and depth of the findings.

The scope of the research was descriptive, seeking to detail and characterize the current conditions and experiences related to the inclusion of students with intellectual disabilities in PE. Finally, it was carried out as a field research, data were collected directly in the real educational environment, to obtain contextualized and relevant information about the practice and challenges of inclusion in the school environment.

The research was carried out in the 9th year, parallel C, of the EBS sublevel, with an enrollment of 39 students. The sample consisted of two students with intellectual disabilities and four PE teachers, selected through intentional sampling.

The research development was from March 2022 to December 2023. Of the teachers selected for this research, three are graduates with 7, 9 and 4 years of experience in the PE subject respectively, and one is a master with 15 years of experience; all, with a working life dedicated to teaching PE classes at the EBS sublevel. The sample selection criterion was intentional because:

- Be the area where the researcher has a direct impact on the fulfillment of his teaching duties by exercising the functions of a professor.
- The teachers chosen for the research work directly with the EBS sublevel.
- All grades of the selected EBS sublevel receive the same EF program.

For the development of the research, the following theoretical methods were used:

- Analysis-synthesis was used to consult bibliographic sources in order to theoretically support inclusive education, intellectual disability and the importance of physical activity for people with this disability.
- Structural-functional systemic, allowed to establish the relationships of interdependence and concatenation between the elements of the research, especially to develop a system of inclusive recreational activities to improve interpersonal relationships within the group.
- Modeling, in the context of scientific research, this method facilitated the creation of a system of inclusive recreational activities for students with intellectual disabilities in the PE class, acting as a mediated reflection of objective reality to design and implement practical solutions.

Among the empirical methods used were:

- Observation was carried out in PE classes to demonstrate the participation of students with intellectual disabilities in the 9th year of parallel C.

- Survey, used to collect individual information from teachers who taught the subject. The questions focused on the teaching-learning process of PE for students with intellectual disabilities, in order to improve their integration in classes.
- Document analysis: PE class plans, assessment logs and records of students with intellectual disabilities were reviewed. This analysis allowed their special educational needs (SEN) to be characterised.
- Consultation with a specialist was used to seek internal consistency that allowed a theoretical validation of the system of inclusive recreational activities for students with intellectual disabilities, in the PE class of the "Adolfo María Astudillo" Educational Unit, city of Babahoyo, Ecuador, with a view to its final development and implementation in educational practice. This consultation sought to ensure the internal consistency of the system before its implementation in educational practice.

Statistical mathematical method, through descriptive statistics, a quantitative analysis of the data collected was carried out, through measurement instruments, descriptive statistics techniques were used. This approach allowed obtaining an overview of the results, identifying trends, patterns and central values that characterized the sample studied.

Research techniques and instruments:

- Direct observation: visits were made to PE classes, where the participation and interactions of students with intellectual disabilities were noted. The observation focused on aspects such as inclusion in activities, interaction with their peers and the support received from teachers.
- Structured survey, a questionnaire was designed with specific questions about the teaching-learning process of PE for students with intellectual disabilities. The surveys were conducted individually with teachers.
- Document review, a review of the documents related to PE classes was carried out, including planning, evaluation logs and records of students with intellectual disabilities.

Each technique was implemented systematically to provide a complete understanding of the phenomenon studied and to adequately substantiate the research conclusions and recommendations. It was also necessary to take into account the dimensions and indicators established for the study (Table 1).

Table 1. *Dimensions and Indicators to assess the participation and inclusion of students with intellectual disabilities*

Operational Operative variables	Dimensions	Indicators	Evaluation criteria		
			B	R	M
			10 points	6 points	3 or (-) points
Participation	Motor skills	Student Participation			
		Applying adjustments to the process			
		Manifestation of body expression			
		Space- time structuring			
Inclusion	Perceptual organization	Mental interpretation of information			

Note: *In the statistical analysis of the results, the data were processed by IBM SPSS Statistics software , Version 20.*

RESULTS

Five observations were made in PE classes with the aim of verifying the inclusion of students with intellectual disabilities and the application of active teaching-learning methodologies in a correct, planned and systematic way in terms of group participation. Two classes were observed for each of the four teachers (Figure 1).

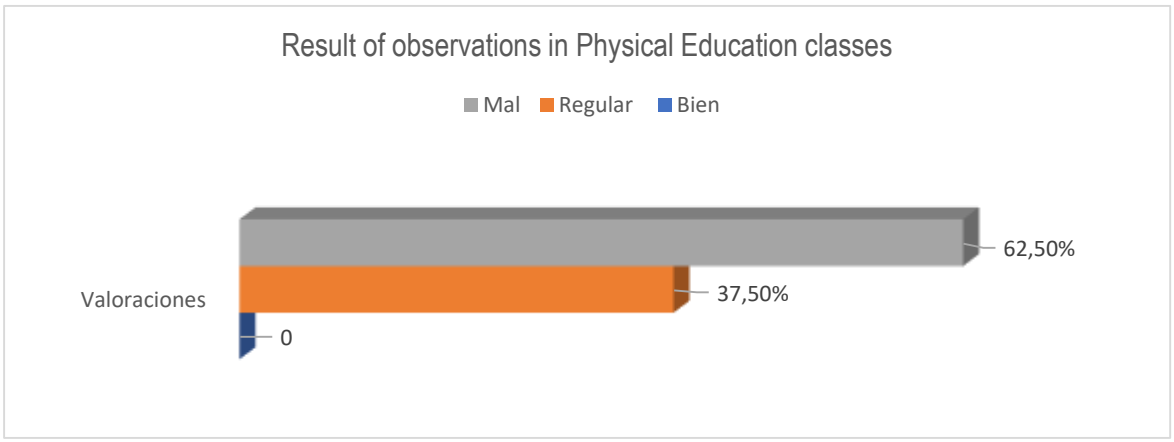

Figure 1. *Results of the observations to the students in the Physical Education classes*

Note: *Figure 1 shows that there are difficulties in the inclusion and participation of students with intellectual disabilities in the PE classes presented by the four teachers of the educational unit.*

The results obtained, summarized in Figure 2, showed the significant need to improve inclusion and adaptation in PE classes for students with intellectual disabilities.

In indicator one, related to the level of participation of students with intellectual disabilities, it was found that seven of the eight observations (87.5%) were evaluated as poor and one observation (12.5%) as average; this suggests that, although students attend PE classes, their social relationships with the group are poor and isolated.

Indicator two assessed the level of application of adjustments to the teaching-learning process in the PE class for students with intellectual disabilities. It showed that in six of the eight observations (75%) it was assessed as poor and in two observations (25%) as average. Therefore, in the majority of the classes observed, teachers did not make the necessary adjustments, which prevented students from actively participating according to their abilities.

Indicator three covered the level of manifestation of body expression in the PE class for students with intellectual disabilities. Six of the observations (75%) were evaluated as poor and two as average. This revealed that three of the teachers did not work adequately on the

development of body expression, which is essential for recognizing body parts, developing motor skills and strengthening social relationships.

In indicator four, the level of space-time structuring was measured; five classes (62.5%) were evaluated poorly and three (37.5%) were evaluated as average, suggesting that adequate work was not done to help students coordinate their movements in terms of tone, balance, laterality and notion of the body.

Indicator five, on the level of mental interpretation of information, showed that seven of the eight observations (87.5%) were evaluated as poor and one (12.5%) as average. These results revealed significant limitations in the integration of emotions, cognitive experiences and the interpretation of stimuli during PE classes.

The results obtained are summarized in Figure 2, and they pointed out the significant need to improve inclusion and adaptation in PE classes for students with intellectual disabilities. Of the 8 observations made, in indicator 1 related to the level of participation of students with intellectual disabilities in the class, it was found that 87.5% were evaluated as poor and 12.5% as average**,** so these students demonstrated poor social relationships with the group and were isolated.

Indicator two regulated the level of application of adjustments to the teaching-learning process in the PE class for students with intellectual disabilities, 75% of whom were evaluated as poor and 25% were average, which showed that teachers did not make adjustments to the teaching-learning process, which prevented students from actively participating according to their abilities.

The level of manifestation of body expression in the PE class, for students with intellectual disabilities, was indicator three, with 75% of observed classes evaluated as poor and 25% of as average**,** so three of the teachers did not work on the development of body expression in their students, an essential factor for recognizing body parts, developing motor skills and strengthening social relationships.

In relation to indicator four, on the level of space- time structuring, in five classes 62.5% was poor and 37.5% was average; teachers did not work on matching movements based on tonicity, balance, laterality and the notion of the body in students with intellectual disabilities.

In indicator five, the level of mental interpretation of information was evident in the observed classes, with 87.5% being poor and 12.5% being average. This result revealed that the practice between emotions, cognitive experiences, the final interpretation of the stimulus and its perception present limitations since their treatment in PE classes.

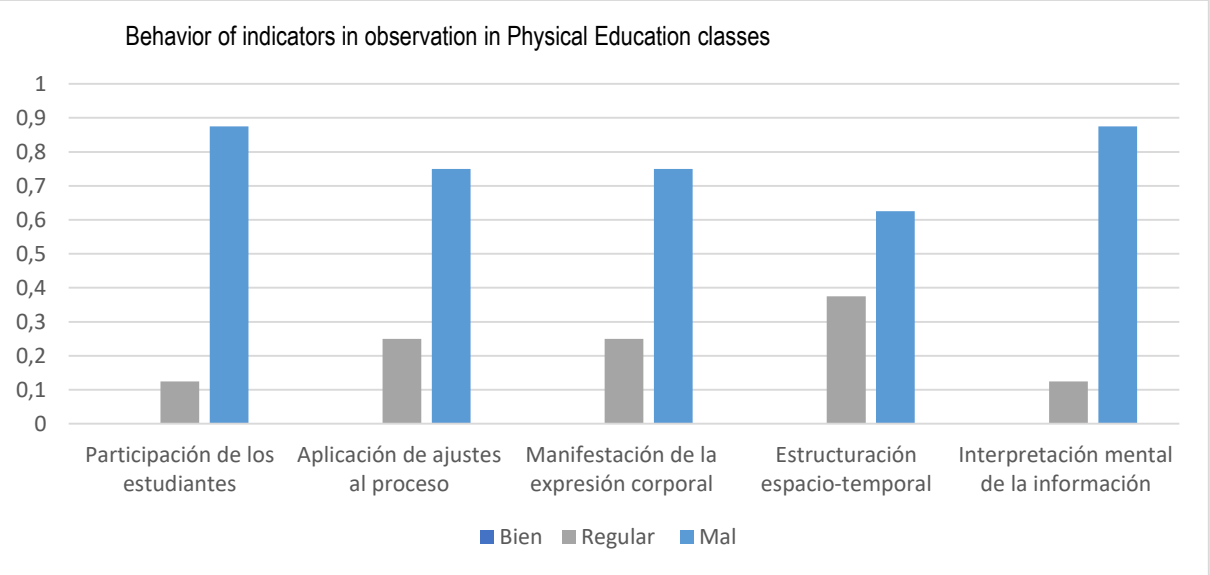

Figure 2 *Behavior of indicators in observation in Physical Education classes*

A survey was conducted with four PE teachers to demonstrate their knowledge and application of inclusion processes for students with intellectual disabilities, as well as the implementation of active teaching-learning methodologies in accordance with the knowledge acquired in their teacher professionalization process. When asked about their knowledge of the physical and cognitive characteristics of these students, only 25% said they were informed about these characteristics and the rest indicated no knowledge in this regard.

This result revealed a general lack of familiarity among teachers with the specific difficulties faced by these students, such as problems in adapting to the environment, recognizing body

parts, time perception, motor deficits, and establishing social relationships. The absence of this knowledge can hinder the implementation of appropriate strategies to effectively support students with intellectual disabilities in the educational environment.

Regarding the analysis of documents, the planning required by the district and the institution's authorities to the four teachers was analyzed, of which 25% planned five classes with adaptations for students with intellectual disabilities and the three remaining teachers, 75%, did not take into account this type of adaptations in their classes, which showed the lack of demand for planning adaptations of class content for these students, and deficiencies in the log of the daily evaluation of the development of the inclusive process.

It was necessary to review the records of the two students with intellectual disabilities with the intention of verifying the results of the evaluation and the progress achieved in relation to physical activities (Table 2).

Regarding the level of participation of these students in the PE class, 100% of the teachers stated that they were isolated; when asked about the frequency with which methodological adjustments were applied to the process, it was found that 25% indicated that they were sometimes applied, while 75% stated that they were never made. The lack of implementation of simple choreographies, varied games and exercises to develop basic motor skills evidenced significant problems in this regard.

As regards the manifestation of body expression, 75% of teachers reported a certain rigidity in movements, especially in the lower limbs of students with intellectual disabilities. Likewise, in terms of spatial-temporal structuring and orientation, 100% reported difficulties in moving through space, with specific problems in motor development.

Regarding the knowledge of alternative methodologies for the inclusion of students with intellectual disabilities, 75% of teachers considered that these methods were insufficient, mentioning the limited reading and viewing of specialized materials, which reflected serious problems in this indicator.

In the document analysis, the planning required by the district and the institution's authorities for the four teachers was reviewed. It was found that only 25% planned five classes with adaptations for students with intellectual disabilities, while 75% did not incorporate them, and no evidence was found of a daily evaluation log of the inclusive process.

Finally, the records of the two students with intellectual disabilities were reviewed to verify the results of the evaluation and the progress achieved in relation to physical activities, which allowed the implementation and effectiveness of the adaptations made to be evaluated.

Table 2. *Qualitative assessment of students with (DI)*

Student No. 1	Student No. 2
He has difficulties with his location in time, space and person, he has difficulty defining laterality and is unaware of his body scheme, as well as problems with the coordination of movements.	He has difficulty maintaining balance because his stride is extra-rotated or abducted. He has physical instability and shows some difficulty with stiffness in his lower limbs, which prevents him from going up and down stairs without support.

Both students did not define their laterality and they lacked the development of their spatial notions. The information obtained demanded a necessary transformation, to promote the development of recreational activities for the inclusion of students with intellectual disabilities and the achievement of a better quality of life.

By developing basic motor skills, balance and coordination and group integration in PE classes, students' self-esteem and better adaptation to the environment increased; therefore, a system of inclusive recreational activities for students with intellectual disabilities was proposed in PE classes.

According to the conceptualization offered by Montejo (2017), it was agreed that a system is made up of objectives, functions, components, structure, forms of implementation and forms of evaluation. Consequently, the proposal that was presented was structured in three essential phases: diagnosis and acclimatization stage, execution and evaluation of the activity (Guachisaca and Valdés, 2024).

In the research, the objectives were assumed as the starting point and premise of the system, which determined the aspirations and expressed the transformations to be achieved. The needs of students with intellectual disabilities and the relevant adaptations were specified, which involved using the necessary and adapted teaching materials and resources, as well as visual, auditory or tactile supports according to the needs. In addition, evaluating progress in a formative and continuous manner, using flexible evaluation criteria, and individual possibilities.

For the presentation of recreational activities, the following requirements had to be taken into account:

1. Define the objectives to be addressed in each scheduled activity, without losing sight of inclusion as the predominant element.
2. Plan activities that respond to the likes, needs and possibilities of the participants.
3. Design the basic rules of the activity, for its development.
4. Explain and demonstrate clearly, in detail and briefly.
5. Check that what was explained was understood.
6. Form teams to develop activities in advance and give responsibility to those who have disadvantages, in this case students with intellectual disabilities, to provide them with meaningful and enriching learning opportunities.
7. Having access to an inclusive and equitable education, where the student is valued and accepted in the school environment.
8. Own only the means necessary for each activity.
9. Properly organize the premises where work was done.

It is important to recognize that the proposal had a systemic character because the conception of the different actions led to the formation of a new stage of development, in that all of them complemented and interrelated each other to allow a new quality in the performance of students with intellectual disabilities. This characteristic led to the sequence of planned actions, with a structure and logic, which necessarily took into account the objectives and content when fulfilled, so that it moved from the general to the particular and from the simple to the complex.

The objective of the system: to promote the inclusion of students with intellectual disabilities in the PE class at the "Adolfo María Astudillo" EBS, city of Babahoyo, Ecuador.

Among the characteristics of the system, flexibility was highlighted, as it was based on the peculiarities of each student, so recreational activities were varied, according to individual needs, a pedagogical approach was adopted and individualized support was provided to encourage participation, learning and the comprehensive development of students with intellectual disabilities in PE classes.

It was contextualized in nature, as physical activities were adapted to meet the individual needs of these students, rules were modified, special equipment or techniques were used, and differentiated teaching strategies were implemented; therefore, PE teachers and other professionals in the area received specialized training to be able to adapt the activities effectively.

The system had projective characteristics, as inclusive programs were implemented that encouraged the participation of all students in physical activities, an inclusive and safe environment was created that promoted collaboration and mutual respect, and collaborative efforts were made to ensure that all students participated fully in physical activities.

The recreational activities system was developed over a school semester, with weekly 35-minute sessions. Activities are structured in four-week cycles, each focused on a specific type of game; the aim was to raise awareness about the importance of inclusion in physical

activities for students with intellectual disabilities through talks, workshops and events that informed the school community about the benefits of inclusion and provided guidelines on how to adapt activities to meet the needs of all students.

Among the proposed activities were:

Week 1-4: Cycle 1: Traditional games and sports

Adaptations: larger squares and time for each turn, tops with longer strings that provided physical assistance, specific hiding areas were designated.

Week 5-8: Cycle 2: Collaboration and cooperation games

Adaptations: Adaptation of rules, mixed teams according to abilities, supports and use of large and light blocks, with defined roles for each student according to their abilities.

Week 9-12: Cycle 3: Basic motor skills and dexterity games

Adaptations: Soft, light balls and adaptation of rules, larger hoops and individual activities, adapted obstacles with different levels of difficulty and physical support where necessary.

Week 13-16: Cycle 4: Balance and coordination games

Adaptations: Use of low ropes and lateral support for students, large, lightweight balls for partner balance activities, and tempo variations.

Week 17-20: Cycle 5: Marching and running games

Adaptations: Adapted bags with handles and support for entering and exiting the bag, use of short lanes and adjustments to rules to ensure inclusion, varied rhythms and support from partners to maintain the pace.

Week 21-24: Cycle 6: Teacher Creativity

Adaptations: Integration of personalized and adapted elements, development of team games, encouraging creativity and active participation, exploration and games in natural environments, with necessary adaptations for accessibility.

Specific adaptations:

- Visual and auditory support, using clear images and sounds to explain and guide activities.
- Physical support, with personalized assistance for students who needed additional help.
- Flexibility in rules, with adaptations in games to ensure that all students participated in a meaningful and safe way.

Evaluation and adjustments:

- Continuous observation of teachers and recording of each student's participation and progress.
- Student feedback, where opinions and suggestions were collected, to adjust the activities according to their preferences and needs.
- Monthly teacher meetings to discuss progress and challenges and adapt activities based on observations and feedback received.

The feedback guaranteed formative assessment, generated new needs and qualities that modified the result of the diagnosis and a new objective was formulated that offered continuity and relevance to the proposed system of activities (Figure 3).

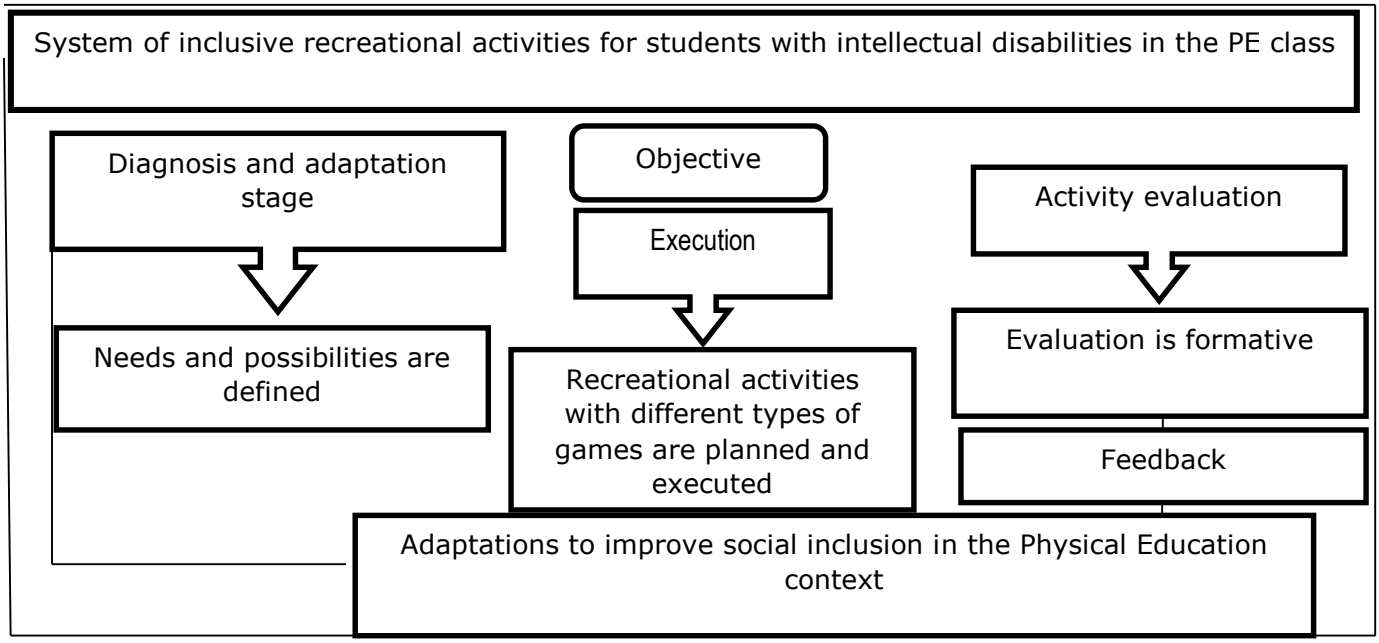

Figure 3. *Graphic representation of the inclusive recreational activities system*

For the theoretical assessment of the system of inclusive recreational activities for students with intellectual disabilities in the PE class, the criteria of specialists were used, with which the consensus of informed opinions about the proposal was obtained. with its structure and operation.

The specialists were selected based on their willingness to participate in the evaluation of the proposal, their analytical capacity and their professional experience of more than six years. They had a KC knowledge coefficient of 0.90 and 1, with a high argumentation coefficient, elements that confirmed their competence. They were given a guide to find out their opinions on the proposed system of activities, which was rated as very appropriate by 100% of the specialists.

However, assessments were made that contributed to its improvement, such as paying greater attention to diagnosis; taking into account the growing social demands regarding educational inclusion; and clarifying the new qualities generated for proper feedback from the system.

Table 3. *Specialists' assessment*

Evaluated Aspect	Initial Assessment	Additional Comments
General Adaptation of the System of Activities	Very Suitable (100%)	- Pay greater attention to diagnosis to ensure that the system is objective.
		- Consider the growing social demands in relation to educational inclusion.
		- Clearly specify the new qualities generated for correct feedback from the system.

These reflections significantly helped to improve the system in its final version. In the implementation of the proposal the pedagogical experience led by the researchers was used and applied to twelve PE classes, which proved to be an effective approach to foster the educational inclusion of these students. By focusing on the curricular block of playful practices, a motivating and participatory environment was created, where both these students and their peers were actively involved in the activities.

The results obtained through the interviews with the 39 students of 9th year, parallel C were positive, all of the respondents expressed that the recreational activities were fun and contributed to a pleasant atmosphere in the classroom, it was highlighted that these activities not only encouraged inclusion, but also improved behavior and respect among them.

The flexibility of the proposal was highlighted, allowing it to be applied in different curricular blocks, making it a valuable tool to facilitate its inclusion in various educational contexts. The empathy and emotional well-being of the participating students were key aspects that reinforced the effectiveness of this inclusive approach. In short, recreational activities not only enriched the educational experience, but also promoted a sense of community and respect among all.

DISCUSSION

The research carried out shows results on the responses of students with intellectual disabilities in PE classes who have functional limitations that prevent them from carrying out physical and recreational activities in a structured manner.

We agree with Fleites et al. (2023) when considering that students, due to their functional limitations, often choose not to do these activities, which can affect their health in the future; therefore, it is a challenge for PE teachers to identify their needs, expectations, interests and possibilities in order to motivate them to participate in sports and recreational activities individually.

Physical activity in PE classes is an ideal space to promote good practices that lead to improving physical and emotional health, among other benefits, as highlighted by Rodríguez et al. (2020). Its systematic practice has a positive effect on students' adaptation to the environment, promotes the development of values, prevents the appearance of comorbidities or compensates for existing limitations due to various disabilities, and improves the quality of life of students with intellectual disabilities.

The inclusive recreational activities system offers a solution to the problem raised, not only by designing actions based on achieving the proposed objective, but also by contributing to the participation of students with intellectual disabilities in EBS. In this sense, it is agreed with Duque (2020) when he states that it must be taken into account that the material with which one works must be in accordance with the activities to be carried out, and many are the simplest to use and are found in the environment, all this depends on the purpose with which one works, for this the environment, age, capacities, environment, among others, are analyzed.

This allows the development of abilities and skills in the physical and cognitive aspect; the important thing is the proper use of the materials chosen for the activities. It should be noted that recreational activities can be adapted to meet the individual needs of students with intellectual disabilities, Colorado et al. (2021) consider that curricular adaptations provide

equal opportunities for all students in their educational process and offer a response to the special needs they present.

This involves modifying rules, using special equipment or techniques, and implementing differentiated teaching strategies. PE teachers and other professionals can receive specialized training to be able to adapt activities effectively and create an inclusive and safe environment where collaboration and mutual respect are promoted.

Acosta and Landero (2023) consider that progress must be made with inclusion policies for students who manage to have an education and develop life skills, on equal terms in society, by strengthening inclusive school processes. By making use of these resources, PE teachers and other school staff members can work together to ensure inclusion and full participation in recreational activities.

CONCLUSIONS

Inclusive education, especially in the field of physical education, played a crucial role in developing the self-confidence of students with intellectual disabilities. Despite the shortcomings identified in the implementation of these classes, the proposal of a system of inclusive recreational activities was presented as a viable solution.

The inclusive recreational activities system was designed to address the recreational needs of these students, with a logical structure that favored progressive learning, from simple to more complex activities.

Validation by specialists supported the feasibility of the proposal, suggesting that if properly implemented, it can significantly improve the educational experience of students with intellectual disabilities in the context of physical activity.

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The author is responsible for writing the work and analyzing the documents.