

## **STUDY ON THE IMPORTANCE OF GYMNASTICS EXERCISES IN THE DEVELOPMENT OF CHILDREN WITH SPECIAL EDUCATIONAL REQUIREMENTS**

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### **Abstract**

This paper aims to present the benefits of practicing gymnastics for students with special educational needs and to offer advice and strategies for adapting gymnastics programs according to the needs and abilities of these students. Also, the paper will address practical aspects, such as the assessment of physical skills, adapting equipment and infrastructure, motivating students and preventing accidents.

Currently there is a lack of equal opportunities for children with special educational needs to participate or succeed both in school and in gymnastics clubs. These programs have a positive effect on the development of children, especially those with special educational needs, giving them all a chance to socialize and practice a sport.

In conclusion, we can say that we managed to show how effective the application of gymnastics exercises is for the development of muscle strength.

### **Introduction**

Special educational requirements are those requirements that derive from the special needs of some people, generated by the existence of dysfunctions at the intellectual, sensory, physical, psycho-affective, socio-economic, cultural level (MECTS – Order 5574/ 2011). Students with special educational needs may have various biopsychomotor peculiarities, which may differently affect the approach and adaptation of the curriculum and learning methods. [1,4,6,9]

Starting from the premise that students with special educational needs cannot do sports, many schools and sports associations do not invite them to various competitions except when they want a bit of publicity. Students with special educational needs cannot all work according to the same work plan or according to the same lesson planning. Each student is unique in his own way, and to each individual student you must explain his meaning.

We conducted this experiment to prove that students will improve not only their mobility, strength and balance, but also their psycho-social qualities.

Gymnastics plays an important role in the development of children with special educational needs, providing them with opportunities to engage in physical activities and develop their motor, cognitive and social skills. [2,3,8,11]

Gymnastics can be integrated into children's special education programs to provide constant opportunities for physical and cognitive development. Through gymnastics, children with special educational needs can learn and apply principles such as discipline, perseverance and determination, which can be of great help to them in other aspects of their lives. [5,7,10]

By promoting gymnastics among these children, we can help build a more inclusive society and ensure equal rights and opportunities for all children, regardless of their special educational needs.

### Material and method

We conducted this experiment to prove that students will improve not only their mobility, strength and balance, but also their psycho-social qualities.

In this study we started from the following hypothesis:

We assume that through the regular practice of gymnastics, children with special needs can benefit from several positive aspects that contribute to their overall development.

Through this study, it aims to highlight the benefits and positive impact that gymnastics can have on these children. It also wants to explore how gymnastics can contribute to the development of motor skills, coordination and balance in these children, in a manner adapted to their special needs.

The students, the place, the period and the conditions in which the study took place

The project was carried out with students from the School Center for Inclusive Education. From the seven classes in this center, we managed to gather 15 students to agree to participate in this study, of which 5 are girls and 10 are boys. The students are between 10 and 14 years old and are enrolled in our school with severe disabilities.

Table 1. Personal data of students

No.	Sex	Name and surname	Height (cm)	Weight (kg)	Age (years)	Diagnosis
1.	F	G.L.	154	42	14	Average mental deficiency, delay in development. psychomotor
2.	F	M.V.	146	28	11	Dev. Severe intellectual, neuropsychic retardatio
3.	F	F.I.	155	73	14	Average mental deficiency, delay in development. psychomotor

4.	F	F.M.	153	49	13	Average mental deficiency, delay in development. psychomotor
5.	F	V.A.	156	59	12	Dev. Severe intellectual, neuropsychic retardation
6.	M	I.R.	176	56	14	Average mental deficiency, delay in development. psychomotor
7.	M	P.S.	166	58	14	Dev. Severe intellectual, neuropsychic retardation
8.	M	E.R.	142	28	11	Neuropsychic retardation, Dec. Severe intellectual
9.	M	F.A.	149	40	13	Average mental deficiency, delay in development. psychomotor
10.	M	A.A.	160	43	14	Dev. Severe intellectual, neuropsychic retardation
11.	M	I.F.	149	38	10	Dev. Severe intellectual, neuropsychic retardation
12.	M	T.A.	174	71	12	Dev. Severe intellectual, neuropsychic retardation
13.	M	T.A.	156	35	10	Average mental deficiency, delay in development. psychomotor
14.	M	B.S.	167	40	13	Average mental deficiency, delay in development. psychomotor
15.	M	I.M.	153	40	12	Dev. Severe intellectual, neuropsychic retardation

The gymnastics classes took place additionally outside the classroom hours, at the end of the students' study program, in the physical therapy room and in the school's gym.

The project ran for eight months, starting on October 1, 2022 and ending on May 31, 2023.

#### Description of tests used

The tests applied were for the development of balance, the development of strength and the development of mobility. The grading for students with special educational requirements when taking these tests was done on a scale of numbers from 1 to 5. Grade 1 being for very poor performance, grade 5 being for excellent performance.

### Results and discussions

Gymnastics can play a significant role in the development of children with special educational needs. Here are some results and interpretations of the importance of gymnastics in the development of these children:

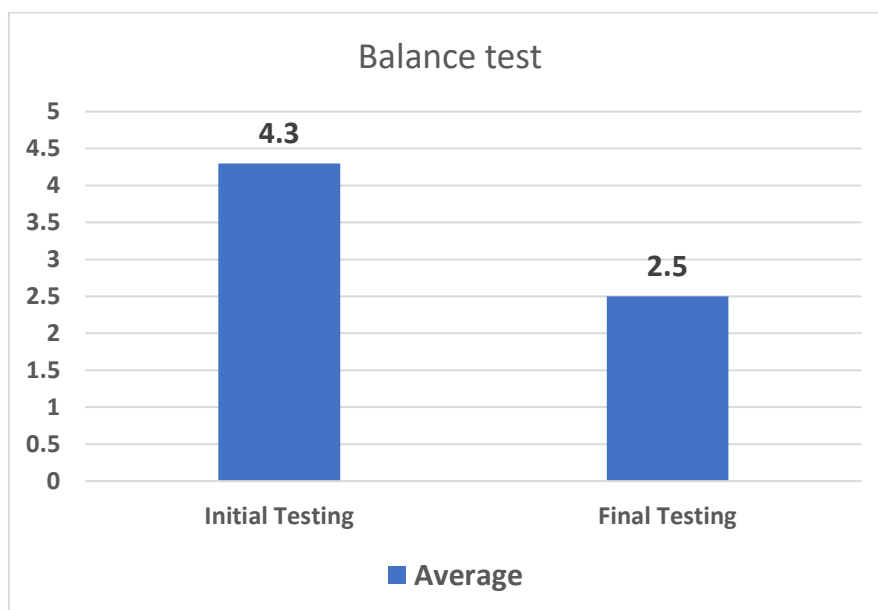
It is important to note that the involvement of children with special educational needs in the practice of gymnastics had to be adapted to the individual needs and capacities of each child. [6,10] Coordinating with special education professionals has provided me with a personalized and safe approach to children's

development. It is also essential to support and involve parents or guardians in promoting physical activity and children's participation in gym classes.

The final grading of the two tests (initial testing and final testing) is an arithmetic average made for scoring each exercise separately, respectively for the development of strength, balance and mobility.

Table 2. Balance test results

The statistical parameter	Initial testing	Final testing
Average	3.06	4.46

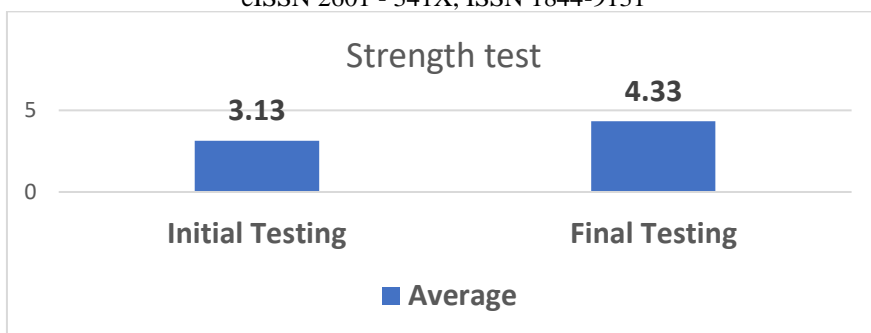


Graph 1. Balance test results

In table number 2 and graph number 1, the arithmetic mean of the results obtained in the initial tests and the final tests obtained after carrying out the exercises for the development of balance was passed. The difference between the results of the initial test and the results of the final test was satisfactory for the students making the most progress.

Table 3. Strength test results

The statistical parameter	Initial testing	Final testing
Average	3.13	4.33

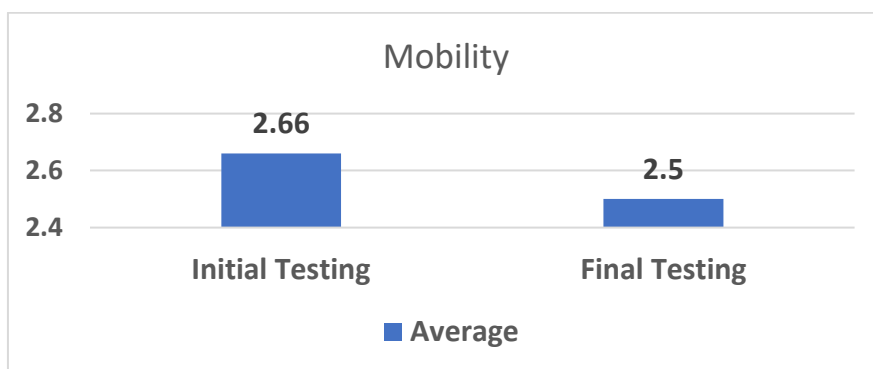


Graph 2. Strength test results

In table number 3 and graph number 2, the results of the initial tests and the final tests of the strength development obtained following the execution of the above-mentioned exercises were given. The difference between the results of the initial test and the results of the final test was satisfactory with students making less progress than the progress made in the development of balance.

Table 4. Mobility results

The statistical parameter	Initial testing	Final testing
Average	2.66	3.66



Graph 3. Mobility results

In table number 4 and graph number 3, the results of the initial tests and the final tests of the development of mobility obtained after the execution of the exercises mentioned above are given. The difference between the results of the initial test and the results of the final test was satisfactory with the students making much less progress than the progress made in the development of balance.

Recommendations for gymnastics coaches who work with children with special educational needs.

Gymnastics coaches who work with children with special educational needs must be trained and have solid knowledge about their individual needs. Some of our recommendations for gymnastics coaches working with these children:

1. Learning about special educational needs: Trainers must have a solid knowledge of special educational needs and be able to adapt training accordingly.

2. Assessment of developmental level: Coaches must be able to assess the developmental level of children and adapt training to suit their individual needs.

3. Communication with parents: Coaches should communicate regularly with parents of children with special educational needs to better understand their needs and ensure that these children benefit from appropriate support and an inclusive training environment.

4. Use of adapted learning strategies: Coaches must be able to adapt learning strategies to suit the individual needs of children with special educational needs. This may include using visual or auditory learning strategies.

5. Ensuring a safe and inclusive training environment: Coaches must ensure that the training space is accessible and the use of safety equipment and techniques are appropriate.

6. Offer emotional and psychological support: Coaches must be prepared to offer emotional and psychological support during training. This may include using motivation and encouragement techniques and creating a positive and accepting training environment.

7. Collaboration with other professionals: Trainers must collaborate with other professionals, such as occupational therapists or physiotherapists, to ensure that children with special educational needs benefit from a complete and appropriate training plan.

By following these recommendations, gymnastics coaches can ensure an inclusive training environment adapted to the individual needs of children with special educational needs, allowing them to benefit from all the physical and mental advantages of this activity and to develop social skills and interaction with others.

## **Conclusions**

Gymnastics offers opportunities for physical, cognitive, social and emotional development, contributing to improving the quality of life and inclusion of these children.

One of the main advantages of gymnastics for children with special educational needs is the development of motor skills and coordination. Through specific exercises, children can improve their balance, flexibility, muscle strength and fine motor skills. These aspects are particularly important for children with disabilities, as they help them improve their independence and mobility in everyday activities.

Also, gymnastics can have a positive impact on the cognitive development of children with special educational needs. Regular exercise boosts blood circulation and oxygenation to the brain, which can help improve these children's focus, attention and learning ability. Also, through gymnastics, they can learn to develop planning, organizing and problem-solving skills.

In conclusion, gymnastics is a valuable tool in the development of children with special educational needs. Through this activity, these children can improve their motor, cognitive, social and emotional skills, achieving outstanding results in their overall development. With the right support and the creation of an inclusive and safe environment, gymnastics can become a transformative experience for these children, providing opportunities for growth, learning and self-realization.

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