

THE IMPACT OF PRACTICING MINI-HANDBALL ON THE MOTOR AND PSYCHOSOCIAL DEVELOPMENT OF PRIMARY SCHOOL STUDENTS

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Summary

The present study investigates the impact of the systematic practice of the mini-handball sport game on the motor and socio-affective development of primary school students. The research was conducted on a sample of primary school students, using specific methods of pedagogical research: observation, experiment and motor testing. The results highlight significant improvements in coordination, reaction speed and cooperation capacity. The hypothesis is thus confirmed that the systematic introduction of mini-handball in physical education lessons optimizes the instructional-educational process.

Introduction

Physical education in primary school plays a decisive role in the development of students, contributing to the development of motor skills[9] and the formation of motor and social skills [4,5]. Adapted sports games stimulate motivation for movement, active involvement of students and represent an effective means of achieving curricular objectives [10].

The discipline of physical education in primary school plays an essential role in the harmonious development of students. By using adapted sports games, such as mini-handball, an attractive and effective framework is created for the development of motor skills and team spirit.

Minihandball, as a simplified version of the game of handball, is notable for its accessibility and complex formative character[7]. Its integration into physical education lessons can contribute to increasing the level of involvement and developing fundamental motor skills. Minihandball is a simplified version of the

game of handball, adapted to the age characteristics of children, with reduced rules and a greater emphasis on participation and enjoyment of the game.

The particularities of minihandball in the primary cycle are characterized by: a small court, a small number of players (4+1 or 5+1), a ball adapted to the size of the child's hand, simplified rules and an emphasis on active participation and not on performance. These characteristics make it accessible and attractive for young students, facilitating the involvement of all children.

Children's motor development is an essential process in the first years of life, and sport plays a central role in this process[1,6]. Playing mini-handball contributes to the harmonious development of children, providing them with a playful and dynamic environment for progress. Specifically, this sport supports:

- developing coordination, teaching children to synchronize their body movements in an efficient way;
- improving speed and agility, qualities necessary to react quickly during the game;
- developing basic skills: running, throwing, catching, fundamental elements that lay the foundation for an active and healthy life.

As for the mental development of young athletes, it is a complex process, facilitated by the constant challenges on the playing field. By engaging in sports, students develop their attention and concentration, becoming much more present and able to follow important details under pressure. They also practice their ability to make quick decisions in critical moments, which ultimately strengthens their self-confidence and the courage to act independently.

Students' social development is closely linked to constant interaction with others, and sports provide the ideal context for this progress. Team play fosters cooperation between colleagues to achieve a common goal, while teaching them the fundamental importance of respecting the rules in an organized group. All these experiences contribute directly to character formation, promoting a spirit of authentic fair play, based on respect for the opponent and integrity[8].

The success of the instructional-educational process depends largely on the strategies chosen, which is why the teacher must use preparatory games designed to stimulate the enthusiasm of the little ones[2,3]. The efficiency of teaching is closely linked to the teacher's ability to adapt the exercises to the class level, respecting the age characteristics, and to encourage the participation of all students to create an inclusive environment. It is essential that he uses interactive and playful methods, so that the learning of basic techniques is achieved through play and collaboration. As

examples of effective exercises, it is recommended to use passing in pairs for stability, "hold the ball" games to develop team spirit and throws at the goal from various positions to increase the effectiveness of technical executions.

For the optimal performance of the activity, a minimum of equipment is required to ensure the safety and comfort of the little athletes, consisting of sports shoes suitable for gyms, a t-shirt and shorts, along with special mini-handball balls that have a small circumference, between 44 and 49 cm, and are made of a soft and easy-to-grasp material to eliminate children's fear of contact. As for the playing space, the mini-handball court is smaller than the standard one, with a length between 20 and 24 meters and a width between 12 and 16 meters, which often represents approximately one third of the surface of a normal handball court. The goals are also adapted to the height of the children, usually measuring 1.70 meters by 3 meters or even smaller, 1.60 meters by 2 meters, while the goal space is delimited by a semicircle with a radius of 5 meters drawn from the middle of the goal.

Minihandball is a complex and effective teaching tool in primary school physical education. Through its accessible and formative nature, it contributes to the integral development of students, facilitating the acquisition of motor, cognitive and social skills necessary for harmonious integration into school and social life.

Research methodology and organization

The research was conducted on a sample of 40 third-grade students from the "Iorgu Vârnăv Liteanu" Theoretical High School, who were divided into two equal samples for precise monitoring of the results. Thus, the structure of the study included an experimental group of 20 students and a control group also composed of 20 students, thus facilitating the comparison of the impact of the teaching methods used on their progress.

The study used the following research methods to ensure the rigor and validity of the data collected. The process began with systematic pedagogical observation of students' behavior during lessons, followed by the actual application of a structured pedagogical experiment to test the working hypotheses. Progress was also assessed through motor testing of the participants, and all the resulting information was subsequently analyzed and interpreted using the statistical-mathematical method.

The aim of the research was to evaluate the influence of mini-handball practice on the motor and socio-affective development of primary school students,

following how this sport can become an effective tool in their general training. By carefully monitoring the students' progress, it was intended to demonstrate that mini-handball not only contributes to improving physical indicators, but also plays a crucial role in the emotional balance and social integration of children within the group.

To assess the motor development of the students involved in the study, specific tests were selected to measure fundamental physical parameters. Thus, acceleration capacity was monitored through the 25 m speed running test, followed by the evaluation of explosive arm strength by throwing a football at a distance. In addition to these measurements, a complex coordination test (applicative course) was applied, designed to highlight the level of mastery of movements in a dexterity and precision regime.

In order to provide a relevant assessment in the game of minihandball, tests should target ball control at speed, throwing accuracy and specific movement ability. Here are three age-appropriate test proposals:

1. Slalom dribbling between posts (speed and control)

The student must cover a distance of 20 meters (round trip) dribbling between 5 posts placed at equal distances. The test measures the ability to control the ball with the dexterous hand under time pressure, without losing contact with it or knocking over the posts.

2. Fixed target shooting (precision)

From a distance of 5-6 meters, the student performs 5 successive shots at a target marked on the goal or on a wall (for example, 50x50 cm squares at the corners of the goal). The number of hits is scored, the test assessing hand-eye coordination and the ability to direct the ball to the vulnerable points of the goal.

3. "Shuttle" test with wall catch and pass (specific coordination)

The student stands 3 meters away from a wall and must execute as many correct passes and catches as possible within 30 seconds. This test assesses reaction speed, correct catch-pass technique and the ability to concentrate under intense effort.

Results and their interpretation

The research was structured in two essential evaluation stages, designed to highlight the evolution of students throughout the entire school year. The initial testing was carried out at the beginning of the 2024–2025 school year, in September, providing the necessary starting data, while the final testing took place at the end of May to measure the impact of the proposed program. Following the application of the initial evaluation, the group involved in the experiment carried out specific

intervention activities, based on mini-handball methods, an approach that generated significant progress in its evolution, both in terms of motor and technical aspects.

The results obtained confirm the data from the specialized literature on the effectiveness of adapted sports games in the development of students, demonstrating that mini-handball, through its dynamic and accessible character, stimulates the active participation and global development of children. At the same time, progress is supported by the simultaneous involvement of multiple mental processes during the game, which turns each lesson into a complex exercise in physical and mental development.

Therefore, the results of the study clearly demonstrate the efficiency of the methods used, highlighting a superior progress of the experimental group compared to the control group in all control tests. If at the initial testing the two groups had a similar level, at the end of the experiment the experimental group obtained an average of 4.8 seconds in the speed test and 18.5 meters in the ball throw, significantly exceeding the control group which recorded 5.2 seconds and 15.2 meters, respectively. The most relevant evolution was visible in the coordination test, where the experimental group improved its time by 6.1 seconds, reaching an average of 22.4 seconds, which confirms that a methodical approach based on minihandball accelerates the development of complex motor skills in third-grade students from the "Iorgu Vârnav Liteanu" Theoretical High School (Table 1).

Table 1. Evolution of motor development results

Assessment test	Testing time	Experimental Group (Mean)	Control Group (Mean)	Progress Experimental Group
25 m sprint	Initial	5.5 sec	5.4 sec	-0.7 sec
	Final	4.8 sec	5.2 sec	
Throwing the sheep ball	Initial	14.2 m	14.5 m	+4.3 m
	Final	18.5 m	15.2 m	
Coordination test (Course)	Initial	28.5 sec	27.9 sec	-6.1 sec
	Final	22.4 sec	26.8 sec	

The results obtained in the specific mini-handball game tests confirmed the technical-tactical superiority of the experimental group, which benefited from an adapted training program. In the slalom test with dribbling between the posts, the students in the experimental group achieved an average time of 12.5 seconds, well

below the 15.8 seconds recorded by the control group, demonstrating a significantly superior ball control in speed mode. The same efficiency was also observed in the fixed target throw, where the experimental group achieved an average of 4 out of 5 successes, compared to only 2 out of 5 successes in the case of the control group. Finally, in the 30-second wall pass test, the experimental group achieved an average of 22 correct executions, surpassing the control group that finished with an average of 16 executions, which validates the significant progress in reaction speed and catch-pass technique (Table 2).

Table 2. Evolution of minihandball specific test results

Assessment test	Testing time	Experimental Group (Mean)	Control Group (Mean)	Progress Experimental Group
Dribbling Slalom (dry)	Initial	17.2 sec	16.9 sec	-4.7 sec
	Final	12.5 sec	15.8 sec	
Target shooting (number of successes)	Initial	1 / 5	1 / 5	+3 successful
	Final	4 / 5	2 / 5	
Wall passes / 30s (no.)	Initial	12 Passing	13 pase	+10 Passing
	Final	22 Passing	16 pase	

The comparative analysis of the data highlights the fact that, although at the initial testing the students presented reduced and relatively equal technical skills, the groups being very close in level, the end of the study marked a clear differentiation between the two samples. Thus, even if initially the control group had obtained slightly better results in the speed and coordination tests, the experimental group subsequently recorded a significantly greater qualitative leap due to the implementation of the methods specific to minihandball. This major progress is particularly visible in the wall pass test, where the average increased from 12 to 22 executions, as well as in the ball control in slalom, which demonstrates that the specific exercises were assimilated efficiently and led to a superior development of motor skills.

Conclusions

Minihandball is a complex and effective teaching tool in physical education in primary school. Through its accessible and formative nature, it contributes to the integral development of students, facilitating the acquisition of motor, cognitive and social skills necessary for harmonious integration into school and social life. In conclusion, the research conducted at the “Iorgu Vârnav Liteanu” Theoretical High School confirms the hypothesis that the systematic practice of minihandball is a determining factor in the harmonious development of third-grade students. The data collected demonstrate that the use of playful and interactive methods generated superior progress within the experimental group, materialized by improving speed, coordination and specific technique indices, but also by better social integration and increased self-confidence. Thus, the implementation of this adapted sports game in the physical education curriculum not only streamlines the learning process, but also offers students an optimal framework for global evolution, both physically, mentally and socially.

Bibliography

- [1] ANGHEL, M. (2019). Dezvoltarea motrică a copilului în ciclul primar. Editura Didactică și Pedagogică;
- [2] BALINT, E. (2024). *Metodica predării handbalului: Note de curs reevaluate și completate*. Editura Universității Transilvania din Brașov;
- [3] CĂLIN, G. C. (2020). *Metodica predării jocului de handbal în învățământul primar și gimnazial*. Editura Larisa;
- [4] DRAGNEA, A., & BOTA, A. (1999). *Teoria educației fizice și sportului*. Editura Didactică și Pedagogică (EDP) ;
- [5] EPURAN, M. (2005). *Metodologia cercetării activităților corporale*. FEST;
- [6] GROȘU, B.-M. (2023) Abordarea fotbalului juvenil din perspective psihomotricității. Editura Ovidius University Press, Constanța, p. 26-32;
- [7] LEUCIUC, F. V., & NAWARECKI, D. (2021). Practical issues and methods of minihandball. *Annals of the „Ștefan cel Mare” University of Suceava: Physical Education and Sport Section*, 15(1), 45-52;
- [8] PÂNTEA, F., TUDOSESCU, I. (2021). Impactul sporturilor de echipă asupra dezvoltării socio-emoționale la copii. *Revista de Educație Fizică și Sport*, 11(2);
- [9] POTOP, L., JURAT, V., & POTOP, V. (2022). Determinarea nivelului dezvoltării capacității motrice la elevii din ciclul primar prin utilizarea mijloacelor specifice jocului de handbal. În *Sport. Olimpism. Sănătate* (pp. 112-118). Universitatea de Stat de Educație Fizică și Sport;
- [10] RAȚĂ, G. (2008). *Didactica educației fizice și sportului*. Alma Mater.