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*Andreea-Gabriela Lazăr*

## THE ROLE OF PHYSICAL EDUCATION AND SPORT IN CASE OF CHILDREN WITH LATERALITY AND BODY SCHEMA DISORDERS

Дослідження спрямоване на поліпшення проявів розладів схеми тіла дітей початкових класів за допомогою занять фізичним вихованням та спортом. Свідома участь дітей в групових заняттях фізичним вихованням та спортом, іграми, на аплікативних стежках, аналітичними вправами, гімнастичними комплексами, покращить бічні розлади та порушення схеми тіла. В дослідженні прийняло участь п'ять школярів початкових класів гімназії “Штефан чел Маре” м. Путна. Діти часто демонстрували незграбні рухи і труднощі у вирішенні рухових завдань, які вимагаються вчителем під час занять фізичним вихованням, порівняно з іншими дітьми їхнього віку. Результати дослідження засвідчили той факт, що специфічні засоби фізичного виховання та спорту, які застосовуються до розвинених дітей, тих, що мають латеральні порушення, призвели до їхнього поліпшення, з позитивним впливом на інші координаційні здібності.

**Ключові слова:** розлад схеми тіла, латеральні порушення, фізичне виховання та заняття спортом, діти.

*This experiment aimed to improve the manifestations of awkwardness and body schema disorders in some children in primary classes through physical education and sports lessons. In this paper we have started from the idea that taking part in physical education and sports lessons in a conscious manner, where they are constantly engaged in games, batches, applicative trails, analytical exercises, gymnastics complexes, will improve lateral disorders and body schema disorders, in children with these aspects. The study was conducted on five pupils of the "Stefan cel Mare" Gymnasium School in Putna, in the primary classes. These children have often shown clumsy movements and difficulties in solving the movements required by the teacher during physical education lessons compared to other children of their age. The results of our research have highlighted the fact that the specific means of physical education and sport applied to normally developed children, but which have some unwholes in performing different movements, have led to their improvement, with beneficial effects also on the other cordonal capacities. Movement games and physical exercises are ways that can be used successfully in psychomotor disorders in young school children.*

**Key words:** *body schema disorders, laterality disorders, physical education and sports lessons, children.*

**Introductions.** Body scheme is a mental picture of the man's own body and self-localisation in space and time and individual relationships with the environment (Ulici, Gh., 2003, p. 57). The body scheme allows the assessment of the relationship between body segments and body relations with the environment (Albu, C, coord., 2006, p. 26). In the field of body scheme includes: self-image (mental representation of their body) and self-perception (knowledge in relation to the body). J., Le. Boulch (quoted by Paunescu., M., 2006, p. 70) includes in the field of body schema the following components:

- body perception and control;
- postural balance and well-established laterality;
- independence of different segments from each other;
- mastering impulses and associated inhibitions in previous ones.

The body scheme is the real body of a person on whom the unconscious image of the body will be structured (Allard, C., 1990, p. 7). The characteristics of body schema according to author Horghidan, V., (2000, p. 79) are:

- is an image of the three-dimensional structure of the body;
- is a reflection of posts and attitudes;
- is the image of body structure and availability;
- performs important functions in adjusting movements;
- is a dynamic structure, but has a certain stability;
- reflects the relationship with space and objects that surround us.

Disturbances in the body scheme reveal the presence of motor, intellectual or affective issues. The deficient child does not recognize the parts of his own body, he does not place his limbs properly, he has difficulty in perceiving the position of body segments in space (De Meur, A., 1988, p. 32).

By laterality is meant the functional dominance of one of the pairs analogous organs (hands, feet, eyes, ears, etc.). Etymologically, it comes from the latines word *lateralis*, witch means side, lateral (Moțet, D., 2009, p. 401). Laterality expresses the functional inequality of the right or left side of the body as a consequence of the difference in function distribution in the hemisphere (Voinea, A., 2015, p. 20).

Laterality is the knowledge of the two parts of the body, the ability to identify the left side on the right side. This has a close connection with the body schema because the right-left location in the body scheme is related to lateral dominance.

By the lateral disorders we understand the lack of homogeneity in terms of cerebral domination, which is manifested by the execution of gestures without a symmetrical preference. The laterality disorders after author Punescu, C., (1997, p. 111) is manifested by:

- to perform work, the hand selection is made by random;

- showing a preference for a hand in performing different actions (precision gestures are executed with the right hand, and movements that require force are performed with the left hand);
- difficulty in recognizing the left side and right side of the body;
- difficulty in recognizing the right or left position of the objects in the environment;
- difficulties in adapting to normal graphic meaning.

**Material and method.** *Hypotheses of the research:* in this paper we have started from the idea that taking part in physical education and sports lessons in a conscious manner, where they are constantly engaged in games, batches, applicative trails, analytical exercises, gymnastics complexes, will improve lateral disorders and body schema disorders, in children with these aspects.

*The purpose of the research:* this experiment aimed to improve the manifestations of awkwardness and body schema disorders in some children in primary classes through physical education and sports lessons, where they have been involved in various games, battleships, application trails, gymnastic exercises.

*Subjects of research:* The study was conducted on five pupils of the “Stefan cel Mare” Gymnasium School in Putna in the primary classes. These children have often shown clumsy movements and difficulties in solving the movements required by the teacher during physical education lessons compared to other children of their age.

*The research methods:* method of study of specialized literature, anamnesis, observation method, experiment method, methods of collecting, processing and interpretation of data.

*Research period:* the experiment was conducted over a period of 4 months (January 2018 – June 2018).

*The means used in research:* during the second semester of the school year, I have insisted on developing the coordination of primary school children by using motion games, batches, exercise exercises, applied routes with basic motor skills and specific.

*Tests used in research were:* Throwing the tennis ball in the ground and grabbing it with left hand and then with right hand (5 correct = 5 points), Grip the ball with the right hand and then with the left hand, dropped by the examiner (5 correct = 5 points), Throwing the tennis ball at the 1.5 meters to a target, with left hand and with right hand (5 correct throws = 5 points) (Manole, V., et al., 2009, pp. 140–142), jumping on the right leg, then the left one in the square with the number “0” to the number “10” (Niculescu, I., 2009, p. 93).

**Results.** After a semester, during which children constantly and consciously participated in physical education and sports lessons, the results of the eight evaluation tests that focused on laterality, body shape and perceptual– motor coordination were the following:

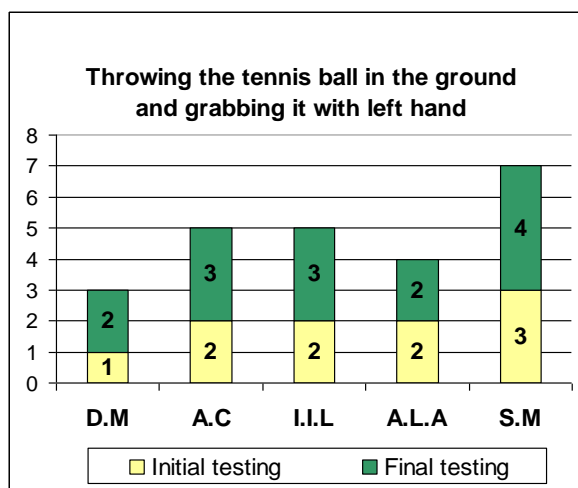


Figure 1. The values for the left hand

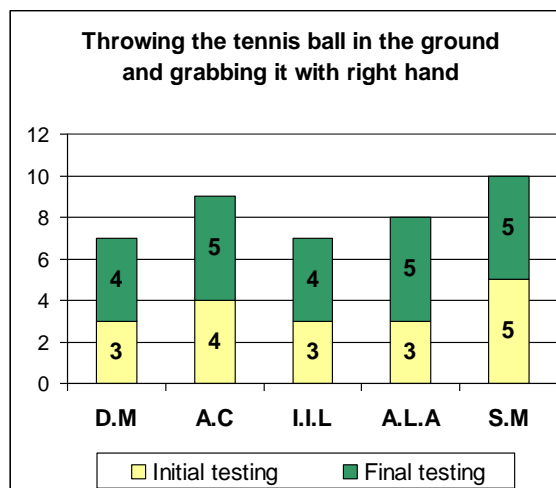


Figure 2. The values for the right hand

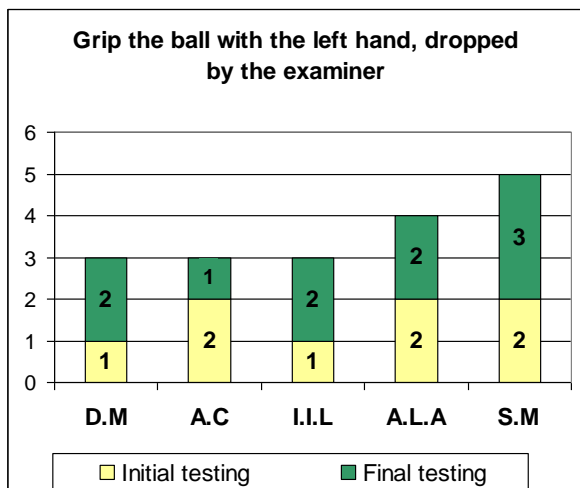


Figure 3. The values for the left hand

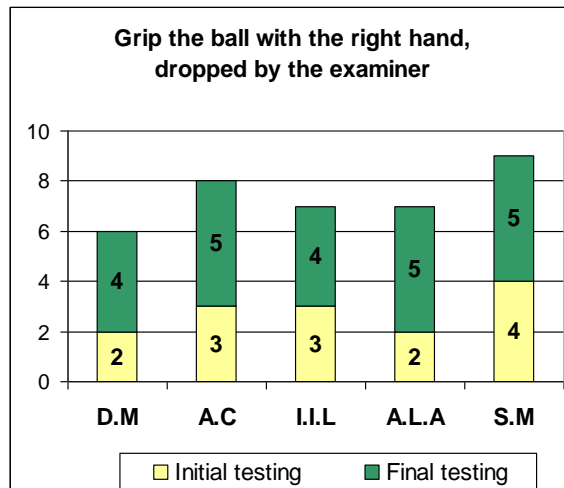


Figure 4. The values for the right hand

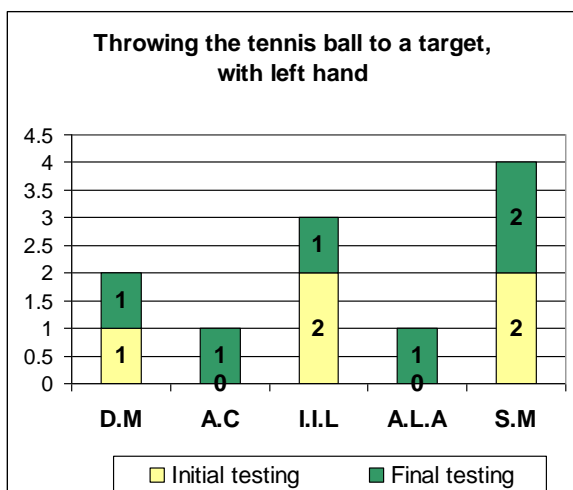


Figure 5. The values for the left hand

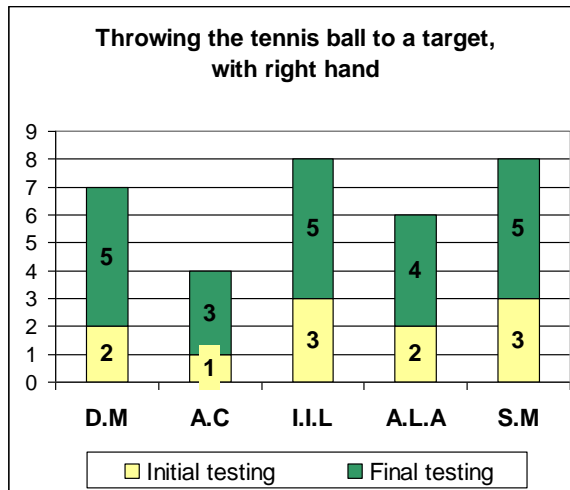


Figure 6. The values for the right hand

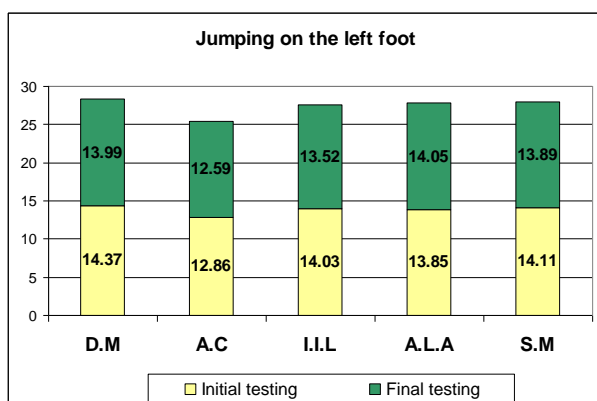


Figure 7. The values for the left foot

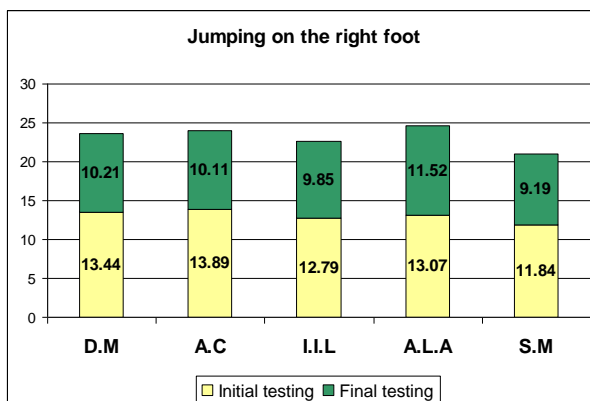


Figure 8. The values for the right foot

**Conclusions.**

The results of our research have highlighted the fact that the specific means of physical education and sport applied to normally developed children, but which have some unwholes in performing different movements, have led to their improvement, with beneficial effects also on the other cordonal capacities.

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Games and physical exercises are ways that can be used successfully in psychomotor disorders in young school children.

After a school semester, which insisted on improving body shape, lateral disturbances and perceptual-driving coordination, the five students had much better results at the final tests, all of them having a hemispheric side-right predominance.

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Тетяна Майкова, Олександра Афанасьєва

## ЗАПОБІГАННЯ СИНДРОМУ ПОСТУРАЛЬНОЇ НЕСТАБІЛЬНОСТІ У ОСІБ ПОХИЛОГО ВІКУ ЗАСОБАМИ ФІЗИЧНОЇ ТЕРАПІЇ ТА ЕРГОТЕРАПІЇ

При дослідженні 25 осіб похилого віку з постуральною нестабільністю визначені основні її причини: порушення рівноваги, страх падінь, деформації пальців стоп, нігтів, розлади зору. Факторами, що сприяли синдрому падінь були незадовільні умови житлового середовища, яке не відповідає вимогам по забезпеченню надійності і безпеки, принципам ергономічності, що в цілому суттєво обмежує незалежність літніх людей у самообслуговуванні.

Для покращення постурального контролю обгрунтована та запропонована багатокомпонентна програма фізичної терапії таких пацієнтів.

Серед запропонованих засобів фізичної терапії були: лікувальна гімнастика з елементами системи Тай-Чі, дозована ходьба та функціональний тренінг. Ерготерапевтичне втручання при постуральній нестабільності літніх людей здійснювалося із використанням таких стратегій: розвиваючої, із відновленням рівноваги та координації і компенсаторної – із застосуванням адаптивних технологій для компенсації рухової активності, адаптації до навколишнього середовища.

**Ключові слова:** похилий вік, постуральна нестабільність, фізична терапія, ерготерапія.

*In the study of 25 elderly patients with postural instability, its main causes are identified: imbalance, fear of falls, deformation of fingers, nails, visual impairment. Factors that contributed to the fall syndrome were unsatisfactory living conditions, which did not meet the requirements for ensuring reliability and safety, the principles of ergonomics, which in general severely limited the independence of the elderly in self-service.*

*In order to improve postural control, a multicomponent program, which consists of Physical therapy and Occupational Therapy, is substantiated.*

*Among the technologies of physical therapy, the main ones are: exercises with elements of the Tai Chi system, dosed walking and functional training.*