

COMPARATIVE STUDY OF SOMATIC AND MOTRIC PARTICULARITIES OF STUDENTS IN THE 8TH GRADE IN DIFFERENT MATERIAL CONDITIONS FOR PHYSICAL EDUCATION AND SPORT LESSONS

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Abstract: *Improving motor skills is one of the main objectives of the training process of the young school, achieved in parallel with the formation of motor skills and abilities. Physical qualities are primary goals of the content of physical education lessons regardless of material conditions (room, apparatus, materials) or atmospheric (rain, snow, fog, cold), the education of motor skills is essential. The aim of the paper is to highlight potential differences in the development of motor skills and the level of somatic development of 8th grade students from three schools with different material base and equipment. The study started from the hypothesis that regardless of the environment (urban or rural), endowment with equipment specific to the discipline there are no significant differences in the students' physical potential. Student assessment, statistical analysis of recorded results, facilitated by the National Biometric Potential Assessment Project, confirmed the study hypothesis.*

Key words: *students, gymnasium, assessment, potential, material basis.*

1. Introduction

Reasoning Improving motor skills is one of the main objectives of the young students training process, realized simultaneously with the development of motor capabilities and abilities [3], [5]. These have a native character in which the level of initial manifestation depends on the hereditary genetic background.

Their further development as well as the development of motor skills is achieved during the growth and evolution process, being influenced by the specifics of the life's activity, the living conditions, the heredity, the geographic and climatic environment and the last but not least, the activity in the school environment [1]. In the educational process, the development of motor skills must be a priority, because they condition and

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determine the formation and especially, the consolidation of motor skills. Developing motor skills favors increasing the exercise capacity of the body, and their development is also achieved in simple material conditions within the independent student activity [6], [8]. In the educational process, an important place within the professor's preoccupations is to find and use in preparation the most efficient methods and ways to ensure the development of these qualities [8]. The physical education professor has to set certain priorities in the education of motor skills. It is recommended that the scheduling of their development is carried out with different weights depending on the content of lessons, sports equipment, season conditions, the motor background of the student in a certain stage [4]. The place for the development of motor skills in the physical education lesson must be determined by the nature of the effort in order to ensure optimum volume or intensity and also the rest of the body [9]. In professional activity, the level of qualities development has a great significance. The current physical education schedule goes from the curricular design model that was used in Romanian education in the early 1990s to the competency model [3]. Mainly, the motor actions are carried out in the presence of basic motor, such as: speed, skill, power, strength and on account of their manifestations of [9]. Many specialists and sport practice attest to the fact that the level of development of motor skills largely determines the fulfillment of the requirements set out in the school curriculum for widening and improving the system of knowledge, capabilities and motor skills of students

[4]. There are also specialists who argue that both students and the adult population can develop their motor skills in the many fitness centers in the urban agglomerations [2].

Objectives.

This study attempts to identify the somatic differences and the motoric potential specific to 8th grade students in three schools, where physical education lessons take place under different conditions. For students, the school represents one of the most important stages of life, in terms of accumulation of knowledge, skills and improvements, but also from the point of view of its biological development. Students from rural area are assumed to have superior motor skills [1]. The quality and quantity of these accumulations depends on the physical, professional development, but also on the biological characteristics of the individual. That is why it is very important that the activity the student performs to achieve a high efficiency, aiming to this optimal influence of the biomotoric indices of the physical and psychic health state [11].

Purpose and tasks.

The aim of the study is to highlight the potential differences in the development of the motor skills and the level of somatic development of the 8th grade students from "George Călinescu" School of Iaşi, "Aron Vodă" Aroneanu and the Holboca General School. The tasks of the study are as follows:

- knowing the level of somatic development as well as the level of development of the motor skills specific to each class of students;
- establishing the means and methods used;

- knowledge and comparison of final results;

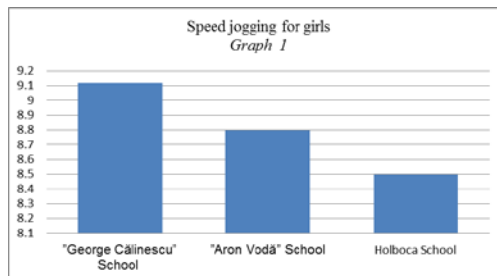
2. Material and Methods

A comparative study [7] aimed at organizing research into the same stages (including the same tests), although it is carried out between three middle-grade classes, one from the urban environment and two from the rural area. In the research were evaluated students of the 8th grade from three different schools, one from the urban area and two from the rural area. The research is done on a number of 20 students from the 8th grade of the "George Călinescu" School of Iași, 22 students in the 8th grade from the "Aron Vodă" Aroneanu School and 23 students from the 8th grade from the General School of Holboca. The material conditions at the "George Călinescu" School in Iași allowed the students to test the speeds running on the 50m distance from the lower ground on the sports ground in the lyceum which has the bitumen-covered surface, the length jump testing to carried out on the same field of sport, and the resistance run on the distance of 800 m for girls and 1000 m for boys took place on the bitumen field. The other control tests included in this study were conducted in the suitably equipped gym. At the "Aron Vodă" Aroneanu School, located in the countryside, the existing material conditions allowed the students to test for speeding on a distance of 50m with ground start on a ground, long jump on the spot and the tests for force and mobility were carried out in an improvised gym, the running of resistance on the distance of 800m for the girls and 1000 m for the boys took place on the field sports ground in the yard of the

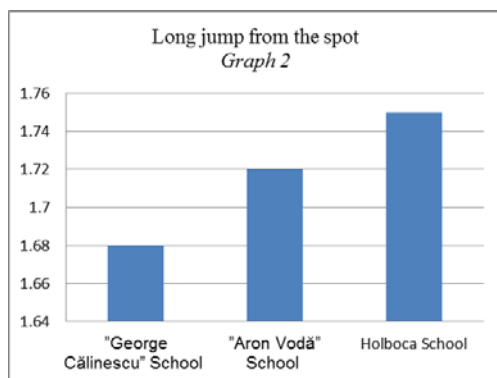
school. At the Holboca General School, located in the countryside, the existing material conditions allowed the students to test for speeding on a distance of 50m with a lower start on a section of the school alley without any space for running a running track, the length of the spot was made on the same alley, and the resistance run on the distance of 800 m for the girls and 1000 m for the boys was done on a field, located outside the enclosure of the school, covered with grass. Tests of control for strength and mobility took place in the improvised gym. All tests were sustained in the school in the year of 2017-2018 during the second semester. In the research, the following tests were applied: 50m running speed starting from top; jump lengthwise; throwing the ball from the spot away; lifting the trunk from the back; running resistance on a distance of 800m for girls and 1000m for boys [10].

3. Results

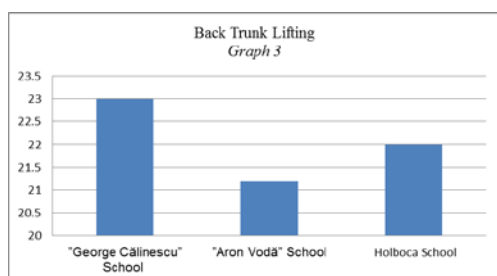
The average for the 50m speed jogging starting from top for girls (graph 1) is bigger at the "George Călinescu" school in the urban area compared to the other two schools in the rural area and the coefficient of the variability is bigger at "Aron Vodă" Aroneanu school compared to the other two schools. For boys, the average and result of the coefficient of variability is bigger for the students from "George Călinescu" school in Iași compared to the other two schools.

Graph 1. *Speed jogging for girls*

At "long jump from the spot" test, for both girls (graph 2) and boys, we see a bigger average at the Holboca school, followed by the Aroneanu school and the Iasi school.

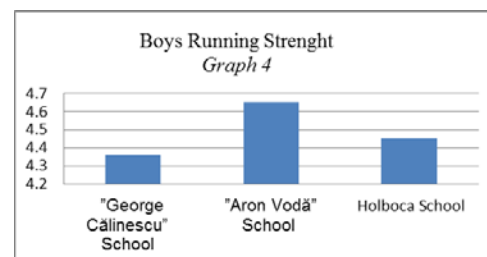
Graph 2. *Long jump from the spot*

As a result of the analysis of the results of the control test, the "back trunk lifting" shows a bigger average at "George Călinescu" School from Iasi compared to the other two schools, for both girls (graph 3) and boys.

Graph 3. *Back Trunk Lifting*

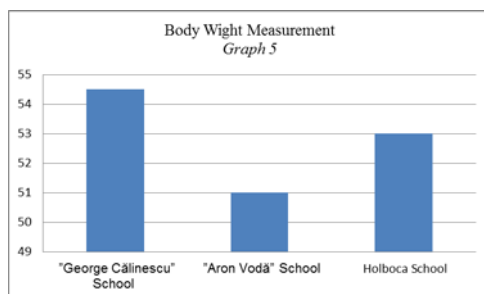
The "throwing the ball from the spot in distance" test, both in boys and girls shows a bigger average at the Holboca School than students from Aroneanu and Iasi.

The average result of the girls' for "running strength" shows that the percentage is higher at the "Aron Vodă" Aroneanu School compared to the students from Iasi and Holboca. The coefficient of variability in urban schools ranges between 0% and 15%, which shows representative and homogeneous data is average and the coefficient of variability of the school "George Călinescu" Iasi is between 15% and 30% that the data dissemination is medium, the average being sufficiently representative. At the "running strength" for the boys (graph 4), we find that the students from "Aron Vodă" Aroneanu School obtained a higher average compared to "George Călinescu" School of Iasi and the Holboca General School. Large averages in these tests are rural schools. The variability coefficients are between 0% and 15%, so here we have an average representative and the data is homogeneous.

Graph 4. *Boys Running Strength*

Following the analysis of the average of the height and the extent for the girls, it is noticed that the girls in Holboca have a higher average than those in Iasi and Aroneanu. As for the somatic weight

measurement, there is a higher average for the students at the "George Călinescu" school from Iași compared to the other two schools (graph 5). Coefficients of variability fall between 0 and 15%, which shows a large group homogeneity and a representative arithmetic mean with the exception of variability coefficients.



Graph 5. *Body Weght Measurement*

In the somatic weight measurement, in the Iași and Aroneanu girls, the arithmetic average ranges from 15% to 30%, which shows that the scattering of data is medium and the media is sufficiently representative.

In the analysis of height and scale in boys, we can see that the arithmetic mean is higher for the students from "George Călinescu" School from Iași compared to the other two schools, and the arithmetic mean of weight is higher at the Holboca General School. The variability coefficients range from 0% to 15%, with the exception of the weight coefficients of the "Aron Vodă" Aroneanu School and the Holboca General School ranging between 15% and 30% but showing that the arithmetic mean is representative and that the data is scattered.

4. Discussions and Conclusions

As a comparative study, the organization and the process of research

aimed at the same objectives, deciding to include the same tests, but under different conditions of physical education lessons and the support of the control tests. Taking into account the obtained results, we can see with certainty that the level of development of the motoring qualities is good both for the students who perform their work in performing working conditions as well as for the students who perform their activity in improvised spaces, in atmospheric pollution conditions, etc. Graphs comparing the arithmetic averages and the coefficient of variability of the studied classes are similar and with very small differences between the three schools.

So, we can say that subjects in the 8th grade have a well-developed motorized baggage in both urban and rural areas. Interpreting the results of this study we come to the conclusion that the hypothesis from which we started is that students who undergo physical education and sports lessons in improvised conditions of the sports or non-existent base compared to the students who have at school level where they play a sporting base, by the nature of the social conditions and the daily activities they carry, have the same level of development of both motor and somatic qualities and are confirmed.

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