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ANALYSIS OF THE CORRELATION BETWEEN THE GENERAL MOTOR SKILLS AND THE PHYSICAL DEVELOPMENT INDICATORS IN 14-15 YEAR OLD FEMALE STUDENTS

Lucica Sava
"Dunărea de Jos", University of Galati, Street .Garii 63-65, 800003, Galati, Romania

Abstract
Physical development ranks among the primary concerns of education and it is an action aimed at influencing the correct and harmonious growth of the human body, concretised in morphological (somatic) and functional qualitative indicators as close as possible to the values assigned to a healthy body at various ages.

Keywords: motor education, physical development, motor capacity, multilateral development;

1. Introduction

Physical education in nowadays' society contributes to the multilateral development of the individual and of the personality.

Physical education has an important role as a special factor for the rational regulation of man's physical development in line with the requirements imposed by the society. It is on physical education that depend directly the tendencies consciously imprinted on physical development, orientation, the level thereof, as well as which motor aptitudes, skills and habits are formed and accomplished during one's life.

At school, students must be given the knowledge, skills and habits which they can valorise for independently practising physical exercises during their spare time, for increasing work capacity, for a harmonious physical development and for compensating and preventing the appearance of physical deficiencies.

The formative aspect of physical education is of a primary importance for the rational use of man's motor skills in practical activities. Another equally important aspect of physical education is the influence it exerts over the range of natural characteristics of the human body, part of the man's physical traits: stimulation and regulation of the development thereof through normalized functional efforts related to the motor activity (physical exercises), as well as the optimisation of the individual lifestyle and rational use of the natural environmental conditions. This aspect of physical education is known as the education of motor qualities or, in other words, physical education in a narrow sense.

Furthermore, the optimisation of physical development aims at obtaining higher and higher indicators of physical training. The notion of "physical perfection" generalises the representations of the optimal harmonious physical development and the level of man's multilateral physical training. In fact, it is implied that this measure optimally corresponds to the requirements of his work and other type of activity, it expresses a high level of the individual's physical development and answers to the laws of maintaining a good health for many years.

Physical education and sports are not limited to the biological aspect, but comprise the entire range of education, the multilateral formation and development of the personality. Physical education and sports act concentrically on the individual for his formation, education, shaping and social integration, with a maximum efficiency, as well as in terms of permanent education.

Along with other forms of education and in the proper social conditions, physical education may become one of the basic factors of the individual's multilateral development.

Therefore, physical education and sports represent a social phenomenon which appears at the same time with the society and evolves in keeping with the laws of the individual's multilateral development.

In "Teoria Educaţiei Fizice şi Sportului" *(The Theory of Physical Education and Sports),* Toma Badiu defines physical education as the activity which systematically valorises the range of physical exercises for improving man's biological potential in keeping with social requirements.

In the work "Terminologia educaţiei fizice şi sportului" *(The Terminology of Physical Education and Sports)*" physical development is defined as the "result, as well as action, aimed at influencing the adequate and harmonious growth of the human body, concretised in morphological and functional, qualitative and proportional indicators as close as possible to the values assigned to a healthy body at various ages".

The motor capacity is a fundamental notion in "Teoria şi metodica educaţiei fizice şi sportului" *(The theory and methodology of physical education and sports),* even if there is no unanimously accepted definition. In the work

"Terminologia educației fizice și sportului", the motor ability is defined as "the range of innate and acquired motor possibilities which allow us to make efforts which are varied in terms of structure and dosing".

Working hypothesis

The present paper studies the correlation between two basic goals of physical education and sports, namely, the development of the general motor capacity and the improvement of physical development indicators in 14-15-year old female students.

The initial testing was held at the beginning of October and the final one in May, recording both physical development and motor capacity data in a group of 58 girls.

2. Research methods and techniques

The analysis of specialty materials, as we quoted many works and opinions of specialists; we resorted to representative sources.

The method of pedagogical observation consisted in systematically monitoring motor acts, actions and activities, with a clearly delineated purpose.

The method of measurements is necessary and very efficient for recording the results of the indicators of physical development and general motor capacity.

The experimental method which implies a succession of phases, aspects, actions, such as: choosing the tests, choosing the sample group, choosing the best observation of the experiment, carrying out the actual samples.

The statistical-mathematical method was necessary for the processing and interpretation of data and for the proper development of the research stages.

The graphical method was used for visualising and presenting the data in a more relevant and suggestive manner.

The used testing system

- movement speed – 50-meter sprint with standing start, in straight line and on level ground. It was organised as a contest, the students running two by two;
- for abdominal strength – bringing one's torso to the vertical position from the supine position. Brining one's torso to the vertical (the torso must form a 90^0 angle with the lower limbs) holding the hands to the back of the head, from the supine position, straightened knees, feet held down on the ground at the level of the ankles by a colleague, time – 30 seconds. It was done once;
- for medium-term or mixed resistance – 800-meter run. Upon arrival, they were informed of their respective times. The test was carried out once.

For motor skills:

- long jump - two attempts out of which we recorded the best result;
- ball throw test - two attempts out of which we recorded the best result. The result was expressed in meters.

For determining the physical development, we made the following measurements in the school surgery:

- height (T) – it is measured using the height meter and it is expressed in centimetres;
- body weight (G) – it is measured using the scales and it is expressed in kilograms and grams.

3. Processing and interpreting the results

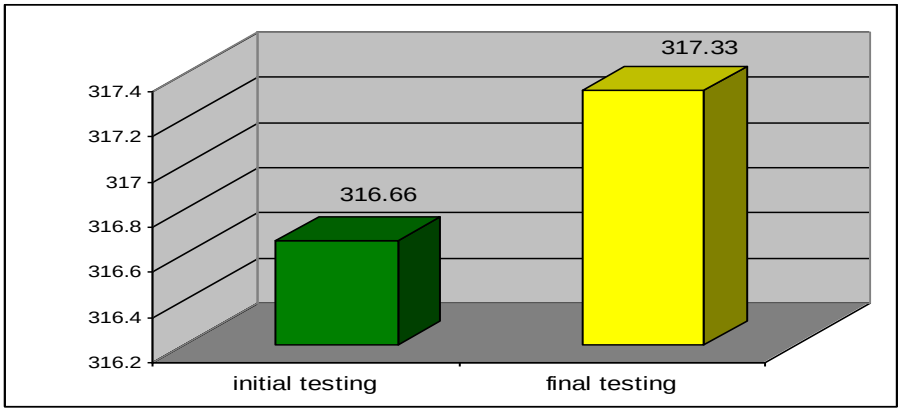

Figure 1. Arithmetic mean – Quetelet indicator – girls

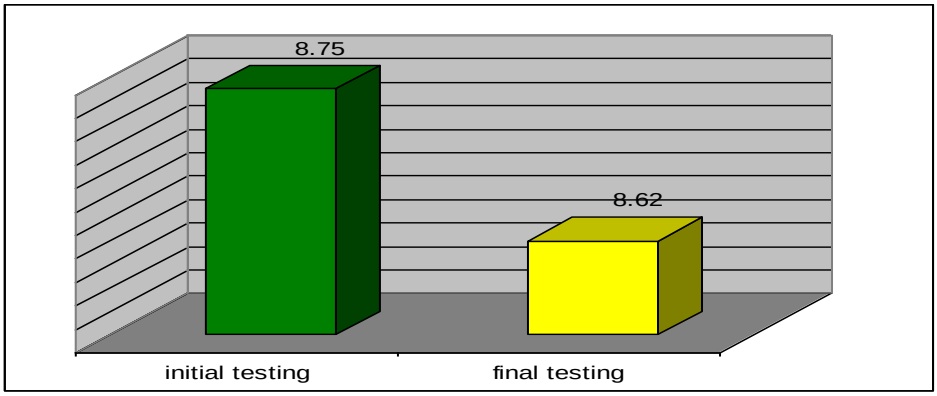

Figure 2. Arithmetic mean – movement speed – girls

In girls, the Quetelet indicator evolved from the value of a 316.66 grams/centimetre, recorded in the initial testing, to the value of 317.33 grams/centimetre, in the final testing. (fig.1).

Concerning movement speed, in girls, the arithmetic mean in the initial testing was of 8.75 seconds and in the final testing we notice a progress of up to 8.62 seconds. (fig.2)

The correlation indicators between the physical development and the movement speed measured 0.31 in the initial testing, therefore a positive, but weak correlation, and in the final testing the correlation reached 0.39.

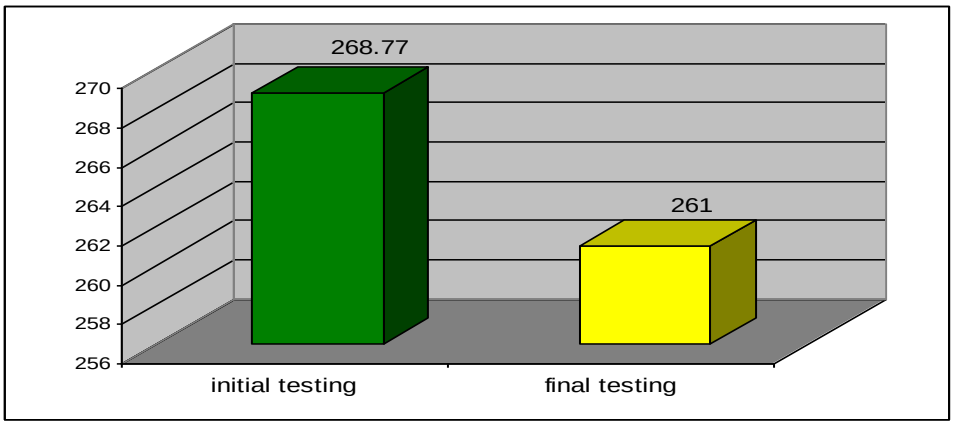

Figure 3. Arithmetic mean – mixed resistance – girls

The correlation indicator between the physical development and the mixed resistance recorded the following values: in the initial testing 0.39, which indicates a positive, but weak correlation, and in the final testing 0.29, still a weak correlation. (fig3).

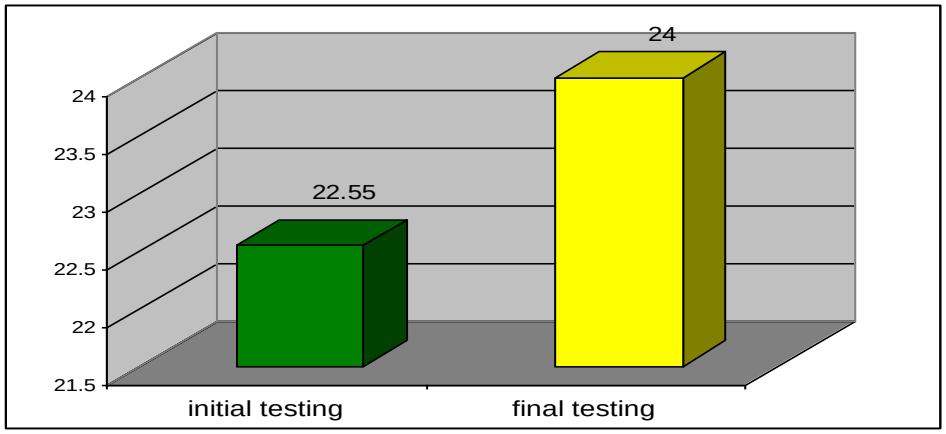

Figure 4. Arithmetic mean – abdominal strength – girls

The correlation between the physical development indicator and the abdominal strength measured -0.10 in the initial testing, therefore an almost insignificant negative correlation and -0.02 in the final testing, again a negative correlation, but heading towards a positive correlation. (fig.4).

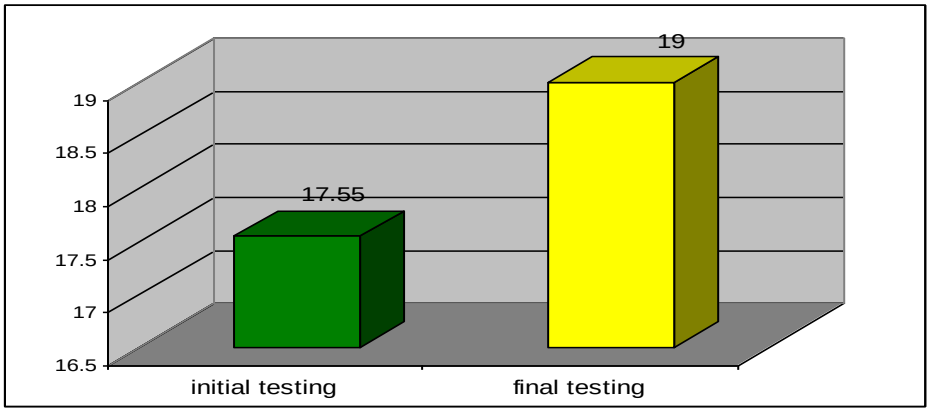

Figure 5. Arithmetic mean – ball throw - girls

The correlation indicator between physical development and the respective motor skill measured -0.42 in the initial testing, indicating a moderate negative correlation and -0.44 in the final testing, therefore, still a moderate negative correlation. (fig.5).

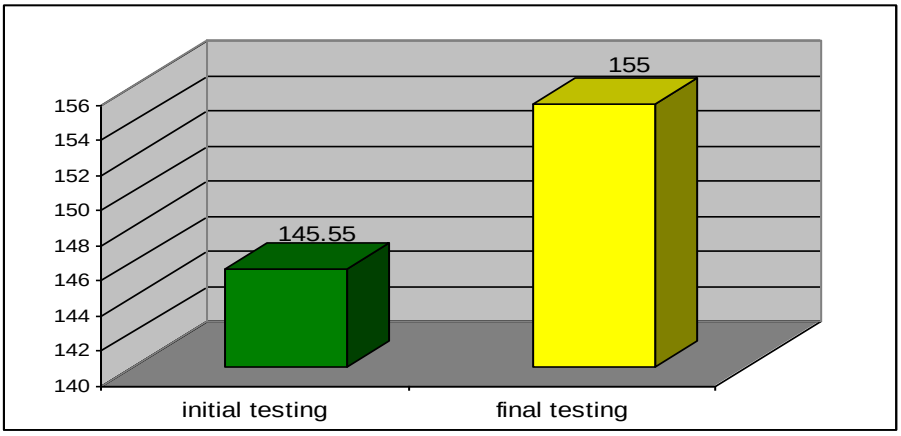

Figure 6.Arithmetic mean – long jump – girls

Concerning the correlation between the physical development and the long jump, the value in the initial testing was -0.18, which indicates an almost insignificant negative correlation and -0.01 in the final testing, again a negative correlation, but heading towards a positive one. (fig.6).

4. Conclusions:

- in terms of physical development, after making the statistical calculations, we found that there is a greater homogeneity in girls than in boys;
- there is a positive correlation for girls between the movement speed and the physical development;
- there is a positive correlation between the mixed resistance and the physical development;
- a negative correlation was recorded between the abdominal strength and the physical development, the conclusion being that this test is not correlated with the physical development of 14-15-year old female students, probably because no steps have been taken for developing the force of the abdominal muscles;
- there is a negative correlation between ball throw, a tossing type of throw, and physical development, because girls have the tendency to push and not to throw the ball;
- there is a negative correlation between long jump and physical development at this level - based on our remarks, we can say that they have not acquired this skill correctly.

A general conclusion would be that, although the two desiderata of this field have been achieved in the two hours of physical education and sports included in the curriculum for the 7^{th} grade, namely, improvement of the motor capacity and motor development, they are not enough for achieving a good correlation between the two goals of physical education.

Proposals:

- a special attention should be paid to the development of dynamic force at the level of the upper and lower limbs and of the scapular arch by using the basic motor skills and the motor skills specific to the various branches or sports tests;
- teachers should prepare homework for the development of motor skills which will take up an important place in future activities;

- teachers should encourage students to exercise outdoors, to participate in cross-country races, contests, school championships.

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DYNAMIC LEARNING GAMES IN VOLLEYBALL GAME CU PRIMARY SCHOOL PUPILS

Vasile Tăbârţă
State University of Physical Education and Sport, 22, A. Doga str., Chişinău MD-2024, Republic of Moldova

Abstract
In practice there are several ways of increasing the quality of physical education lessons with primary school pupils. One would be extensive use of dynamic games with elements of volleyball, which contributed to learning processes and technical elements of the game.

Keywords: *students, primary, dynamic games, volleyball.*

1. Introduction

In the last 10-15 years school education in Moldova, including the mayor, is in constant recasting all disciplines of study. This refers to the discipline "Physical Education". For example, currently in primary school physical education lessons are recommended to be undertaken by specialist teachers, which also lead to a high enough return on their quality.

According to the school curriculum subject "physical education" Sports Games prominently in physical education to students at all levels of education, especially at the primary stage, which actually puts students in terms of training for motor plan. One of the most favorite games at this age is the game of volleyball. In fact, learning the game begins gymnasium, but some elements and techniques can be learned successfully in various forms right from the primary stage.

According to the literature of domestic and foreign authors are plenty of cases when they use many of the lessons of physical education in primary elements and techniques from various sports, including volleyball and play. However, applying elements of volleyball physical education lessons are not directed towards acquiring one or another specific game. They usually are the general, so as to increase the density lesson, or its spectacular nature, the development of motor skills etc.

The present work is proposed to use the physical education lessons with primary school pupils and elements of the game of volleyball technical procedures for its successful acquisition and to enhance the quality of lessons at primary stage.

Dynamic games with technical elements of volleyball is driving actions that engages the subject in motor behavior to achieve a goal, if our aim is to improve the educational process of physical education with primary school students. Dynamic Games with elements of volleyball action are means or instruments whose content, shape and organization lead to stable functional effects (Moroşan Larionescu V., Максименко А.М., Фурманов А.Г.).

From the methodological point of view there are different classifications conventional helped us to make a choice operatively game. The criteria used are varied and coplementare, none of them taken separately, might not include the wide variety of the various forms of games. Without claiming that deplete the whole typology of games, we will focus on the most used criteria presented in the figure below (Figure 1.).