STUDY ON THE IMPROVEMENT OF PSYCHOMOTRICITY COMPONENTS OF STUDENTS IN SECONDARY SCHOOL

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Abstract: The purpose of the research was to increase the efficiency of the physical education and sports lesson by developing and implementing methods and means focused on improving the components of the psychomotor capacity of the students in the secondary school. The undertaken study included a sample of 50 subjects aged 11-12 years, who were randomly assigned into two groups: experimental (N=25) and control (N=25). The educational experiment was carried out within a secondary school from Bucharest within the physical education and sport lessons. The investigated subjects performed a number of two physical education and sports lessons per week of 45 minutes each, of which 10-12 minutes were allocated/lesson of the means of optimizing the psychomotor components (general coordination, dynamic balance, segmental and plurisegmentary coordination, spatial and temporal orientation, etc.). Following the comparative analysis of the results obtained by the two groups, experimental and control, at the end of the conducted study, it was observed that the experimental group has an improved psychomotricity, which emphasizes the efficiency of the methods and means used, thus confirming the correctness of the elaborated methodology.

Keywords*: physical education lesson, psychomotor capacity, secondary school, students*

Introduction

Psychomotor skills are defined as the “result of the integration, interaction of education and the maturation of synergy and conjugation of motor and mental functions, not only in terms of observable movements and expressions, but also in what determines and accompanies them (will, affectivity, needs, impulses)” (Epuran, 2013, p. 480).

Psychomotor education has an important contribution in the development of school-age children, being a necessity of the educational process of the young generation. Its importance lies in its implications for the integral development of children from a biological, mental, motor and social-affective point of view. Psychomotor skills aim at the subject's relationship with his body, dealing with the problem of motor skills from inside, by the individual who decides, communicates, therefore the one who subjectively lives the movement (Bota, 2007).

In the opinion of specialists in the field, psychomotor skills are viewed from a three-dimensional perspective, namely: educational, re-educational and therapeutic, all forming an "entire system conditioned by the interaction between children and adults, between education and growing up, between movement and mental functions” (Talaghil et al., 2019, Piaget & Barber, 2005, Sas et al., 2017).

The motor side of psychomotor skills is predominant in body activities, for which reason it is a very broad subject of study.

,,Motricity as a functional substructure of psychomotor skills is the global denomination of the muscular reactions through which the movement of the body or of the different segments is performed. Manifestations in the field of motor skills must be viewed in close connection with the manifestations in the psychic sphere” (Abrudan, 2005, p. 144-145). Physical education and psychomotor skills work together in the intellectual and motor development of children (Camargos & Maciel, 2016).

Psychomotor development includes: "development of motor skills - speed, strength, endurance, dexterity, agility; development of kinesthesia (complex perception of movement); development of motor skills and

abilities (walking, running, jumping, throwing, climbing, pushing, traction, etc.). development of the body's working capacity and adaptation to the task of movement (body control, environment control)" (Grosu, 2009, p. 11-12).
Therefore, psychomotor ability is the degree of motor development and complex behavioral coordination functions. This involves the participation of various processes and mental functions, which ensure both the reception and proper execution of the act of motor response. This category includes the components of psychomotor skills, such as: kinesthesia, sense of balance, sense of rhythm and appreciation of short durations, limb coordination - homolateral or heterolateral, eye - hand or eye - leg coordination, general coordination, agility, laterality, body scheme, ideomotricity, sensorial-motor coordination, motor reactions, motor memory, etc. all based on motor skills such as strength, speed, dexterity, endurance, etc. (Grosu, 2009). Psychomotor skills are an indispensable element in all individual and collective motor activities of the child, as they can significantly contribute to shaping the future adult from childhood.
It is known that psychomotor education begins at an early age, focusing on self-education of one's own body, promoting the harmonious development of various aspects of personality, autonomy and self-accomplishment, depending on stages and educational goals (Constantin & Chirazi, 2020). "Children have different development levels, different development and learning rates and also different learning styles" (Prodan et al. 2016).
Age between 7 and 12 years is the stage of organizing voluntary activities being characterized by psychomotor improvement by: increasing the level of mental development (operational intelligence or real intellectual operations), developing strength in parallel with coordination, endurance, dexterity and precision (Grosu, 2009). Between 10 - 12 years the child is in the prepubertal period. During this period, profound somatic, psychological and social transformations take place (Constantin, 2020a).
Thus, in psychomotor education, the teacher must pay special attention to the selection of methods and means according to age and level of training.
„In childhood, when the formation of the most important systems and functions of the body takes place, it is very important to consider the most favourable periods for the development of certain physical abilities" (Vasilescu & Țifrea, 2021).
The international literature offers multiple educational perspectives on psychomotor components. It is considered necessary in childhood to "provide children with a variety of motor experiences" through movement games "because they work with the strength, agility, endurance and speed. In childhood's end, the maturation of motor skills requires stimuli, which are provided through games that combine the intense physical effort, improving the physical fitness of the student " (Raiol, 2010).
The use of a game-based approach has been widely recognized in the literature as a valid, effective, and authentic teaching strategy (Sgro et al. 2021, Harvey& Jarrett, 2014, Miller, 2015, Romero Martínez et al., 2018).
Physical education and sport through its objectives influence the development of the body scheme by forming time coordinates of movements and memorizing them, developing static and dynamic balance and motor intelligence (Șunei et al., 2021). Some undertaken studies revealed that it is possible to develop junior high school students psychomotor skills through physical education (Kalaja et al. 2011, Stodden et al., 2008). In other studies low levels of psychomotor competence have been reported for both children and adolescents in many countries (Lorås 2020, O'Brien et al., 2016).
From the perspective of students' mental manifestations in activities in physical education and sports, the study of psychomotor behavior remains a constant concern of specialists in the field.
Determining the ways of psychomotor development and selecting the optimal methods and means to improve it, is a topic often addressed by specialists in the field of preschool and primary education (Iconomescu&Talaghir 2014, Cojanu & Vișan, 2019, Iconomescu et. al., 2017, Merida Serrano

et al., 2018, Fonseca & Silva, 2019, Făgăraș et al., 2014, Shingjergji, 2020), but less studied at school age, this being the reason for choosing the topic of this study.

Research objective and tasks

The objective of this study was to intervene in the instructive-educational process of students aged 11-12 years with appropriate methods and means in optimizing the psychomotor components. In order to achieve this goal, we considered the fulfillment of the following tasks:

• Scientific documentation by studying the information in the literature on the issue of psychomotor ability in secondary school students;

• Establishing the stages and hypothesis of the research;

• Identification of groups of subjects and their distribution in experimental and control groups;

• Identification and application of tests and control tests to assess the level of development of psychomotor ability of subjects;

• Development and implementation of methods and means of action in accordance with the level of physical and biomotor development of students, to facilitate the psychomotor ability optimization;

• Experimental validation of the conceived operational structures and verification the efficiency of the applied methodology by collecting, processing and analyzing the recorded data;

• Elaboration of research conclusions.

The purpose of the research

Increasing the efficiency of the physical education and sports lesson by developing and implementing methods and means of action focused on improving the psychomotricity components of the secondary school students.

Research hypothesis

It is assumed that by using methods and optimal means focused on the development of segmental and multi-segmental coordination, static and dynamic balance, general coordination, laterality, etc. we will facilitate the optimization of the training process by improving students' psychomotor potential.

Materials and methods

Participants

The study included a sample of 50 subjects aged 11-12 years, who were randomly assigned to two groups: experimental (N = 25) and control (N = 25).

Research organization

The experimental study took place at the Secondary School no. 280 in Bucharest. The research conditions met the required standards for conducting the scientific experiment. The pedagogical experiment of ascertaining type took place between 16.09.2021-25.01.2022, within the physical education and sports lessons. At the begining of the study, all investigated subjects were medically healthy and voluntarily participated in the research. All test subjects were notified of the content and implementation of testing procedures and consent was obtained by signatures from their parents. Measurements were carried out in accordance with ethical standards of the Declaration of Helsinki.

Stages of the study

Stage I took place on 20.09.2021-24.09.2021 and included the initial testing of the two groups: experimental and control. The test aimed to assess the initial level of psychomotor ability and general motor skills of students, as a support for the expression of psychomotor skills. The analysis and interpretation of the obtained results provided important information, which were landmarks in the development of operational structures for optimizing the psychomotor components of students.

Stage II took place between 27.09.2021-25.02.2022 and included the introduction of the independent variable - methods and means of action focused on the development of psychomotor components, in the physical education and sports lessons of the experimental group.

Stage III took place between 28.02.2022-04.03.2022 and included the final testing of the two groups. This stage completed the practical experimental process of the study.

Instruments

The tests and sports trials used followed:

• assessment of general motor skills

Test no. 1: 25 m speed run;

Test no. 2: standing long jump (cm) - explosive force of the lower limbs;
Test no. 3: burpee (rep.) - general coordination, strength, motor memory;
• assessment of psychomotor skills
Test no. 1: Matorin (general coordination);
Test no. 2: Bruininks-Oseretsky - Item 5 - jumping on the spot with synchronized movements of the opposite arm and leg (segmental coordination);
Test no. 3: Bass (Dynamic balance).

Research content

The investigated subjects performed a number of two physical education and sports lessons per week of 45 minutes each, for 21 weeks. The control group carried out the activities according to the usual teaching strategies, specific to each teacher in the class, while the experimental group followed the didactic teaching procedures in which the independent variables were introduced, focused on using 10-12 minutes / lesson.

In order to fulfill the proposed goal and to verify the hypothesis, we introduced in the preparation of the experimental group operational structures focused on the development of the following psychomotor components: general coordination, static and dynamic balance, segmental and multisegmental coordination, laterality, body scheme, simple and fast reaction time, spatial and temporal orientation, etc.

The planning of the learning units was based on the accomplishment of the following fundamental operations: the establishment of the operational objectives, of the methods and means of practice (operational structures). The establishment of the thematic content of the learning units was done in accordance with the students' age and level of training.

In this context, thematic learning units were planned that included application paths, dynamic games, relay races and means specific to the basketball game, meant to act in a psychomotor plan, so as to contribute to the efficiency of the instructive-educational process, by improving aspects such as the ability to concentrate, attention, active and aware participation of students.

The operational objectives were to develop the targeted psychomotor components and biomotor qualities, as well as to learn, consolidate and improve the technical elements and procedures specific to the game of basketball.

The methods used in the physical preparation of the experimental group were: the method of practicing in various conditions (environment, space, time) by increasing the complexity, as well as that of acquiring basic motor skills. The means used had a degree of complexity accessible to the level of training and the age of 11-12 years, so as to be executed in maximum speed and efficiency and with minimum effort. These have been streamlined and standardized, with rest intervals and duration to allow the proper restoration of the main physiological indicators. The operational structures proposed for experimentation took into account the development of psychomotor components and included: exercises with different objects and of different sizes, exercises on apparatuses, with/without partner, basketball-specific exercises, performed with both the dexterous/non-dexterous segment, exercises that involve a variation of the motor load by varying the distances, the initial or final positions, the movement direction, the demands of force, speed, endurance through elimination of visual control, combined relays, movement games, etc.

Results

Following the experiment, we interpreted and comparatively analyzed the results obtained by the two groups, experimental and control, in motor tests and psychomotor tests applied in the initial and final phase, to highlight the effectiveness of methods and means implemented in preparing the experimental group.

The obtained results were recorded in the datasheets and were subsequently processed statistically and mathematically. The following statistical parameters were used: arithmetic mean (AM), standard deviation (SD), coefficient of variability (CV). To validate the working hypothesis we used the "t" test for independent groups. According to Fisher's table, critical t-test value for n = 25, critical t-value = 2.011 ($p < 0.05$).

The statistical values were calculated with EXCEL program, version 2010, of Microsoft.

Data presentation was both tabular and graphical.
We present in table 1 the results obtained by the two groups, experimental and control, in the testing of the target group in the initial testing:

Table 1. Results obtained by the experimental group vs. control group in motor tests – Initial test

Test	Mathematical and statistical indicators						
	AM/SD CG	AM/SD EG	Progress CG-EG	Cv % CG	Cv % EG	Independent t-Test	p
25-m speed run (sec)	4.85/0.28	4.52/0.47	0.33	5.77	10.39	2.97	< 0.05
Standing long jump (cm)	124.36/12.57	122.76/9.67	1.60	10.10	7.87	0.50	> 0.05
Burpee (rep)	8.2/1.35	7.96/1.48	0.24	16.46	18.59	0.59	>0.05

Analyzing the data disclosed in table 1, it is observed that at the test - 25m speed run (sec), the value of the arithmetic mean (AM) at the initial test is 4.85 sec. for the control group and 4.52 sec. for the experimental group (figure 1). The difference of the arithmetic means between the two groups is 0.33 sec. The standard deviation (SD) has the values at the initial test of 0.28 for the control group, respectively 0.47 for the experimental group. The coefficient of variability (CV) has the value of 5.77% in the control group and 10.39% in the experimental group, both samples being homogeneous. The value of the calculated "Student" test "t" is 2.97 so 2.97 > 2.011 (at the level of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the initial test.
In the Standing long jump (cm) test the value of the arithmetic mean (AM) at the initial test is 124.36 cm for the control group and 122.76 cm for the experimental group (figure 1), the difference of the arithmetic means between the two groups being 1.60 cm. The standard deviation (SD) in the initial test has values of 12.57 for the control group and 9.67 for the experimental group, respectively. The coefficient of variability (CV) has the value of 10.10% in the control group and 7.87% in the experimental group, which means a high homogeneity. The value of the calculated "Student" test "t" is 0.50, so 0.50 < 2.011 (at the level of $p < 0.05$), therefore there are no statistically significant differences between the means of the two groups in the initial test.
In the Burpee (rep) test the value of the arithmetic mean (AM) at the initial test is 8.2 rep. for the control group and 7.96 rep. for the experimental group (figure 1). The difference of the arithmetic means between the two groups is very small, 0.24 rep. The coefficient of variability (CV) indicates that both samples are inhomogeneous, its value being 16.46% in the control group and 18.59% in the experimental group. The value of the calculated "Student" test "t" is 0.59, so 0.59 < 2.011 (at the level of $p < 0.05$), as a result there are no statistically significant differences between the means of the two groups in the initial test.
The comparison of the average results obtained in the initial phase of the research, by the two groups, reveals close values of the level of development of the general motor capacity of the investigated subjects (figure 1).
Table 2 shows the results obtained by the two groups in the final test of the general motor capacity:

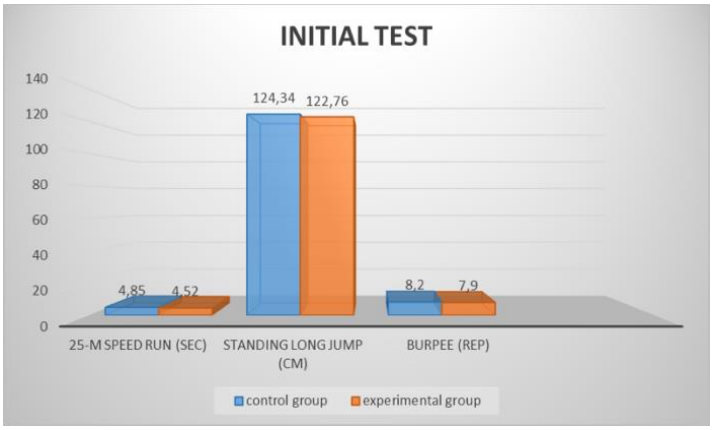

Figure 1. Dynamics of the average results obtained by the two groups in the initial testing - general motor skills

Table 2. Results obtained by the experimental group vs. control group in motor tests – Final test

Test	Mathematical and statistical indicators						
	AM/SD CG	AM/SD EG	Progress CG-EG	Cv % CG	Cv % EG	Independent t-Test	p
25-m speed run (sec.)	4.48/0.28	4.20/0.45	0.28	6.25	10.71	2.65	< 0.05
Standing long jump (cm)	131.84/11.92	147.40/14.36	15.56	9.04	9.74	4.16	< 0.05
Burpees (rep.)	9.6/1.37	10.28/1.37	0.68	14.27	13.32	2.88	<0.05

According to the results presented in table 2 we notice that in the final testing the subjects from the experimental group progressed, compared to those from the control group. In the 25m speed run (sec) test, the progress rate between the two groups is 0.28 sec., the value of the arithmetic mean (AM) is 4.48 sec. for the control group and 4.20 sec. for the experimental group (figure 2). The coefficient of variability (CV) has the value of 6.25% in the control group and 10.71% in the experimental group, both samples having a high homogeneity. The value of the calculated "Student" test "t" is 2.65, therefore 2.65 > 2.011 (at the level of $p < 0.05$), so there are statistically significant differences between the averages of the two groups in the final test. At the Standing long jump (cm) test the value of the arithmetic mean (AM) at the final test is 131.84 cm for the control group and 147.40 cm for the experimental group (figure 2). The difference of the arithmetic means between the two groups is 15.56 cm. The standard deviation (SD) has the values at the initial test of 11.92 for the control group, respectively 14.36 for the experimental group. The coefficient of variability (CV) has the value of 9.04% in the control group and 9.74% in the experimental group, both samples being very homogeneous. The value of the calculated "Student" test "t" is 4.16, therefore 4.16 > 2.011 (at the level of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the final test. In the Burpee test (rep) the value of the arithmetic mean (AM) at the final test is 9.61 rep. for the control group and 10.28 rep. for the experimental group (figure 2). The difference of the arithmetic means between the two groups is 0.24 rep. The coefficient of variability (CV) has the value of 14.27% in the control group and 13.32% in the experimental group, both samples being slightly inhomogeneous. The value of the calculated "Student" test "t" is 2.88, therefore 2.88 > 2.011 (at the level of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the final test. The comparison of the average results obtained at the end of the experimental research by the two groups in the general motor capacity highlights the significance of the differences made in preparation in favor of the experiment group (figure 2).

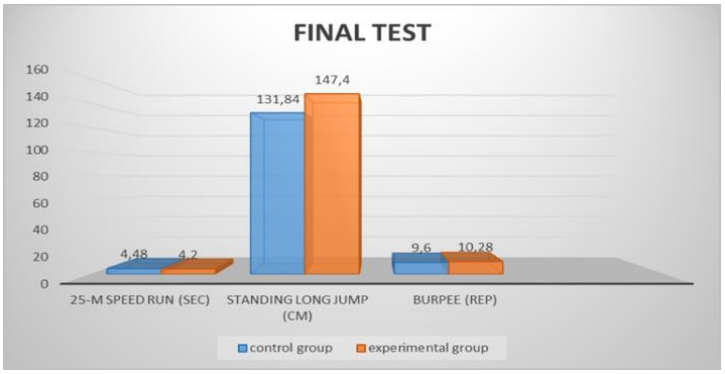

Figure 2. Dynamics of the average results obtained by the two groups in the final testing – general motor skills

Table 3. Results obtained by the experimental group vs. control group in psychomotor tests – Initial test

Test	Mathematical and statistical indicators						
	AM/SD CG	AM/SD EG	Progress CG-EG	Cv % CG	Cv % EG	Independent t-Test	p
Matorin (right) (degree)	253.2/59.71	250/50.73	3.20	23.58	20.29	0.20	> 0.05
Matorin (left) (degree)	235.2/57.76	237/47.18	2.20	24.55	19.87	0.14	> 0.05
Bruininks Oseretsky (points)	8.4/1.09	8.36/1.01	0.04	12.97	12.08	0.13	> 0.05
Bass (points)	57.4/9.06	58.6/9.11	1.20	15.78	15.54	0.46	>0.05

As about the results of the psychomotor tests (table 3), we note that in the Matorin test with clockwise rotation the value of the arithmetic mean (AM) at the initial test is 253.2 degrees for the control group and 250 degrees for the experimental group (figure 3). The difference of the arithmetic means between the two groups is 3.20 degrees. The standard deviation (SD) has the values at the initial test is 59.71 for the control group, respectively 50.73 for the experimental group, the variability coefficient indicates inhomogeneous results for both groups (CV = 23.58% in the control group and CV = 20.29 % in the experimental group). The value of the calculated "Student" test "t" is 0.20 so 0.20 < 2.011 (at the value of p < 0.05), as a result there are no statistically significant differences between the averages of the two groups in the initial test. In the Matorin test with rotation to the left, a difference of 2.20 degrees is observed (table 3) between the two groups. The value of the arithmetic mean (AM) at the initial test is 235.2 degrees for the control group and 237 degrees for the experimental group (figure 3). In this case the coefficient of variability also indicates inhomogeneous samples (CV = 24.55% in the control group and CV = 19.87% in the experimental group). The value of the calculated "Student" test "t" is 0.14 so 0.14 < 2.011 (at the value of p <0.05), as a result there are no statistically significant differences between the averages of the two groups. In the Bruininks-Oseretsky test the value of the arithmetic mean at the initial test is 8.4 points for the control group and 8.36 points for the experimental group (figure 3). The difference of the arithmetic means (AM) between the two groups is very small, 0.04 points. The scattering degree of the string values represented by the standard deviation (SD) has the values at the initial test of 1.09 for the control group, respectively 1.01 for the experimental group. The coefficient of variability (CV) has the value of 12.97% in the control group and 12.08% in the experimental group, both samples having average homogeneity. The value of the calculated "Student" test "t" is 0.13, so 0.13 < 2.011, (at the value of p <0.05), therefore it results that there are no statistically significant differences between the averages of the two groups in the initial testing. In the Bass test the value of the arithmetic mean (AM) at the initial test is 57.4 points for the control group and 58.6 points for the experimental group (figure 3). The difference of the arithmetic means between the two groups is 1.20 points. The standard deviation (SD) has the values at the initial test

of 9.06 for the control group, respectively 9.11 for the experimental group. The coefficient of variability (CV) has the value of 15.78% in the control group and 15.54% in the experimental group, both samples having average homogeneity. The value of the calculated "Student" test "t" is 0.46, so 0.46 < 2.011 (at the value of p < 0.05), as a result there are no statistically significant differences between the averages of the two groups in the initial test.

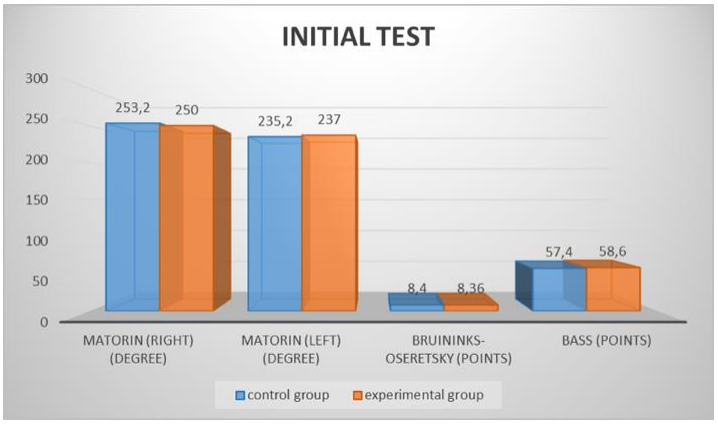

Figure 3. Dynamics of the average results obtained by the two groups in the initial testing–psychomotor tests

Table 4. Results obtained by the experimental group vs. control group in psychomotor tests – Final test

Test	Mathematical and statistical indicators						
	AM/SD CG	AM/SD EG	Progress CG-EG	Cv % CG	Cv % EG	Independent t-Test	p
Matorin (right) (degree)	273.2/59.71	304.6/50.41	31.40	21.85	16.54	2.00	> 0.05
Matorin (left) (degree)	253.8/57.67	346/52.61	92.20	22.72	15.20	5.90	<0.05
Bruininks-Oseretsky (points)	8.84/1.00	9.8/0.48	0.96	11.31	4.89	4.28	< 0.05
Bass(points)	67.8/7.08	84.0/8.1	16.20	10.44	9.64	7.51	<0.05

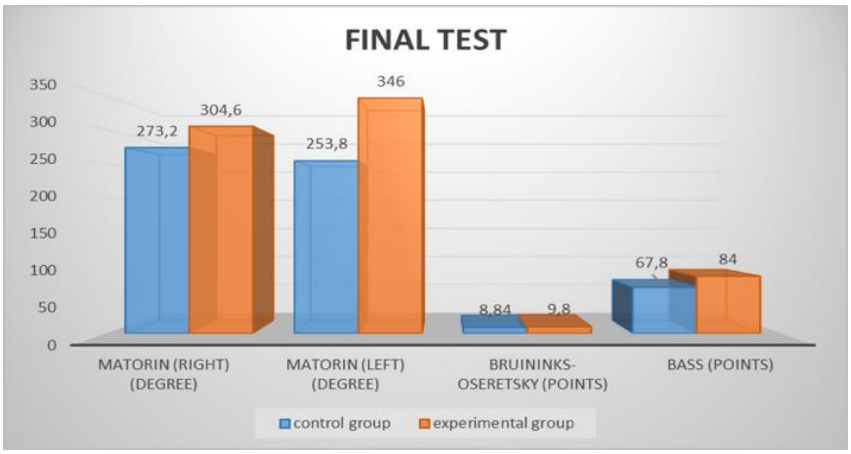

Figure 4. Dynamics of the average results obtained by the two groups in the final testing–psychomotor tests

At the final test we observe, according to the data presented in table 4, that in the Matorin test with clockwise rotation the value of the arithmetic mean (AM) is 273.2 degrees for the control group and 304.6 degrees for the experimental group (figure 4), the difference of the arithmetic means between the two groups being of 31.4 degrees. The coefficient of variability (CV) has the value of 21.85% in the control group and 16.54% in the experimental group. The value of the calculated "Student" test "t" is 2.00, so 2.00 < 2,011 (at the value of $p < 0.05$), as a result there are no statistically significant differences between the averages of the two groups in the final test.

In the Matorin test with rotation to the left, the value of the arithmetic mean (AM) at the final test is 253.8 degrees for the control group and 346 degrees for the experimental group (figure 4). The difference of the arithmetic means between the two groups is 92.2 degrees. The standard deviation (SD) has the values at the initial test of 57.67 for the control group, respectively 52.61 for the experimental group. The coefficient of variability (CV) has the value of 22.72% in the control group and 15.20% in the experimental group, both samples being inhomogeneous. The value of the calculated "Student" test "t" is 5.90, so 5.90 > 2.011 (at the value of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the final test.

In the Bruininks-Oseretsky test the value of the arithmetic mean (AM) at the final test is 8.84 points for the control group and 9.80 points for the experimental group (figure 4). The difference of the arithmetic means between the two groups is 0.96 points. The coefficient of variability (CV) has the value of 11.31% in the control group and 4.89% in the experimental group, both samples showing high homogeneity. The value of the calculated "Student" test "t" is 4.28, so 4.28 > 2.011 (at the value of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the final test.

In the Bass test the value of the arithmetic mean (AM) at the final test is 67.8 points for the control group and 84 points for the experimental group (figure 4). The difference of the arithmetic means between the two groups is 16.20 points. The standard deviation (SD) has the values at the initial test of 7.08 for the control group, respectively 8.1 for the experimental group. The coefficient of variability (CV) has the value of 10.44% in the control group and 9.64% in the experimental group, both samples having high homogeneity. The value of the calculated "Student" test "t" is 7.51, so 7.51 > 2.011 (at the value of $p < 0.05$), as a result there are statistically significant differences between the averages of the two groups in the final test.

Conclusions

In the beginning of the research, it is assumed that by using methods and optimal means focused on the development of psychomotor capacity components such as segmental and multi-segmental coordination, static and dynamic balance, general coordination, laterality, etc. we will facilitate the optimization of the training process by improving students' psychomotor potential.

Following the comparative processing and interpretation of the research results between the experimental and control groups, we found that, at the initial testing, there were no statistically significant (random) differences (at the value of $p \leq 0.05$) in most of the tests applied.

Regarding the final testing, carried out at the end of the experiment, we found that there were statistically significant differences between the averages results of the two groups, experimental and control, at all the parameters tested, thus confirming the hypothesis of the research.

As a result of the differences of significance observed between the two groups, we can say that the independent variable (the operational structures focused on the optimization of the psychomotor components) is the component of the training that determined the qualitative differentiation of the results of the subjects in the experimental group.

The operational structures developed by us for the optimization of the psychomotor potential have proved their applicability at the level of the students, proof being the progress of the experimental group towards the control group in the final testing.

The means strictly quantified in terms of number of repetitions and content, designed and adapted according to the age peculiarities and the level of training of the subjects, had efficiency in the preparation of the experimental group, an aspect that validates the didactic strategy elaborated and implemented within the didactic process of the thematic learning units.

The realization of the instructive-educational process within the physical education and sports lessons through the methodology that includes primarily means in the form of relays and applicative paths, can lead to the improvement of the psychomotor capacity of the students.

By systematically applying the elaborated means, the physical education lesson has gained in terms of attractiveness, which can be used in the training of all students, either in the form proposed by us or adapted according to the existing conditions and the available working materials.

Psychomotricity is one of the basic components of the school curriculum and it is considered to be a primary objective of the physical education lessons, so it is important that the teaching process is scientifically guided with the help of as much objective data as possible, so that the efficiency of the methods and means used is maximum.

Authors' contribution

All authors have equally contributed to this study.

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