USEFS

LEARNING THE HANDBALL GAME BY MOVEMENT GAMES TO PRIMARY CYCLES

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Abstract: In the didactic activity it was found that the easiest, technical technique is used in the game, because the child is at the age when the game is a priority in his daily activity. Playing as a means of physical education is at the same time a social phenomenon, formed and established in society.
The aim of this study was to optimize the physical education teaching process by using motion games with handball technical elements in the physical education lessons with primary school pupils, as their influence on the handball game, social integration and development level psychomotor. As a result of the application of motion games in the physical education lessons to the primary cycle, all the investigated indicators recorded increases in the experimental group, compared to the results of the pupils in the control group, where the teaching of the lessons was carried out by traditional means due to the selection of some games that engage the whole of the collective versus the traditional means where the practice takes place individually, the character of competition between the students.
Keywords: handball, motion games, physical education, pupils, social integration.

Introduction. So far, handball has had a great evolution and development, organizing sports competitions where athletes of all ages participate. The game concept is constantly changing, keeping pace with international developments.

Handball has a regulation with precise rules, in the moral sporting spirit, the spectators living in the great phases of the game, played in fair-play spirit [3].

Handball is a team sports game, which refers to the handling of the ball (catching, passing, throwing, dribbling, rejecting and blocking), the movement or movement of players on the ground - in short, pre-established, accessible structures, technical elements and techniques used with maximum efficiency in play [13].

In the view of I. Kunst Ghermănescu [13], account must be taken of the child's age specificity and the critical points specific to the stages of development.

"Handball under competent guidance, besides physical qualities, develops willpower, combativeness, initiative, perseverance, courage, moral qualities as respect for the opponent" [15].

The preponderant and special role of motion games with elements of various sporting branches, for the formation of certain psycho-physical capacities, skills and motor skills in the primary classes, but also for the initial orientation and selection in some sporting branches is specified in the multiple research over time. In this context, a major importance in physical education for pupils in the primary cycle belongs to the games of movement, which through their specific content of analytical influence-individual influence, have the potential to form the socio-psychomotor skills and attitudes of self-

assertion, self-evaluation and value orientation of personality.

Playing as a means of physical education is at the same time a social phenomenon, formed and established in society. Movement games offer a wide range of possibilities for the consolidation and application in various conditions of the skills and abilities learned, for the development of motor skills in the opinion of the specialists [1]. Also, the game is an exercise that prepares the child for life, is the mirror of the environment in which the child lives and develops.

"The game is an integral part of human life, and in modern didactics it is considered a means and method of learning and education. Movement games can help to optimize the learning process by increasing children's interest in movement by creating conditions that facilitate the consolidation of driving forces, ensuring success, preventing or eliminating failure, building skills to overcome hardships, developing the driving skills, the responsibility of each student" [11]. To complete the definition of the game, it is absolutely necessary to consider the main features it has, emphasizes V. Gogâltan [12].

We consider that a more correct and comprehensive systematization of the games provides the criterion of the tasks to be solved, as the authors also asserted [5, 16]. According to them, the motion games are divided into:

• Games for training and refining basic motor skills and applicative utility (running games, jumping games; throwing games; climbing games; crawling games; escalation games);

• Games for the formation and development of motor-specific motor skills (handball preparatory games, preparatory football games, basketball preparatory games, volleyball preparatory games, gymnastics games, preparatory games for athletics);

• Games for motor sensitization and the development of basic motor skills (games for the development of the sense of orientation in space, games for the development of the sense of balance);

• Educational attention games.

In general, motion games have been systematized on two fundamental criteria, namely: the didactic functions and the teaching objectives they can solve.

Numerous specialists [6, 8, 16], systematizes movement games according to didactic functions: the formative-educational function of the human personality; the knowledge function; the stimulating function of motricity that meets the most important needs of "playful man" (homo ludens): the need for movement, the need to compete, the consumption of extra energies, the strictly specific functions of the game: recreation, functional balancing, fun, fortification, compensation, restoration , rest, therapy, purification, pleasure.

The systematization of Claparede quoted by E. Colibaba [7]*, I. Bota* [2]*:*

• general function games: sensory games, mimic games, agility, utility skills and psychic, intellectual, affective, volitional games, etc.;

• special function games: fighting games, gambling games, hunting games; family games with dolls, imitation games.

The classification of motion games by the criterion of the didactic tasks concerned (subordinated to the organizational and environmental criterion) shows as follows [9]:

• motion games for building and refining basic and applied skills;

• motion games to train and improve motor skills specific to sports (handball, basketball, football, etc.);

• games to educate motor sensitivity and basic motor skills;

• games to educate certain functions and psychic processes.

The motion game is characterized by a simple content with few rules and easy to understand. In organizing motion games, some methodological requirements that greatly constrain the attainment of the objectives pursued must be respected. The content of the game must correspond to the somato - functional and psychic particularities of the pupils. The rules must be understood and retained by students, the elements that make it known, the duration of the effort and the request of the body corresponding to the age and level of training.

Research hypothesis. It has been assumed that by using motion games in physical education lessons in the fourth grade, handball will be learned in a shorter time but with the same effective results. We aim to demonstrate this hypothesis, using motion games in the experimental classes in each lesson at different times and for various purposes.

The reason. I approached this topic is that we wanted to find out more about this game, especially how it is shown, how it helps to play games on handball and how to solve certain problems (underestimation of colleagues, etc.) at physical education classes. Handball is one of the most popular sports games in general schools, and there is a particular focus on learning how to play in a shorter timeframe, just as effective and with the same goals. It is known that sports play is the main point of interest for students of all ages and both sexes.

The purpose of the study is to optimize the teaching process of physical education by using handball technical moves in physical education lessons with primary school pupils and observing their influence on social integration and the level of psychomotor development but also how to solve certain

problems (vedetism, violence, under-appreciation of the opponent, underestimation of colleagues, etc.) occurring during physical education classes.

The research tasks consisted of:
• studying the topic in the specialized literature and selecting the specific means to achieve the objectives pursued;
• knowing the level of socio-motor and psychological development of the sample included in the research by applying motor tests;
• investigating motor skills in terms of motor skills;
• establishing the stages of organizing and conducting research;
• studying the school curriculum and the content it has to acquire the sample surveyed;
• development of evaluation criteria, initial and final testing of the sample;
• processing the obtained results, recording and comparing the results obtained by the experimental class with those obtained by the control class;
• validation of the hypothesis.

Organization. The research was conducted in three stages during the school year 2017/2018: Stage I involved the following activities: analysis of sources of specialized literature throughout the research and pedagogical observation which was carried out throughout the experiment and of the basic one; Stage II consisted of a concluding experiment conducted in October 2017 at Nicolae Iorga Gymnasium School in Iasi. In the pedagogical experiment involving pupils aged 10-11 years. The third stage of the research was the organization of the basic experiment, which took place between November and May. The training program was carried out within the physical education lesson, according to the elaborated planning documents and the SNE [14]. Two hours a

week were worked, the duration of lessons being 50 minutes. At the beginning and end of the pedagogical experiment, the subjects were tested in the training program, which subsequently determined the dynamics of the development of the somatic and motor indices, which could confirm or suppress the hypothesis of the work. To measure the progress of the children we used driving tests.

Research methods used in the research: bibliographic documentation method; the method of observation; experimental method; the mathematical - statistical method [4].

Analysis of the results: As a result of the application of motion games in the physical education lessons to the primary cycle, all the investigated indicators recorded increases in the experimental group, compared to the results of the pupils in the control group, where the teaching of the lessons was carried out by traditional means due to the selection of some games that engage the whole collectively towards the traditional means where the practice takes place individually, not being the character of competition between the students.

Table no.1. Results of Predictive Testing of Student Training Levels

Control Sample	Boys$X \pm S$	Average country$X \pm S$	Girls$X \pm S$	Average country$X \pm S$
Running speed 30 m, s.	6,28±0,47	6,1	6,85±0,56	6,4
Travel speed, m / s.	4,48	4,92	4,37	4,69
Jumping in length, cm.	141,05±15,11	138,5±5,2	128,97±16,25	130,7±5,9
Throwing the ball,	20,53±3,92	21,5±4,6	12,86±2,45	13,7±3,7
Vertical Target Throw, no. successful	1,77±0,84	1	1,43±0,88	1

Speed. Speed development was assessed through the 30 m run-in runway trial. The group of girls has an average of 6 "85 ± 0.56 and the boys' group has an average of 6" 28 ± 0.47.Analyzing the data from the 30 m running speed test, we note that in the group of faces the displacement speed is 4.37 m/s. Comparing the data with the country averages, we can see that the average of the girls' group is lower than the average for the country: 4.69 m/s at the speed of travel, due to the fact that in the case of the studied sample we have a small number of cases with very good results, are located around the average. We note that the speed of the boys is 4.48 m / s, and if we compare the speed of the boys with the average speed of the country: 4.92 m/s, we have a superiority of 0.44 m / s in favoring the 1992 research in this age group.

Strength - Long jump on the spot. For the group of arithmetic average girls is 128.97

cm; the standard deviation is ± 16.25 and the coefficient of variation is 8.17%; the average error is 0.07.

The boys group has an arithmetic mean of 141.05 cm; the standard deviation is ± 15,11 and the coefficient of variation is 10,71%; the average error is 1.93. The homogeneity of the student group is average at this sample.

Dropping of the ball - technical test. The girls' group has an arithmetic mean of 12.86 m; the standard deviation is ± 2.45 and the coefficient of variation is 19.06%; the average error is 0.32. The boys group has an arithmetic mean of 20.53 m; the standard deviation of the group is ± 3.92 and the coefficient of variation is 19.08%; the average error is 0.50. The statistical parameters indicate an average homogeneity in both girls and boys; but the media are representative of this group because the average error is low.

Skill - Drop to vertical target. The statistical indicators for the group of girls are: arithmetic mean is 1.43; the standard deviation is ± 0.88 and the coefficient of variability is 61.49%. The average error is 0.12. The boys group has an arithmetic mean of 1.77; the standard deviation is ± 0.84 and the coefficient of variability is 47.70%; the average error is 0.11. The collective homogeneity is small. The boys group also has a higher average than the minimal scale (one out of three) but the distribution of individual values is slightly asymmetric because we have a small number of cases with very good results; the magnitude of the results is high; the college of students is not homogeneous (we have the value of the coefficient of variability: 47.70%).

Table no.2. Dynamics of motor indices in girls

Control test	Sample	Initial Testing			Final Testing			T	P
		$X \pm Em$	S	CV	$X \pm Em$	S	CV		
Speed control, 30 m sec	E	6,81±0,10	0,53	7,76	5,97±0,06	0,30	5,09	7,179	<0,001
	W	6,89±0,11	0,60	8,74	6,61±0,10	0,54	8,54	1.879	>0,5
Jumping lengthwise, cm	E	134,07±3,10	16,38	12,22	158,11±2,21	11,69	7,40	6,315	<0,001
	W	124,20±2,71	14,85	11,95	144,73±1,85	10,14	7,01	6,257	<0,001
Throwing balls (m)	E	13,15±0,54	2,88	21,90	19,55±0,58	3,06	15,64	8,030	<0,001
	W	15,58±0,36	1,98	15,78	16,87±0,36	1,96	11,62	1,945	>0,5
Target drop, vertical no. successful	E	1,50±0,18	0,96	64,15	2,71±0,09	0,46	16,95	6,020	<0,001
	W	1,77±0,15	0,81	59,17	2,17±0,14	0,79	36,53	1,951	>0,5

Table no.3. Dynamics of motor indices in boys

Control test	Sample	Initial Testing			Final Testing			T	P
		$X \pm Em$	S	CV	$X \pm Em$	S	CV		
Speed control, 30 m sec	E	6,15 ±0,10	0,53	7,76	5,81±0,06	0,30	5,09	7,179	<0,001
	W	6,40 ±0,11	0,60	8,74	5,68±0,10	0,54	8,54	1.879	>0,5
Jumping lengthwise, cm	E	140,17±3,10	16,38	12,22	157,76±2,21	11,69	7,40	6,315	<0,001
	W	141,84±2,71	14,85	11,95	162,96±1,85	10,14	7,01	6,257	<0,001
Throwing balls (m)	E	20,88±0,54	2,88	21,90	24,58±0,58	3,06	15,64	8,030	<0,001
	W	20,22±0,36	1,98	15,78	26,10±0,36	1,96	11,62	1,945	>0,5
Target drop, vertical no. successful	E	1,86±0,18	0,96	64,15	2,52±0,09	0,46	16,95	6,020	<0,001
	W	1,69±0,15	0,81	59,17	2,75±0,14	0,79	36,53	1,951	>0,5

Legend: TI = Initial Testing; T.F. = Final Testing; t - was calculated between the initial and final indicators of each group; P - is the one from Fischer's table according to the sample surveyed

Speed - Speed run 30m with leg start. Analyzing data from the 30m running speed test, we noticed that the running speed averages are 4.74 m/s in the control group and 5.03m / s in the experimental group.
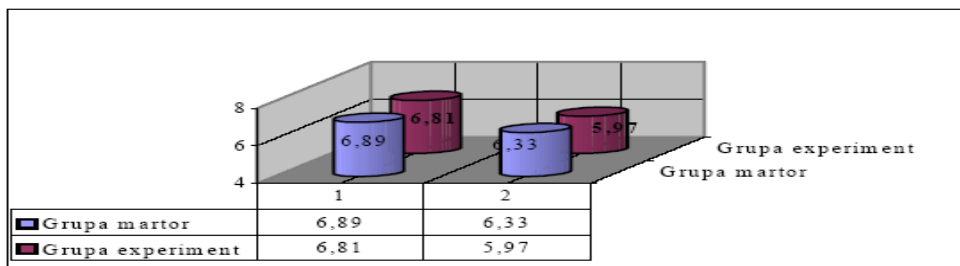
Comparing the data with the country averages, we can see that the groups of students have mediums that have a higher value only in the country experiment group (5.02 m/s). The distribution of these individual values is represented by a small number of cases with very good results and most of the cases are around the average. In boys' groups the speed of movement is 5.17 m/s in the control group and 5.29 m/s in the experimental group.

Comparing these data with the country average, we note that they are higher than the national average (5.26 m/s); the coefficient of variability indicates good homogeneity in both girls and boys. Individual values with good results in boys are present in a very small number of cases and most of the results are grouped around the average.
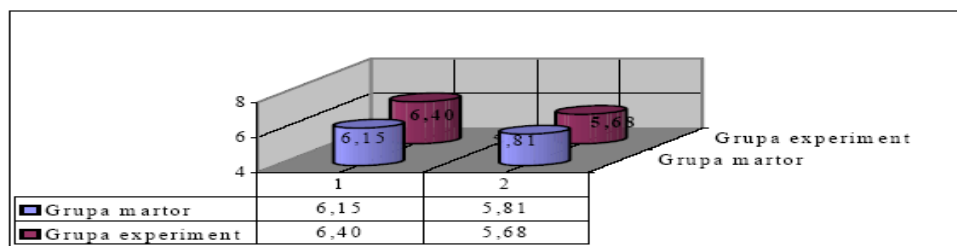
We note that the mean of the experimental girls group is higher than the control group mean 0-36, as well as the boys experiment group has the upper mean 0-13 relative to the control group. The displacement rate in the experimental group is better with 0.29m / s for the girls and with 0.12m / s for the boys group. The superiority of experimental group vs. experimental group indicators requires us to assert that games with handball elements have a positive influence on speed and are superior to traditional means with 6% for girls and 3% for boys. The statistical significance test is more and more significant for the groups of girls than the Fischer table, the value of T is 7.179 (P <0.001) in the experimental group and the control group T is 1.879 (P <0.001). The statistical significance test is higher for boys than for the Fischer table, the T value is 6.990 (P<0.001) in the experimental group, and the control group T is 3.009 (P<0.001).

According to the Student's T test, the highest statistical difference is recorded in experimental groups for both girls and boys. The increase in experimental girls is superior to the control group by 3.84%, and in boys, the increase in the experimental group is superior to the control group by 5.61%.

	1	2
Grupa martor	6,89	6,33
Grupa experiment	6,81	5,97

Graph 1. Speed dynamics in girls

|	1	2
Grupa martor	6,15	5,81
Grupa experiment	6,40	5,68

Graph2. Speed dynamics in boys

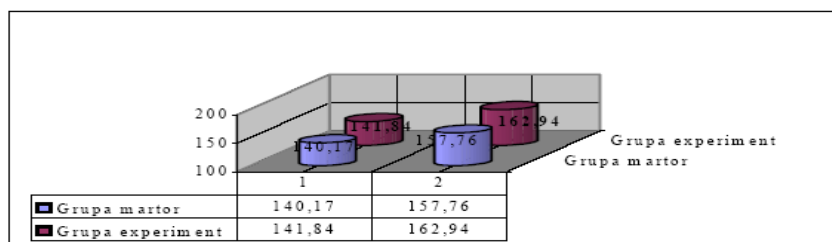**Strength - Long jump on the spot.** Confronting the data with the country average on this sample, the average of the student groups is higher than the country average for the group of girls. The college of students is homogeneous because the dispersion of results is small. The argument due to which the experiment groups have higher values than the control group is:

The experimental girls group has a higher artistic average of 13.38 cm from the mean of the control group. The boys experiment group has a 5 cm arthritic mean than the average of the control group. It is seen from the table the superiority of the experiment groups. The increase is 20.53cm for girls W and 24.04cm for girls E; in Boys W the increase is 17.59cm; in group E the increase is 21,10 cm.The

statistical significance test is more and more higher in the group of girls than in the Fischer table, the value of T is 6,315 (P<0,001) in the experimental group and the control group T is 6,257 (P<0,001). The statistical significance test is higher for boys than for the Fischer table, the T value is 5.781 (P<0.001) in the experimental group and the control group T is 5.152 (P<0.001). Experimental face augmentation is superior to the control group by 1.40%, and in boys, the increase in experimental group is superior to the control group by 3.73%. In the case of Combined Driving Speed + Force (Dynamic) dynamic games with handball elements are superior with 9% for girls and 5% for boys compared to traditional means.

	1	2
Grupa martor	124,2	144,73
Grupa experiment	134,07	158,11
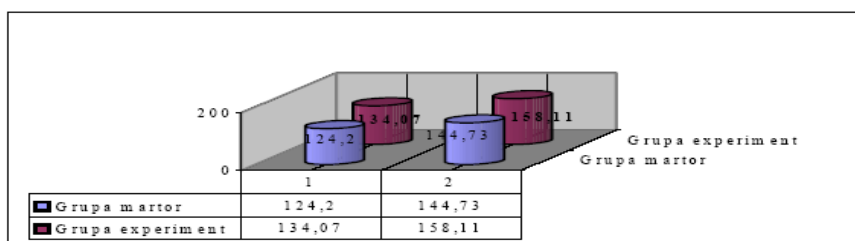
Graph 3. Dynamics of jumping in length at girls

	1	2
Grupa martor	140,17	157,76
Grupa experiment	141,84	162,94

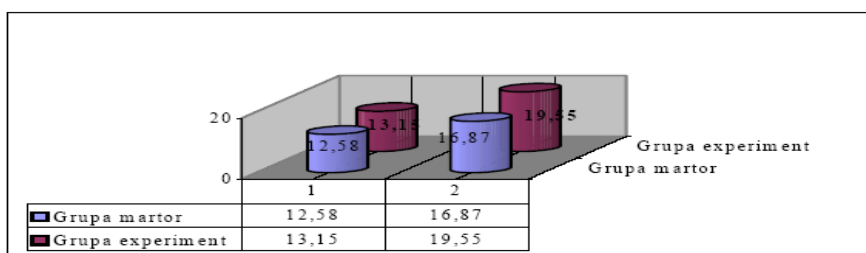*Graph 4. Dynamics of jumping in length at boys*

Throwing the ounce ball. In girls, we find a difference of 3-6m between the average of the group of girls and the average per country (13.7m), the homogeneity of the tested team is average, while the homogeneity values are average due to the large number of cases.

Homogeneity is high in the C.V. is 9.27%. The average difference is 2.68m in favor of the experimental group of girls. Throwing the

ounce ball is handball specific and these performances are rated as very good in handball selection and orientation. In the case of this test, which is close to the handball game, the results are good for girls E. 19,55 and very good for boys W. 24,59m and boys E. 26,10m. The most conclusive progress rates have the experiment group with 5,88m for boys and 6,40m for girls. The statistic

significance test is higher in the experimental group of girls than in the Fischer table, the value of T is 8,081 (P <0,001) in the experimental group and the control group T is lower than the Fischer table: 1,945 (P<0.001). The statistical significance test is higher for boys than for the Fischer table, the T value is 7,500 (P<0,001) in the experimental group, and the control group T is 3,630 (P<0,001). The increase in experimental girls is superior to the control group by 14.65%, and in boys the increase in the experimental group is superior to the control group by 11.32%. Girls and boys who were enrolled in the experiment show superior performances of 14% and 5% over the control group components.As can be seen in the above graph and in the following graph, we have as a basic move in this sample the throwing that is specific to handball only.

Graph 5. Dynamics of throwing the ball in girls

	1	2
Grupa martor	12,58	16,87
Grupa experiment	13,15	19,55
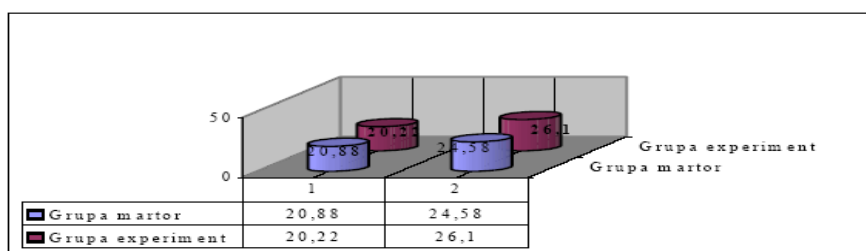
Graph 6. Dynamics of throwing the ball in boys

	1	2
Grupa martor	20,88	24,58
Grupa experiment	20,22	26,1

Skill: Going to the vertical target. At the end of the research, experimental classes recorded 2.71 throws in girls and 2.75 throws in boys. Control groups have final scores of 2.17 girls and 2.52 throws in boys. We observe the superior results in the experimental groups compared to the control groups.

The average of the group of girls is 0.60 higher than the mean of the control group. The boys of the experimental group have a superior average performance of 0.23 against the control group.

Results vary in girls between 2,17-2,71 and between 2,52-2,75 in boys. The highest growth rate is recorded in experimental girls 1.21; follow the guy's experiment group 1.06; control girls occupy the third position with 0.80; and the last guys are 0.66. We mention that the student performs the thrown throw with a ball of a blade giving him a better outlet, so by default the accuracy will be better. It is not mentioned in S.N.E. the length of time that this sample is to be carried out. This sample is performed once, according to S.N.E.
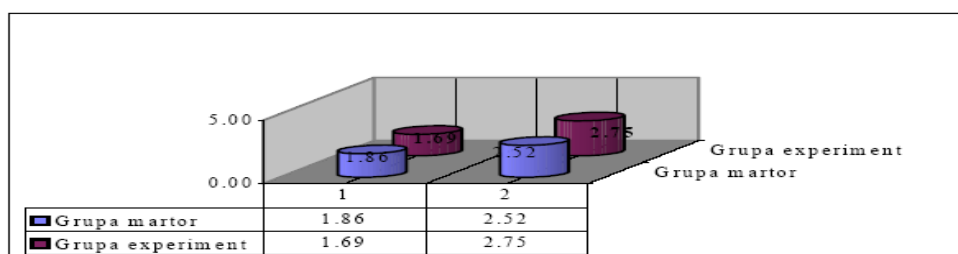
The statistical significance test is more and more higher for the groups of girls than for the Fischer table, the value of T is 6.020 (P<0.001) in the experimental group and the control group T is 1.951 (P>0.05). The statistical significance test is higher for boys than for the Fischer table, the value of T is 5.889 (P<0.001) in the experimental group and the control group T is 1.957 (P>0.05). The results are good and the difference between environments

is significant for all groups. The increase in experimental girls is superior to the control group by 22.28%, and in boys, the increase of the experimental group is superior to the control group by 27.24%. The influences of dynamic games with handball elements are multiple, they have positively influenced the student's results and the vertical target throw.By comparing the media we can see their advantage over the traditional means. In percent, the benefit is 20% for girls and 10% for boys.

	1	2
Grupa martor	1,37	2,17
Grupa experiment	1,50	2,71
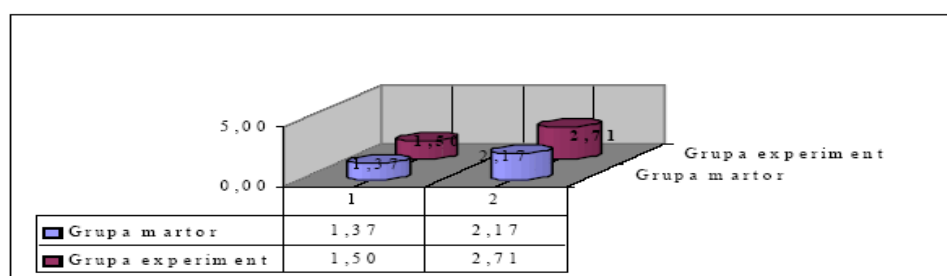
Graph 7. Dynamics of vertical goal throw in girls

	1	2
Grupa martor	1.86	2.52
Grupa experiment	1.69	2.75

Graph 8. Dynamics of vertical goal throw in boys

General considerations

From statistically processed data we can see that the arithmetic mean of each experimental group is superior to the mean of the control group at each sample but the collectives still lack a homogeneity due to a very large dispersion of the obtained performances.

Conclusions: Following the analysis of the technical training results based on the acquisition of the handball technical procedures at this age level, it was observed that the experiment group had superior results compared to the control group due to the selection of games that engage the whole collectively with the traditional means where practicing individually present the race between students. The superiority of the experiment group to the control group is obvious in the case of passing the ball away, driving the ball through the throws, throwing the ball away, fact cleared by the positive transfer of the motor skills and skills following the application of handball games.

Practical-methodical recommendations. Movement games with handball technical elements should be appropriate to the dynamic structure of basic physical education exercises in IVth grades, to match the behavioral and motivational peculiarities of students. The themes of the lesson will have a concrete character delimiting the training objectives. The training objectives will be determined by the place of the lesson in the lesson and the lesson system. The number of games used is no more than 3-4 within a lesson.

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