Thus, the boys' experimental group also recorded a significant progress in all the tests applied in comparison with the boys' control group, who have recorded a minimal progress of just 0.3 points at throwing the ball on a fixed point. Both the boys' experimental group and the control group presented a high homogeneity of the results, therefore a small dispersion, the values of the coefficient of variation falling between 10% and 0.18.

If we analyze the results recorded by the girls' groups, the experimental group is distinguished by the significant advances registered for all five tests applied, while the control group made progress only in three of the applied tests, but still not exceeding the values recorded by the experimental group. Thus, if the girls' experimental group recorded a progress on the average of the Matorin test to the right with 14 degrees, the witness group progressed by 9 degrees, while with the left Matorin test, the progress of both groups was identical. In the case of girls groups of girls too, there was little variation and high homogeneity of results.

Comparing the progress of the experimental groups, the boys recorded a higher progress for the Romberg and Matorin test, the girls showing greater progress at the other tests.

Conclusions:

1. The working hypothesis is confirmed; according to it, the use of movement games in physical education lessons on children in the primary school determines the development of motor qualities in general, and of skill in particular.
2. It is scientifically known that there is not a lower age for developing motor qualities, fine motor skill being a quality that begins developing around the age of 4-5.
3. After the application of motion gaming, it was found that fine motor skills is a quality that can be improved at the age of 9-10, fact proven by the results obtained in the present study.
4. The investigation carried out showed that elementary students are more receptive if they are proposed movement games to acquire and develop certain skills and motor qualities.
5. In addition to their effectiveness in developing motor qualities, movementgames also develop intellectual abilities and traits of personality and character of children.

Bibliography

Alexe N., *Antrenamentul sportiv modern, Editis Publishing House, Bucharest, 1993*

Bota A.,*Exerciţii fizice pentru viaţa activă, Cartea Universitară Publishing House, Bucharest, 2006*

Cârstea G.,*Teoria şi metodica educaţiei fizice şi sportului, Universul Publishing House, Bucharest,1993*

Dragu M., *Didactica educației fizice și sportului, Zigotto Publishing House, Galați, 2010*

Dragnea A., Bota A.,*Teoria activităţilor motrice (educaţie fizică, sport, activităţi de timp liber, kinetoterapie, activităţi de expresie corporală), Didactică şi Pedagogică Publishing House, R.A., Bucharest, 1999*

Dragnea A., Teodorescu-Mate S.,*Teoria sportului, FEST Publishing House, Bucharest, 2002*

Marinescu I. T.,*Metodica predării educaţiei fizice la grădiniţă şi la clasele I-IV, AS'S Publishing House, Iaşi, 2000*

Mitra G., Mogoș A.,*Metodica educației fizice școlare, Sport-Turism Publishing House, Bucharest, 1980*

EXPERIMENT ON THE IMPLEMENTATION OF STRENGTH MEANS IN THE TRAINING OF THE 13 YEAR-OLD SOCCER PLAYERS

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Abstract

Forming the personality of players individually and integrated in a group, is a necessary offer for the educational practice facing all the increasingly higher requirements of the soccer game culture. The specialized knowledge and the continuous improvement of practice and theory have led to an elaborated and updated instruction, that is, not to do anything unnecessary , to use optimal age-specific sports training skills; our experiment is meant to implement means of strength to train the upper body, including the arms and simple techniques accepted as training activities in the integrative model of bilateral competition. This is a requirement that must be educated/trained from the age of 13. In this context, we considered that the strenght training for the upper part of the body in footballers is not given a great importance, and this lack influences the evolution of the body required for the competitional game.

Key words*: football, training, efficiency*.

Introduction

Sports training programming will not be made by learning separate skills of the game, but by practising technical actions under similar conditions to those of the game. Programmed training is based on certain principles: small steps, gradual progress, distribution, that is a range of operations by which the lesson tasks are solved.

Methodological guidelines, creativity, problematic situations in training, which were proposed in the experiment concerning the development of segmentary strength, the implementation of technical training means, they all concur for the need to achieve a formative and integrative model by simple means, according to the age, using approaches such as assimilating development operational models according to the scientific data available in the literature.

Putting children in certain situations in order to discover (problem-solving), activating new requirements in games, execution etc., are meant to develop creative thinking, interest, imagination, especially the independent ability to choose the solutions. The highlighted problems should not exceed to a great extent the students' abilities. In the same vein, the design of complementary means used during the workout can solve the problem of physical development, proportionally, of the whole body.

Purpose

Apply complementary means in order to increase the athletic performance, that may lead to developments.

We believe that by improving the training facilities we can significantly increase the level of sports training of some coordination, technique and segmentary strength indices, in our case train the strength of the upper body, to 13 year-old athletes who practise the football game.

Objectives

We consider the fact that the proposed experimental curriculum provides the necessary scientific data on how the segmentary technique and strength evolved to a group of footballers, aged 13. We wish to learn the way in which the compensation of the age specific training will develop the sports training.

Hypotheses

1. It is assumed that the implementation of accessible coordination and technique means for children aged 13 who practise football, will contribute to an evolution in the sports training.

2. If, by using means of segmentary strength in the sports training of children aged 13 who play football, we can influence a practical approach towards improving early performance.

Material and Method

The experiment was carried out at the Danube Football Centre in Galati, during April-September, 2016, the experimental group being the Sports High School of Galati, and the control group the Danube Football Centre in Galati. Throughout the experiment there were three training sessions of 60 minutes per week. The training sessions were held outdoors on grass land totaling 70 hours of guided, quantified, assessed training.

Within the training sessions we used: exercises to develop the speed of reaction, the movement speed, within the simple football-based games; simple forms of leading the ball by foot; ways to improve your sense and control of the ball; learning to pass the ball with the broad side and full lace taking over the ball; learning to shot on goal with the lace.

Examples of technique exercises

1. Simple passes for 10 meters increasing and decreasing distance. Two, three movement games. The training session ends with a bilateral game.
2. Hitting the ball against the wall with the lace, performed in different variations. Two or three movement games. The training ends with a bilateral game.
3. Control the ball on the leg followed by sending the ball with the lace from volley in the empty gate/target, 8 meter distance. Two or three movement games. The training ends with a bilateral game.
4. Lead the ball through cones or avoid several circles at a close range. We will not exclude the lead with a 1 kg medicine ball over very small distances. Two or three games. The training ends with a bilateral game.

Examples of coordination exercises

1. At the beginning of the exercise, for 10 minutes, the children play with a tennis ball performing at the coach's/teacher's suggestion different individual actions, in pairs, groups, afterwards they hold the tennis ball and kick it up. In the first part they strike once with their foot and catch it by hand; afterwards the number of times is increased, as well as keeping the ball on their foot as much as possible, for 10 minutes. After a pause of several minutes, 1-2 motion games are played. The training ends with a bilateral game for 10 minutes.
2. At the beginning there will be exercises to make them accommodate with the handball by performing actions with their hand and foot. Handball exercises including means for maintaining the ball and placing it in various sporting tools: circles positioned on the ground, avoid a cone/gate pillar, throw the ball over a barrier of 40-50 cm., etc. After a several minute break, 1-2 movement games are performed. The training ends with a bilateral game for 10 minutes.
3. Lead the ball with their foot going round some randomly placed circles within an area with a diameter of 8-10 metres, then simple/multiple hand dribblings among these circles. Lay the ball into the circle from the ball control by foot. After a several minute break 1-2 movement games are performed The training ends with a bilateral game, 10 min.

At the end of each training session we carry out 10 minutes of some strength exercises to train the upper body with medicine balls, throwing and catching the oina* ball, weight lifting and moving from one place to another.

Control tests

1. Keeping the ball in the air by successive kicks, alternating feet. We record in seconds the run time for each child. Run time is recorded.

* Tr.n.Romanian game similar in many ways to baseball.

2. Keeping the ball in the air by successive kicks, alternating feet, and then shot on goal from volley in the empty gate (demarcated area) with the skilfull leg. We record the correct number of hits on the target.

3. Lead the ball among 4 obstacles in a perimeter of 10/10 meters. The route is composed of 2 cones to be avoided and 2 circles to be avoided/surrounded. We record the time it takes in the established perimeter.

4. Record the torque of the skilfull arm, is the process of measuring the muscle force/contraction using a dynamometer. Measure the maximum voluntary force, which represents the maximum force that can be maintained during an isometric contraction for 3-4 seconds using the palmar flexors method.

Table no. 1

„Dynamometric" test of the groups included in the research

Dynamometry kg/force				
Indicators	Experimental Gr. n = 26 Sports High School of Galaţi		Control Gr. n = 26 Dunărea Galaţi	
	IT	FT	IT	FT
Results	**698**	**990**	**672**	**736**
Arithmetic mean	**27**	**38**	**26**	**28**
Weight t-dependent	**41 %**		**8 %**	

Graphical expression regarding the arithmetic mean of the initial and final tests of table no. 1

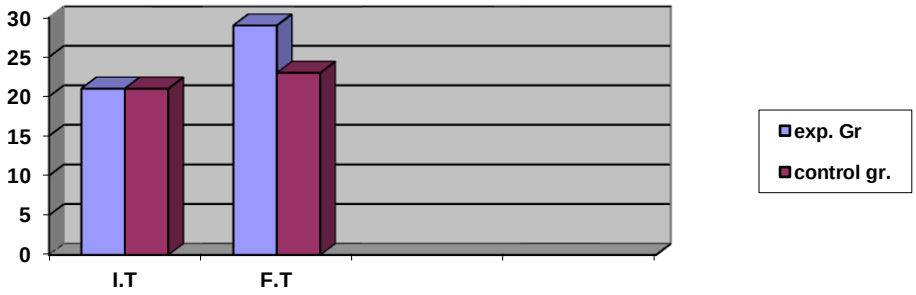

Fig. 1. Results of the"dynamometric" test

Interpretation

At the „**Dynamometric**" test, the arithmetic mean of the experimental group is 38 force of the palmar flexors, compared to the final average of the control group, that is 28 kg/force, having an increase of 10 kg./force, in favour of the experimental group.

Analyzing the weighted mean of each group by dependent t-test (results timed in the initial and final testing that are related to each other), the increase of the average level for the experimental group is 41 percent, compared to the control group which has an increase of 8%.

Table no. 2

Table with the initial and final results of the **„Keeping the ball in the air by successive kicks, alternating feet"** of the groups included in the research

Keeping the ball in the air by successive kicks, alternating feet (s/duration)				
Indicators	Experimental Gr. n = 26 Sports High School of Galaţi		Control Gr. n = 26 Dunărea Galaţi	
	IT	FT	IT	FT
Results	**820**	**1520**	**826**	**920**
Arithmetic mean	**32s**	**58 s**	**32 s**	**35 s**
Weight t-dependent	**85 %**		**11 %**	

Graphical expression regarding the arithmetic mean of the initial and final tests of table 2

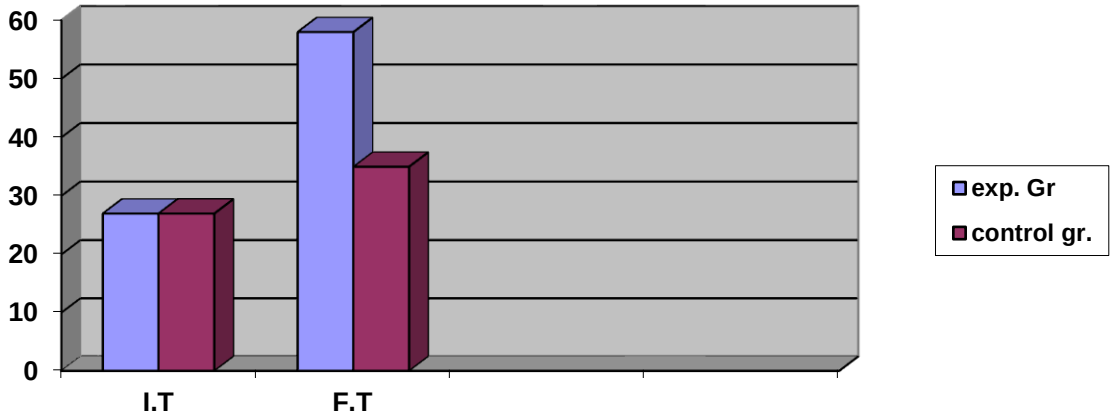

Fig. 2. Results for the test „Keeping the ball in the air by successive kicks, alternating feet"

Interpretation

At the test,,**Keeping the ball in the air by successive kicks, alternating feet**"., the arithmetic mean of the experimental group is 58 seconds/execution, compared to the final mean of the control group, of 35 seconds/execution, recording an increase of 23 seconds/execution in favour of the experimental group.

Analyzing the weighted mean of each group by the t-dependent test (timed results from the initial testing and the final ones are in relationship to each other), the growth of the average level for the experimental group is 85 percent, compared to the control group which has increased by 11%.

Table no. 3

Table with the initial and final results of the **„shot on goal from volley in the empty gate, fixed area, with skilfull leg preceded by keeping the ball in the air by successive kicks, alternating feet"** of the groups included in the research

shot on goal from volley in the empty gate, fixed area, with skilfull leg preceded by keeping the ball in the air by successive kicks, alternating feet (no.)

Indicators	Experimental Gr. n = 26 Sports High School of Galaţi		Control Gr. n = 26 Dunărea Galaţi	
	IT	FT	IT	FT
Results	**330**	**522**	**336**	**353**
Arithmetic mean	**13**	**20**	**13**	**14**
Weight t-dependent	**58 %**		**5 %**	

Graphical expression regarding the arithmetic mean of the initial and final tests of table no.3

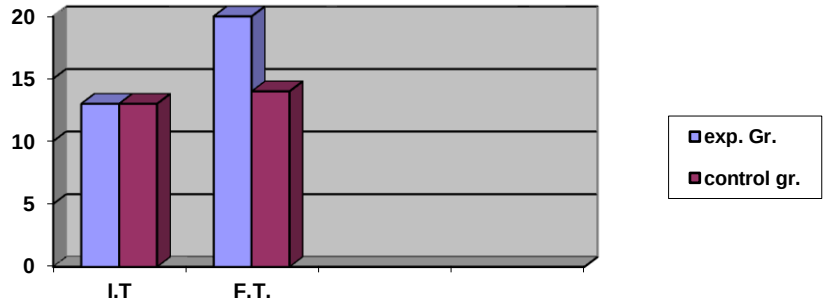

Fig. 3. Results of the test „Keeping the ball in the air by successive kicks, alternating feet, and then shoot on goal from volley in the empty gate (demarcated area) with the skilfull leg".

Interpretation

At the test „**Keeping the ball in the air by successive kicks, alternating feet, and then shoot on goal from volley in the empty gate (demarcated area) with the skilfull leg**", the arithmetic mean of the experimental group is 20 successful shots, compared to the final average of the control group, of 14 successful shots, recording an increase of 6 shots (shot balls), in favour of the experimental group.

Analyzing the relationship of each group by t-dependent test (results timed from the initial testing and the final one are in relationship to each other), the growth of the average level for the experimental group is 58%, compared to that of the control group with an increase of 5%.

Table no. 4

Table with the initial and final results of the **„Lead the ball among 4 obstacles in a perimeter of 10/10 meters."** of the groups included in the research

Lead the ball among 4 obstacles in a perimeter of 10/10 meters. (s.)				
Indicators	Experimental Gr. n = 26 Sports High School of Galaţi		Control Gr. n = 26 Dunărea Galaţi	
	IT	FT	IT	FT
Results	**680**	**421**	**674**	**612**

Arithmetic mean	**26 s**	**16 s**	**26 s**	**24 s**
Weight t-dependent	**62 %**		**10 %**	

Graphical expression regarding the arithmetic mean of the initial and final tests of table 4

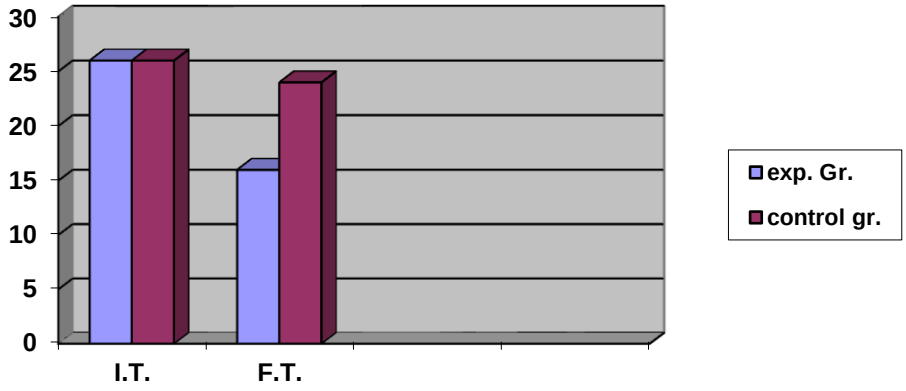

Fig. 4. Results of the test „lead the ball through 4 obstacles"

Interpretation

At the test „**lead the ball through 4 obstacles, randomly placed, within a 10 / 10 meters perimeter**", the arithmetic mean of the experimental group is 16 s, compared to the final average of the control group of 24 s., recording an increase of 8 seconds, in favour of the experimental group.

Analyzing the relationship of each group by t-dependent test (the results timed from the initial testing and the final one are in relationship to each other), the increase of the average level for the experimental group is 62%, compared to the control group which has increased by 10%.

Conclusioons

Acting on the content of the training for children who are 13 years of age is quite complex, based on the integrative model starting from the formative level, which we are interested in, in the proposed experiment.

Having certain knowledge on the evolution of complementary means allows an intervention in determining the correct programming and leading of the training. Means of training should be targeted and developed on the non-specific capacity that must be developed.

The structure of the operating systems and that of the functional, motor, psychological applications must constitute actions and age-specific development opportunities.

The choice of these systems in the proposed experiment has led to a good fine motor development for both technique and coordination as well as for muscle strength training.

REFERENCES

1. N. Alexe (1993), Antrenamentul sportiv modern, Editis.

2. Benigni A., Ferrari M., Kuk A., Preda A. (1999), Guida al giocco del calcio, Editore de vecchi, Milano.

3. Rădulescu M., Cojocaru V., Drăgan A., (2003), The guide of football coach at children and young players, Axis-Mundi Publishing House, Bucharest.

EFFICIENCY THROUGH PROCESS OF RECOVERY IMPLEMENTATION GONARTHROSES MASSAGE AND PHYSIOTHERAPY ASSOCIATED WITH PHYSICAL THERAPY

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Abstract
Background. The physical therapy is essential for the articular functionality, in cases like knee arthritis disease. In the knee recovery I have been using methods like physical exercise, electrotherapy and massage.
Objectives. In osteoarthritis, the cartilage in the knee joint gradually wears away. As the cartilage wears away, it becomes frayed and rough, and the protective space between the bones decreases. This can result in bone rubbing on bone, and produce painful bone spurs. Osteoarthritis develops slowly and the pain it causes worsens over time.
Methods. The main goal of any therapy for patients with knee osteoarthritis in most cases is to reduce pain and improve the physical functioning.
Results. In the process of recovery it can be used medicamentation, thermotherapy, electrotherapy, physiotherapy, balneoteraphy, hydrotherapy, ergotherapy.
Conclusion. Physical therapy can help to reduce the pain, swelling, and stiffness of knee osteoarthritis, and it can help improve knee joint function. Working out muscles in the leg can help make the knee joints stronger. Strengthening these muscles alone can help decrease the pain of knee osteoarthritis. Because knee osteoarthritis often makes it hard to move, flexibility exercises are very important. Doing them regularly can help increase range of motion, make the knees more flexible.

Keywords: *physical therapy, physiotherapy, massage, osteoarthritis*

Introduction

Osteoarthritis is a degenerative affection localized at the knee joint level, without being an invalidated arthrosis as cox-arthrosis. If it is not treated, it ends up producing serious injuries in an alert pace, evolving to a partial or total blocking of articular movements. When it comes to gender, osteoarthritis affects both women and men, but for women the percentage is higher, of roughly 64%, the disease beginning especially after menopause, meaning between the ages 40-70. Epidemiologic studies show that over 80% of the persons above the age of 60 present degenerative modification in one or more of the joints, which reduces their daily activities, more exactly reduced work ability.

Three main joints are localized at leg level: hip joint, knee joint and ankle joint. The knee has the largest intermediary joint, having multiple roles. Being involved in several diverse daily activities, the knee offers stability during walking, offers balance and support while standing and helps in rising the leg. It also supports going up and down the stairs, sitting down and lifting objects (Baciu C. 1977).

The installation of the degenerative process at knee level takes place when an imbalance exists between the resistance of the structures which compose the articulation and