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DEVELOPING THE DEXTERITY OF SCHOOLCHILDREN USING THE EXTENSIVE INTERVAL METHOD OF CIRCULAR TRAINING

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A B S T R A C T

The article describes a technique aimed at developing the coordination abilities of primary schoolchildren by circular training using sensitive periods of their physical development. This improved technique can be effectively used in physical education lessons and in sports sections for the development of coordination abilities of children.

K E Y W O R D S

Coordination abilities, circular training method, sensitive periods, primary schoolchildren, physical education lesson.

Introduction

The sphere of physical education in the activities of secondary educational institutions of our country is to improve the health of children and adolescents by improving their physical fitness, using new effective methods. Proceeding from this, it can be said that in the system of physical education and sports of our independent country, increasing the general level of physical training of schoolchildren through the development of motor qualities has become essential.

The educational process of general secondary education schools provides for the formation of basic physical training, the formation of the fund of necessary movement abilities and competencies in schoolchildren's, and their harmonious development in all aspects. Physical fitness is a necessary component of health, and its improvement is one of the main tasks of school physical education classes[1].

Due to various reasons, it is not possible to conduct physical education classes every day of the week. Therefore, in order to improve the physical education of schoolchildren's, many experts suggest the use of circular training methods for the maximum goal-oriented development of physical qualities [5].

Circuit training is an organized and methodical form of physical exercises, which are mainly aimed at the collective development of movement qualities, the development of several muscle groups is performed in turn. The main task of circuit training is to develop movement qualities of the person engaged in a strict selection of individual exercises within a limited time. These activities have a beneficial effect on the general physical fitness, mental state and health of schoolchildren's [2, 6].

In the main part of the lesson, taking into account the sensitive periods of physical development, the rapid development of the coordination abilities of school-aged children by effectively using circular training exercises allows to increase the motor intensity of physical education classes, improve the quality of education, and increase work productivity [3, 4].

The purpose of the study. Development of proposals and recommendations on the use of circular training exercises for the development of agility qualities of young schoolchildren in physical education classes.

Organization and conduct of pedagogical experience.

Before the start of the experiment, the first graders were examined and the following tests were used to determine and evaluate the level of development of their coordination abilities:

1. 3x10 m shuttle run (assessing the qualities of agility and quickness of children's);
2. Jump forwards (assessment of coordination abilities, quality of agility, ability of vestibular stability, three attempts were made, the best result was taken into account);
3. Throwing a tennis ball for accuracy, cm (assessment of coordination abilities, accuracy, three attempts were made, the best result was taken into account);
4. Catching the ball by throwing it up (1.5-2.0 m), times (assessment of coordination abilities, two attempts were made, the best result was taken into account);
5. Hitting the ball on the ground and carrying it around 3 beams (the distance between each beam is 2.5 m), sec (assessment of coordination abilities);
6. Jumping on two legs with a rope, (assessment of the quality of agility, three attempts were made, the best result was taken into account);

Before conducting the tests, schoolchildren's were informed about the purpose of control tests, the technique of correct performance of control exercises was explained and demonstrated to them.

All participants of the experiment (n=48) were divided into two groups: "EG" - experimental group and "CG" - control group. The number of children in each class is equal (n=24), as many children participated in "EG" as in "CG". Physical education classes at "CG" were held based on the traditional school program. At "EG", physical education classes were held based on the program developed and proposed by us.

The results obtained at the beginning of the experiment in the two groups "EG" and "CG" did not reliably differ from each other in terms of physical fitness indicators, both in boys and girls. These data indicate that schoolchildren's with the same physical fitness were selected for the control and experimental groups.

Experimental work was carried out in the 2021-2022 (October-December) school year in the first grades in secondary school No. 1 in Karshi district. 7-9 year old first graders took part in the experiment; control class (2-A – 24 people), experimental class (2-B – 24 people). The lessons of the control group were conducted under the guidance of a physical education teacher based on the traditional physical education program.

The experimental group was taught the same program, but in the main part of the lesson, the methodology developed by us was introduced. In the main part of the lesson, the developed methodology included the execution of exercises in one series (rotation) based on the 3rd option of the extensive-interval rotational training method for the development of coordination abilities for 6

minutes. 30 seconds were spent on each exercise, 30 seconds of rest between them, and 1-2 minutes between sets of exercises. Every week a new exercise was introduced, which means that the exercises became more difficult. One round consists of 6 stops. The duration of this method is a minimum of 16 lessons (8 weeks), 2 consecutive lessons per week, which is a completed cycle according to the extensive-interval method of circuit training. During the academic year, the number of cycles is - minimum 3, - maximum 4.

The circuit training complex included the following exercises:

1st stop

Shuttle run 3x5 m, sec; Shuttle run 3x6 m, sec; Shuttle run 3x7 m, sec; Shuttle running 3x8 m, sec; Shuttle run 3x9 m, sec; Shuttle running 3x10 m, sec (the distance is increased every week).

2nd stop

The initial state , sitting and leaning forward, leaning on the hands. Jump forward and take over the initial state.; i.e., sitting and holding the palms of the feet with the hands. Jump forward and take over the initial state.; i.e., sitting on the feet. Jump forward and take over initial state.; i.e., kneeling. Jump forward and take over the initial state.;., sitting and leaning on the arms from the side. Jump forward and take over the initial state.; initial state., kneeling and leaning on hands. Jump forward and take over the initial state.; i.e., half-sitting with hands on knees. Jump forward and take over the initial state.; initial state., stand up. Take a step forward and master the initial state. (every week the exercises become more difficult).

3rd stop

a).The initial state., two schoolchildren’s face each other at a distance of 5, 8, 10, 12, 15 m (the distance is added every week). Throwing a tennis ball accurately into the partner's hands with one hand and catching the ball thrown by the partner.

b). The initial state., stand at a distance of 5, 8, 10, 12, 15 m (the distance is added every week) to the basketball board. The tennis ball is thrown to the basketball board with one hand and touched, the partner takes the returned ball and throws it to the basketball board, etc.

4th stop

The initial state, volleyball in hand. Throwing the ball up with two hands 15-30-50-80-1.0-1.20-1.50-2.0-3.0 cm (the height increases every week). (without leaving a circle with a diameter of 1.0 m).

5th stop

The initial state, basketball in hand. Jump with one hand hitting the ball on the ground; jump with the right and left hand hitting the ball on the ground; walking back and forth and jumping with the right and left hand hitting the ball on the ground; spinning and jumping with the right and left hands hitting the ball on the ground; jump with the right and left hand hitting the ball on the ground; jumping with the right and left hand to the knee, waist, and chest, hitting the ground; moving around 2 obstacles by hitting the ball on the ground with right and left hand; hit the ball on the ground with right and left hand and go around 3 obstacles (every week the exercises become more complicated).

6th stop

a). The initial state: Standing as if holding a rope in the hand. Stepping over the rope, jumping on two and one leg, imitating the movements of jumping by crossing the legs and writing between them;

b). The initial state: rope in hand, passed behind legs. Walking with rope, skipping; jumping lightly on tiptoes; jumping alternately with straight and bent legs; jumps 3 steps forward and 3 steps back; high jump; jumping to the sides on a pair of legs; alternating jumps from foot to foot (every week the exercises become more complicated).

According to the results of the data obtained after the pedagogical experiment (Table 1), it can be noted that boys and girls of the CG group engaged in the traditional program had a relative increase in the results of physical fitness indicators, but there were no reliable statistical differences ($r>0.05$). . These data support the evidence of unreliability of improvement in outcomes within the control group during the experimental period. In this way, it can be noted that the traditional system of conducting physical education classes has a negligible effect on the development of coordination abilities of children of junior school age.

In the course of the pedagogical experience, the results of the physical training of the boys and girls of the EG, who were engaged in the improved methodology of developing coordination abilities using the circular training method, taking into account the sensitive periods of physical development in the physical education classes, were obtained at the end of the pedagogical experience, and the results of their physical training are described below (Table 2 clearly shows that the level has improved significantly.

During this experiment, in EG, where an experimental program was introduced using a rotating training complex aimed at developing coordination abilities, there was a significant increase and improvement of the results in three of the 6 tested indicators to determine the development of coordination abilities, and reliable statistical differences were shown ($r<0.05$), and in three tests: 3x10 m shuttle run, ball throw and jump rope tests, more reliable shifts occurred and more reliable statistical differences were shown ($r<0.01$).

Conclusion

As a result of the research, evidence was obtained that allows for a positive evaluation of the recommended methodology for the development of coordination abilities affecting the level of physical fitness of children of junior school age.

By comparing the results of the conducted pedagogical experience with the effectiveness of the traditional and improved methodology developed by us according to the results of the control tests, it can be said that the introduced methodology is more reliable in the development of coordination abilities in 7-9-year-old schoolchildren's ($r<0.01$; $r<0.05$) and had an effective effect.

Table 1 Dynamics of physical fitness indicators of children of the control group during the research period [number of boys-12; number of girls-12]

№	Control Tests	Gender	Before the experiment $\bar{x} \pm \sigma$	V%	After the experiment $\bar{x} \pm \sigma$	V%	t	p
1.	Shuttle run 3x10 m, sec	B	10,94±0,43	3,9	10,78±0,40	3,7	0,94	□0,05
		G	11,42±0,40	3,5	11,25±0,38	3,4	1,07	□0,05
2.	Forward rolls (3 times), sec	B	9,54±0,43	4,5	9,40±0,48	5,1	0,75	□0,05
		G	9,93±0,53	5,3	9,81±0,46	4,7	0,59	□0,05
3.	Tennis ball throwing for accuracy, cm	B	95,8±7,88	8,2	93,6±7,90	8,4	0,68	□0,05
		G	90,2±10,5	11,6	87,7±9,7	11,1	0,61	□0,05
4.	Catching the ball by throwing it up (1,5-2,0 m), times	B	19,5±2,25	11,5	20,4±2,10	10,3	1,01	□0,05
		G	18,1±2,43	13,4	19,0±2,40	12,6	0,91	□0,05
5.	Hitting the ball on the ground and carrying it around beams, sec	B	27,92±1,52	5,4	27,41±1,54	5,6	0,68	□0,05
		G	28,85±1,83	6,3	28,32±1,90	6,7	0,70	□0,05
6.	Skipping rope (30 sec), times	B	10,2±2,67	26,2	10,7±1,83	17,2	0,54	□0,05
		G	12,6±2,85	22,6	13,4±2,49	18,5	0,76	□0,05

Table 2 Dynamics of physical fitness indicators of children of the experimental group during the research period [number of boys-12; number of girls-12]

№	Control Tests	Gender	Before the experiment $\bar{x} \pm \sigma$	V%	After the experiment $\bar{x} \pm \sigma$	V%	t	p
1.	Shuttle run 3x10 m, sec.	B	11,02±0,44	4,0	10,49±0,33	3,1	3,35	□0,01
		G	11,48±0,49	4,3	10,82±0,42	3,9	3,54	□0,01
2.	Forward rolls (3 times), s	B	9,61±0,48	5,0	9,11±0,40	4,4	2,77	□0,05
		G	10,03±0,54	5,4	9,43±0,47	5,0	2,90	□0,05
3.	Tennis ball throwing for accuracy, cm.	B	96,5±8,82	9,1	89,5±5,54	6,2	2,32	□0,05
		G	91,3±10,0	11,0	83,7±6,8	8,1	2,18	□0,05
4.	Catching the ball by throwing it up (15-20 cm.), times	B	19,1±2,17	11,4	22,2±1,94	8,7	3,69	□0,01
		G	18,5±2,83	15,3	21,9±2,09	9,5	3,35	□0,01
5.	Hitting the ball on the ground and carrying it around beams, sec	B	28,22±1,51	5,4	26,67±1,00	3,7	2,96	□0,05
		G	29,13±2,25	7,7	26,90±1,53	5,7	2,84	□0,05
6.	Skipping rope(30 sec.), times	B	9,8±2,75	28,2	13,5±2,08	15,4	3,77	□0,01
		G	12,3±2,33	19,0	15,8±1,88	11,9	4,05	□0,01

In this way, the results of the pedagogical experiment allow us to conclude that the proposed method improved by us with the help of the 3rd variant of the extensive-interval method of circular training aimed at the development of coordination abilities, provided more serious changes in the physical fitness indicators of 7-9-year-old children.

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