

The Development of Reaction in School Children Using the Exercise Classic's

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ABSTRACT

Background: The problem of insufficient motor activity of schoolchildren can be solved by introducing additional exercises for each lesson in physical culture at school.

Aim: To study the impact of the exercise «Classic's» on the coordination ability and the ability to reaction quickly to younger schoolchildren.

Methods: the study lasted nine months. It was attended by fifty schoolchildren 8-9 years. Physical education classes at the school were twice a week for 40 minutes each. Assessment of the level of coordination abilities – Shuttle run 3x10m; Evaluation of the ability to react quickly – Stop rolling the ball with your foot. Programs that have been used for mathematical calculations - bio-stat 2009 and Microsoft excel 2016. The parametric criterion t-student was used, the reliability at $P>0.05$.

Results: Before the start of the study in the EG and CG indices were about the same. After the end of the study, the indicators in CG did not improve significantly. Children from CG improved performance in the test Shuttle run by 3.9%. The indicators of Stopping the ball with the foot also improved not significantly from 269.3 ± 7.0 cm to 260.9 ± 9.0 cm ($P<0.05$). At the same time, there were significant improvements in EG in both tests. In the test, the Shuttle run result improved by 19.1%, and the indicators of Stopping the ball with the foot improved from 271.3 ± 6.1 cm to 246.0 ± 6.8 cm ($P<0.05$). This indicates the effectiveness of the use of new exercises in physical education lessons at school.

Conclusion: if the physical education classes at school to perform the exercise «Classic's», it will improve the performance of not only coordination abilities, but also the reaction of schoolchildren 8-9 years, increase interest in classes, improve the motor density of the lesson in physical education at school.

Keywords: coordination abilities, reaction, schoolchildren, physical education, lesson.

INTRODUCTION

Physical education is in every school, not only in Russia but also in foreign countries. Two lessons are the minimum number of physical education classes in ordinary Russian schools¹⁻³. The main objective of the lesson is a comprehensive harmonious development of children, learning new motor actions and exercises. Many schools have problems with the gym of classes. Usually, the gym only one and it small size. This does not allow to fully realize the physical abilities of schoolchildren. After explaining and showing the exercise to the teacher, the children begin to try it, there is a queue, the motor density of the class falls. Usually, the lesson lasts 40-45 minutes, and if during this time 2-3 times to get in line, the child risks to remain without load. This does not solve the main task of the physical education lesson. Of course, the creative personality of the teacher comes to the fore. He has to make all the kids move. It is not easy to do it in a limited space. One of the effective exercises that even children know is the exercise «Classic's». This exercise does not require special equipment, material resources or knowledge. However, how does it affect the coordination abilities of children and is it able to develop a child's reaction?

Coordination abilities are very important in the life of schoolchildren. The higher the level of development of coordination abilities of children, the easier and faster he overcomes the difficult tasks that face him in life, in class or training^{4,5}. Types of specific coordination abilities are diverse, one of the leading abilities – a reaction to an object or movement. Due to the good reaction the children can

solve the motor tasks, especially complex tasks, or those that occur suddenly⁶⁻⁹.

If we talk about the sensitive periods of development of coordination abilities, the authors unanimously called the younger school age. For the period of 7-11 years it is recommended to pay special attention to the development of General and specific coordination abilities^{10,11}.

The main purpose of the study is to study the influence of exercises «Classic's» on coordination abilities and the ability to reaction quickly from schoolchildren. The hypothesis of the study is the assumption that if schoolchildren 8-9 years old in physical education lessons in a regular school will perform the exercise «Classic's», the indicators of coordination abilities and their reactions will improve significantly.

METHODS

The pedagogical experiment lasted for 9 months (September - May). The study involved boys and girls 8-9 years (50 people). At the beginning of the study, all children were healthy and had access to practical exercises in physical culture. At the time of the study, the children studied in the second grade at the regular school №60 in Kirov, Russia. Each physical training session was held for 40 minutes, twice a week.

Before the study 2 groups were formed: The control group (CG) are children from class 2A, the Experimental group (EG) are schoolchildren from class 2B. There were 25 people in each group. Children from CG were engaged in the standard program on physical culture at school¹².

The children of the EG were doing the same program, but additionally at every opportunity doing the drill «Classic's» (table 1).

Table-1: Exercise «Classic's»

8	2	5		3	2	5		2	4	8
7	9	3		9	4	8		6	9	5
1	4	6		7	1	6		3	7	1
Square 1				Square 2				Square 3		

In the gym, on the floor, there are three large squares with sides of 180 cm. Each large square includes 9 small ones. The numbers from 1 to 9 are shown in small squares in random order (from lesson to lesson the positions of the numbers change). With jumps (one or two legs) the schoolchildren must land in a square with a number from 1 to 2 and up to number 9, then he jumps in the reverse sequence to number 1. It is desirable that each schoolchildren during the lesson was able to overcome all the squares. You can start the exercise at any time, for example, after building, while running or other pauses that occur during the lesson. The difference between the large squares is that the numbers in them are in different order. If the schoolchildren made a mistake, he can continue with the same number

Control tests:

- Assessment of the level of development of coordination abilities – Shuttle run 3x10m¹³;

Table-2: Indicators of coordination abilities and reaction of schoolchildren 8-9 years (M±m)

Test	CG				EG			
	Before	After	%	P	Before	After	%	P
Shuttle run 3x10 m (sec)	10.1±0.9	9.7±0.5	3.9	P<0.05	10.5±0.8	8.5±0.5	19.1	P<0.05
Stop rolling the ball with your foot (cm)	269.3±7.0	260.9±9.0	3.1	P<0.05	271.3±6.1	246.0±6.8	9.3	P<0.05

DISCUSSION

Motor activity of schoolchildren is of great interest to specialists and scientists. For children is important as an organized activity of physical culture (lesson), and free time, during which children can actively move, perform new and useful exercises^{1-3,16}.

A high role in the motor activity of schoolchildren is played by the level of development of coordination abilities. The higher the skill, the easier it is for the child to overcome the difficulties provided by motor activity^{4,5,17}.

Most authors suggest replacement of existing systems of physical education, or introduction of additional occupations or trainings.

But, the school program is very important, it covers the maximum range of motor skills of children that they have to learn throughout their school life and exclude from it some fragments will not be correct. In our view, it is only right to supplement existing programs without violating their fundamental values. The school program introduces schoolchildren to the basic sports subjects, mobile and sports games, includes the formation of discipline among schoolchildren, but most importantly – it is recovery and training¹².

The results of the pedagogical experiment allow us to say with confidence that the exercise «Classic's» can perfectly complement any lesson in physical education at

- Evaluation of the ability to reaction quickly – Stop rolling the ball with your foot⁹.
- Mathematical and statistical processing of the results was carried out using Microsoft excel 2016 and bio-stat 2009. Used parametric criterion of t-student, reliability (P>0.05)^{14,15}.

RESULTS

Before the beginning of the pedagogical experiment all children passed control tests. Table 2 shows that prior to the study, the difference was small. However, after nine months of training sessions, the situation has changed for the better in both groups. Children from CG improved performance in the test Shuttle run by 3.9%. The indicators of Stopping the ball with the foot also improved not significantly from 269.3±7.0 cm to 260.9±9.0 cm (P<0.05). Such results in CG can speak about efficiency of modern system and the program of physical culture in the country. At the same time, in the EG had significant improvements in both tests. In the test, the Shuttle run result improved by 19.1%, and the indicators of Stopping the ball with the foot improved from 271.3±6.1 cm to 246.0±6.8 cm (P<0.05). Information about such data, of course, speaks about the effectiveness of the use of exercises «Classic's» in physical education classes at school

school. Especially with children of primary school age, for which motor activity is so important.

A significant improvement in the coordination abilities of children from EG, as well as an increase to 9.3% of the reaction rate indicate the success of the use of additional exercises «Classic's».

Motor activity density increases, as children, free from the queue to exercise can perform other motor action in the square. Of course, the new exercise is of interest to children, including physical education. It is also important to use in the classroom with children playing and competitive methods¹⁸, for example, the job at a speed of 1 to 9 square and vice versa.

The hypothesis, which was put forward at the beginning of the study, is solved. And it should be noted that the uniqueness of the exercise «Classic's» is that it does not require special equipment, a large place or a considerable time. The limit is only the duration of the lesson.

Differentiated and individual approach in education with younger schoolchildren is also very important. It allows you to discover and realize the physical and intellectual abilities of schoolchildren^{19,20}. Each schoolchildren performs the exercise «Classic's» at a time when he wants and can, an additional load, the speed of the exercise and its duration is chosen by the schoolchildren depending on his mood and well-being.

CONCLUSION

If at each physical education class in school children will perform the exercise «Classic's», their indicators of coordination abilities, as well as indicators of the ability to reaction will improve significantly. In addition, the motor density of the lesson will increase, the interest of schoolchildren in physical education will increase. Research is actual and perspective for studying and addition of modern programs on physical culture at school.

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