

# Influence of exercise classics on the ability to distribute attention of schoolchildren aged 9-10.

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## Abstract

**Introduction:** The problem of distributing the attention of schoolchildren can be solved by exercises in physical education classes at school.

**Objective:** To determine the impact of exercise Classics on the ability of schoolchildren to distribute attention at the age of 9-10 years.

**Method:** The study was conducted over a period of 9 months, in which 40 9-10-year-olds took part. Physical education classes were held 2 times a week for 40 minutes each lesson. The level of development of coordination abilities was evaluated on the «Shuttle run» test, and the indicators of attention distribution on the «Different counting» test. The programs bio-stat 2009, Microsoft excels 2016 and t-student was used for mathematical and statistical processing of results.

**Results:** Before the beginning of the pedagogical experiment, the indicators of school children between the groups did not have significant differences ( $P>0.05$ ). After the end of the study, the indicators in both groups improved. In CG, in the «Shuttle run» test, the indicators improved by 2.9% ( $P>0.05$ ), and in the attention distribution test, they improved from  $36.1 \pm 2.4$  to  $32.9 \pm 3.4$  ( $P>0.05$ ). In EG, in the «Shuttle run 3x10 m» test, the indicators improved by 14.1% ( $P<0.05$ ), and in the «Different counting» test, the indicators improved from  $9.9 \pm 0.5$  to  $8.5 \pm 0.4$  ( $P<0.05$ ). These results indicate the effectiveness of using Classical exercises in physical education lessons in working with younger schoolchildren.

**Conclusion:** if you perform exercise Classics in physical education classes at school, you will improve not only your coordination abilities, but also the distribution of attention among schoolchildren.

**Keywords:** Attention distribution, Coordination abilities, School children, Physical culture, Classics.

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## Introduction

In recent years there has been a trend of decline in the level of children's health. When examining first-graders, there are such diseases that previously could only be in older people. As a rule, the main problem is a lack of motor activity from an early age. Lack of motor activity negatively affects almost all systems of the body, the muscular system, the cardiovascular system; there are diseases of the pulmonary system and others. To a large extent, physical education at school can solve the lack of motor activity. Physical education classes are compulsory for all children at school. During the lesson, the teacher should form schoolchildren interest in physical culture and sports. The schoolchildren must fully realize their motor needs during classes. The main goal of physical education is to form a healthy and harmonically developed personality of the schoolchildren.

Currently, there are physical education programs at school that are updated and reissued. The programs provide sets of exercises that allow you to develop strength, speed, endurance, flexibility and coordination abilities of children. However, modern programs cannot be fully implemented in ordinary schools in Russia. Primarily due to the lack of gyms and equipment. In this regard, some authors suggest completely changing the program to new progressive methods. We believe

that the comprehensive and multifaceted physical education program at school needs only minor additions. For example, earlier it was proved the effectiveness of introducing exercise Classics in the educational process of physical culture at school.

Exercise Classics does not require special equipment and a large space, it is quite effective in terms of developing coordination and other abilities. Exercise Classics allow a physical education lesson to realize the hidden reserve capabilities of the schoolchildren body, to meet their motor needs. This is important, as an individual approach is implemented, which must be used in working with children.

Coordination abilities are the ability of a person to quickly, accurately and rationally solve motor problems that arise in unexpected and constantly changing situations. It should be noted that the high level of development of coordination abilities allows you to save time and effort, and movements become more rational and accurate. This is evident not only in sports, but also in everyday life. A favorable period for the development of most physical qualities, including coordination abilities, is the age of 7-10 years. If purposefully develop abilities at this age, the effectiveness of the impact will be much higher. Of course, it is proved that motor activity has a positive effect on most of the mental processes that occur in the human body, improving

cognitive and thought processes. The effectiveness of physical activity of schoolchildren in relation to positive grades in other subjects at school has also been proved.

Objective of the study to determine the impact of exercise Classics on the ability of schoolchildren to distribute attention at the age of 9-10 years.

## Material and Methods

### Participants

The study involved schoolchildren aged 9-10 years in the number of 40 people. At the beginning of the pedagogical experiment, all children were healthy and allowed to take physical education lessons at school. The schoolchildren studied in the third grade of secondary school 60, Kirov, Russia.

All procedures met the ethical standards of the 1964 Declaration of Helsinki. Informed consent was obtained from all parents of school children who were included in the study.

### Procedure

The pedagogical experiment lasted from September to May for nine months. Physical education classes for children were held twice a week for 40 minutes each lesson. During the study period, 56 lessons were conducted.

### Prior to the study, 2 groups were formed

The Control Group (CG) consists of 20 schoolchildren from class 3A, boys and girls, who were engaged in the standard physical education program for secondary schools for children in grades 1-114.

The Experimental Group (EG) consists of schoolchildren from class 3B, as well as 20 people who were engaged in the standard program; however, in addition, during each lesson in physical culture, the children performed the exercise Classics, which is presented in the form of (Table 1).

**Table 1:** Exercise «Classic's»

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

Exercise classics: In the gym, there are three large squares on the floor. The side of one square is 180 cm. inside each large square there are nine small squares, the side of the small square is 60 cm. inside each small square are numbers from 1 to 9.

Task: The schoolchild must use jumps from square to square to get from number 1 to number 2, then to number 3, and so on, to number 9. After that, it should jump on the same squares in reverse order (from number 9 to number 1). You can move around the squares in any way (from one leg to the other, jump on one leg or on two). If the schoolchild makes a mistake, he

returns to the previous square. During the lesson, each schoolchild must overcome three large squares. The numbers in the squares must be changed by the teacher before each lesson. You can perform the exercise in any part of the lesson. Before and after the pedagogical experiment all schoolchildren took control tests:

1. Shuttle run 3x10 m (indicator of coordination abilities).
2. The «Different account» Method (an indicator of the ability to distribute attention)

Schoolchildren write numbers from 1 to 20 in ascending order on a piece of paper. At the same time, they must count audibly from 20 to 1 (that is, in reverse order).

Result: The amount of time spent by schoolchildren on the task (up to 0.1 seconds).

### Statistical analysis

Mathematical processing of the results was performed using Microsoft excel 2016 (calculating the arithmetic mean). Statistical analysis was performed using the bio stat 2009 program, which uses the t-student parametric criterion. The reliable significance of the research results was calculated at ( $P < 0.05$ ).

## Results

Before the beginning of the pedagogical experiment, all children passed the control tests «Shuttle run» and «Different counting». The difference between the indicators in both groups was insignificant ( $P > 0.05$ ). After the pedagogical experiment, the results in the indicators of schoolchildren from class 3A and 3B changed (Table 2).

**Table 2:** Indicators of coordination abilities and the ability of children 9-10 years to the distribution of attention.

Test	CG				EG			
	Before	After	%	P	Before	After	%	P
Shuttle run 3x10 m (s)	10.2 ± 0.6	9.9 ± 0.5	2.9	$P > 0.05$	9.9 ± 0.5	8.5 ± 0.4	14.1	$P < 0.05$
Different counting (s)	36.1 ± 2.4	32.9 ± 3.4	8.9	$P > 0.05$	33.6 ± 2.6	25.1 ± 2.8	25.3	$P < 0.05$

Table 2 shows that school performance has changed over the study period, but not in the same way. The results of the school year in physical education for children from CG indicate that the standard physical education program for primary school children is insignificant, but effective. The use of such a program in physical education classes gives the following results: the «Shuttle run» test indicators improved by 2.9% ( $P > 0.05$ ), and the indicators of attention distribution of schoolchildren improved from  $36.1 \pm 2.4$  to  $32.9 \pm 3.4$  ( $P > 0.05$ ).

At the same time, in EG, where children were engaged in a standard program, but at each lesson they additionally performed exercise Classics they were able to significantly improve the indicators of both coordination abilities and the ability to distribute attention. In the «Shuttle run» test, the indicators improved by 14.1% ( $P < 0.05$ ), and the indicators in the «Different counting» test increased from  $9.9 \pm 0.5$  to  $8.5 \pm 0.4$  ( $P < 0.05$ ). These results allow us to speak about the effectiveness of using exercise Classics in physical education lessons in working with children of primary school age.

## Discussion

Motor activity has a great influence on human growth and development. Physical exercises that form the basis of physical culture are a catalyst for human motor activity. The main goal of physical education is a comprehensive harmonious development of a person's personality, preparation for work and social adaptation. In a secondary school, a physical education lesson is mandatory to attend, and every year schoolchildren pass control standards.

Some authors suggest completely changing the standard physical education programs at school, to new methodic and sets of exercises. In our opinion, it is more appropriate to supplement programs in this situation, for example, with exercise Classics. Exercise Classics proved its effectiveness in the previous experimental study; it increases the motor density of the lesson, the emotional background of the lesson.

This study found that the exercise Classics not only develops coordination abilities, but also improves children's mental abilities, such as attention distribution. The results of this study confirm the opinion that physical exercise and motor activity have a positive impact on the formation of mental and cognitive processes. Schoolchildren who use the exercise Classics in physical education classes receive additional physical development, but also mental development, which ultimately affects positive grades for educational activities.

Separately, it should be noted the effectiveness of using a differentiated approach in working with children of primary school age, this approach will allow you to individualize the load for each child, since the level of training of each schoolchildren is different. In addition, as an additional motivation to perform physical exercises in primary school age, it is the use of game and competitive methods in the process of physical education.

The results of the study shown by the control group may indicate that the standard physical education program at school is effective, but not enough. As well as the fact that the sensitive period for the development of most physical and mental processes is primary school age.

The obtained data actively echo the previously conducted studies that concern children of different ages and the level of physical and technical training both at school and in sports sections.

## Conclusion

Summing up the results of the study, we can conclude that if children perform exercise Classics at each physical education lesson in school, their indicators of coordination abilities will improve, as well as indicators of their ability to distribute attention. The new research is relevant and promising for further directions in the field of physical education at school.

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## Conflicts of Interest

There is no conflict of interest.

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