

Influence of Exercise Classics on the Development the Volume of Attention of Schoolchildren Aged 8-9

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Abstract

The aim of the study: To determine the influence of exercise Classics on the development of the volume of attention of children 9-10 years old in physical education lessons.

Methods and Material: 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 assessed on the «Shuttle run» test, and the indicators of attention volume on the «Schulte Table» test. The programs bio-stat 2009, Microsoft excel 2016 and t-student were 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 from 10.2 ± 0.6 to 9.9 ± 0.5 ($P > 0.05$), and in the volume of attention test, the indicators improved by 6.1% ($P > 0.05$). In EG, in the «Shuttle run 3x10 m» test, the indicators improved from 9.9 ± 0.5 to 8.5 ± 0.4 ($P < 0.05$), and in the «Schulte Table» test, the indicators improved by 32.1%. These results indicate the effectiveness of using exercise Classics in physical education lessons in working with younger schoolchildren.

Conclusion: if schoolchildren will perform exercise Classics in physical education classes at school, they will improve not only coordination abilities, but also the volume of attention.

Key Words: *volume of attention, coordination abilities, schoolchildren, physical education, Classics.*

Introduction

A healthy lifestyle includes several components, including motor activity. It should be noted that insufficient motor activity, even in childhood, can lead to serious negative consequences for health. Unfortunately, there are more and more first-graders who have abnormalities in their health, usually due to lack of movement. Physical education at school is an integral part of the modern education system. The main form of physical exercises in school is a physical culture lesson. At the lesson, schoolchildren receive the necessary minimum of knowledge, skills, and skills provided for in the school curriculum, and increase their level of physical development. The main goal of the lesson is that children, starting from their earliest childhood, grow up healthy, strong, harmoniously developed, so that

they learn well. Physical culture plays a major role in improving a person's health^{1,2}.

Today, there is a physical education program for schoolchildren from the first to the eleventh grade. In each age group, a detailed description of the load on schoolchildren and the exercises that they must master is given³.

Despite the versatility of modern physical education programs, they have shortcomings, for example, to implement some tasks, you need a large gym, which is not in every school, there is not enough space for physical education, which reduces the motor density of classes. How to increase physical activity of children in such conditions? Despite the fact that some authors suggest replacing the standard program with modern

methods, we believe that it will only be enough to slightly Supplement the existing program⁴. It is proved that the exercise Classics allow you to solve this problem⁵.

Exercise Classics allow you to implement an individual and differentiated approach to schoolchildren, which is important for each of them. It allows you to open and increase the reserve capabilities of physical abilities^{6,7}.

We should also mention the development of coordination abilities for children of primary school age. Coordination abilities are the ability of a person to quickly master new movements and reconstruct motor activity in accordance with the requirements of a changed situation. The level of development of coordination abilities determines the effectiveness of human movement, its rationality of actions, speed and other aspects of movement. Coordination abilities are also necessary for mastering movement techniques in any sport. The higher the level of development of coordination abilities, the more effective the athlete will act^{8,9}.

At the age of 7-11 years, it is necessary to lay the Foundation for the growth of the development of the body and abilities involved in school, since this age is favorable for the development of most physical abilities¹⁰.

Physical education and sports have a positive impact on the cognitive processes of schoolchildren¹¹⁻¹³. However, despite the established relationship, it is important to study the influence of Classical exercises on the volume of attention of schoolchildren.

Aim of the study – to determine the influence of exercise Classics on the development of the volume of

attention of children 9-10 years old in physical education lessons.

The hypothesis of the study. It is assumed that if you use the Classic exercise in physical education classes, the indicators of the volume of attention of schoolchildren will improve.

Material and Methods

Participants:

Boys and girls 9-10 who participated in the study were healthy and admitted to physical education classes. The schoolchildren studied in grade 3, at secondary school Number 60, in the city of Kirov (Russia).

All procedures conformed to the ethical standards of the Helsinki Declaration of 1964. Informed consent was obtained from all parents of schoolchildren included in the study.

Procedure:

The study continued for nine months (September-may). A total of 56 physical education classes were held. Classes were held 2 times a week. Each lesson lasted for 40 minutes.

Prior to the study, 2 study groups were formed:

1. the Control group (CG) consists of 20 children from class 3A. These schoolchildren were engaged in a standard physical education program at school³.

2. Experimental group (EG) – children of the 3B class in the amount of 20 people. These schoolchildren were engaged in a standard program, but in addition to each lesson, they performed an exercise Classics. The exercise is presented in table 1.

Table 1. Exercise «Classic's»

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

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)¹⁴.
2. «Schulte Tables» (indicator of the volume of attention)¹⁵.

On an ordinary sheet of A4 paper, 25 cells are drawn, and the numbers 1-25 are randomly written in each cell (table 2).

Table 2. Schulte Tables

10	21	16	2	19		21	6	14	7	16
25	23	1	11	3		19	25	23	5	8
22	12	17	6	7		11	17	1	10	4
14	20	4	8	15		20	2	12	18	15
24	13	9	5	18		13	22	3	9	24

Option 1

Option 2

At the signal, children must cross out all the numbers in order, from 1 to 25. After the last digit, the test stops. The result is the time that the schoolchildren completed the task. One attempt. If an error is made, the test is repeated.

Statistical Analysis

In the course of the study, we used the program Microsoft excel 2016, and bio-stat 2009. The detection of arithmetic averages in the tests of both groups

was carried out using Microsoft excel 2016. Bio-stat 2009 allowed using the parametric criterion t-student (confidence at $P < 0.05$)¹⁶.

Results

Before the beginning of the pedagogical experiment, schoolchildren from class 3A and 3B passed two control tests Shuttle run 3x10 m and Schulte Tables. The difference between the indicators was not significant ($P > 0.05$). However, after the pedagogical experiment, the indicators in both groups differed significantly (table 3).

Table 3. Indicators of coordination abilities and attention volume children 9-10 years old

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
Schulte Table (s)	37.7±4.7	35.4±5.1	6.1	P>0.05	39.9±4.9	27.1±3.5	32.1	P<0.05

Table 3 shows that the results of 9-10 year olds in both groups changed from the beginning to the end of the study. The performance of coordination abilities in the «Shuttle run 3x10 m» test in CG improved, but not significantly from 10.2±0.6 to 9.9±0.5 (P>0.05), in contrast to children from class 3B. In EG, the indicators of coordination abilities improved from 9.9±0.5 to 8.5±0.4 (P<0.05). The situation in the «Schulte Table» test is the same. The volume of attention of schoolchildren in class 3A improved, but only by 6.1% (P>0.05), and for schoolchildren in class 3B by 32.1% (P<0.05). Such results may indicate that the standard physical education program at school is not very effective, at the same time, the results in EG show the effectiveness of implementing exercise Classics in the educational process of younger schoolchildren, which significantly improved the indicators of coordination abilities and the volume of attention.

Discussion

Children's health is an important issue in society today. This problem can be solved, first of all, by physical education and physical exercises. In General, physical education is aimed at a comprehensive harmonious development of a person and his preparation for work in life^{1,2}. In the Russian Federation, physical education classes at school are mandatory. And the physical education program at school covers a very large set of skills and abilities of physical abilities of children, which need to be developed through physical exercises³. However, some authors believe that the standard physical education programs at school are very outdated and they need to be completely replaced with modern methodics and new sets of exercises⁴. This approach seems to us not quite correct, the correct option would be to Supplement

existing programs. One of the most effective additions to the standard physical education program at school is the exercise Classics. The introduction of this exercise has had a positive effect in our previous research⁵.

In this study, the effectiveness of using exercise Classics in physical education classes at school is proved. Namely, there was an improvement in indicators not only of children's coordination abilities, but also improved indicators of the volume of attention of schoolchildren. Thus, the hypothesis that the development of physical abilities has a favorable effect on the development of cognitive and mental processes is confirmed¹¹⁻¹³.

It is also worth noting the positive impact of the coordination exercise of the Classics in primary school age, which is sensitive for the development of most of the abilities of schoolchildren¹⁰.

The new study confirms the effectiveness of using a differentiated approach in working with schoolchildren, which ensures individual physical development of the optimal level of each schoolchildren^{6,7}.

Conclusion

If at each lesson in physical culture at school, schoolchildren will perform a Classic exercise, then the indicators of not only coordination, but also the volume of attention of children will improve. This will significantly increase the effectiveness of standard physical education lessons at school. The research is relevant and promising for further research in the field of physical education and sports.

Conflicts of Interest: There is no conflict of interest

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Ethical clearance – All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

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