



The Development of Balance in School children using the Exercise Classic's

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ABSTRACT

The purpose of the study: To study the impact of the exercise «Classic's» on the general coordination abilities of school children and their ability to balance. **Method:** The main method of studying the issue is a pedagogical experiment. In the course of the study exercise, «Classics» supplemented the standard program of physical education. Second-graders from the regular school took part in the study. **Result:** The change performance of the general coordinating abilities of junior school children and their ability to balance. Children in CG, the improvements were not significant, but in the EG the indices improved significantly in both the control tests. **Conclusion:** Insufficient motor and coordination activity of younger school children is a problem. New ideas should complement the existing physical education program at school. If perform the exercise «Classic's» in the classroom for physical culture at school, it will improve the performance of not only coordination abilities, but also the ability to balance the school children 8-9 years, increase interest in physical education lessons at school.

Keywords: Coordination ability, Balance ability, School children, Physical education, Lesson

INTRODUCTION

One of the main problems that are relevant today is health. Health, founded from childhood and attitude to it, is the Foundation of a happy longevity. The most important aspect of human health is motor activity from early childhood. From kindergarten and school children years, children should receive a certain amount of motor activity during the day and week. It is very important to monitor the physical health of children, their mental development and other aspects of the growth and development of the young body. Centralized control over the main indicators of the school children is a lesson in physical culture at school. As a rule, school children have two classes a week for 40-45 minutes each lesson. It is a lesson in physical education teacher gives tasks in the form of exercise, which allows you to develop the ability of children [1-3].

Despite the fact that the school has programs for physical education, the purpose of which is the development and education of children, there are some problems with their implementation, especially in regional secondary schools. One of the problems is the presence of a large, comfortable sports hall, which would accommodate a group of school-children or two. As a rule, it is a small gym. How to implement the work program and most importantly to increase the motor activity of children in physical education at school, if there is no place to study? The creative personality of the teacher is very important. The main task is to increase the motor activity of each child in the classroom.

It is necessary to develop and implement an exercise that does not require large investments and knowledge, does not require complex and expensive equipment. One of such exercises is «Classic's». The main purpose of this exercise is the development of coordination abilities. The importance of motor-coordination work in the life and physical activity of children is very high. Well-developed coordination abilities help to solve the motor tasks of different complexity quickly and cost-effectively, without significant expenditure of force [4,5].

In addition to the general coordination abilities of children, there are also specific coordination abilities, there are a lot of them. One of the important specific coordination abilities of school children is the ability to balance. This is the ability to maintain a pose in static and dynamic positions of the body. Well-developed ability to balance cannot only successfully perform different tasks in everyday life, but also in sports activities [6-9].

The earlier work on improving children’s ability to balance begins, the easier it will be to achieve good results in sports. At the same time, the natural increase in the ability to balance is the age of 8-11 years. Therefore, purposefully develop this ability is better with 8 years. Thus, primary school age is favorable for the development of balance and general coordination abilities [10,11].

The aim of the study is to study the impact of the exercise «Classic’s» on the overall coordination abilities of school-children and their ability to balance.

Research Hypothesis

If the activity physical culture lessons perform at school to use the exercise of «Classic’s», the indicators of general coordination abilities and the indicators of balance in children aged 8-9 years will improve.

METHODS

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.

The pedagogical research lasted nine months, from September to May. The study involved school children, boys and girls 8-9 years, in the number of 50 people. At the time of the pedagogical experiment, the children studied in the second grade of the regular school №60, the city of Kirov. All school children were physically healthy and admitted to physical education classes at school. Each week there were two physical education lessons of 40 minutes each lesson.

Before the beginning of the pedagogical experiment formed: Experimental group (EG) and Control group (CG).

CG is school children from class 2A, children who were engaged in the standard program for physical education in school [12]. EG these are children from 2B class, they are also engaged in the standard program, but, during the pedagogical experiment, additionally performed the exercise «Classic’s» in each lesson of physical culture. Exercise «Classic’s» looks and is performing as follows (Table 1).

Table 1 Exercise «Classic’s»

4	7	2		9	8	3		9	5	6
8	3	6		4	6	2		8	2	3
5	9	1		6	1	7		1	4	7
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. Numbers from 1 to 9 are shown in small squares in random order. With jumps (one or two legs), the school children 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. If children make a mistake with a square, they start from the previous square. Each school children during the lesson must overcome all the squares, while doing the exercise he can at any time. The numbers in the squares change before each lesson.

Two control tests used to assess the level of development of coordination abilities and balance:

1. Shuttle run 3 × 10 m (assessment of coordination abilities) [13]
2. Turns on the gymnastic bench (assessment of the ability to balance school children). The school children should be on the gymnastic bench with a narrow surface (about 10 cm). Within 20 seconds, the school children must make as many revolutions around him 360°. At the same time, one turn to the right, then turn to the left. The result -the number of revolutions in 20 seconds with an accuracy of 0.5 turns. Just two tries. If you fall, you can get up and continue the exercise [9]

The main programs for mathematical and statistical analysis of the results were Microsoft excel 2016 and bio-stat 2009. The parametric criterion t-student was used, the reliability of the results was calculated at $p > 0.05$ [14,15].

RESULTS

Before the beginning of the pedagogical experiment, all school children passed two control tests (Table 2). At the beginning of the study, the difference between CG and EG was not reliable. However, after the end of the pedagogical experiment indicators in both groups improved, but in different ways.

Table 2 Indicators of the ability to balance and general coordination abilities of school children 8-9 years ($M \pm m$)

Test	CG				EG			
	Before	After	%	p-value	Before	After	%	p-value
Shuttle run 3×10 m	10.1 ± 0.9	9.7 ± 0.5	3.9%	$p < 0.05$	10.5 ± 0.8	8.5 ± 0.5	19.1%	$p < 0.05$
Turns on the gymnastic bench	8.5 ± 1.4	9.4 ± 1.2	10.6%	$p < 0.05$	8.1 ± 1.1	11.1 ± 0.9	37%	$p < 0.05$

In the CG, in which school children were engaged in a standard program for physical education at school, the indicators improved in both tests, but not significantly. In the test «Turns on the gymnastic bench» performance improved from 8.5 ± 1.4 to 9.4 ± 1.2 ($p < 0.05$), and in the test «Shuttle run» performance improved by 10.6%. Such results may indicate the effectiveness of the existing standard program for physical education in school, as well as a natural increase in coordination abilities in primary school age.

In the EG, in which school children performed the exercise «Classic's» at each lesson in physical culture, indicators in both tests have improved significantly in comparison with the original. In the test «Turns on the gymnastic bench» school children from 2B class improved by 37%, and in the test «Shuttle run» performance improved from 10.5 ± 0.8 to 8.5 ± 0.5 ($p < 0.05$). These results indicate the effectiveness of the use of exercises «Classic's» in the classroom for physical education in school school children 8-9 years.

DISCUSSION

Insufficient motor activity of younger school children is a big problem in modern society. To conduct lessons on physical culture in the school there are increased requirements. During the lesson, all children should not only learn the material, gain knowledge, strengthen skills, but also get enough physical development, sufficient motor activity [3,16].

Coordination abilities play a significant role in motor activity of younger school children. The higher the index of coordination abilities, the easier it is to master new physical exercises, to solve new tasks of different complexity and those that arise unexpectedly. According to some authors, among the variety of specific coordination abilities, the leading is the ability to balance [4,5,16,17]. In primary school, age their natural increase is noted [10,11]. The results of this study confirm this, as the performance of children improved in both groups, that is, those who used the exercises «Classic's» and those who were engaged in the standard program.

One of the main problems of physical culture in the school is the lack of normal facilities for classes. If there is a gym, it is not of sufficient size. It was important for us to find an exercise that allows us to compensate for the shortcomings of the material base of schools and improve the existing physical education programs in the school [12].

Studies of some authors in physical culture at school talking about the replacement of the existing programs for physical culture at school [1,2]. However, we must not forget that this program embodies the basic ideas and goals of physical education for children 8-17 years. This is not only training and education, but also development. This is not only the study of new physical exercises or improving motor skills, but also the development of game sports, outdoor games and more. Of course, this program is effective for children in school. Our study confirms this, as children who were engaged in the standard program were able to improve the studied indicators without the introduction of additional tasks.

Thus, to exclude some part of the standard program, to replace the program completely, it is not quite correct. The way out of this situation is to supplement the program. The introduction of such exercises will increase the motor activity of school children without their detracting from the lesson of physical culture. Such exercise is «Classic's». It can be done in any part of the lesson, it does not require special equipment, a large place or time.

The effectiveness of the use of exercises «Classic's» confirmed by the results of the pedagogical experiment, as school children who performed this exercise, significantly improved their performance coordination abilities and ability to balance.

Observation shows that children with interest and enthusiasm performed a new physical exercise, in some cases there was also a competitive moment when school children tried to get ahead of each other when performing one large square. The use of playing and competitive methods are very important in working with children of primary school age, increases the emotional background of classes and motor activity of school children [18].

Also important is the differentiated approach, which allows revealing the physical and mental potential of children [19-21]. When performing the physical exercise «Classic's» each schoolchild can dose the load, he can perform the exercise when there is strength, he can perform it quickly or slowly, and the duration of the exercise, the school children can choose himself depending on health. Thus, the hypothesis put forward at the beginning of the study solved.

CONCLUSION

Exercise «Classic's» is a great addition to the standard program and any lesson in physical education at school. If you use the exercise «Classic's» in the classroom with children, the indicators of general coordination abilities, and indicators of the ability to balance will significantly improve, increase the emotional background of the lesson and motor activity of school children, which is very important, especially for children of primary school age. The presented study is relevant and promising for the study and Supplement of modern programs on physical education in school.

DECLARATIONS

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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