

METHODS OF GYMNASTICS EXERCISES PRIMARY SCHOOL CHILDREN TO SPORTS CLUBS

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Abstract:

Aim: Development of pedagogical recommendations for optimizing effective activities, forms and methods of increasing the motor activity of primary school students.

Methods: 1. Pedagogical test; 2. Pedagogical experiment; 3. Pedometry; 4. Timing; 5. The method of mathematical statistics.

Results: During one academic year, the daily motor activity of first-graders in the experimental group increased by 2111 steps in boys and 2230 steps in girls; the intensity of movements per minute when walking increased to 12.2 movements in the first and 10.4 movements in the second; the total number of movements during the physical education lesson held in the gym increased to 742 steps and 702 movements, respectively.

Improved results in physical education control tests: in the 30 m run results were 1.2 s for boys, 1.23 s for girls; in the 3x10 m shuttle run, the results improved by 1.4 seconds in the first and by 1.3 seconds in the second; the long jump from a standing position is 21.1 cm and 19.1 cm, respectively; in the 150 m run, the results improved in boys by 9.9 seconds, in girls by 10.2 seconds; in horizontal equilibrium, the first recorded 4.22 s, the second 4.19 s.

Conclusion: During the observation period, the physical indicators of first-graders in the experimental group increased by 13.1 kgm/min, and girls by 11.4 kgm/min. The reaction of the cardiovascular system to moderate physical activity (20 squats in 30 seconds) was characterized by a decrease in heart rate and a reduction in the recovery period by 0.45 seconds. At the end of the experiment, 80% of the pupils of the experimental group had positive reactions of the cardiovascular system to standard physical activity. This indicates that the adaptation of the body to physical activity and the level of physical fitness has been improved in the children of the experimental group.

Keywords: primary class pupils, gymnastics clubs, activity, pedometry, motor activity, physical fitness, physical quality.

МЕТОДИКА ГИМНАСТИЧЕСКИХ УПРАЖНЕНИЙ ДЛЯ ДЕТЕЙ МЛАДШЕГО ШКОЛЬНОГО ВОЗРАСТА В СПОРТИВНЫХ СЕКЦИЯХ

Абстрактный:

Цель: Разработка педагогических рекомендаций по оптимизации эффективной деятельности, форм и методов повышения двигательной активности младших школьников.

Методы: 1. Педагогическое тестирование; 2. Педагогический эксперимент; 3. Шагометрия; 4. Сроки; 5. Метод математической статистики.

Результаты: за один учебный год суточная двигательная активность первоклассников экспериментальной группы увеличилась на 2111 шагов у мальчиков и на 2230 шагов у девочек; интенсивность движений в минуту при ходьбе увеличилась до 12,2 движений в первом и 10,4 движений во втором; общее количество движений на уроке физкультуры, проводимом в спортивном зале, увеличилось до 742 шагов и 702 движений соответственно.

Улучшились результаты в контрольных тестах по физкультуре: в беге на 30 м результаты составили 1,2 с у мальчиков, 1,23 с у девочек; в челночном беге 3x10 м

результаты улучшились на 1,4 секунды в первом и на 1,3 секунды во втором; прыжок в длину из положения стоя – 21,1 см и 19,1 см соответственно; в беге на 150 м результаты улучшились у мальчиков на 9,9 секунды, у девочек на 10,2 секунды; в горизонтальном равновесии первый зафиксировал 4,22 с, второй 4,19 с.

Закключение: За период наблюдения физические показатели первоклассников экспериментальной группы увеличились на 13,1 кгм/мин, а девочек – на 11,4 кгм/мин. Реакция сердечно-сосудистой системы на умеренную физическую нагрузку (20 приседаний за 30 секунд) характеризовалась снижением частоты сердечных сокращений и сокращением восстановительного периода на 0,45 секунды. По окончании эксперимента у 80% школьников экспериментальной группы наблюдались положительные реакции сердечно-сосудистой системы на стандартную физическую нагрузку. Это свидетельствует о том, что у детей экспериментальной группы улучшилась адаптация организма к физической нагрузке и уровень физической подготовленности.

Ключевые слова: учащиеся начальных классов, кружки гимнастики, активность, шагомерия, двигательная активность, физическая подготовленность, физическое качество.

INTRODUCTION

One of the main conditions for the full-fledged upbringing and personal development of schoolchildren is the correct organization of physical education. Physical education of primary school students is the primary link and the main component of physical education of school-age children.

Currently, it is well known that the optimal organization of children's activities has a positive effect on their physical and mental health. Therefore, in the context of the reform of school education, the role of a properly organized movement regime with the use of various forms of physical exercises in the school hours is significantly increasing. Among the many factors (hygienic, socio-economic, demographic, cultural) that affect the health of primary school children, physical education and regulation of daily routines occupy an important place:

One of the main tasks of physical education in primary school is the preservation and strengthening of the child's health, the development of motor and coordination abilities, the education of his physical and moral-volitional qualities, the formation of motor skills and skills necessary in the life of pupils. Of particular importance in solving these educational, educational and health-improving tasks is a rationally organized order of actions.

Aim of the research: It consists in the development of pedagogical recommendations for optimizing effective activities, forms and methods of increasing the activity of primary school students.

Research objectives:

1. To study the order of movement of pupils, to determine its compliance with modern requirements and to identify existing shortcomings in its organization, content and planning.
2. To study the motor activity of pupils and identify the causes that limit independent motor activity and lead to hypokinesia.
3. The introduction into practice of effective means of physical education (callanetics, bodyflex, stretching, yoga), forms and methods that contribute to increasing the physical activity of pupils and relieving educational loads.
4. Experimental verification and justification of the effectiveness of the use of moderate physical exercises in volume and intensity from the main section of gymnastics clubs in additional

physical education classes aimed at increasing the motor activity and working capacity of children.

METHODS

The following research methods were used in the study: the study and analysis of literature, questionnaires, surveys, conversations, pedagogical observations of educational activities and motor activity of children; timing and pedometry methods for determining motor intensity and physical activity during training; pedagogical tests (control tests) to assess the level of development of physical qualities and motor skills; step-by-step PWC-170 test for determining correctional tasks, mental and physical performance; functional test to assess the reaction of the cardiovascular system to physical activity (20 squats in 30 seconds); anthropometry for determining the level of physical development; expert assessment of the quality of physical exercises and motor activity; pedagogical experience and methods of mathematical statistics.

Pedagogical experiment. In order to develop physical fitness and determine motor activity, experiments were conducted in 24th school for children aged 10-11 years of the Samarkand city of the Samarkand region. The experimental program covered the means and methods of gymnastics clubs (callanetics, bodyflex, stretching, yoga) aimed at solving the problems of physical education of school children. In order to increase the physical, functional and adaptive capabilities of the body, a group (frontal) method of performing various running and jumping, dancing, outdoor games, gymnastic complex exercises has been implemented.

Table 1. Comparative analysis of callanetics with other types of gymnastics and fitness clubs

	Callanetics	Bodyfley	Stretching	Yoga
Is special trainer needed?	The method of exercises is easy to master on your own	At the initial stage, a trainer is needed to properly organize breathing and monitor the correctness of the exercises	Can exercise independently	Conducted with a trainer at the initial stage of training
What equipment is needed for training?	Gymnastic carpet	Gymnastic carpet for full practice. But it can be done without any equipment.	Gymnastic carpet and elastic bands are needed	Gymnastic carpet
Required level of training	The initial skills are easy, gradually becoming more complicated	Optimal training for sedentary children	Optimal training for very active children	The initial skills are easy, gradually becoming more complicated

The main effect	Joint flexibility and mobility improves	Helps to lose weight	It models the body, mainly the abdominal muscles, thighs, sides	Strengthens the body, relieves muscle spasms, calms the nervous system
Forming the shape	Effectively affects the formation of the good figure	The effect is enough to form the good figure	Effectively affects the formation of the good figure	Partially helps to maintain the good figure
Breathing techniques	During training quiet breathing	A complex respiratory system, on which the final result depends	Little attention is paid to breathing	Breathing is very important. Differs in each exercise
Contraindications	As a result of prolonged training, the muscles may strain	Fatigue occurs during exercise	No contraindications	The program is adjusted by the teacher individually, depending on the state of health of each participant

The main task of callanetics is to ensure the work of deep muscles that do not participate in the daily movement of children in any way. Muscles are more like a thin web, weak and lifeless. By training these muscles, you can master the whole body in a very short time, easily achieve a comfortable physical position and the good figure. (see table 1).

1. The results of physical fitness control tests have improved: in the 30 meters running 1.2 s for boys, 1.23 s for girls; the results in the 3x10 m shuttle run among young men improved by 1.4 s in the first and by 1.3 s in the second; the long jump from a standing position is 21.1 cm and 19.1 cm, respectively; in the 150 m run, the results improved in boys by 9.9 seconds, in girls by 10.2 seconds; 4.22 s for the first and 4.19 s for the second in horizontal equilibrium. At the end of the school year, on all types of control tests, children of the experimental class showed significantly more positive changes than students of the control group.

The method of mathematical statistics was used to determine the objectivity and reliability of the data obtained during the experiment, as well as to establish patterns and determine their specific values. After the experiment, changes in the statistical reliability of the test results were determined ($p < 0.05$ and higher, $847 \pm 0,9$, $t_{ct} = 1,55$).

RESULTS AND DISCUSSION

In the course of the study, a comparative pedagogical experiment was conducted in order to determine and verify the effectiveness of the experimental and testing methodology.

A total of 200 respondents aged 10-11 years took part in the experiment, 40 of them were involved in the experiment. 20 participated in experimental and 20 in control groups. At the beginning of the experiment, a comparative analysis of the physical development and physical fitness of the respondents of the experimental and control groups was carried out.

In the experimental group of respondents, 40-minute workouts were conducted three times a week for six months according to a program consisting of modern gymnastics clubs. At this time, the pupils of the control group were engaged in a continuous traditional physical education program (the duration and time of classes are similar).

The motor density of physical fitness in the experimental group ranged from 57-65% to 77-85%, depending on tasks and activities, and in the control group it was lower and 52-68%.

In the experimental group, the effect of training on the body, the intensity of the exercise, and the heart rate were monitored.

The effectiveness of the proposed method was evaluated by comparing indicators of physical development and physical fitness, as well as data on the physical and mental development of respondents in the experimental and control groups at the beginning and end of the experiment.

After the 1st experiment, the results of somatoscopic examination of children of the experimental and control groups showed that the number of children with a tendency to diseases of the musculoskeletal system in the control group ranged from 17.5% to 14.5%, and in the experimental group 16 decreased from 0.5% to 10.5% (see figure 1).

Comparing the traditional and research program, the experimental program had an effective impact on the prevention of various diseases of the musculoskeletal system in children with the help of special software methods and tools aimed at the formation of proper growth, as well as exercises aimed at strengthening muscles.

At the beginning of the experiment, there was no significant difference in the results of physical development and physical fitness of the respondents of the experimental and control groups.

During the experiment, the analysis of indicators of physical fitness of children of experimental and control groups was carried out (n = 60) (see table 2).

Table 2. Changes in the indicators of physical fitness of first-graders during the pedagogical experiment

Indicators of motor activity	Sex	Experimental group: 1 st grade pupils (30 children)					
		At the beginning		At the end		Difference (increase)	P
		M ± m	Q	M ± m	o		
Running 30 m, sec	M	7.40 ±0.10	0.26	6.19±0.12	0.34	1.20	0.001
	F	7.55 ±0.13	0.37	6.31±0.11	0.30	1.24	0.001
Shuttle run 3x10 m, sec	M	10.8 ±0.40	1.20	9.4 ±0.25	0.92	1.4	0.01
	F	11.2±0.39	1.18	9.9 ±0.28	0.95	1.3	0.01
Long jump from a place, cm	M	108.2±3.77	11.9	130.4±2.4	7.96	21.2	0.001
	F	106.4±2.50	8.12	125.6±3.8	12.2	19.1	0.001
150 m endurance run, sec	M	44.2 ±1.38	3.90	34.5 ±1.20	3.44	9.9	0.001
	F	45.4 ±1.32	3.74	35.2 ±1.18	3.16	10.2	0.001

Horizontal balance on one leg, sec	M	3.33 ±0.18	0.60	7.55±0.16	0.56	4.23	0.001
	F	4.40±0.20	0.67	8.59±0.14	0.42	4.2	0.001
Control group: 1 st grade pupils (30 children)							
Running 30 m, sec	M	7.55 ±0.15	0.48	7.12±0.13	0.36	0.44	0.05
	F	1.84 ±0.12	0.35	7.41±0.14	0.41	0.43	0.05
Shuttle run 3x10 m, sec	M	10.6 ±0.29	0.97	10.1±0.33	1.20	0.50	0.05
	F	11.0±0.40	1.27	10.4±0.32	1.17	0.60	0.05
Long jump from a place, cm	M	104.9±3.50	10.2	114.9±3.80	12.2	10.0	0.05
	F	103.1±3.90	12.6	112.1±3.6	11.6	9.0	0.05
150 m endurance run, sec	M	44.5±1.42	3.86	40.4± 1.26	3.58	4.1	0.01
	F	46.3±1.30	3.63	42.1±1.18	3.19	4.2	0.05
Horizontal balance on one leg, sec	M	3.43 ±0.19	0.64	3.94±0.16	0.55	0.51	0.05
	F	4.36±0.22	0.78	5.38±0.18	0.59	1.02	0.05

At the end of the pedagogical experiment, it was found out that in all types of control tests, the experimental group of first-graders showed more specific, statistically significant improvements.

The results in the control tests of physical fitness in the 30 m run improved: 1.2 s for boys, 1.23 s for girls, in the 1st grade of the experimental group ($P<0.001$); during the 3 x 10 m shuttle run, the results improved in the first 1.4 seconds, in the second 1.3 seconds ($P<0.01$); 21.2 cm and 19.1 cm in the long jump ($P<0.001$); in the 150 m endurance run, the results were 9.9 seconds for boys and 10.1 seconds for girls ($P<0.001$); 4.22 seconds in the first group and 4.19 seconds in the second group in horizontal equilibrium ($P<0.001$).

CONCLUSION

Our research has had a positive impact not only on the physical indicators of children, but also on the indicators of mental intelligence. The analysis of the results revealed a high level of knowledge in all academic subjects among the pupils of the experimental group. Average growth results: from 3.44 to 4.30 points in the native language; in mathematics from 3.34 to 4.49 points; from 3.54 to 4.80 points in reading; in technology (technological education) from 3.70 to 4.90 points; in physical culture, an increase from 3.39 to 4.77 points. In all academic subjects, the students of the experimental group had higher quarterly and annual indicators than the control group. This is due to the fact that during the school year, the students of the experimental group had a low incidence rate, and the experimental group mastered the educational resources provided by the primary school program better than the children of the control group.

Improved results in physical fitness control tests: experimental group first graders 30 m 1.2 sec for boys, 1.23 sec for girls ($P<0.001$); during the 3 x 10 m shuttle run, the results improved in the first 1.4 seconds, in the second 1.3 seconds ($P<0.01$); 21.2 cm and 19.1 cm in the long jump ($P<0.001$); in the 150 m endurance run, the results were 9.9 seconds for boys and 10.1 seconds for girls ($P<0.001$); 4.22 seconds in the first group and 4.19 seconds in the second group in horizontal

equilibrium ($P < 0.001$).

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