

EXPERIMENTAL VERIFICATION OF THE EFFICIENCY OF THE DEVELOPED METHODOLOGY FOR IMPROVING THE SYSTEM AND CONTENT OF STUDENTS IN PRIMARY EDUCATION

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Abstract. *This article illustrates information on the improvement of the system and content of selection of 10-12-year-old general school students to the stage of primary preparation.*

Keywords: *general education, selection, special, physical training, exercise, talent, strength, speed, endurance.*

Introduction. The problem of selecting and directing talented children to sports in the world is at the stage of continuous learning, improvement and further work as an independent direction. The problem of qualifying for sports is one of the important theoretical and practical pedagogical, medical-biological and also psychological problems of physical education and sports.

Actuality. Nowadays, in the world, including many countries of Europe, effective systems are being developed in terms of qualification criteria and directions in athletics. In the sport of athletics, most researchers are conducting research on the relationship between genes and physical performance, as well as the relationship between running position and the current state of the sprinter. Despite the sufficient development of the content of the selection of participants for sports, there are still many unsolved problems related to the issues of directing children to sports during admission to the initial preparatory stage of athletics.

The purpose of the presentation. physical and functional training of general education schoolchildren consists of developing proposals and recommendations regarding the selection methodology for athletics.

Research tasks. to determine the problems of selection of those engaged in the training of information developers from the sources of scientific and methodical literature;

Development of quality-developing and auxiliary trainings for the training group of 10-12-year-old youth in changing the elements of loading, jumping, throwing techniques;

Research results and their comparative analysis. The sports direction is inextricably linked with the stages of long-term sports training, starting from early school age, ending with the gathering of national teams for participation in responsible international competitions. After all, the goal and main task of sports guidance is to direct the young athlete to the sport that matches his natural inclination, and also help to find talents in sports that can achieve high level of sportsmanship under specialized training conditions.

The ability to further improve the skills of young athletes depends on high-quality initial sports training, where the issues of sports selection and direction are of particular importance. To date, the system of guidance and selection for sports in many sports is being supplemented and deepened, but many issues have not been sufficiently studied.

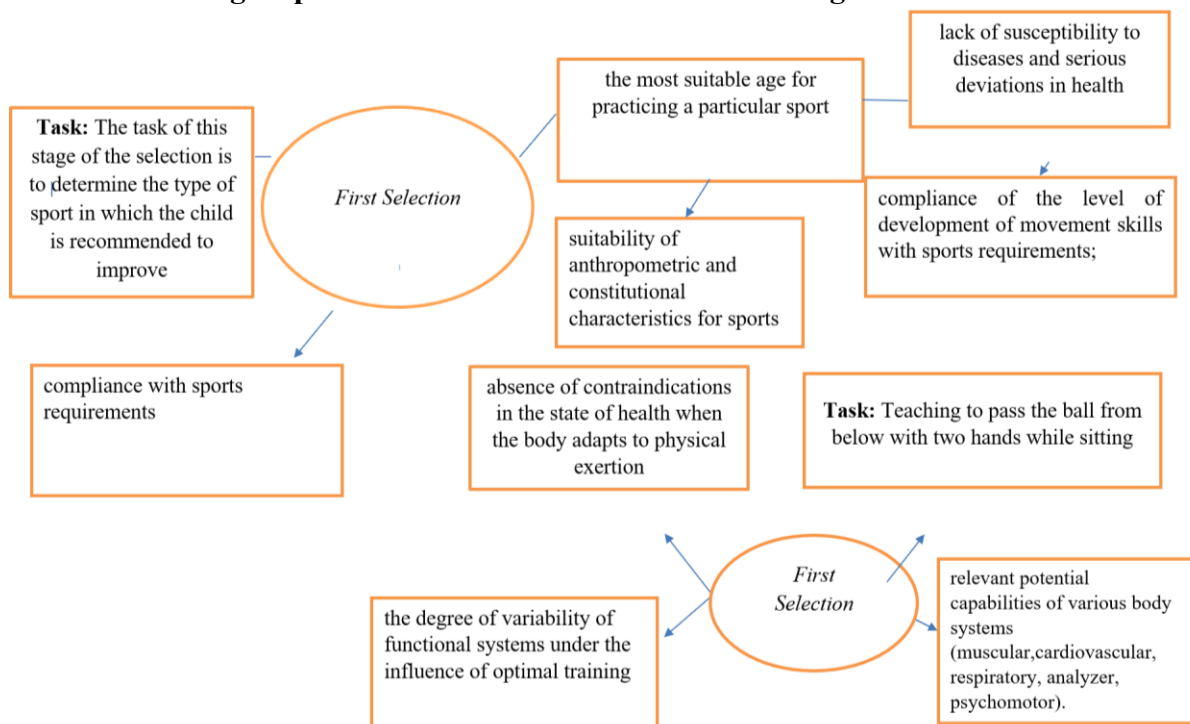
The results of our study are consistent with the opinion of a number of authors who insist on the need for a specially organized selection. Less rational natural selection relies on the coach's

intuition and experience, and his ideas about what abilities are important to athletes. But, in this case, the coach carelessly assumes responsibility, determines the sports fate of the student only on the basis of signs available for initial visual perception.

The lack of such a selection method is seen and criticized by various researchers of the issue. Summarizing the results of our research, it can be said that relatively early diagnosis of sports readiness allows 10, 11, 12-year-old schoolchildren to be oriented to sports. The observations made it possible to create an adequate test system of physical exercises for school-aged children who participate in speed-power sports.

In our study, the methodology of selection of general education school students to the primary training group was developed.

Methodology of selection of general education school students to the primary training group of athletics based on technical training indicators



In order to assess the level of physical fitness of 10-12-year-old participants in the primary training group, based on the following physical exercises and test tasks, determination of quick-power by running 30 meters from a high start; determining coordination skills by running a shuttlecock for a distance of 3x10 meters; to determine arm strength by throwing a stuffed ball weighing 1 kg, bending forward in a sitting position to determine the degree of flexibility development; 6-minute run to determine endurance; the explosive power of the leg to long jump from a standing position; control tests were used, such as pull-ups on a high bar to determine the muscle strength of the arms, and grasping a falling bar to determine coordination abilities. In this way, it was possible to obtain necessary information about the level of development of physical fitness of boys in the primary training group.

The level of physical fitness of 10-12-year-old boys in the initial training group had the following indicators: determination of the level of development of the quality of quickness in 10-year-old boys showed that the result of running 30 meters from a high start was 6.9 ± 0.4 seconds before the experiment, in 11-year-old 6 It was 7 ± 0.8 seconds. The average difference in the 30-meter run from the high start in 10-11-year-old boys of the primary training group was equal to $t=$

0.22. The result of 12-year-old boys running from a high start to 30 meters was 6.4 ± 0.7 seconds, with an average difference of $t=0.28$ according to Student's t-criterion between 11-12 years old. An average difference of $t=0.62$ was observed between 10-12 years old.

In order to determine the coordination ability of 10-year-old boys of the primary training group, the test standards for 3×10 meter shuttle run were adopted (distances were measured with an accuracy of 1 meter). According to him, the result before the experiment was 9.0 ± 0.8 seconds, and at the age of 11 it was 8.8 ± 0.9 seconds. The average difference of 3×10 meter shuttle running in 10-11-year-old boys is equal to $t= 0.16$.

Dynamics of physical fitness of 10-12-year-old athletic control group boys at the beginning of the experiment [n=60]

| No | Indicators | Unit of measure | Research indicators | | | | | | | | |
|----|-------------------------------------|-----------------|---------------------|--------------|--------------|-----------------|-------|------------------|--------|-----------------|--------|
| | | | 10 years old | 11 years old | 12 years old | 10-12 years old | | 11-12- years old | | 10-12 years old | |
| | | | | | | t | p | t | p | t | p |
| 1. | Running 30 meters from a high start | c | 6,9±0,4 | 6,7±0,8 | 6,4±0,7 | 0,22 | >0,05 | 0,28 | >0,05 | 0,62 | >0,05 |
| 2. | 3×10 meter shuttle run | c | 9,0±0,8 | 8,8±0,9 | 8,5±0,5 | 0,16 | >0,05 | 0,28 | >0,05 | 0,53 | >0,05 |
| 3. | Throwing a filler ball (1 kg) | m | 5,2±0,2 | 5,9±0,5 | 6,8±0,7 | 0,93 | >0,05 | 1,04 | >0,05 | 1,86 | >0,05 |
| 4. | Standing long jump | cm | 157,1±2,5 | 168,0±5,1 | 180,1±5,3 | 1,85 | >0,05 | 1,64 | >0,05 | 3,92 | <0,001 |
| 5. | Leaning forward while sitting | cm | 9,7±0,4 | 11,1±1,5 | 12,9±0,8 | 0,68 | >0,05 | 1,06 | >0,05 | 1,99 | >0,05 |
| 6. | Pull-ups on a high bar | times | 3,5±0,6 | 4,4±0,8 | 5,5±0,9 | 0,75 | >0,05 | 0,92 | >0,05 | 1,57 | >0,05 |
| 7. | Grabbing a falling bar | cm | 20,9±2,8 | 19,8±0,9 | 18,6±0,8 | 0,37 | >0,05 | 1,00 | >0,05 | 0,99 | >0,05 |
| 8. | 6 minute run | m | 851,8±12,4 | 890,7±5,6 | 1100,5±9,8 | 2,86 | <0,01 | 18,5 | <0,001 | 15,7 | <0,001 |

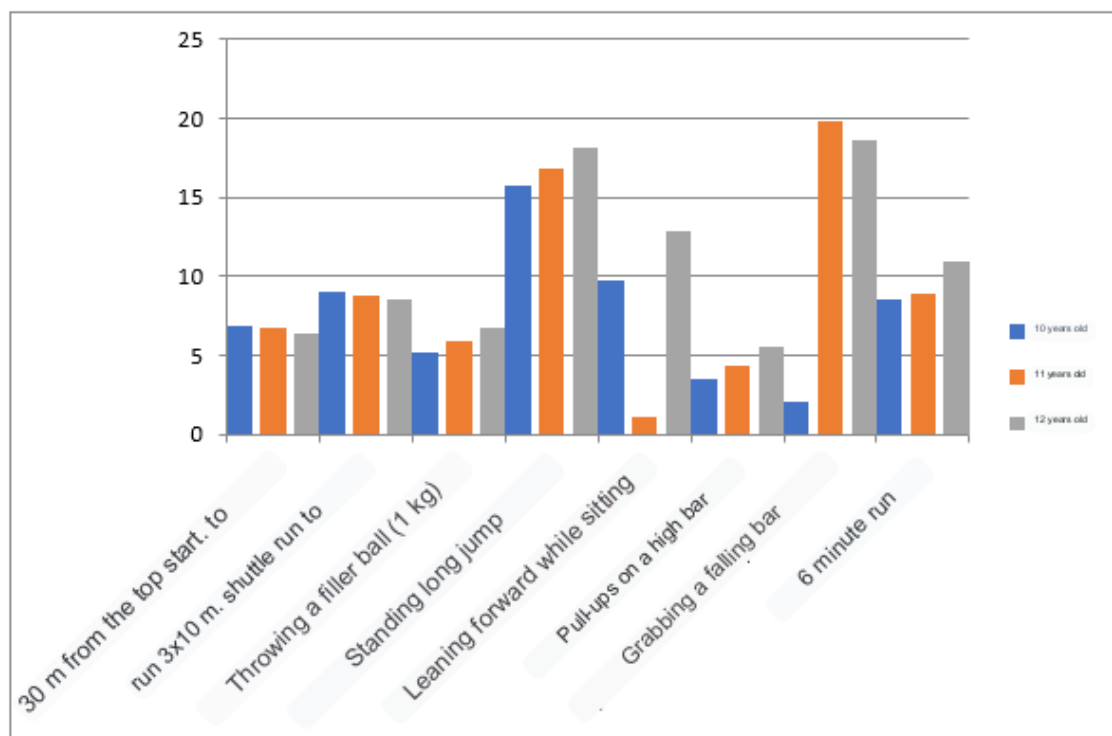


Figure 1. Dynamics of physical fitness of 10-12-year-old athletic control group boys at the beginning of the experiment

Dynamics of physical development of experimental and control group boys aged 10-12 at the beginning of the experiment and at the end of the experiment [n=60]

| No | Indicators | Unit of measure | 10 years old | | | | 11 years old | | | | 12 years old | | | |
|----|----------------------------------|-----------------|--------------------------------|--------------------------------|--------------|--------------------------|--------------------------------|------------------------|--------------|------------------|--------------------------------|--------------------------------|--------------|------------------|
| | | | CG | EG | t | p | CG | EG | t | p | CG | EG | t | p |
| | | | $\bar{x} \pm \sigma$ | $\bar{x} \pm \sigma$ | | | $\bar{x} \pm \sigma$ | $\bar{x} \pm \sigma$ | | | $\bar{x} \pm \sigma$ | $\bar{x} \pm \sigma$ | | |
| 1 | Body length | cm | 144,7±0,7 150,2±0,8 | 144,7±0,8 152,4±0,8 | 5,18 6,81 | <0,00 1 <0,00 1 | 150,2±0,9 155,2±0,2 | 152,5±0,8 158,2±0,2 | 5,43 6,95 | <0,001 <0,001 | 155,2±0,7 160,0±0,2 | 158,2±0,8 163,8±0,3 | 6,66 6,82 | <0,001 <0,001 |
| 2 | Body weight | kg | 32,4±0,9 34,7±0,6 | 32,6±0,9 35,9±0,1 | 2,12 3,66 | <0,05 <0,05 | 35,5±0,8 37,2±0,2 | 35,9±0,6 38,9±0,5 | 2,02 3,84 | >0,05 <0,05 | 38,1±0,5 40,2±0,5 | 39,1±0,7 42,7±0,5 | 3,00 4,18 | <0,05 <0,05 |
| 3 | Chest circumference | cm | 66,5±0,7 68,1±0,6 | 66,8±0,7 69,9±0,4 | 1,73 3,87 | >0,05 <0,05 | 68,1±0,9 70,0±0,2 | 69,9±0,9 73,1±0,5 | 2,06 3,13 | >0,05 <0,05 | 70,1±0,9 72,2±0,5 | 73,2±0,9 76,8±0,5 | 2,05 3,52 | >0,05 <0,05 |
| 4 | Right hand paw strength | kg | 13,8±0,4 14,4±0,9 | 13,8±0,7 15,2±0,7 | 0,61 1,42 | >0,05 >0,05 | 14,4±0,9 16,1±0,6 | 15,2±0,8 18,2±0,1 | 1,57 3,75 | >0,05 <0,05 | 16,1±0,9 17,9±0,3 | 18,2±0,9 21,1±0,4 | 1,91 2,95 | >0,05 <0,05 |
| 5 | Left hand paw strength | kg | 12,3±0,6 13,6±0,8 | 12,3±0,7 14,1±0,3 | 0,90 2,36 | >0,05 <0,05 | 13,6±0,9 14,8±0,2 | 14,1±0,7 16,0±0,2 | 1,30 2,63 | >0,05 <0,05 | 14,8±0,9 15,9±0,2 | 16,0±0,8 17,9±0,3 | 1,19 2,23 | >0,05 <0,05 |
| 6 | The living capacity of the lungs | ml | 1711,6±5 0 1798,3±4 5 | 1713,8±1 1 1802,0±2 0 | 1,29 3,86 | >0,05 <0,05 | 1799,5±5 0 1889,2±1 1 | 1810,3±45 1938,1±12 | 1,75 2,74 | >0,05 <0,05 | 1890,4±7 6 2102,6±1 6 | 1942,4±6 2 2198,6±2 2 | 2,73 3,89 | <0,05 <0,05 |

Note 1.: In the photo - the results before the experiment; in the denominator - the results after the experiment. **CG-control group, EG-experimental group.**

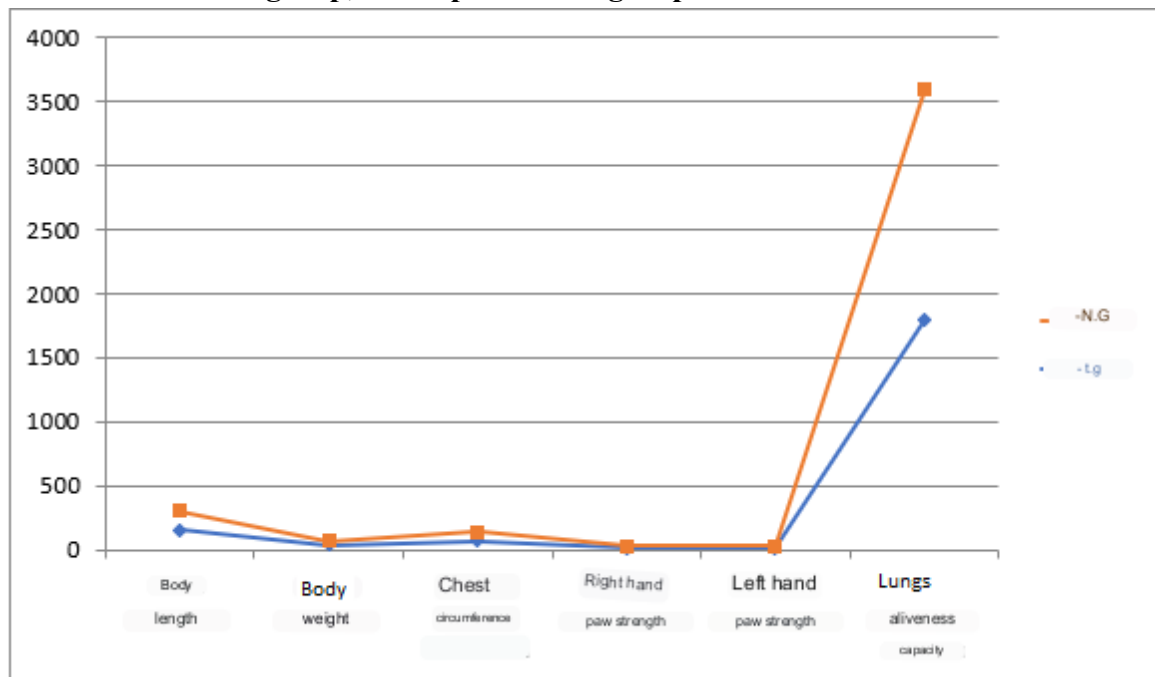


Figure 2. Physical development graph of 10-year-old experimental and control boys at the end of the experiment.

When the level of physical development of 12-year-old boys of the experimental and control groups was studied, compared to the results at the beginning of the experiment, at the end of the experiment, significant changes were observed in the boys of the experimental group compared to those of the control group. In particular, the differences between the experimental and control groups were found to have statistical differences in body length, body weight, chest circumference, right hand paw strength, left hand paw strength and lung capacity tests [$p < 0.05$]. According to the researches, the method used by the participants in the primary training group of the children's sports school together with the exercises of other types of athletics does not have a negative effect on the physical development of children. The hand paw muscle strength indicators

were higher in the participants of the experimental group compared to those in the control group. Pedagogical experiments on the living capacity of the lungs showed that there were significant differences in the experimental groups compared to the control groups in all cases.

Conclusions

1. The methodology of physical training of 10-12-year-old children should be organized in a weekly training cycle, starting from the direction of one training session. It is necessary to choose training tools in accordance with the loading mode, duration, nature of the work, the number of consecutive repetitions, and the duration of the rest intervals. Based on this, it is necessary to develop a mesocycle and a macrocycle of training.

2. There is a reason to believe that it is necessary to lay a solid foundation for physical training in the selection of general education school students for sports, and in the third year of training, training lessons should be directed to the next competition in speed-power sports.

3. General and special physical fitness indicators create opportunities to quickly and accurately assess the level of fitness of the participants with the help of physical exercises and tests.

4. It is determined by the fact that the participants learn the techniques of athletics sports, master the techniques of the types, the extent to which they have mastered the knowledge and skills and methods of physical training presented in the training program prepared by us, and are able to independently decide on their physical fitness and health status.

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