IMPROVING STRENGTH QUALITY AMONG 12-14-YEAR-OLD ATHLETES THROUGH WEIGHTLIFTING EXERCISES

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Abstract. *This article illustrates organizing and planning the training of sprinters in a yearly cycle. The principle of proportionality in the training of physical qualities of sprinters envisages the observance of the optimal ratio of the level of development of physical qualities at each stage of a person's age. In the performance of this or that exercise, the intensity, size and time of repetition of exercises in each direction are correctly selected, and their most successful ratio ensures the growth of results in special exercises. It is possible to achieve balance in the training of individual physical qualities of sprinters due to the correct selection of means and methods of their execution.*

Keywords: *training particle, sprint, growth of physical training, individualize,particle size, physical developing ,planning, functional researches, quickness, selection, organizing trainings, methods and means, modern technology, education, practice.*

The role of sports in the popularization of physical education and sports on a global scale, in the upbringing of a person to be physically healthy, mentally mature, strong, willful, and tenacious is increasing. At this point, athletics is considered one of the most popular sports in the world. It is especially noteworthy that people are constantly engaged in athletics and achieve high sports results by mastering its techniques at a high level. It is worth noting that attracting talented children, improving their sports skills, and organizing training sessions conducted with them on a scientific basis in the development of short-distance runners in the world are becoming important in the field.

Nowadays, world scientists are conducting research on improving the scientific-methodical and organizational foundations of improving the professional knowledge, practical skills, and professional skills of physical education and sports specialists. An important aspect of these studies is the implementation of the means and methods used in the general and special physical training, technical, psychological, intellectual and functional training of young athletes in the practice of athletics theory and methodology, as well as the planning of training loads requires conducting many scientific researches. At present, the rapid growth of the results in sprinters requires the improvement of the system of organizing the training process in order to find talented athletes who meet the requirements of the time in this field.

Today, fundamental reforms in our political, social, economic, and spiritual-educational life carried out in our Republic under the leadership of President Shavkat Miromonovich Mirziyoev include the organization of education-training and sports-health improvement works in a completely new content, form, and means. This makes full use of the unique opportunities created for them and encourages them to solve extremely important tasks, such as rising our growing youth to be children worthy of the Motherland.

The principle of proportionality in the training of physical qualities of sprinters envisages the observance of the optimal ratio of the level of development of physical qualities at each stage of a person's age. In the performance of this or that exercise, the intensity, size and time of

repetition of exercises in each direction are correctly selected, and their most successful ratio ensures the growth of results in special exercises. It is possible to achieve balance in the training of individual physical qualities of sprinters due to the correct selection of means and methods of their execution.

The essence of the principle of superior effects in training the physical qualities of sprinters is that the pedagogical effects used means, methods and forms should be in accordance with the level of training of these abilities of the individual. However, this compatibility is not absolute, but rather relative.

In order to continuously educate the physical qualities of sprinters, external influences must constantly surpass the internal development of certain qualities. If there is no such compatibility of external influences somewhat surpassing internal developments, then the development of physical qualities will face stagnation. Stagnation, in the development of physical qualities, is a negative result of the use of methods and means that have become the norm. At the age of 15-16, due to the increase in strength endurance, the number of exercises with weights of 2-3 kilograms increases. In girls of this age, strength training is limited due to a decrease in relative muscle strength. In training with teenagers, it is necessary to use exercises that require static situations, preliminary situations, hanging and leaning. This is understood as a process aimed at creating a solid functional base for strengthening, improving physical abilities and all other types of training. In addition to traditional exercises, the experimental group performed the following special weightlifting exercises: 1) Leaning forward with a barbell placed on the shoulders, then lifting the body straight. 2) Bending to the right and left sides with a barbell on the shoulders, then straightening the body. 3) Carry out a rotational movement of the body directed to the right and left sides with a barbell placed on the shoulders. 4) Sitting with a barbell on the shoulders, keeping the body straight. 5) Sitting and jumping with a barbell on the shoulders, keeping the body straight.

In order to increase the performance of 12-14-year-old short-distance runners, it is desirable to increase the quality of strength using weightlifting exercises. By reducing or increasing the rest time among exercises, you can change the direction of the load and increase or decrease the effect.

Therefore, the goal of our work is to increase the quality of strength of 12-14-year-old athletes who run short distances through weight training. Improving the performance of 12-14-year-old short-distance runners by identifying weightlifting exercises that effectively develop strength quality. The research was conducted in athletics training with the participation of students of the Olympic reserve college. Research was conducted from September 2022 to November 2022. In the tests, we used 30.60 meter running, standing long jump, triple jump, and sitting with a barbell. Classes were held 3 times a week for 120 minutes. The control group planned training in a traditional way, while the experimental group performed special running exercises, jumping and throwing exercises, as well as weightlifting exercises that improve the strength quality and sports performance of short-distance runners. The average indicators of test results by groups are presented in table 1. There were 12 schoolgirls in each group, and the test results were summarized and the average values are shown in table 1. At the beginning of the study, indicators of physical fitness of schoolgirls in the control and experimental groups.

Table 1

No	Tests	Control group	Experimental group
	30 meter dash (seconds)	6,0	6,1
	60 meter dash (seconds)	11,3	11,4
	Long jump (cm)	127	124
	Triple jump (cm)	314	309
	Barbell squat (kg)	37,5	37,4

As can be seen from the table, the results of the tests in both groups are almost the same, even the physical fitness indicators of girls in the experimental groups are slightly higher in some tests. The conditions of conducting special pedagogical tests and their essence, running pedagogical tests, 30 m, 60 m running test types help to determine the level of development of the qualities of strength, quickness, speed, and agility. In order to train the quickness of 12-14-year-old schoolchildren participating in our research, in the form of a game-competition, depending on their ability and desire, running loads at maximum speed for short distances of 30-60 meters in different forms of relays "Who is the first, who is the fastest?" execution under the motto will give high results. These exercises are repeated in a repeated manner, after a relatively full recovery, they are performed again. The required distance for running is carried out on a strictly measured track or on any flat surface with start and finish lines drawn. Depending on the number of lanes 4-6 competitors take part in running from a low start (except for 30 m). During training and in competitions, the start is given by the referee with the help of start flags. At the finish, the result is recorded by the judges using a stopwatch with an accuracy of 0.1 seconds. All short-distance running exercises are used: 1) running 15-20 meters from the start, repeatedly; 2) running repeatedly for 15-20 m with weights; 3) the technique of running repeatedly for 20-30 m with gradual acceleration and reaching the finish line; 4) timed distance races; 5) control and competition runs to determine 1st, 2nd places.

Standing long jump is a measure of strength and quickness that helps determine the quality of strength. Standing long jump is one of the exercises that develop quick-strength quality. The long jump is performed on the field, the starting line is drawn on the corresponding field, 5(10) cm to the side of the jumping place is drawn with the help of a ruler (centimeter tape) markings are drawn based on divisions. The participant must stand without stepping on the starting line. Participant, from a semi-squatting support position, freely swings his arms forward and upward, sharply dips with both legs, and lands on the sand; the result of measurement is the footprint in the sand at the distance closest to the subsidence line from the subsidence line. It is the trail left by the athlete's body or limbs on the sand when landing, closest to the kick line, so it is used during the take-off and landing phases when mastering the jumping technique. Special importance should be attached to the movement of A jump is not counted if the tip of the foot touches the landing line during a jump. The jump is performed in three chances, and the best result is recorded in centimeters.

The result is recorded with an accuracy of 1 centimeter. In the course of the training, jumping on the pole, jumping while standing in one place with increased weight, jumping on the raised support and over the support, and jumping from the place to the result are performed. The same requirements apply to the triple jump. Research evidence of the effectiveness of recommended exercises in improving the strength quality of 12-14-year-old sprinters. In addition

to these traditional exercises, the experimental group specifically performed the following weightlifting exercises: 1) Bending forward with a barbell placed on the shoulders, then straightening the body. 2) With a barbell placed on the shoulders, right and bending down to the left side, then straightening the body. 3) Carrying out a rotational movement of the body directed to the right and left sides with a barbell placed on the shoulder. 4) Sitting with a barbell on the shoulders, keeping the body straight. 5) Sitting and jumping with a barbell on the shoulders, keeping the body straight. At the end of the study, the comparison of physical fitness indicators of schoolgirls of the control and experimental groups is presented in table 2.

At the end of the study, the indicators of physical fitness of girls in the control and experimental groups.

Table 2

shows the growth of each group of results in absolute terms.

No	Tests	Control group	Experimental group
	30 meter dash (seconds)	5,8	5,7
	60 meter dash (seconds)	10,9	10,5
	Long jump (cm)	132	136
	Triple jump (cm)	326	350
	Barbell squat (kg)	41,2	46,1

Table 3 shows the growth of results for each group in absolute terms and percentages. If we compare the dynamics of their growth during the study, it was found that the experimental group made significant progress. For example: in the control group, the increase in running from a high start of 30 meters is equal to 0.2 seconds and 3.4%, while in the experimental group these indicators are equal to 0.4 seconds and 6.5%. Comparison of the growth of physical fitness indicators of female athletes in the control and experimental groups during the study (n=12 people)

Table 3

No	Tests	groups	Results		Growth	
			At the beginning of the study	At the end of the study	Absolutely	In %
1.	30 meter dash (seconds) 60 meter dash (seconds)	C	6,0	5,8	0,2	3,4
		E	6,1	5,7	0,4	6,5
2.	Long jump (cm) Triple jump (cm)	C	11,3	10,9	0,4	3,5
		E	11,4	10,5	0,9	7,9
3.	Barbell squat (kg)	C	127	132	5.0	3,9

	30 meter dash (seconds)	E	124	136	12	9,6
4.	60 meter dash (seconds)	C	314	326	12	3,8
	Long jump (cm)	E	309	350	41	13,2
5.	Triple jump (cm)	C	37,5	41,2	3,7	9,9
		E	37,4	46,1	8,7	23,3

Note: **C** - control group, **E** - experimental group

In the 60-meter run, the increase in the control group was 0.4 seconds, 3.5%, and these indicators were 0.9 seconds and 7.9% in the experimental group. In the standing and long jump test, the growth of indicators in the control group is equal to 5 cm, 3.9%, while in the experimental group, these indicators are equal to 12 cm and 9.6%. In the triple jump test, the growth of indicators in the control group is equal to 12 cm, 3.8%, while these indicators are equal to 41 cm and 13.2% in the experimental group. In the test of sitting with a barbell, the increase of indicators in the control group is 3.7 kg, 9.9%, while in the experimental group, these indicators are 8.7 kg and 23, equal to 3%. From the growth of the results, it became clear that the effectiveness of the recommended exercises in improving the quality of strength of 15-16-year-old sprinters was practically proven in the study.

Based on the above, it can be concluded that if we compare the dynamics of growth during the study using weightlifting exercises to increase the results of 12-14-year-old track and field athletes running short distances, it was found that the experimental group was significantly different and made significant progress. From the growth of the results during the study, for example: when running from a high start of 30 meters, the growth in the control group was equal to 0.2 seconds and 3.4%, while in the experimental group these indicators were 0.4 seconds and 6.5% is equal to; in the 60-meter run, the increase in the control group is equal to 0.4 seconds, 3.5%, while these indicators are equal to 0.4 seconds and 6.5% in the experimental group; - in the standing long jump test, the growth of indicators in the control group is equal to 5 cm, 3.9%, while in the experimental group, these indicators are equal to 12 cm and 9.6%; - in the triple jump test-test, the growth of indicators in the control group is equal to 12 cm, 3.8%, while in the experimental group, these indicators are equal to 41 cm and 13.2%; in the test-test of sitting with a barbell, the increase of indicators in the control group is 3.7 kg, equal to 9.9%, while in the experimental group, these indicators are 8.7 kg and 23 equal to .3%, it was found that the effectiveness of the recommended exercises in improving the quality of strength of 12-14-year-old track and field athletes running short distances was practically proven in the study.

REFERENCES

1. Shavkat Mirziyoev “Buyuk kelajagimizni mard va oliy janob xalqimiz bilan quramiz” T.2017
2. Matveev L.P. “Основы общей теории спорта и системы подготовки спортсменов” Kiev, 1999. 318 str.
3. Platonov V.P. “Общая теория подготовки спортсменов в олимпийском спорте.” Kiev. 1997y. p 584.

4. Kerimov F.A. “Sport sohasidagi lmiy tadqiqotlar”. Tashkent, 2004y p329.
5. Salamov R.S. “Sport mashg’ulotlarining nazariy asoslari”. Study guide. T., 2005, pp. 152-163.
6. Yunusova Yu.M. “Теоретические основы физической культуры и спорта”. Study guide. T., 2005y, p. 219-233.