

## **The Development of Jumping Ability in Young Handball Players 12-13 Years Old**

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**Abstract:** To increase the level of jumping ability (high-speed strength abilities), a depth jump training program has been developed, taking into account technical and tactical actions in the game "Handball". Classes in the handball section are nothing more than a well-organized and well-thought-out system in which the qualitative and quantitative characteristics in the preparation of children correspond to both the general tasks of physical education and age-specific ones. Jumping like motor quality, refers to the speed-power abilities of a person. An indicator of a significant development of speed-strength training and, as a consequence, an increase in the quality of technical and tactical actions is a good jump.

**Keywords:** jumping ability, speed-strength abilities, training program.

### **INTRODUCTION**

The relevance of the research is based on the need to increase the effectiveness of the process of sports training (Nematovich et al., 2020), which leads to an increase in the level of sports training due to the use of a set of specialized exercises (Abdueva, 2020; Abduyeva, 2022c), which, respectively, are aimed at developing the speed-strength abilities of children 12-13 years old, playing handball in extracurricular activities at school. The essence of the study is that there is a problem of inconsistency in the control standards of speed-strength readiness of young handball players, who go in for handball according to the control standards of children 12-13 years old, who go in for the "Handball" program for extracurricular activities in the school section.

The practical significance of the study consisted in the development of the content of a complex of special exercises aimed at improving and developing the jumping ability of handball players (Abduyeva, 2022c), in determining the conditions for choosing exercises and load parameters in accordance with the main objectives of the training session (Abdueva, Khurbonov, & Sabirova, 2019; Abduyeva, 2022a, 2022b). The obtained results of the research can be used in the educational training process of handball players of the school section.

## **RESEARCH METHODS**

The purpose of the study was to theoretically substantiate and develop a methodology for the development of jumping ability in children aged 12-13 years old who play handball in extracurricular activities at school.

The task of the coach is to bring the teams to the same level of motor readiness. Proceeding from this problem, I developed and tested a technique in which jumping exercises performed in a complex were added to the main aspects of classes. Also, a deep jump from an object of 45-50 cm in height, followed by a long jump, from three to four approaches 8-10 times.

### **Object of research**

Educational and training process of children aged 12-13 years old, playing handball in extracurricular activities at school.

### **Organization of the study**

The research was carried out on the basis of a pedagogical experiment, on the basis of schools No. 8 and No. 21 in the city of Bukhara, Bukhara region. The experiment involved pupils of the 6th and 7th grades in the amount of 20 people (boys). The control group consisted of 10 pupils of school No. 8. Classes were held three times a week. The experimental group consisted of students from school number 21 in the number of people. The content of the training sessions of the control group was carried out according to the generally accepted method, i.e. included a variety of physical exercises that contribute to learning the elements of playing handball and the development of motor skills.

## **RESULT AND DISCUSSION**

Educational-training sessions of school children of the experimental group were also held according to the generally accepted method, but in contrast to the control group, specially developed complexes aimed at developing jumping ability were included in the content of the preparatory and the beginning of the main part. At the first stage of the study, we conducted a search experiment with the aim of selecting physical exercises of speed-strength orientation (jumping ability), which were combined into complexes. Table 1 shows the complexes of special exercises, which were included in the content of the training session for young handball players of the experimental group.

Table 1. Special exercise options

№	An exercise	1	2	3
		Dosage	Dosage	Dosage
1	Jumping over the bench	15x3	(10x3)x2	(12x4)x3
2	Jumping rope (min)	1x4	(1x2)x2	(1x4)x4
3	Partner squat	6x3	5x4	(6x3)x2
4	Running high / high hips (m)	10x4	(10x3)x2	(10x3)x4
5	Jump out. from a semi-squat (times)	10x3	(10x2)x3	(10x3)x4
6	Jumping on two legs (m)	10x3	(10x3)x2	(10x2)x:
7	Running Exercise Series	6x4	(6x4)x2	(6x4)x4
8	Jumping Exercise Series	6x3	(6x3)x3	(6x3)x5
9	Jumping off (times)	5x6	(5x6)x4	(5x6)x8
10	Jump with hip pulls (times)	6x10	(6x10)x3	(6x10)x8
11	Jumping over barriers (times)	8x4	(8x4)x3	(8x4)x6

We suggested that the content of the training program of the experimental group include such exercises as: performing jumps over the benches with the left and right sides with the advance along the benches, push two or one leg.

Jumping rope on two and on one leg. Raises on socks with a partner on the shoulders, half-squats on the shoulders of a partner. Jumping out of a half-squat position with getting the object. Running and jumping exercises. Long jumps from a place on two legs without stopping on a segment of 10-15 meters. A series of 5-7 jumps, running and jumping exercises on mats, with the hip raised up, reaching with the supporting leg to the chest in a jump, jumping up with a push of two legs, while touching the knees with the chest. The percussion exercise, the jump in depth, was added. Based on the objectives of the study, all participants in the experiment performed test exercises of speed-strength orientation (Table 2).

Table 2. Initial indicators of speed-strength qualities in groups before the start of the experiment

Groups	An exercise			
	Run 20 m (s)	Run 40 m (s)	Length s/m (cm)	Jumping out (cm)
Control	3,94±0,04	148,2±1,75	180,1±3,25	35,1±1,33
Experimental	3,82±0,03	148,3±2,08	180,1±3,25	35,1±1,33

Comparing the test results of school children in the control and experimental groups, we can say that the manifestation of speed-strength abilities during the performance of tests does not have significant differences, i.e. all participants in

the experiment are relatively equal in the manifestation of speed-strength abilities.

Table 3. Comparative results of the manifestation of speed-power qualities by the participants of the experiment

Groups	Stage	An exercise			
		Run 20 m (s)	Run 40 m (s)	Length s / m (cm)	Jumping out (cm)
		M±m	M±m	M±m	M±m
Control	Before	3,94±0,04	148,2±1,75	180,1±3,25	35,1±1,33
	After	3,73±0,13	154,1±1,08	186,3±2,83	37,3±0,42
Experimental	Before	3,82±0,03	148,3±2,08	180,1±3,25	35,1±1,33
	After	3,62±0,23	158,4±1,5	192,6±3,5	40,3±1,0

The analysis of the obtained results suggests that when performing test exercises of the speed-strength orientation, there is a positive dynamics of the average results, both in the control and in the experimental group.

It can be seen from the table that the average result of the participants in the control group when performing a run on a segment of 20 meters increased by 5.2%. When the participants of the experimental group performed the same test, the increase in the average result was 5.3%. The table shows that the average result of the participants in the control group when running for 40 seconds increased by 3.9%. When the participants of the experimental group performed the same test, the increase in the average result was 6.8%. The table shows that the average result of the participants in the control group when performing the long jump from the spot increased by 3.4%. When the participants of the experimental group performed the same test, the increase in the average result was 6.9%. The table shows that the average result of the participants in the control group when jumping upwards increased by 5.6%. When the participants of the experimental group performed the same test, the increase in the average result was 14.8%.

## CONCLUSION

Based on research results, it was found that: (1) analysis of scientific and methodological literature suggests that the problem of the development of jumping ability (speed-strength abilities) of students school handball section is not sufficiently represented in the methodological literature; (2) The methodology of using the school section in the training sessions is quite effective when specific exercises are used in well-defined complexes and with a clear

dosage; (3) The experiment showed that despite the positive dynamics in test exercises of speed-strength orientation, the proposed method of using standard complexes, is more effective.

The assumption of the hypothesis confirmed the effectiveness of a set of exercises aimed at the development of jumping ability of young handball players 12-13 years old, playing handball in extracurricular activities at school. The set of exercises for the development of jumping ability among young handball players 12-13 years old, used in the experimental group, is effective. Complex of physical exercises have been developed aimed at developing jumping ability. young handball players 12-13 years old in the educational process.

The hypothesis hypothesis confirmed the effectiveness of the set of exercises used by us, aimed at the development of jumping ability of young handball players 12-13 years old.

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