Intensification of teaching the technique of competitive exercises with kettles to students of higher education institutions of physical and pedagogical profile

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Abstract

Objective of the study was to substantiate the effectiveness of the method of intensive training in kettlebell lifting competitive exercises for students of the Faculty of Physical Education.

Methods and structure of the study. 52 people (28 boys and 24 girls) took part in the scientific experiment. There were 16 boys and 12 girls in one group. There are 13 boys and 11 girls in the other group. The study of the section "Kettlebell lifting" in accordance with the curriculum of the discipline "Athletics" was given 8 hours of classroom work and 8 hours of independent work. A formative experiment was carried out, during which two different approaches to teaching students of the Faculty of Physical Education were applied. The first approach assumed the mastery of three competitive exercises at each practical session, and the second one - the sequential study of competitive exercises in the following order: clean and jerk; long cycle push; jerk. In one group, where the first approach to training was implemented, the classes were structured as follows: at the first lesson, there was a theoretical introduction to the technique of performing all competitive kettlebell lifting exercises, after which the students began to master the technique; in the second or third lesson, students mastered the technique of lead-up exercises; at the fourth lesson there was a mastering of all competitive exercises in full coordination and their performance for evaluation. In another group, where the second approach to learning was implemented, the classes were structured as follows: at the first lesson, students mastered the push exercise; the second lesson - a long cycle push; the third is a jerk; on the fourth - there was a development of all competitive exercises in full coordination and their implementation for evaluation.

Results and conclusions. The results of the study showed the effectiveness of using the methodology, which is based on the sequential study of first a push, then a long cycle push and a jerk of the kettlebell, as evidenced by the results of athematical processing using White's T-criterion.

Keywords: *kettlebell lifting, power sports, athleticism, kettlebell snatch and jerk.*

Introduction. Kettlebell lifting is a national sport in Russia. It is affordable, does not require significant costs for equipment and equipment. At the same time, classes with kettlebells affect the development of all physical qualities of a person. Power abilities develop especially effectively [2].

In the GTO complex, revived in Russia in 2014, among the tests for determining strength abilities for boys and men, one of the exercises was borrowed from kettlebell lifting - this is a kettlebell snatch [3]. This circumstance confirms the importance of future teachers of physical culture mastering the technique of performing and teaching methods of competitive kettlebell lifting exercises.

At the Faculty of Physical Education of the Belgorod State National Research University within the discipline "Athletics" the module "Kettlebell lifting" is being implemented. Given the small amount of hours of classroom work that involves the study of this section, it becomes necessary to optimize the learning process.

Objective of the study was to substantiate the effectiveness of the method of intensive training in kettlebell lifting competitive exercises for students of the Faculty of Physical Education.

Methods and structure of the study. The experiment involved 52 people (28 boys and 24 girls). In one group there were 16 boys and 12 girls, in the other group there were 13 boys and 11 girls. The study of the section "Kettlebell lifting" in accordance with the curriculum of the discipline "Athletics" was given 8 hours of classroom work and 8 hours of independent work.

The first approach assumed the mastery of three competitive exercises (snatch, clean and jerk, long cycle jerk) at each practical lesson assigned to the “Kettlebell lifting” section. The second approach involved the sequential study of exercises in the following order: 1. Push; 2. Long cycle push; 3. Jerk.

In one group, where the first approach to learning was implemented, the classes were structured as follows. At the first lesson, there was a theoretical introduction to the technique of performing all competitive kettlebell lifting exercises. After that, the students began to master the technique, using lead-up exercises. For each competitive movement, 2-3 lead-up exercises were performed. In the second lesson, some lead-up exercises were replaced by others. The same thing happened in the third session. At the fourth lesson, all competitive exercises were mastered in full coordination and their performance was assessed by experts. In another group, where the second approach to learning was implemented, the classes were structured as follows. At the first lesson, the students performed all the lead-up exercises for the clean and jerk and the mastery of the clean and jerk in full coordination. In the second lesson, they also mastered the push in a long cycle. On the third - a jerk. On the fourth stage, all competitive exercises were mastered in full coordination and their implementation was assessed by experts.

The following exercises were used as leading exercises for the push: jumping onto a pedestal (20-40 cm high) and jumping off it, with the adoption of a vertical position with completely straight legs, both after jumping and after jumping off; discus push from the bar (disc weight 2.5-5 kg) with a jump (with legs off the platform). Gradually, the height of the jump decreases and the exercise is performed without taking off the socks from the platform; holding kettlebells (weight of kettlebells from 8 to 16 kg) on the chest in the starting position; semi-squat with a barbell on the chest (the barbell is held on the deltoid muscles with arms bent crosswise); jumping out of a semi-squat with a barbell on the back.

The following lead-up exercises were used for the long cycle clean and jerk: kettlebell swing (one kettlebell is held with both hands); undermining weights from the platform; lifting one weight on the chest (the weight is held with one hand); lifting one kettlebell followed by a push; lifting two kettlebells to the chest without placing kettlebells on the platform.

Among the leading exercises for the snatch, the following were used: undermining the kettlebell from the platform without a swing (the kettlebell stands near the heel of the left leg when performing the exercise with the right hand); undermining the kettlebell from the platform with a swing; swing the kettlebell to chest level with one hand; swinging the kettlebell to chest level with the kettlebell placed on the forearm at top dead center (at top dead center we move from a regular grip to a deep grip); performing a snatch in full coordination with a change of working hand every five repetitions.

Results of the study and their discussion. Competitive movements were performed by girls with 8 kg kettlebells, and by boys with 16 kg kettlebells. The students alternately performed first a push, then a push in a long cycle, then a snatch. In each exercise, it was necessary to perform from 10 to 15 repetitions. Experts evaluated the technique of each exercise on a 10-point scale. The ratings of the three experts were summed up and divided by three. For grading, criteria were developed, according to which for small single errors there was a deduction of

Table 1. *The results of the expert evaluation of the technique in boys of both groups*

	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	amount
K1	16	5,7	5,7	5,7	6	6	6	6,3	6,3	6,7	6,7		7	7	7	7	7		7,7												
K2	13											6,7						7,3		7,7	7,7	8	8	8	8	8	8,3	8,7	9	9,3	
R1		2	2	2	5	5	5	7,5	7,5	10	10		14	14	14	14	14		19												145
R2												10						17		19	19	23	23	23	23	23	26	27	28	29	290

Table 2. *Results of expert evaluation of technique in girls of both groups*

	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	amount
K1	12	5,7	5,7	5,7	6	6	6	6		6,3	6,3	6,7			7				8						
K2	11								6				6,7	6,7		7	7	7,7		8	8	8,3	8,7	9	
R1		2	2	2	6	6	6	6		9,5	9,5	12			15				19						95
R2									6				12	12		15	15	17		19	19	21	22	23	181

1 point, for small, constantly repeating errors, a deduction of 2 points. For gross errors, the deduction could be from 2 to 4 points [4].

In table 1, 2 presents the results of mathematical processing of the expert assessment obtained during the study. Processing was carried out using White's T-test [1].

With a given number of observations, $T_{(tabular)}$=150. The smallest sum of ranks is 145. Since $T_{(tabular)} > T_{(smaller\ sum\ of\ ranks)}$, we can talk about the reliability of differences between the expert assessments of the students of the two groups. It can be argued that the methodology, which is based on the consistent study of kettlebell lifting exercises, is more effective.

The average result for boys in the first group is 6.5 points, and in the second group - 8.0.

Similar results were found in girls (Table 2).

With a given number of observations, $T_{(tabular)}$ =99. The smallest sum of ranks is 95. Therefore, for girls, the method, which is based on the consistent study of kettlebell lifting exercises, also turned out to be more effective.

The average result for girls in the first group is 6.3 points, and in the second group - 7.6.

Conclusions. When mastering the technique of performing and teaching methods of kettlebell lifting competitive exercises, it is advisable to use a methodology based on the sequential study of first a point, then a push in a long cycle, then a jerk of the kettlebell. It is recommended to repeatedly perform 5-6 lead-up exercises and then a competitive exercise in full coordination at each lesson.

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