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Physical fitness model characteristics in wrestling

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Purpose: *to develop model characteristics of physical preparedness of the qualified wrestlers.*

Material & Methods: *analysis of scientific and methodological literature, generalization of practical experience, pedagogical testing of the level of physical fitness, methods of mathematical statistics. Tested 30 qualified Greco-Roman wrestlers, qualified from the 1st rank to the master of sports, different ages (from 18 to 23 years).*

Results: *a set of special exercises is selected for testing the basic physical qualities of wrestlers. It is established that to test the physical fitness of wrestlers it is necessary to conduct tests of speed-strength abilities, strength endurance, agility and general and special endurance. Based on the results of pedagogical testing, model characteristics of the physical fitness of qualified wrestlers.*

Conclusion: *analysis and representation of the model became the basis for the development of evaluation criteria and forecasting of physical fitness level.*

Keywords: *model characteristics, physical fitness, wrestling.*

Introduction

One of the most pressing problems of modern sports science is the search for effective ways to achieve high results, provided the harmonious development of athletes and maintain their health. The successful solution of this problem becomes more difficult due to the intense professionalization of sports activities, a significant upward trend in the volume and intensity of exercise [9; 11; 14; 22].

Modern sports of the highest achievements make high demands on all aspects of the athlete's preparedness, in addition, the main problem of the sport of higher achievements – the impossibility of an infinite increase training loads, which leads to the need to further the search for new, more effective pedagogical means and methods in the training of highly qualified athletes [6; 17–19; 21].

In the modern methods of technical and tactical training of wrestlers, all the complex problems of improving the athletes' motor skills [1; 3; 10; 15; 20]. However, here, as in other sports, there is a characteristic specificity, which ultimately determines the level of athletes skill. Among the most actual specific problems of wrestlers technical training is the task of optimizing and improving the means and methods of developing physical qualities in terms of conducting intense fights with an active opposition of an opponent [4; 5; 7; 8; 16].

Communication of research with scientific programs, plans, themes

The work was carried out according to the plan of research of the Kharkov State Academy of Physical Culture.

The purpose of the research

To develop model characteristics of physical preparedness of the high trained wrestlers.

Objectives of the study:
– to select informative tests for pedagogical control of wrestlers level of physical readiness;
– to determine the indicators of athletes level of development of physical readiness;
– to compose the model characteristics of physical preparedness of wrestlers.

Material and Methods of the research

Methods of research: analysis of scientific and methodological information, generalization of best practical experience, pedagogical testing, modeling, methods of mathematical statistics.

Results of the research and their discussion

Physical training of wrestlers has its own specific features, which must be taken into account when building a training process and load sharing [2; 12; 13]. It is necessary to observe the correspondence between the capabilities of the organism and the requirements presented to it when choosing the means and methods of training, so we used various methods of testing dexterity, strength endurance, speed-strength qualities, general and special endurance for assessing the physical readiness of wrestlers.

Based on the results obtained, the model characteristics of the physical preparedness of high trained wrestlers of the Greco-Roman style (table).

The analysis and models presented were the basis for developing assessment criteria and predicting the level of physi-

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Model characteristics of the physical readiness of high trained Greco-Roman wrestlers

№	Indicators	$\bar{X}$	δ	m
1.	Running on 30 m (s)	4,98	0,31	0,06
2.	High jump (cm)	50,97	4,79	0,87
3.	Long jump (cm)	219,20	8,94	1,63
4.	Token turn throw 10 times (s)	28,13	2,22	0,40
5.	Back arch throw 10 times (s)	30,90	2,29	0,42
6.	Throw the medicine ball (3 kg) back with both hands (cm)	9,89	0,72	0,13
7.	Throw the medicine ball (3 kg) forward from behind the head (cm)	8,89	0,67	0,12
8.	Climbing on a rope without the help of your feet (s)	6,70	0,72	0,13
9.	Pulling on the crossbar for 20 seconds (number of times)	15,57	1,15	0,21
10.	Flexion-extension arms in emphasis lying 20 s (number of times)	30,90	2,33	0,43
11.	Flexion of the trunk lying on the back for 20 s (number of times)	18,77	1,33	0,24
12.	Raising the legs on the gymnastic wall (number of times)	18,47	1,50	0,27
13.	Squatting with a partner of equal weight (number of times)	22,23	2,38	0,43
14.	Pulling on the crossbar (number of times)	30,43	4,06	0,74
15.	Flexion-extension of the arms in the support lying (number of times)	64,43	4,34	0,79
16.	Flexion-extension arms-ups on the uneven bars (number of times)	49,83	4,44	0,79
17.	The partner's uplift of the torso by the back (number of times)	15,90	1,35	0,25
18.	Running to "bridge" (5 left, 5 – right) (s)	15,09	1,35	0,25
19.	10 somersaults forward (s)	12,15	1,17	0,21
20.	Turnovers on the "bridge" 15 times (s)	34,83	2,06	0,38
21.	Running on 800 m (s)	155,83	5,65	1,03
22.	Running 2x800 m (1 min rest) (s)	320,33	10,27	1,88
23.	1 series 15 token turn throw 10 times (s)	32,13	3,34	0,61
24.	2 series 15 token turn throw 10 times (s)	32,83	4,06	0,74
25.	3 series 15 token turn throw 10 times (s)	35,97	5,46	1,00
26.	Sum of three series token turn throw (c)	100,93	12,09	2,21

cal readiness. They allow differentiating the assessment and management of physical performance of high trained Greco-Roman wrestlers at the stage of maximum realization of individual opportunities.

To plan training loads, it is necessary to increase the level of special working capacity of athletes, taking into account the requirements of competitive activity. This is also confirmed by the results of research presented in scientific papers (Y. V. Verkhoshanskii, 2014; S. Latyshev, G. Korobeynikov, L. Korobeynikova, 2014).

The data are supplemented (A. A. Primakov, 2013, E. Arslanoglu, 2015) on methods for monitoring the level of development of special physical qualities of high trained wrestlers.

Conclusions

1. Analysis of scientific and methodical literature and compilation of best practices revealed that in wrestling athletes physical redness is one of the most important components of the overall preparedness of their structure, which determines the level of special performance.

2. It is established that to test physical redness of wrestlers it is necessary to conduct tests on speed-strength abilities (running on 30 m, jumps in length and height from the place, token turn and back arch throw, throwing a medical ball (3 kg) from behind the head back and forth with both hands, climbing on the rope 5 m without help of the feet, pulling on the crossbar for 20 s, flexion-extension of the arms in the support lying for 20 s, lifting the trunk from the supine position on the back for 20 s); strength endurance (lifting the legs to the grasp with his hands in the vise on the gymnastic wall, the maximum number of sit-ups with the partner, the maximum number of pull-ups on the crossbar, maximum amount of flexion-extension of the hands in the support lying down, the maximum amount of flexion-extension of the arms in the restraint on the uneven bars, lifting the partner by grasping the trunk from standing on the parallel benches); dexterity (turns on the "bridge" 15 times, running on the "bridge" (5 – left, 5 – right), 10 somersaults forward); General (running 800 m, running 2x800 m (1 min rest)) and special endurance (three series of 15 throws across the back).

3. Application of methods of pedagogical testing and mathematical statistics made it possible to reflect the structure of the physical readiness of qualified Greco-Roman wrestlers at the stage of maximum realization of individual opportunities and develop model characteristics that can be used in the planning and management of the training process.

4. It is determined that the key characteristics of the physical preparedness of qualified wrestlers with an equal volume of technical and tactical actions became their speed-power capabilities, special endurance and the ability to overcome the growing difficulty, combining a high tempo of the bout and maintaining the effectiveness of technical action.

Further research will be aimed at drawing up model characteristics of the technical and tactical preparedness of high trained Greco-Roman wrestlers.

Conflict of interests. The authors declare that no conflict of interest.

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