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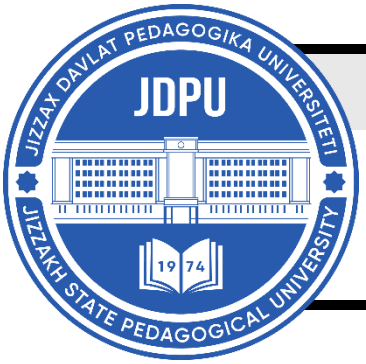
MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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METHOD FOR DETERMINING LOAD INTENSITY IN THE PROCESS OF PRE-COMPETITION PREPARATION OF ELITE WRESTLERS

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ABOUT ARTICLE

Key words: methodology, loads, intensity, process, pre-competition, wrestlers.

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Abstract: In this article information on the number of heart contractions, the effect on the amount of execution of methods, and unit of time spent on recovery during the determination of the loads intensity during the pre-competitional preparation of elite wrestlers have been explained in this article. 14 elite wrestlers, age 16-22 were examined. At the stage of
pre-competition training of elite wrestlers, special training programs were used and the effectiveness of the reaction on physical load was analyzed. Despite the conducted systematic research, the rapid developing sports wrestling in educational and methodological resources which's based on new modern approaches in this field, requires the development of additional scientific, scientific and methodological raising related to the improvement of the system and content of the selection of children for the sport of wrestling. The training process of elite wrestlers have been designed taking into account the individual characteristics of the competitive activity of each specific athlete, which excludes the use of the frontal method of improving technical and tactical training. Conclusions: During our research, we tactical plan for the competition

with the main rivals, technical strength has been analyzed in its diversity, the ability to transfer techniques in direction, preparatory movements and combinations, and mental stability in extreme situations.

Introduction

Many of the works of leading experts in the field of theory and methodology of high achievements of sports are published (Curby et al., 2023; González 2014; Platonov 2018). The system of training athletes in Olympic sports indicate of tendensy used of modern technology (Bădescu et al., 2022; Mali et al. 2020). Also this actual in Olympic wrestling (Pryimakov et al., 2020; Baić et al., 2022). One of the main problen in Olympic wrestling is pre-competition training of elite wrestlers (Karninčić et al., 2018; Koca et al., 2023).

Despite the importance of the chosen topic for the practical training of elite wrestlers, studies of pre-competition training have not been sufficiently studied. Thus, the methodology for managing pre-competition training of elite wrestlers requires the development of additional scientific and scientific-methodological developments to improve the system and content of training of elite wrestlers.

The aim of the study methodology for determining the intensity of downloads in saving elite wrestlers pre-competition training.

Methods

Participants

Despite the conducted systematic research, the rapid developing sports wrestling in educational and methodological resources which's based on new modern approaches in this field, requires the development of additional scientific, scientific and methodological raising related to the improvement of the system and content of the selection of children for the sport of wrestling.

The experiment was conducted with highly qualified wrestlers who're specialized on wrestling of the National Guard's Olympic reserve school, and freestyle and Greco-Roman wrestling students of the Chirchik Olympic and Paralympic Center.

Tasks and Measures

study of the impact of highly qualified athletes on the final results of competition activities in the manifestation of the technical-tactical capabilities of rapid-force training of special endurance of wrestlers; development of a system of standard tests, criteria and

normative values for assessing the special endurance and fast-strength training of highly qualified wrestlers; studying the characteristics of special endurance and speed gain as the most important factors determining the degree of development of the quality of endurance in highly qualified wrestlers;

We have studied and analyzed about 200 literature on the research problem under study. It is of great theoretical and practical importance to know the ratio and relationship of different aspects of sports training of wrestlers. A double analysis of the dynamics of the studied indicators can be concluded that in the test periods, the wrestlers of the combined style were the most effective at the beginning of the first and second periods, after a 1-minute rest.

Statistical analysis

Statistics have been used to analyze data. Since our sample is not normally distributed, we used non-parametric methods of statistical analysis. It has been used to estimate statistical differences between groups of individuals in research values for all analyses, and was considered statistically significant in $p<0.001$. The quartile range was calculated using the first (40% percent) and the third quartile (75%).

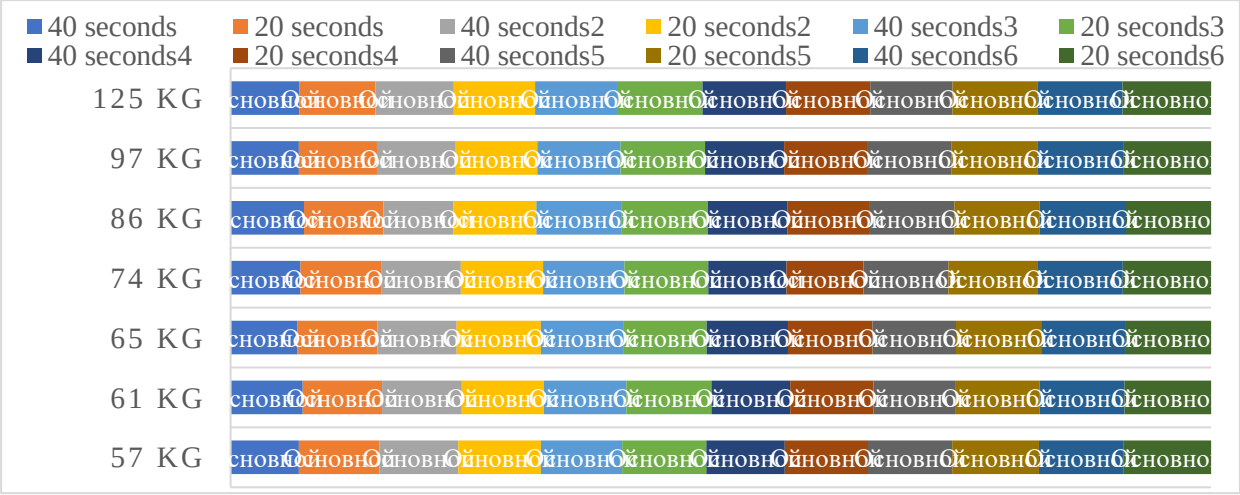
Results

We have developed a methodology for controlling loads of elite wrestlers during training, in which the lightest weight class wrestler had a resting heart rate of 94 during the 1st minute, 40 seconds of performing the method, the pulse was 134 and the number of performing the method was 10 number of heart rate was 158 and the number of performed methods was 15 times. In 40 seconds of the 2nd minute, the heart rate was 154 while performing the method was 7 in 20 seconds, the heart rate was 162 while performing the method at a fast pace, and 13 during the 3rd minute, 40 seconds of the 3rd minute, the heart rate was 159 and performing the method made 6, while performing the method at a fast pace in 20 seconds, the number of heart contractions was 165 and it was 12 when performing the method at a fast pace.Heart rate was 154 after 3 minutes of recoving process. During the 4th minute, 40 seconds of performing the method, the heart rate was 154 and the number of performed methods was 11 when performing the method at a fast pace for 20 seconds, the number of heart contractions was 163 and the number of performed methods was 15 times. in the 40th seconds of the 5th minute, the number of heart contractions was 165 and the execution of the method was 7. At the 20th minute, the number of heart contractions was 170 and the fast execution of the method was 14 In the 3rd minute, 40 seconds, the number of heart contractions was 166, and the execution of

the method was 7 and it was made up 171 in 20 seconds in fast execution of the method, and 15 in fast execution of the method.

We have developed a methodology for controlling the loads of elite wrestlers during training, in which the middle-light weight class in a calm state made 109 pulses, in the first minute, 40 seconds, the pulse was 151 when performed, the number of performed methods was 167 and the number of performed methods was 12 In the 40th minute of the 2nd minute, the number of heart contractions was 167 and the execution of the method was 7 in the 20th minute, the number of heart contractions was 172 and the fast execution of the method was 8 in the 3rd minute, 40 seconds, the number of heart contractions was 173 and the execution of the method was 5 made 179 in 20 seconds in fast execution of the method, and 9 in fast execution of the method. Number of heart contractions made 170 during recovery after 3 minutes. (Look at the Table 1).

During the 4th minute, 40 seconds of performing the method, the pulse was 165 and the number of methods performed was 7 times. When performing the method at a fast pace for 20 seconds, the heart rate was 175 and the number of performed methods was 7 times. In the 40th minute of the 5th minute, the number of heart contractions was 171 and the execution of the method was 4 in the 20 second time, the number of heart contractions of the fast execution of the method was 177 and the execution of the method was 7 in the 40th minute of the 3rd, the number of heart contractions was 178 and the execution of the method was 6 made up 182 in 20 seconds in fast execution of the method, and 7 in fast execution of the method.



1-picture. Controlling loading methods of highly qualified wrestlers during training

We have analyzed a methodology for controlling the loads of elite wrestlers during training. In this case, in the welterweight category, the number of heart contractions in a calm state was 96 in the first minute, 40 seconds of the method, the pulse was 143 and the number

of times when the method was performed was 16 methods, 20 seconds of the method at a fast pace. when performed, the number of performed methods was 166 and the number of performed methods was 14 In the 40th minute of the 2nd minute, the number of heart contractions was 163 and the execution of the method was 7 in the 20th minute, the number of heart contractions was 169, and the fast execution of the method was 12 in the 40th minute of the 3rd the number of heart contractions was 167 and the execution of the method was 8 made up 172 in 20 seconds, and 12 in fast execution of the method. After 3 minutes during recovery number of heart contractions was 167 In 40 seconds of the 4th minute, when performing the method, the pulse was 160 and the number of performing the method was 8 times, when performing the method at a fast pace for 20 seconds, the HIGH was 158 and the number of performed methods was 15 times. In the 40th minute of the 5th minute, the number of heart contractions was 174 and the execution of the method was 4 in the 20th minute, the number of heart contractions was 184, and the fast execution of the method was 11 in the 3rd minute execution of the method.

Discussion

We have dworked out a methodology for controlling the loads of elite wrestlers during training. In this case, in the middle weight category, the number of heart contractions was 101 in a calm state, the pulse was 153 in the 1st minute, 40 seconds of performing the method, and the number of performing the method was 11 methods, 20 seconds when performing the method at a fast pace. Ynumber of heart contractions was 165 and the number of performed methods was 10 degrees. In the 40th minute of the 2nd minute, the number of heart contractionS was 146 and the execution of the method was 4 In the 20th minute, the number of heart contractions was 172 and the fast execution of the method was 9 In the 40th minute of the 3rd, the number of heart contractions was 178 and the execution of the method was 9. made 179 in 20 seconds in fast execution of the method, and 9 in fast execution of the method. After 3 minutes during recovery Ynumber of heart contractions was 176 During the 4th minute, 40 seconds of performing the method, the pulse was 166, and the number of methods performed was 8 times. When performing the method at a fast pace for 20 seconds, the number of heart contractioNS was 171 and the number of performed methods was 10 times. In the 40th minute of the 5th minute, the number of heart contractions was 176 and the execution of the method was 6 in the 20th minute, the number of heart contractions was 177 and the fast execution of the method was 10 in the 3rd minute, 40 seconds, the number of heart contractions was 180,

and the execution of the method was 7 made up 177 in 20 seconds in fast execution of the method, and 12 in fast execution of the method.

We have found out a methodology for controlling the loading of elite wrestlers during training, in which the heart rate at rest in the havyweight category was 97, the pulse was 135 in the 1st minute, 40 seconds of performing the method, and the number of performing the method was 11 methods, 20 seconds when performing the method at a fast pace number of heart contractions was 155, and the number of performed methods was 12 degrees. In 40 seconds of the 2nd minute, the number of heart contractions was 156, and performing the method was 10, in 20 seconds, performing the method at a fast pace, the number of heart contractions was 162, and when performing the method at a fast pace, the number of heart contractions was 165, in the 40th second of the 3rd minute, performing the method was 11 made up 167 in 20 seconds in fast execution of the method, and 10 in fast execution of the method. After 3 minutes during the recovery process, Ynumber of heart contractions was 164. In 40 seconds of the 4th minute, when performing the method, the pulse was 157, and the number of performing the method was 13 times. The number of heart contractions when performing the method for 20 seconds at a fast pace was 164, and the number of performed methods was 11 times. At 40 seconds of the 5th minute, the heart rate was 167, while performing the method was 10, at 20 seconds, the heart rate was 171, while performing the method at a fast pace, and at the 40 second of the 3rd minute, the heart rate was 170 and performing the method was 9, while performing the method at a fast pace in 20 seconds, the number of heart contractions was 174, while performing the method at a fast pace was 11.

We have developed a methodology for controlling the loads of elite wrestlers during training. In the heaviest weight category, in a calm state, the number of heart contractions was 99, the pulse was 125 in the 1st minute, 40 seconds, and the number of times the method was performed was 11 methods, 20 seconds of the method at a fast pace, the number of performed methods was 138 when performed, and the number of performed methods was 12, the number of heart contractions was 143 in 40 seconds of the 2nd minute, and performing the method was 10 in 20 seconds, performing the method at a fast pace, the number of heart contractions was 148, and performing the method at a fast pace was 11, the number of heart contractions was 149 in the 40th second of the 3rd minute, and performing the method was 11 made up 155 in 20 seconds in fast execution of the method, and 10 in fast execution of the method. After 3 minutes during recovery number of heart contractions was 149. The pulse was 152 during the 4th minute, 40 seconds of performing the method, and the number of performed methods was

13, the heart rate was 153 while performing the method at a fast pace for 20 seconds, and the number of performed methods was 11 times. The number of heart contractions was 150 in 40 seconds of the 5th minute, and performing the method was 10, in 20 seconds, performing the method at a fast pace, the number of heart contractions was 154, and performing the method at a fast pace was 11, in the 40th minute of the 3rd, the number of heart contractions was 155, and performing the method was 9 made up 161 in 20 seconds, and 11 in fast execution of the method.

We have created a methodology for controlling the loads of elite wrestlers during training, in which the athletes of the lightest weight category, after completing this test, after the 1st minute in a calm state, the number of heart contractions was 140, after the 2nd minute it was 124, and after 3 minutes it was 112 and after the 4th minute it was 105.

We have learned a methodology for controlling the loads of elite wrestlers during training, in which, after completing this test, after completing this test, the number of heart contractions after the 1st minute was 149, after the 2nd minute it was 124, and after 3 minutes it was 117 , and after the 4th minute it was 116.

We have developed a methodology for controlling the loads of elite wrestlers during training. After the 4th minute, it was 116.

We have developed a methodology for controlling the loads of elite wrestlers during training, in which after completing this test, after performing this test, the number of heart contractions after the 1st minute was 161, after the 2nd minute it was 134, and after 3 minutes it was 119 , and after the 4th minute it was 115.

Table 3.

Intensity of elite wrestlers performing the technical method of lifting from the waist in training

Weight	C/S (calm state)	After 1 minute	After 2 minutes	After 3 minutes	After 4 minutes
57 kg	94	140	124	112	105
61 kg	109	149	124	119	111
65 kg	96	147	128	117	116
74 kg	96	161	134	119	115
86 kg	101	158	128	111	116
97 kg	97	153	129	116	113

125 kg	99	141	132	126	122
$\overline{X}$	98,8	149,8	128,4	117,1	114
σ	5,0	8,1	3,7	5,1	5,2
V	5,1	5,3	2,9	4,2	4,5

We have developed a methodology for controlling the loads of elite wrestlers during training, in which, after performing this test, the average weight of athletes in the middle weight category in a quiet state after the 1st minute was 158 and after the 2nd minute it was 128 and after 3 minutes it was 111, and after 4 minutes it was 116.

We have worked out a methodology for controlling the loads of elite wrestlers during training, in which, after completing this test, the weighted athletes in the heavy weight category in a quiet state after the 1st minute made 153 and after the 2nd minute it was 129. and after 3 minutes it was 116 and after 4 minutes it was 113.

We have learned a methodology for controlling the loads of elite wrestlers during training, in which the athletes of the heaviest weight category, after completing this test, after the 1st minute in a quiet state, the heart rate was 141, and after the 2nd minute, it was 132 It was 126 after 3 minutes and 122 after 4 minutes.

The Athletes of the experienced groups determined their ability to quickly process information before and after the test. Before loading, combination wrestlers were found to absorb non-specific information faster and better than tempo wrestlers.

The time to solve the problem has been increased by 45, +64% after conducting Test 1 for combination wrestlers, the number of errors has been increased by 55.5%, and the corrections have been increased by 57.1%. Tempoviks recorded significantly smaller shifts: the time to solve the problem has been increased by 21.18%, the number of errors did not change significantly, the number of corrections has been increased by only 1.43%. After conducting test number 2, even greater differences were found. Thus, the performed load did not significantly affect the ability to quickly process information in tempo wrestlers.

The ability to quickly process information in a steady state of the body is much higher in combination wrestlers than tempo wrestlers, but after a 6-minute test that simulates competitive wrestling, all the studied parameters are similar to tempo wrestlers, even compared to the initial state. has significantly worsened compared to the indicators.

The obtained data showed that in order to effectively improve tactical and technical skills in the organization of attacks with combinations in the form of a spurt, it was determined

that it is necessary to plan the size of training tools and their direction, taking into account the individual fighting style. The rational use of a combined method of technical and special physical training allows creating the functional capabilities necessary for the implementation of each fighting style, which is necessary to maintain an optimal pace during the fight.

In the pre-competition training phase, statistically significant changes in pace and combination style wrestlers are recorded mainly in special training tests. Indicators, general physical fitness stabilize or slightly increase, because high intensity is recorded only when performing wrestling exercises, the rest of the means serve for active rest.

In the preparation process, it's recommended to limit the duration of spurts consisting of 3-5 technical movements for tempo wrestlers to 5-7 seconds in training bouts, and 10-12 seconds for representatives of the combination style. In tempoviks, it is necessary to form the ability to carry out 20-25 spurt attacks in a fight using relatively simple technical movements (loss of balance, translation with legs, knockdown, etc.).

Fighters of a combination style should develop the ability to carry out

10-15 spurt attacks in a fight. To overcome an effective defense, they must perform 5-8 tactical-technical actions in one spurt (imitation of technique, deceptive actions, loss of balance, change of grips at the end of the combination 2-3 methods).

Due to the fact that tempo-style fighters are not able to implement a large number of tactical situations, it is necessary to use a repeated method of improving spurt attacks on several partners who model the main opponents in training. Intervals between 5-7 second spurts should be within 15-20 seconds, the total time to perform such a high-intensity task is 6 minutes. This task is performed 2-3 times during training. When improving wrestling tactics, it should be remembered that the most convenient time for the implementation of tactical tasks of the fight for representatives of the combination style of wrestling is 1, 2, and 4 minutes, and for fighters of the tempo style, 2, 3, 4, 5 minutes. To attack, it is necessary to use a certain time interval when the reaction of opponents decreases due to fatigue (for fighters of the combination style - 3, 5 and 6 minutes, for tempoviks - 6 minutes).

Pre-competition training can be held at least three days before the start of the main competitions. The day before the start, it is recommended to carry out pull-back exercises with the main methods of competitive activity (Ünver et al., 2024; Nurmukhanbetova et al., 2023). During the preparatory period, it is necessary to carry out one training session for the development of special power endurance for wrestlers. In the process of preparation, it is recommended to use the system of multi-year preparation based on the principle of the wave

exchange of the volume and intensity of physical exercises in the stages of the annual cycle and improvement of sports (Gierczuk et al., 2023; Yildiz et al., 2024).

One of the reserves for the further improvement of sports at the stage of maximal realization of the individual capabilities of wrestlers is the individualization of sports training based on a deep study of the functional and reserve capabilities of the body, the search and application of the most effective tools and training methods (Sobko et al.m 2023). Due to the study of elite wrestlers in the characteristics of different weight categories in the pre-competition stage microcycles, the possibility of using the size and intensity of the application of loadings in the pre-competition stages has been determined..

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Table 1. Controlling loading methods of elite wrestlers during training (n-14)

Weight	C/S (calm state)	1 minute		2 minutes		3 minutes		Recovery	4 minute		5 minutes		6 minutes	
		40 seconds	20 seconds	40 seconds	20 seconds	40 seconds	20 seconds	30 seconds	40 seconds	20 seconds	40 seconds	20 seconds	40 seconds	20 seconds
57 kg	94	134	158	154	162	159	165	157	154	163	165	170	166	171
61 kg	109	151	167	167	172	173	179	170	165	175	171	177	178	182
65 kg	96	130	155	154	163	160	162	159	158	164	162	165	163	167
74 kg	96	143	166	163	169	167	172	167	160	158	174	184	174	181
86 kg	101	153	165	146	172	178	179	176	166	171	176	177	180	177
97	97	135	155	156	162	165	167	164	157	164	167	171	170	174
125	99	125	138	143	148	149	155	149	152	153	150	154	155	161
$\bar{X}$	98,8	138,7	157,7	154,7	164	164,4	168,4	163,1	158,8	164	166,4	171,1	169,4	173,2
σ	5,1	10,5	10,1	8,5	8,3	9,5	8,8	8,9	5,2	7,3	8,7	9,7	8,8	7,5
V	5,7	7,6	6,4	5,5	5,1	5,8	5,2	5,4	3,2	4,5	5,3	5,6	5,2	4,3

Table 2. The method of determining the intensity of loads when performing the technical method of lifting elite wrestlers from the waist in training
(n-14)

Weight	1 minutes		2 minutes		3 minutes		30 seconds of rest	4 minutes		5 minutes		6 minutes	
	40 seconds	20 seconds	40 seconds	20 seconds	40 seconds	20 seconds		40 seconds	20 seconds	40 seconds	20 seconds	40 seconds	20 seconds
57 kg	10	15	7	13	6	12		11	15	7	14	7	15
61 kg	6	12	7	8	5	9		7	7	4	7	6	7
65 kg	12	13	9	11	8	10		12	11	8	9	9	10
74 kg	16	14	7	12	8	12		8	15	4	11	6	11
86 kg	11	10	4	9	9	9		8	10	6	10	7	12
97 kg	11	12	10	11	11	10		13	11	10	11	9	11
125 kg	15	11	6	10	4	9		9	9	6	9	6	9
$\bar{X}$	11,5	12,4	7,1	10,5	7,2	10,1		9,7	11,1	6,4	10,1	7,1	10,7
σ	1,2	1,7	0,9	1,3	0,8	1,3		1,2	1,3	0,8	1,2	0,9	1,4
V	10,6	13,8	12,6	12,3	11,1	13,2		12,3	11,1	12,5	11,8	12,6	13,8