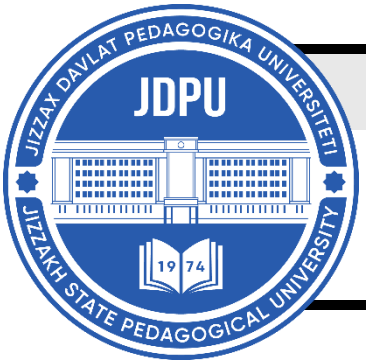
DOI: https://doi.org/10.37547/mesmj-V4-I5-22 Pages: 168-176

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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MODEL CHARACTERISTICS OF ATHLETES IN INDIVIDUALIZING THE TRAINING PROCESS

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ABOUT ARTICLE

Key words: individualization, highly qualified canoeists, planning, long-term preparation, training process, competitions, rowing components, model shown competitive distance.

Received: 02.10.23
Accepted: 04.10.23
Published: 06.10.23

Abstract: The article presents the results of the study of the individualization of the preparation of highly qualified female canoeists. The main directions of planning and exercise of athletes training at various stages of long-term training are given. Recommendations are given for improving the training process of highly qualified female canoeists. This article has a practical importance for kayaking and canoeing coaches, students and teachers of physical education and sports faculties, and specialists in the field of physical education and sport.

INTRODUCTION

A high level of sports results in kayaking and canoeing, intense sports competition for prizes require rowers to have a high level of physical and tactical, technical and volitional readiness [1, 4, 5]. Particular attention should be paid to functional readiness. For a scientific solution of all aspects of training, a comprehensive assessment of the functional readiness of rowers is necessary.

Scientists, coaches and sports doctors have long realized that each person who's an individual predisposition to the successful implementation of various types of physical exports and can succeed only in certain sports. The importance of model characteristics is reflected in how to develop scientific and methodological foundations of the problem of the problem of the management of long-term training.

The aim of the research is to identify the model of preparing athletes in the canoeing in the canoeing in the individualization of the training process.

MATERIALS AND METHODS

We face the complex of regulatory requirements and scale assessments, through which it can be estimated its effectiveness in any sports activity. Such normative estimates can be the results shown in competitions and the level of development of functional systems in the system of sports training. These indicators can be considered as model characteristics of competitive activity and the level of development of functional systems. Creating model characteristics of the functional state of the rows at the modern stage of the development of heating sports is an urgent problem [6, 9, 14]. The developed model scales of various directions contribute to the successful development of training programs designed to achieve a specific result.

Models used in the practice of training and competitive activities can be divided into three levels: generalized, group and individual. Individual models are developed for individual athletes and rely on the data of a long study and individual forecast of the structure of competitive activity and the preparedness of a separate athlete, its reaction to the load. The model of the model of all three levels apply in sports practice. Models of a higher level, providing general areas of sports training and participation in competitions are detailed in individual models and create prerequisites for versatile management of training and competitive activities of athletes [2, 8, 12].

RESULT AND DISCUSSION

At present, the desire for optimization of the athletes prepares is to develop models for constructing preparations in the year and long-term training cycles [3, 12]. The creation of a model provides for analysis of the practical experience of building training, which makes it possible to determine the composition of fixed assets, the quantitative characteristics of the volume and distribution of training and competitive loads in the annual cycle in athletes of various qualifications, and to determine existing trends of the construction technique of the [7, 10, 11]. In addition, in terms of management of the training process of high quality skills, the very important and relevant problem is the problem of the defending of the training and the structural organization in the year's training cycle.

According to the concept of the individualization of the preparation of highly qualified skills to competitions, we have developed a program of training nuclear girls, specializing in a distance of 200 meters. The program took into account the modern ideas about the rational dynamics of training loads in the direction and volume at various stages of the annual cycle.

The focus of the pedagogical experiment was to substantiate the basic principles of individualization of the training process of highly qualified female canoeists. Just as in previous experiments, multiple regression equations were developed, which made it possible to obtain numerical values of those individual indicators that characterize the dynamics of the speed of passing the distance and the factors that determine it. The use of such equations made it possible to calculate

the rowing time for individual sections of the distance, which must be shown to the athlete in order to achieve the intended result. In addition, using equations, you can specify the length and frequency of strokes, as well as determine the results in control exercises and the amount of muscle strength involved in the stroke, which the athlete demonstrates to achieve the intended result at a 200-meter distance. At the same time, the discrepancies between the results calculated using regression equations and the actual ones can serve as an assessment of the physical and technical potential of the athlete.

The first part of the experiment lasted nine months and was carried out from October 2021 to May 2022. The main objective of this part of the experiment was to register the individual characteristics of the 200 m distance, kinematic parameters of rowing, as well as indicators of special strength readiness among the 12 highly qualified canoeists (MS and IMS) who took part in it. In addition, the possibility of using regression equations to assess the special physical preparedness of female athletes was substantiated. Athletes were tested twice a month. Indicators of special strength readiness were determined. First of all, it is the absolute and explosive strength of the muscles of the arms and back. The time for completing the 200-meter distance was determined at the competitions in which the athletes participated. The pace of stroke execution was also recorded on segments of 50, 100 and 150 meters.

The second part of the experiment took place in June-August 2022. The working hypothesis for this part of the experiment was the assumption that the dynamics of speed at a 200-meter distance depends on the optimal ratio of tempo and stroke length (taking into account the anthropometric characteristics of the athlete). And a certain result in rowing 200 meters corresponds to its own speed dynamics.

In other words, an incorrect individual relationship between the pace and length of the stroke leads, as a rule, to a deterioration in sports results in rowing at a distance of 200m. A comparative analysis of the data recorded in the experiment and calculated using regression equations identified individual differences among the subjects, as well as some deviations of the experimental data from the calculated ones. The analysis of the training diaries of the experiment participants made it possible to identify the reasons for such deviations, which made it possible to strictly individualize the training process in the future. Taking into account the sports result of the previous year, each athlete was aimed at achieving a certain time for completing the 200 m distance. For a specific result, such experimental indicators as rowing time, pace and length of strokes on individual sections of the distance, as well as indicators of special speed were determined using regression equations. -strength readiness of female athletes.

The obtained control indicators, calculated using regression equations, characterized the dynamics of passing segments of the 200m distance, the length and frequency of strokes on them, as well as the special speed-strength preparedness of the athletes participating in the experiment.

As a result of the analysis of the experimental data, it was possible to obtain the most complete idea of the dynamics of the speed of passing a 200 meters every athlete, which allowed to simply strictly customize the training process and specify the goal and tasks of preparation at the stages of the annual cycle. The analysis of the diaries of the workout of the athlete participating in the experiment revealed the volume and direction of training exercises last season.

At the beginning of the experiment (October-November), the problem related to the conscious attitude of canoeists to the individualization of training was solved. The individual structure of 200m rowing, the level of special speed-strength preparedness and anthropometric characteristics of the athletes, and their body composition were determined.

The obtained data were grounded to develop a promising model of competitive structure rowing and indicators of special speed-free preparedness for the next year. The main directions of the training of the training were determined in connection with the biological characteristics of the body. At the end of the first preparatory period (January), the results of the work done by the results of testing rowing on the river trial "Dan-Sprint" and the formation of a competitive structure rowing for 200 meters continued.

In the second part of the experiment, the main objectives of the study were solved. In terms of timing (March-May), this corresponded to the basic and special preparatory stages of the second macrocycle of training. In the third (final) part of the experiment (competitive period), the results of the work done were summed up. The rowers competed in official competitions and took part in specially organized tests. At the same time, work continued on the formation of a competitive rowing structure and individualization of training.

The results of the research of the competitive structure rowing in a kayak alone at a distance of 200 meters at the beginning of the experiment are presented in Table 1.

Comparing the obtained data with developed by the developing models of competitive activities of the co-appropriate skills of the corresponding qualifications allowed to identify the strengths and weaknesses of each athlete and to plan the promising ways of its sports improvement. On the basis of the research of the indicators of competitive activities and their comparison with developed normative indicators, promising model indicators of the competitive structure rowed at the scheduled sports planners were developed.

The analysis of the ratio of length and the rate of rowing on the different charge of the 200 m distance allowed to allocate two groups of athletes.

The experimental group (6 athletes) demonstrated the optimal stroke frequency for their individual parameters during the distance as a whole and in its individual sections. Raising the result by increasing the last component was problematic, because at the data of the athletes the frequency reached significant quantities. In this regard, it was decided to achieve the planned improvement in sports results by increasing the length of strokes with a relative stabilization of their frequency.

Table 1.

Individual indicators of the competitive structure row (S-1, 200 m) at the beginning of the experiment

Athletes names and surnames	200		0-50			50-100			100-150			150-200		
	t	n	t	ℓ	f	t	ℓ	f	t	ℓ	f	t	ℓ	f
Experimental group														
R.D.	59,96	49	15,25	4,19	43	16,03	4,19	43	15,65	4,19	43	15,01	4,19	44
B.Sh.	1.01,75	48	15,32	4,21	42	15,32	4,21	42	15,32	4,21	42	15,04	4,21	42
Kh.R.	1.02,66	49	16,37	4,14	40	16,37	4,14	40	16,37	4,14	40	16,12	4,14	40
A.S.	1.03,95	50	16,39	4,02	41	16,39	4,02	41	16,39	4,02	41	16,05	4,02	41
B.N.	1.04,68	48	17,26	4,20	40	17,42	4,20	40	17,63	4,20	40	17,26	4,20	40
V.N.	1.05,34	49	17,32	4,17	40	16,34	4,17	40	16,55	4,17	41	15,72	4,19	42
Control group														
Kh.K.	1.05,68	49	17,26	4,20	40	17,02	4,20	40	17,21	4,20	40	16,35	4,19	42
I.Yu.	1.04,98	48	16,49	4,22	41	16,02	4,22	41	16,49	4,22	41	15,73	4,23	43
R.G.	1.05,06	49	17,37	4,24	41	16,35	4,24	40	17,48	4,24	41	16,37	4,22	44
U.M.	1.04,25	50	18,36	4,13	40	17,65	4,13	41	17,36	4,13	40	17,32	4,24	42
Ch.Ch.	59,87	48	15,25	4,12	42	16,33	4,18	41	15,38	4,18	41	15,23	4,13	43
A.D.	1.01,58	49	15,31	4,19	41	15,75	4,20	40	15,49	4,20	41	15,11	4,15	41

Note: t-rowing time; n-number of strokes; ℓ - stroke length; f-rowing pace

The control group (6 athletes) had a stroke length that, in terms of stroke modulus, corresponded to the standard indicators for international-class athletes. In this case, it was decided to increase the rowing speed mainly by increasing the stroke frequency while maintaining their optimal length. The division of female athletes into two groups with different pedagogical tasks of improving the structure of rowing, in addition to the above-mentioned objective prerequisites, was also dictated by research considerations. The latter reached and recreated the hypothesis that the appropriate pedagogical influences with the correct use of individual characteristics, an increase in speed can be achieved by increasing both the length and frequency of strokes.

The results of the research of the individual level of special speed-strength readiness made it possible to determine the strengths and weaknesses of canoeists. In accordance with the planned result, promising indicators of special speed-strength readiness of rowers were developed (Table 2). When determining them, the initial level of speed-strength fitness of the athlete was taken into account.

Table 2.

Individual indicators of special speed-strength readiness of canoeists at the beginning of the experiment (C-1, 200m, women)

Athletes' names and surnames	Barbell row 20 kg in 2 minutes		Bench press 20 kg in 2 minutes		Strength indicator relative to body weight (c.u)	Rowing. Dan-sprint 200 m (min, s)
	F abs. (number of times)	F ems. (kg)	F абс. (number of times)	F sfm. (kg)		
The 1st group						
R.D.	86	603	81	612	2,1	59,58
B.Sh.	90	681	80	624	2,3	58,63
Kh.R.	86	579	77	509	2,0	1.04,06
A.S.	82	561	81	576	2,2	59,59
B.N.	82	614	74	557	2,3	1.05,02
V.N.	86	593	80	622	2,0	1.02,34
The 2nd group						
Kh.K.	78	537	75	575	2,1	1.05,27
I.Yu.	82	572	73	568	2,3	1.04,93
R.G.	85	544	83	601	2,3	59,95
U.M.	79	603	74	545	2,2	59,86
Ch.Ch.	80	593	81	612	2,1	1.03,27
A.D.	80	603	80	624	2,3	58,76

Notes - F abs. - absolute muscle strength (kg); F ems - explosive muscle strength (kg/s); F ams (p) -absolute muscle strength relative to body weight (P).

To increase the speed of completing a competitive 200-meter distance, it was necessary first of all to determine which of the two speed components (stroke length or rowing tempo) should be increased and what their optimal ratio for a particular athlete would give the required increase in speed. During the pedagogical experiment, the following were used to increase the length of the stroke:

- exercises for relaxing muscles performing the main load at the canoeing or the rowing simulator;

- exercises using special simulators aimed at developing these muscle groups;

- row with the brake fixed on the body of the boat (tennis ball) and the row with the additional load (5-7kg).

When using a means of "forced" braking - rowing with a brake and weights, we proceeded from the fact that the efforts when performing the drive will allow the athlete to "feel" the progress of the canoe, as well as to make more successful efforts when performing the stroke. In addition, such weighting causes the movement of the arms and upper shoulder girdle along a forced, but dynamically stable trajectory and simultaneously contributes to the formation of the ability to rationally spend muscle energy during rowing. The following methods and exercises contributed to increasing the rowing tempo: verbal instructions from the coach (motor settings) - exceed the rowing tempo; rowing

on a wave behind the leader; rowing downwind; rowing on a wave behind a boat; rowing with the current.

The individualization of the training process was carried out at each stage of the annual cycle in accordance with the tasks of the study and the logic of sports training. So, at the general preparatory stage of the winter macrocycle, the focus was to increase the level of special speed-free preparedness of athletes. The direction of speed-free training exercises provided predominant improvement of muscle groups and power indicators determined by the promising model of speed-free preparedness.

Analyzing the results obtained at the end of the experiment (Table 3), we will see that all canoeists showed positive changes in all indicators. The task of the final part of the experiment is to develop the ability to consistently, at a good technical level, solve motor actions in accordance with the model of competitive activity.

Table 3.

Individual indicators of special speed-strength readiness of canoeists at the end of the experiment (C-1, 200m, women)

Athletes' names and surnames	Barbell row 20 kg in 2 minutes		Bench press 20 kg in 2 minutes		Strength indicator relative to body weight (cu)	Rowing. Dan-sprint 200 m (min, s)
	F abs. (number of times)	F ems. (kg)	F абс. (number of times)	F sfm. (kg)		
Experimental group						
R.D.	90	675	85	640	2,3	56,52
B.Sh.	93	681	81	675	2,4	55,69
Kh.R.	91	620	79	595	2,5	57,81
A.S	90	625	87	638	2,6	58,19
B.N.	86	623	79	593	2,7	59,52
V.N.	90	675	85	640	2,3	59,54
Control group						
Kh.K.	93	681	81	675	2,4	1.03,27
I.Yu.	91	620	79	595	2,5	1.01,93
R.G.	90	625	87	638	2,6	58,95
U.M.	86	623	79	595	2,7	58,86
Ch.Ch.	90	675	85	640	2,3	1.01,27
A.D.	86	681	81	675	2,4	58,06

The analysis of the results at the first stage of the experiment was given to determine individually to each subject of due quenches:

a) stroke length and rowing tempo to achieve a certain result at a distance of 200m;

b) the results in the speed-specific indicators necessary to increase the structural components of the speed of the competitive distance.

A comparative analysis of calculated and experimental data allowed to obtain the most complete idea of indicators that characterize the dynamics of the speed of each athlete participating in the experiment.

CONCLUSION

1. Analysis of advanced pedagogical experience in constructing training and identifying the most significant general provisions for organizing the training of highly qualified athletes are an important reserve for its rationalization, the source material for individualizing the training process.

2. As a result of the experimental justification of the main areas of preparation of highly qualified canoeists, intergroup variation in the distribution of the training load in the annual cycle is also proposed and a methodological algorithm for the individualization of their training process is proposed.

3. The effectiveness of the use of forms and funds in the training process of highly qualified athletes is justified.

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