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Features Of Morphological Indicators Of Canoe Slalom Athletes Of High Qualification.

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ABSTRACT

The features of anthropometric indexes of canoe slalom athlete are presented. Anthropometric investigation of 43 canoe slalom athlete members of the Kharkiv national team is carried out. consisted in certain leading morphological indicators in the structure of the training of canoe slalom athlete. following research methods were used: theoretical analysis and generalization of data from scientific and methodological literature, anthropometric survey, methods of mathematical statistics. It is revealed that canoe slalom athlete (men and women) have higher values of total sizes of a body in comparison with non-athletes. A prevailing somatotype for men is muscle type (75%). Based on the results of the factor analysis it is received that the most significant morphological indicators for canoe slalom are the body length, body weight, extended arm length, shoulder length, length of forearm, arm span, length of the body sitting with arms outstretched. These morphological indexes should be first of all take into account for the selection of the most perspective canoe slalom athlete.

Keywords: canoe slalom, sport selection, morphological indicators, anthropometric investigation, physical preparedness.

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INTRODUCTION

Modern level of athletic achievement requires the organization of target oriented training, research more efficient organizational forms, means and methods of training work, the selection of talented young men and women to recruit young qualified athletes [2].

Problem of orientation and selection has long been an independent science. Predicting the possibility of a child or adolescent, the coach sets himself the task of finding a talented individual with a hope for a successful, further narrow specialization. Now the problem of improving sports orientation has found great support from specialists of different profiles both in our country and abroad [7]. Various technologies of sports selection were suggested by V.M. Volkov, (1983), V.N. Platonov (1997), L.P. Sergienko (2003).

Despite the numerous data available, the problem of selecting and orientation the most talented people as an independent direction is in the stage of constant search, improvement and further development. Scientifically based methods of selection of children in the Olympic reserve junior sports school, as well as predicting their future results are becoming important stages and an integral part of the modern system of training athletes from beginners to masters of sports of international class [8].

The identification of motor talent children is a continuous process associated with the step-by-step analysis of the genetic features of the development of the morphological, motor-psychic functions of a particular child that determine the success of sports activities. Development of methods and technological approaches to obtaining and evaluating objective and reliable scientific data on genetic factors and the state of various motor manifestations, psychological characteristics and personality characteristics is a necessary condition for the identification and optimal development of motor talent [6].

Problem of improving sports selection remains one of the main theoretical and applied medical and biological problems of physical culture and sports. The development of the theory of sports selection influences on the level of athletic achievement and on the development of sports science in general [3].

Purpose of sports activity is to achieve the maximum possible results for a particular individual. The growth of indicators in most sports, including in canoe slalom, requires further searching for reliable ways and ways to assess the individual capabilities of athletes [4].

In the current conditions of sport of higher achievements, early detection of the most gifted, promising athletes acquires special significance, since record achievements are demonstrated by those athletes who have the most optimal parameters characteristic for this sport [2]. On the one hand, athletes differ in their morphological, functional and psychological characteristics, adapt differently to the conditions of activity, on the other hand, purposeful activity influences the selection of the most talented athletes and the formation of a specific morphofunctional status [5].

Among the indicators that determine the success of the performance in canoe slalom, one of the main places is taken by the figures of physique, which are taken into account during sports selection at different stages of long-term preparation. Such indicators as total body size, its proportions, physique, significantly affect physical performance, competitive activity, the choice of sports specialization. They have a high hereditary conditionality, which along with taking into account psychological, physiological, biochemical factors makes it possible to determine the prospects of athletes [1].

In this regard, the principles of selection and methods of an objective assessment of the preparedness of young athletes is one of the urgent problems of the modern system of sports training.

Purpose of the research:

Consisted in certain leading morphological indicators in the structure of the training of canoe slalom athlete.

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Objectives of the study

1. Summarize the literature data on the selection and prospects of young athletes.
2. Conduct a survey of anthropometric indicators of canoe slalom athlete in Kharkov.

Research methods:

1. Theoretical analysis and generalization of data from scientific and methodological literature.
2. Anthropometric survey.
3. Methods of mathematical statistics.

METHODS AND ORGANIZATION

The study involved 43 athletes who are engaged in canoe slalom in the sports section of the Sports School "Mayak +" and Sports School "FED", Kharkov. Qualification of athletes - masters of sports and candidates for master of sports.

Body height was measured by stadiometer with a permissible error of measurement of 5 mm. Body weight was measured using on medical scales with error of measurement of 50 g. Circumference dimensions are measured with a centimeter tape

RESULTS

The constitution is one of the factors determining the sport success, a sufficiently significant structural and mechanical factor. Canoe slalom athletes men and women differ from non-athletes by significantly higher values of total body size (body length, weight, chest circumference), body proportions (body length, limb length), muscle mass, lower value fatty matter. Statistical result processing was conducted using the Statistica programme v. 10.0.

The predominant somatotype in men is muscular (75%).

Table 1 shows some morphological indicators of highly skilled canoe slalom athletes.

Table 1: Morphological indicators canoe slalom athletes (men)

№ in order	Indicators	Kayak n=24	Canoe n=19
		$\overline{X} \pm \sigma$ V	$\overline{X} \pm \sigma$ V
1	Body length, cm	183,1±4,45 2,43	179,3±6,91 3,85
2	Body weight, kg	83,1±4,75 3,72	81,6±7,34 5,99
3	Chest circumference, cm	102,3±3,07 3,00	104,3±4,10 3,92
4	Trunk height, cm	55,1±2,58 4,69	53,3±2,98 5,59
5	Extended arm length, cm	81,5±3,07 3,76	79,3±3,85 4,80
6	Shoulder length, cm	35,3±1,91 5,43	34,4±2,15 6,24
7	Length of forearm, cm	26,6±1,61 6,07	26,2±1,96 7,45
8	Length of foot, cm	99,2±3,13 6,15	97,8±5,01 5,12
9	Thigh length, cm	49,7±1,95	49,1±3,12

		3,93	6,35
10	Tibia length, cm	42,3±2,42 5,71	41,2±3,23 7,86
11	Hip diameter (pelvis width), cm	28,4±1,88 6,60	28,4±2,26 7,99
12	Arm span, cm	192,0±6,29 3,28	186,8±9,76 5,22
13	Length of the body sitting with arms outstretched, cm	145,5±9,38 6,44	141,2±5,72 4,05

As can be seen from Table 1, rowers on a canoe differ from rowers on a kayak by reliably smaller body length, body weight, body proportions, having a larger chest circumference and not differing in body composition.

Thus, it should be noted that canoe slalom athletes are characterized by a special, specific type of physique, which distinguishes them from people who do not do sports, and from each other, which makes it possible to create morphological models for selection in each of these types of specialization.

As a result of our factor analysis has been allocated the most informative indicators of body obtained during the anthropometric survey. So we found out that for canoe slalom the most significant morphological indicators are body length, body weight, extended arm length, shoulder length, length of forearm, arm span, length of the body sitting with arms outstretched.

The obtained values of the coefficient of variation (V) indicate a considerable dispersion of the results in terms of: length of the thigh, leg, shin and pelvic width in comparison with other morphological indices. This indicates a low significance of these indicators in the selection of prospective athletes for canoe slalom.

DISCUSSION

1. Analysis of literature data on the problem under study, as well as a detailed review of the competitive results of highly qualified athletes who took part in competitions of various levels, showed that studying the athlete's body composition in a one-year training cycle will correctly assess the athlete's preparedness level and adjust the training process program. Athlete's mismatch even for one of the success factors, or one of the functional systems for performing the delivered sport result, causes the athlete to compensate for this discrepancy at the expense of other body systems, causes an additional expenditure of energy. Such compensation is inexpedient, because it forces the organism to be in a state of limiting stress of the functional system, which leads to depletion of the reserve capabilities of the athlete's organism and aggravation of various chronic diseases. In this regard, the more individual the model of activity corresponds to, the higher the reliability of the biological system and the longer the period of high sport longevity.

2. As a result of anthropometric surveys of canoe slalom athletes, it was found that the most significant morphological indicators for canoe slalom are the body length, body weight, extended arm length, shoulder length, length of forearm, arm span, length of the body sitting with arms outstretched. This gives grounds for the assertion that during the selection of the most promising athletes for canoe slalom, in the first place, these stable morphological indicators should be taken into account

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