Structure and content of tourists' physical training at the stage of preliminary basic training

Savchenko V.G.[ABCDE], Moskalenko N.V.[ABCDE], Mikitchik O.S.[ABCDE], Gorbonos-Andronova O.R.[ABCDE], Lukina O.V.[ABCDE]

Dnieper State Academy of Physical Culture and Sports, Ukraine

Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection.

Abstract

Purpose: The purpose of the research is to substantiate scientifically the structure and content of tourists' physical training at the stage of preliminary basic training.

Material: The study involved athletes aged 12-13 years. The control and experimental groups consist of 32 young men in each group.

Results: It was developed and experimentally substantiated the structure and content of athletes-tourists' physical training. It was determined the content and volumes of physical training types (general, special and additional). It was developed the complexes of training exercises with a rational correlation of general and additional physical training means. The ratio of the main types of training was as follows: general physical training – 35%, special – 15% and additional – 50%.

Conclusions: The rock climbing and slacklining were offered for the preparatory period as the means of additional physical training. These means are based on the structure of motor activity and preferential orientation focused on the development of coordination, power, speed and speed-power qualities.

Keywords: tourism, physical training, young athletes, speed-power, coordination of motor actions.

Introduction

The stage of preliminary basic training plays an important role in the training of athletes [1]. This stage presupposes the development of physical qualities, the strengthening of the young athletes' health, the creation of motor capacity for learning motor skills. Physical training is an integral part of the process of athletic sports improvement. It provides the basis for technically challenging activities [2]. Other authors [3, 4, 5] emphasized the need to consider modern effective means of training with the acquisition of special technical skills. It is defined that achieving results in tourism is impossible without reliable physical training [6, 7]. That is why increasing the effectiveness of the training process is of particular importance for different types of tourism.

Complex improvement of the technical training of multi-player tourists explored Makarov [8]. Makhov studied the development of physical qualities and the formation of motor skills and of tourists' skills [9]. His studies considered forms and methods of preparation for hiking with different complexity levels [10]. Specialized training ground allows to conduct effectively the process of mastering the basic technique of overcoming obstacles and promotes the development of the necessary physical qualities of tourists [11]. Dem'ianchuk [12] and Kondratenko [13] developed software for training classes in sports tourism.The preparation of water tourism athletes at the stage of preliminary basic training is carried out in accordance with the "Curriculum for tourist circles of extracurricular education (sport and tourism profile)" (block "Water tourism") [14]. The program is designed for three years of study in circles and sections of the corresponding profile and covers the stage of preliminary basic training.

According to Sukhovec point of view [15] there is a contradiction between the traditional approaches to the training process and the persistently increasing requirements to the level of tourists' physical fitness. This interferes with the harmonious development of athletes' technical skills of run required for passing the competing race [16-18].

Other studies stated:

There is a pressing need for research into the prevalence and incidence of aquatic injuries in children, so the effectiveness of preventive interventions can be determined [19];

During competition, kayak athletes must optimally adapt to environmental factors (e.g. wind, waves) to achieve peak performance [20];

Results highlight the importance of peripheral adaptations in both short and long events and stress the relevance of adding muscle oxygenation measurements during testing and racing in sprint canoe-kayak [21];

The results showed that reduction in both push and pull foot-bar forces resulted in a reduction of 21% and 16% in mean paddle-stroke force and mean kayak speed, respectively. Thus, the contribution of foot-bar force from lower-limb action significantly contributes to kayakers' paddling performance [22];

Today many compact and efficient on-water data acquisition units help modern coaching by measuring and analyzing various inertial signals during kayaking. One of the most challenging problems is how these signals can be used to estimate performance and to develop the technique [23].

The abovementioned stipulates the need to develop

doi:10.15561/18189172.2019.0108

the structure and content of tourists' physical training at the stage of preliminary basic training in the annual cycle.

The purpose of the research is to substantiate scientifically the structure and content of tourists' physical training at the stage of preliminary basic training.

Material and methods.

Participants. The study involved athletes aged 12-13 years. They were engaged in water tourism in the Dnipropetrovsk region (Ukraine). The control and experimental groups consist of 32 young men in each group. At the beginning of the experiment, there was no significant difference in the indicators of physical fitness, physical development and functional status between the groups ($p > 0.05$). Parents gave written consent to their children participating in the experiment.

Design of the research. The research was conducted on the basis of sports tourism clubs of Dnipropetrovsk region (Ukraine): "V.M. Shkurenko Physical Culture and Sports Complex", the sports club "Avangard" (Dnipro), the communal institution "Dnipropetrovsk Children and Youth Center for International Cooperation" (Dnipro), the communal educational institution "Center for Tourism and Country Study "Gorytsvit" (Kamianske). Experiment participants trained 6 times a week.

The training of the control group athletes was planned in accordance with the "Curriculum for the circles of the tourist country study direction of extracurricular education (sports and tourist profile)", the block "Water tourism" [14]. The program is designed for three years and covers the stage of preliminary basic training. The training process was 216 hours (6 hours per week). The program included participation in tourist activities (56 hours), general tourist training (52 hours), physical training (48 hours), special tourist training (40 hours), regional studies (14 hours), introduction and results (6 hours).

The structure and content of the physical preparation of tourists developed at the stage of the preliminary basic training were introduced in the process of training the experimental group athletes. We have defined the content and scope of physical training (general, special and additional). The distribution of hours for different types of physical training was determined in accordance with programs of other water sports [1, 4, 7, 8]. Such sports include canoe paddling and canoeing, paddle slalom. 35% were assigned to general physical education, 15% for special education and 50% for additional training.

The preparatory period was divided into general and special stages. Duration of the preparatory period was 8 months. The general preparatory stage was structurally divided into retractive and basic mesocycles. The retractive mesocycle contained 4 microcycles. The main task of the retractive mesocycle was athletes' preparation for the effective implementation of specific training work. The ratio of general, special and additional physical training was 60:10:30 (%).

The basic mesocycles contained 4 developmental and 4 recovery microcircuits. They were aimed at increasing the functional capabilities of the main body systems, the development of technical and tactical preparedness.

The main task of developing microcycles was the stimulation of adaptive processes in the athletes' body, the solution of the main tasks of technical and tactical and physical training. They were characterized by a large total volume of work. The load was 70% of the maximum. Microcycles were aimed at the complex development of physical qualities with the predominant development of flexibility and coordination qualities. The ratio of general, special and additional physical training was 50:15:35 (%).

Recovery microcycles were planned after intense developing microcycles. Their main role was to provide optimal conditions for restorative and adaptive processes in the body of athletes. The ratio of general, special and additional physical training was 60:10:30 (%).

The targeted special training was presupposed for the special-preparatory stage. In the structure of the special preparatory stage were allocated 2 basics and 1 control preparatory mesocycles. The first basic mesocycle was aimed at the complex development of physical qualities with a predominant development of endurance. The ratio of general, special and additional physical training was 45:20:35 (%). The second basic mesocycle was aimed at the complex development of physical qualities with a prevailing development of power qualities. The ratio of general, special and additional physical training was 40:25:35 (%).

Control preparatory mesocycle was characterized by the wide application of special-preparatory exercises with the predominant development of high-speed and speed-power qualities. The ratio of general, special and additional physical training was 35:30:35 (%). It included developing, recovery and preparation microcircuits that were aimed at the direct preparation of athletes to the competition. The current and step-by-step control of the tourists' physical fitness level was conducted at this mesocycle.

Figure 1 presents the tasks and means of various training types of control and experimental groups' tourists The preparatory period was divided into general and special stages. Duration of the preparatory period was 8 months. The general preparatory stage was structurally divided into retractive and basic mesocycles. The retractive mesocycle contained 4 microcycles. The main task of the retractive mesocycle was athletes' preparation for the effective implementation of specific training work. The ratio of general, special and additional physical training was 60:10:30 (%).

The basic mesocycles contained 4 developmental and 4 recovery microcircuits. They were aimed at increasing the functional capabilities of the main body systems, the development of technical and tactical preparedness.

The main task of developing microcycles was the stimulation of adaptive processes in the athletes' body, the solution of the main tasks of technical and tactical and physical training. They were characterized by a large total volume of work. The load was 70% of the maximum. Microcycles were aimed at the complex development of physical qualities with the predominant development of

flexibility and coordination qualities. The ratio of general, special and additional physical training was 50:15:35 (%).

Recovery microcycles were planned after intense developing microcycles. Their main role was to provide optimal conditions for restorative and adaptive processes in the body of athletes. The ratio of general, special and additional physical training was 60:10:30 (%).

The targeted special training was presupposed for the special-preparatory stage. In the structure of the special preparatory stage were allocated 2 basics and 1 control preparatory mesocycles. The first basic mesocycle was aimed at the complex development of physical qualities with a predominant development of endurance. The ratio of general, special and additional physical training was 45:20:35 (%). The second basic mesocycle was aimed at the complex development of physical qualities with a prevailing development of power qualities. The ratio of general, special and additional physical training was 40:25:35 (%).

Control preparatory mesocycle was characterized by the wide application of special-preparatory exercises with the predominant development of high-speed and speed-power qualities. The ratio of general, special and additional physical training was 35:30:35 (%). It included developing, recovery and preparation microcircuits that were aimed at the direct preparation of athletes to the competition. The current and step-by-step control of the tourists' physical fitness level was conducted at this mesocycle.

Figure 1 presents the tasks and means of various training types of control and experimental groups' tourists.

During the preparatory period in the control group was planned general and special tourist training, general and special physical training [14].

The content of general tourist training included:

- historical aspects of the origin and development of tourism and water tourism in the world and in Ukraine,
- the question of sports tourism at the present stage of Ukraine development,
- the order of awarding sports titles;
- the basics of sport navigation,
- requirements of group and individual equipment, its repair,
- rules of camp organization in a hiking,
- the basis of nutrition in the hiking,
- the basics of safety in the hiking,
- sanitary and hygiene rules,
- the basics of the first aid.

The contents of the special tourist training include:

- technique of motor action and management of water crafts,
- requirements for water trips equipment;
- the basis of hiking and overnight organization in the water trip,
- safety insurance in water trip,
- basic knowledge of region tourism opportunities for water tourism,
- rules of water tourism competitions.

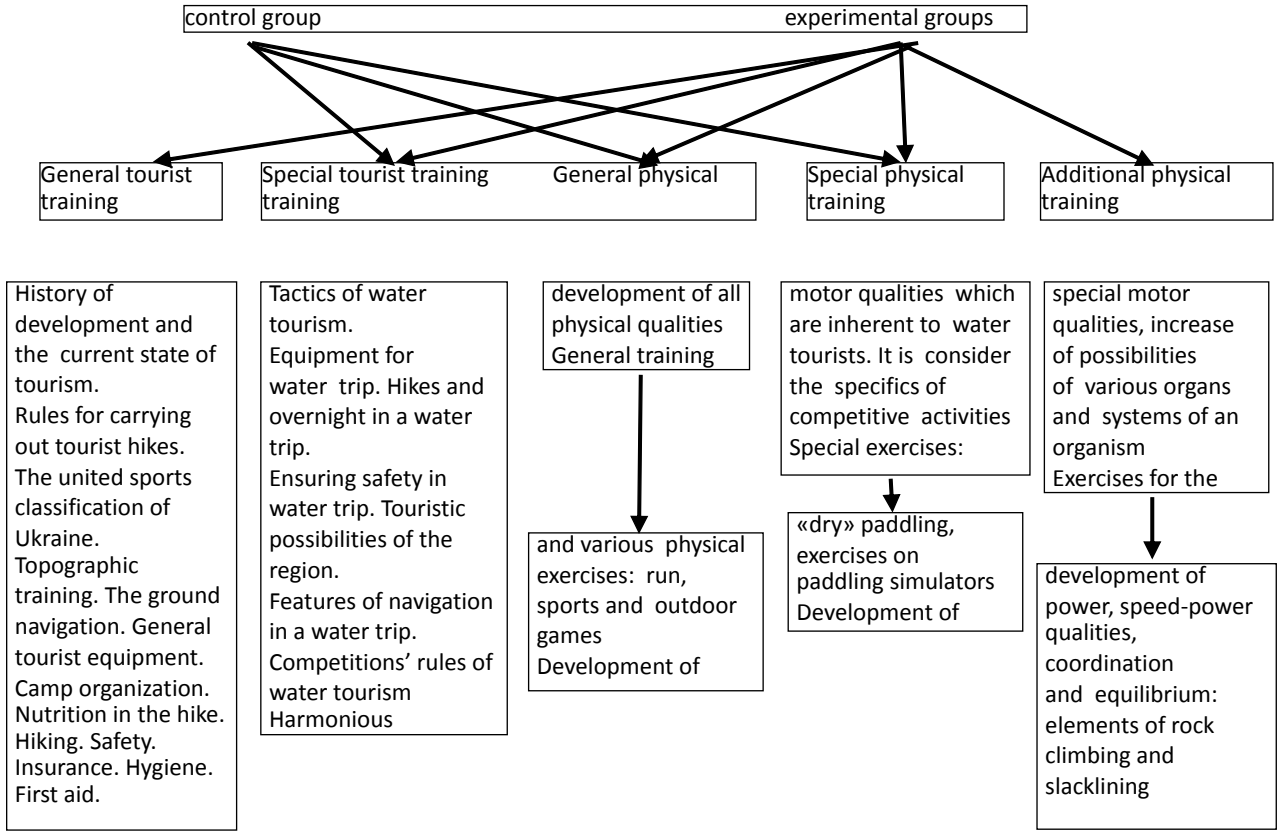

Fig. 1. Means of various training types of control and experimental groups' tourists at the stage of preliminary basic training in the preparatory period.

The development of special physical characteristics of tourists was emphasized in the experimental group. In order to increase overall physical fitness were applied the general development exercises, running, various hangs, rope climbing, hanging crossings, squats, jumps, and gymnastic exercises.

Special physical training was aimed at the development of special physical qualities. The following exercises were applied:

- elements of water tourism,
- touristic exercises of applied all-round,
- water racing
- passing "serpents", direct and reverse gates,
- rise on a steep snowy or grassy slope,
- swimming,
- use of paddling simulators,
- overcome obstacles.

Additional physical training included exercises aimed at the development of coordination, speed, speed-power and power qualities. These exercises form the basis for the special motor actions formation - elements of rock climbing and slacklining.

We have developed 24 sets of training exercises. These exercises emphasize the development of leading physical fitness of athletes. The duration of the complexes was 20-25 minutes. Exercises in each complex were carried out by the method of circular training. Increase of loads was achieved by gradual increase of volumes and intensity of exercises.

Dosing load was determined by:

- total amount of exercises
- the number of their repetitions
- duration of rest intervals between exercises,
- content of rest in intervals, efforts,
- the rate of exercise, their intensity.

The increase in the load increased by reducing the interval between individual exercises or their series and increasing their volumes.

In both groups, at the beginning and at the end of the preparatory period was conducted, the level of athletes' physical fitness did not have a significant difference at the beginning of the study (P> 0.05).

Athletes' competitions included:

- "Kayak" slalom. This is a short race to overcome the obstacles (gates) on the kayak (sports boat with a width of 0.56 m). Kayak is intended for runs in turbulent water;

Table 1. Indicators of physical fitness of 12-13 years athletes before and after the experiment

Indicators	CG (n=45) $\bar{x}$ ± S		EG (n=45) $\bar{x}$ ± S	
	before	after	before	after
Cadence Push-Up Test, quantity of times	18.13±4.40	19.20±2.30	17.65±1.75	20.30±3.10*
Standing Long Jump Test (Broad Jump), cm	164.30±5.70	165.70±6.10	164.53±3.07	173.81±5.90*
Eurofit Sit Up Test, quantity of times	24.20±4.45	27.6±1.60	26.40±2.84	30.60±2.70*
2 kg stuffed ball throwing, m	4.01±0.55	4.65±0.50*	4.03±0.35	4.80±0.30*
60 m run, s	11.10±0.48	10.84±0.20*	11.24±0.45	10.60±0.42*
Shuttle run 4×9 m, s	12.34±0.80	11.8±0.28*	12.35±0.46	11.50±0.37*
30 serpent run m, s	6.68±0.36	6.22±0.22*	6.53±0.33	6.00±0.30*
1500 m run, min	7.59±0.42	7.51±0.37	7.53±0.31	7.34±0.20*
Seated Forward Bend, cm	6.72±1.80	7.65±1.08	6.84±0.72	7.90±1.30*
Romberg's test, s	24.56±4.65	31.50±4.80*	24.06±1.46	36.00±2.20*
Handgrip Strength Test (right hand), kg	17.40±0.78	21.00±3.20*	25.06±1.93	28.47±2.47*
Handgrip Strength Test (left hand), kg	15.18±0.95	16.90±1.75*	19.75±1.40	22.75±1.77*
Lifting dynamometry, kg	31.70±3.40	31.70±2.70	31.34±1.03	37.40±1.50*
Passing the reverse gate, s **	38.03±4.50	37.75±1.12	37.5±1.92	32.00±2.70*
Passing 10 gates, min	2.99±0.43	2.55±0.30	3.11±0.07	2.38±0.10*

Note. * - p <0.05; ** - gates which is opposite to the direction of the main flow of the river or canal.

Table 2. Results of the Athletes' Performance at the Sports Water Tourism Championship 2013-2014.

Year	Kayak slalom, min,sec,ms		Canoe slalom, min,sec,ms		Catamaran-2 slalom, min,sec,ms		Catamaran-4 slalom, min,sec,ms		Life-saving technique slalom, min,sec,ms	
	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG
2013	2.03.44	2.07.13	2.46.22	2.44.41	3.02.89	2.56.15	3.36.27	3.44.52	1.19.43	1.25.28
2014	1.59.82	1.25.34*	2.42.09	1.57.03*	3.10.04	2.15.75*	3.36.22	2.58.84*	1.13.18	0.59.13*

Note. * – p<0.05; CG – control group; EG is an experimental group.

- "Canoe" slalom. Speeding over the distance on a sports double boat (width 0.75 m, length 3,6 m). This boat is designed for racing on smooth water;

- "Catamaran-2" slalom and "Catamaran-4" slalom. Speed cover distance on a double / four-seater double-hull boat. The hulls of the boat are connected by a bridge (farm or a deck type).

Competitions on the distance "Life-saving technique" were conducted on a part of the river which length was 100-500 m. The zones of certain special tasks fulfillment were determined. The limiting devices and navigation points were applied to define areas of ship's overturning, rescue operations, and finish. The coastal landmarks, gates of the required width were applied as limiting devices. They limit the zones of special tasks. The marked place on the river bank above the boundary line was determined as the competition finish line.

Statistical analysis. The statistical processing of the study materials was conducted applying the Microsoft Excel 2010 software. The arithmetic average and the arithmetic mean error were calculated. The reliability of the differences between the indicators of the samples was verified by Student's criterion and was considered statistically significant at $p < 0.05$.

Results

Table 1 demonstrates the results of a comparative analysis of athletes' test data of the control and experimental groups.

According to the results of the experiment, significant differences were found among a number of physical fitness indicators of the control and experimental group. In the experimental group, there is a significant increase in all indicators of physical fitness ($p<0.05$).

It is identified a little increase in power and speed-power qualities in the control group in the following tests: "Cadence Push-Up Test", "Standing Long Jump Test (Broad Jump)", "Eurofit Sit Up Test", "2 kg stuffed ball throwing" ($p> 0.05$). This is a predictable result because the age of 12-13 years old is one of the most favorable periods for the development of coordination, speed, and speed-power qualities. At the end of the experiment, athletes in the experimental group had significantly higher physical fitness indicators than athletes in the control group ($p<0.05$).

It was conducted the comparative analysis of the athletes' performance at the Sports Water Tourism Championship (Dnipropetrovsk region) (2013-2014) to analyze the indicators of special fitness. The obtained data presented in Table 2.

We analyzed the results of passing distances Kayak slalom; Canoe slalom; Catamaran-2 slalom and Catamaran-4 slalom.

In the experimental group is observed the following statistically significant reduce of the time taken to pass the competitive distances according to the results of competitive activities:

- at Kayak slalom distance it improved by 33%,
- at Canoe slalom distance – by 29%,
- at Catamaran-2 slalom distance – by 23%,
- at Catamaran-4 slalom distance – by 21%,
- at Life-saving technique distance – by 30% ($p<0.05$).

The results indicate an increase in the level of physical fitness and effectiveness of the athletes' competitive activity in the experimental group.

Discussion.

Analysis of scientific and methodological literature revealed a number of problematic issues. They relate to the peculiarities of the physical training process:

- definition of content and volume of physical training (general, special and additional);
- consideration of individual characteristics of athletes, territorial conditions and availability of material and technical base.

The study confirmed the opinion of various authors [4, 5] regarding the need to consider modern effective means of training with the acquisition of special technical skills.

We have developed the structure and content of physical training of athletes engaged in water tourism at the stage of preliminary basic training. We defined the content and volume of physical training (general, special, and additional). They are applied depending on the purpose, tasks, and orientation of the stages of the preparatory period. It was experimentally substantiated the efficiency of the training exercise complexes application with rational correlations of general and additional physical training means. They influenced the development of the leading physical characteristics of tourists at the stage of preliminary basic training.

The results of the study confirmed other data [1, 2] that physical training provides a basis for technically challenging activities. It was also confirmed the data of other researches [4, 11] regarding the influence of the physical fitness level of tourists on the effectiveness of competitive activities.

It was completed the data of Konstantinov [5], Makarov [8] concerning the physical training peculiarities of athletes engaged in tourism. It was also completed the data of other studies [8, 12, 13] concerning the design of the training process at the stage of preliminary basic training. The data of Sukhovec [15] regarding the application of means and methods of athletes' physical training.

Acknowledgements

The research was conducted in accordance with the Consolidated Plan of Research Work of Ministry of Family, Youth and Sports of Ukraine (2011-2015) the subject 2.6 "Theoretical and Methodological Basis of Training Process and Competitive Activities Improvement in the Structure of Multi-Year Athletes Training", the State Registration Number is 0111U001168.

Conclusions

1. Analysis of the literature on the issue of research and the synthesis of practical experience of tourists' preparation at the stage of preliminary basic training revealed a number of problem issues. They relate to

the peculiarities of the physical training process. Such questions are the definition of the content and volume of physical training, consideration the individual characteristics of athletes, the territorial conditions and the availability of material and technical base.

2. It was offered the application in the preparatory period of the means of additional physical training: rock climbing and slacklining. These means are based on the structure of motor activity and preferential orientation focused on the development of coordination, power, speed and speed-power qualities.

Conflict of interest

The author states that there is no conflict of interest.

References

1. Platonov VN. *System of athletes' preparation in the Olympic sport*. Kiev: Olympic literature; 2004.
2. Bajkovskij IuV. *Theory and methods of training in mountain sports*. Moscow: Division; 2010. (in Russian)
3. Gorbonos-Andronova OR. *The structure and contents of physical training athletes which are engaged in water tourism on the stage of previous base preparaition. Cand. Diss.* Dnipropetrovsk; 2016. (in Ukrainian)
4. Blanco PC, Hernandez-Hernandez E, del Valle MR. Analysis of Universal Factors of Physical Activities in Natural Environment. Adventure Physical Activities in Nature (Outdoor Activities): Preliminary Research. *Espiral-Cuadernos Del Profesorado*. 2018;11(22):61-68.
5. Konstantinov IuS. *Theory and practice of sports tourism*. Moscow: Soviet sport; 2009. (in Russian)
6. Kukhtij OA. Influence of hiking on the functional condition of the student body (on the example of "tourism" speciality). *Naukovij chasopis Nacional'nogo pedagogichnogo universitetu imeni M.P. Dragomanova*, 2011; 13: 290-295. (in Ukrainian)
7. Makarova GA. *Sports medicine*. Moscow: Soviet sport; 2003. (in Russian)
8. Makarov VM. *Training of athletes in the tourist of mountain all-around and hiking types at the stage of initial improvement applying technical means. Cand. Diss.* Rula; 2006. (in Russian)
9. Makhov II. *Program and methodological support of tourist all-around classes in 12-15 years children. Cand. Diss.* Belgorod; 2007. (in Russian)
10. Makhov SIu. *Sports and health tourism*. Eagle: OSTU; 2010. (in Russian)
11. Ryl'skij SV. *Learning methods of overcome natural and artificial obstacles in sports tourism. Cand. Diss.* Belgorod, 2012. (in Russian)
12. Dem'ianchuk OG. The interest of middle school age children in tourism types. *Naukovij chasopis Nacional'nogo pedagogichnogo universitetu imeni M.P. Dragomanova,* 2011; 13: 136–139. (in Ukrainian)
13. Kondratenko OM. *Educational program for groups of tourist and country study direction of out-of-schools education (sports and tourist profile), complex "Water tourism".*Kiev; 2013. (in Ukrainian)
14. Grabovs'kij Iu, Vasiutins'ka O. Influence of sports hiking on the development of moral and emotional-volitional personality features. *Gumanitarnij visnik Pereiaslav-Khmel'nic'kogo derzhavnogo pedagogichnogo universitetu imeni Grigoriia Skovorodi*; 2004; 1: 54-58. (in Ukrainian)
15. Sukhovec LN. *Extreme School*. 2003. (in Russian)
16. Bulashev AIa. *Sports tourism*. Kharkov: HGAFK, 2009. (in Russian)
17. Voronov IuB. Selected routes for kayak trips. Voronov IuB. Trovant; 2002. (in Russian)
18. Shtangej IuV, Ivanov VJ. *Conceptual foundations of the sports tourism development in Ukraine.* Kiev; 2007. (in Ukrainian)
19. Buzzacott P, Mease A. Pediatric and adolescent injury in aquatic adventure sports. *Research in Sports Medicine*. 2018;26:20-37. https://doi.org/10.1080/15438627.2018.1438281
20. Hamacher D, Krebs T, Meyer G, Zech A. Does local dynamic stability of kayak paddling technique affect the sports performance? A pilot study. *European Journal of Sport Science*. 2018;18(4):491-496. https://doi.org/10.1080/17461391.2018.1435726
21. Paquette M, Bieuzen F, Billaut F. Muscle Oxygenation Rather Than VO2 max as a Strong Predictor of Performance in Sprint Canoe-Kayak. *International Journal of Sports Physiology and Performance*. 2018;13(10):1299-1307. https://doi.org/10.1123/ijspp.2018-0077
22. Nilsson JE, Rosdahl HG. Contribution of Leg-Muscle Forces to Paddle Force and Kayak Speed During Maximal-Effort Flat-Water Paddling. *International Journal of Sports Physiology and Performance*. 2016;11(1):22-27. https://doi.org/10.1123/ijspp.2014-0030
23. Vadai G, Gingl Z. Can the fluctuations of motion be used to estimate the performance of kayak paddlers? *Journal of Statistical Mechanics-Theory and Experiment*. 2016. https://doi.org/10.1088/1742-5468/2016/05/054040

Information about the authors:

Savchenko V.G.; http://orcid.org/0000-0002-3839-6595; admin_infiz@ukr.net; Dnieper State Academy of Physical Culture and Sports; Naberezhna Pobedy str., 10, Dnieper, 49094, Ukraine.

Moskalenko N.V.; http://orcid.org/0000-0001-9162-5206; admin_infiz@ukr.net; Dnieper State Academy of Physical Culture and Sports; Naberezhna Pobedy str., 10, Dnieper, 49094, Ukraine.

Mikitchik O.S.; (Corresponding author); http://orcid.org/0000-0002-0047-4359; molga.0604@gmail.com; Dnieper State Academy of Physical Culture and Sports; Naberezhna Pobedy str., 10, Dnieper, 49094, Ukraine.

Gorbonos-Andronova O.R.; http://orcid.org/0000-0002-6233-006X; admin_infiz@ukr.net; Dnieper State Academy of Physical Culture and Sports; Naberezhna Pobedy str., 10, Dnieper, 49094, Ukraine.

Lukina O.V.; http://orcid.org/0000-0002-3085-7975; admin_infiz@ukr.net; Dnieper State Academy of Physical Culture and Sports; Naberezhna Pobedy str., 10, Dnieper, 49094, Ukraine.

Cite this article as:
Savchenko VG, Moskalenko NV, Mikitchik OS, Gorbonos-Andronova OR, Lukina OV. Structure and content of tourists' physical training at the stage of preliminary basic training. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 2019;23(1):47–53.
https://doi.org/10.15561/18189172.2019.0108

The electronic version of this article is the complete one and can be found online at:
https://www.sportpedagogy.org.ua/index.php/PPS/issue/archive

Received: 03.01.2019
Accepted: 12.02.2019; Published: 27.02.2019