

Study of the impact of sports tourism on the level of physical condition of girls

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Abstract. The paper discusses the versatile influence of sports tourism lessons on the body of girls, the development of their physical abilities, and the formation of vital and motor skills. The possibility of controlling the effectiveness of the applied methods while preparing athletes is considered. The author pays attention to the typical features of the motor activity aimed at improving the functional state of the body, which may depend on the age and the level of the individual functional state of the athlete. Sports tourism activities contribute to the physical development of girls and increase their physical condition, which has a positive effect on their general development and health. The pedagogical test offered an opportunity to study the organization of training sessions in sport tourism for girls and to determine the possibility of its improvement and optimization. The author proposes an experimental methodology of training sessions in sports tourism for girls 16-17 years old in the youth tourism center "Edelweiss" (Togliatti, Russia). During the pedagogical experiment, competitions between the control and experimental groups in the distance walking and orienteering were conducted.

1 Introduction

Sports tourism is a sport based on competitions on routes that include overcoming categorized obstacles in the natural environment (passes, peaks, rapids, canyons, caves, etc.) and at distances laid out in the natural environment and on artificial terrain. Several authors note: "Tourism is one of the major industries in the world. Sports tourism is considered as a part of tourism created by integration of sports and tourism" [1-5].

L.N. Rogaleva et al. show that "the leading motives for choosing this sport are: interest (50%), invitation from friends (44.4%), accessibility to the place of residence (44.4%). Athletes note that sports tourism is not so popular as other sports, but it is actively developing in the regions where they train. It is promoted by the fact that this kind of sport does not require large material expenses, most athletes train in children and youth sports schools at the expense of parents and/or budgetary funds" [6].

Tourism training is a process of forming knowledge and skills for the successful, effective and safe passage of competitions and hikes. The preparation of students depends primarily on the knowledge and skills of the trainer. During the training process, we adhered to the main methodological techniques: to teach tactical schemes and options typical for the given sport; vary systematically the conditions accompanying the performed

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sports exercises; increase theoretical preparedness, using special literature; examine and fix the results; develop observation, operative thinking of both an individual athlete and a tourist group.

Y.A. Karvunis and L.V. Kapilevich note: "The development of active types of tourism poses several topical problems to modern science, and the professional approach to the formation of tourist groups is not unimportant" [7]. The coach should be able to plan the training process correctly, choose specific tactics workable for athletes, develop the physical conditions of students, and prepare them for competition. Athlete preparation is a purposeful pedagogical process, which uses the whole variety of training tools for successful performance at competitions. The process of athlete preparation includes a variety of means, methods, loads and other components, each of which can be called a training element. The development of training status is determined by the correspondence between the functional capabilities of the athlete and the training load. The higher the functional capabilities are, the stronger is the organism, the higher the training requirements can be, and as a result, the higher the rate of training status growth is.

As part of training, the athlete performs various exercises in various modes, according to the training plan. The data of daily self-control allows one to deeply analyze the course of the training process, observe the correctness of the intended plan or deviations from it, make the necessary changes, etc.

M.P. Shestakov pays attention that "nowadays the basic way of increasing the efficiency of methods of sports training is seen in searching and understanding (explanation) of regularities of individual internal interactions of athlete organism systems, in prediction of results of influence of training loads" [8].

This work presents the developed methodology in which the content of the training process in sports tourism was optimized. The new methodology was tested.

2 Materials and methods

During the pedagogical experiment we formed two groups of 12 people in each group. The control group followed the generally accepted program. The experimental group followed the developed methodology with the optimized content of training process in sports tourism. The developed methodology additionally included the classes in flat (walking), mountain, ski, and water tourism, as well as classes in sports orienteering. For in-depth mastering of the theoretical foundations of sports technique and tactics we used special forms and methods: lectures, films, seminars, simulation tactics, work with information sources, etc. During the study, we selected methods and organized a pedagogical experiment, which contributed to improving the indicators of physical condition and physical health of girls engaged in sports tourism.

The level of physical development was studied using the following indicators: body weight (kg), body height (cm), wrist dynamometry (kg), heart rate (bpm), heart rate (mm Hg), etc.

The physical condition of girls was studied by control tests: passing obstacle courses on flat terrain and competitions in orienteering by running 2200 m.

3 Results and discussion

According to the set tasks, training practices are divided into educational, training, simulating competition (integral) and control. They can be aimed at improving technical and tactical actions, or at developing various qualities. Training sessions have the following characteristics:

- 1) The training course corresponds to the training programs for the sport approved by the educational institution (Sports School);
- 2) Classes are held according to the training plans;
- 3) Classes are held according to the schedule of the educational institution;
- 4) Classes are held with a coach-teacher;
- 5) Athletes make up a homogeneous group by age, sex, sport qualification, type of sport and sport discipline;
- 6) Training is aimed at achieving the highest sports mastership.

Loads of training sessions are arranged in a certain pattern to provide continuity in the direction of the loads, to achieve the maximum possible improvement of the athlete's condition and preparation of the athlete's body for competition.

V.V. Gorelik et al. write: "The selection of optimal developmental and training influences in physical education make it possible to find ways of maximum individualization of classes, increase their effectiveness, significantly increase their developmental potential for the formation of psycho-physiological adaptation reserves" [9].

At the beginning of the pedagogical experiment, we studied the indicators of physical development of girls in the control and experimental groups, the results are presented in Table 1.

Table 1. Physical development of girls

Groups	HR (beats per minute)	BP (mm Hg)		Body weight (kg)	Height (cm)	Hand dynamometry (kg)	
		system.	diast.			Right hand	Left hand
Control	76.4±3.1	132.3±4.4	84.4±3.2	71.4±3.9	165.5±2.4	52.3±2.6	51.4±2.7
Experimental	78.5±2.4	124.4±3.3	82.3±2.4	68.6±3.2	172.4±2.1	52.7±2.4	51.2±2.2
P	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05

During the training process, it is very important to consider the individual characteristics of athletes, first of all, their general physical condition. At the same time, physical exercises should sufficiently support the level of development of strength, speed, endurance, agility, flexibility of the athlete. It should be taken into account that along with the growth, development and formation of the organism, reaching a mature age, the orientation of training, its objectives, means and methods change.

Practice is a lesson form of training and has a structure similar to a lesson: the preparatory, main, and final parts. Training solves the problems of training and education, development of ability and skills. The main part of the training is aimed at developing the functional systems of the body, which directly ensure the performance of specific motor actions. The main part of training includes exercises aimed at the development of flexibility, balance, agility in alternate with other exercises. The time during which a training session is held depends on many factors: the conditions of the classes, workload in the classroom, the physical condition of the participants, etc. With increasing sports qualification, the volume and intensity of training loads should be increased. The used means must have a positive "transfer" on the development of physical condition. The volume and intensity of loads is planned with regard to age, sex and qualification of athletes.

G.N. Golubeva et al. note: "Tourist-sports routes and distances are characterized by a high level of objective risks, a constant change of natural environmental conditions, physical loads of sub-maximal and maximum intensity, high frequency of occurrence of

subjective dangers, a large variability of techniques and tactics of overcoming obstacles, dynamic changes of mental states of participants. The occurrence of these factors is unpredictable, and their impact is complex and continuous" [10].

Theoretical training in sports tourism includes learning the basics of theory and methodology of sports training, knowledge of technical and tactical preparation for competition, the ability to analyze competitive activity and to understand the basics of comprehensive control in sport, means and methods of recovery. During training sessions, it is desirable to conduct exercises in the fresh air, that include cross-country, running cross-country, swimming in a pool or in open water, winter skiing. The athlete should strengthen his musculoskeletal system and monitor his health outside training. The coach and the doctor must constantly take special measures to prevent possible diseases, injuries and fatigue of the trainees. For this purpose, it is recommended to perform restorative training with low intensity with complete elimination of competitions, active rest with nonspecific muscular work.

Technique is a way of solving motor problems in sport. The achieved motor potential is transferred to the sport result through effective motor actions. It should be noted that technical preparedness is characterized by the degree of mastering the system of movements by the athlete. The technique of executing movements is determined by the rules of competition and the indicators of performance and effectiveness. Technique is understood as a biomechanical construction of movements with the goal of optimally and rationally achievement of a sports result. The first, most important stage of teaching technical movements is the formation of the athlete's motor ideas about the movements being studied. A wide range of methods (explanation, demonstration, observation, testing, analysis, etc.) is used at this stage. The second stage of training involves the formation of motor skills. At the third stage, the primary motor skill is formed, which is connected with the execution of technical actions in relaxed conditions, in a familiar environment, in the absence of fatigue. The fourth stage is the formation of an actualized motor skill. This occurs only when technical actions are mastered in competitive activity under different psycho-functional states of the athlete and under different environmental conditions. At the fifth stage, a differentiated motor skill is formed, which allows performing technical actions with high efficiency in complex and constantly changing environmental conditions, under progressive fatigue. At the sixth stage, the motor skill must reach such perfection so that the athlete effectively uses a wide range of technical actions, considering the specific conditions of competitive activity. Assessment of the technical skill of the athlete is recorded visually and on video. Further, it is reproduced with analysis of the whole movement and separate elements of technique. The total indicator of technical skill is assessed.

In the process of competitive activity, different tasks related to specific conditions are solved, so the technique must have the following characteristics:

- efficiency, which is the ability not only to solve problems in general form, but also to achieve a high result, that is, to go the whole competitive distance with a high average speed, to take the planned place in the final protocol;
- economy, which is the ability not just to show a high speed of movement, but also to spend less energy on it, to use an effective tactics accompanied by the minimum cost, the least strain of mental capabilities within a given speed of movement;
- variability, which is an athlete's ability to adapt motor actions to the conditions of microrelief, fatigue, etc;
- stability, which is the ability to resist interference.

In the process of training and improving technical actions, various errors occur. It is necessary to determine the causes of their occurrence and use the entire arsenal of means and methodological techniques to eliminate them. One of the main provisions in the

methodology of teaching and improving the technical skills of an athlete is to use in the training process a constant complication of the conditions for performing technical actions.

Improvement of sports mastership is inextricably connected with the development of physical qualities. Each level of development of physical qualities should correspond to a certain structure of technical actions and vice versa - a more perfect technique to perform motor actions requires a higher degree of development of physical qualities.

Tactical training involves the development of the ability to quickly and correctly assess the situation, independently make a decision and implement it in sports competitions. Tactics should be understood as ways of realizing the goal in training and competition activities. Tactical abilities, skills and thinking are acquired during the special training. The training can be guided by the following guidelines:

- 1) The trainer teaches tactical schemes and variations typical of the sport;
- 2) The conditions accompanying the sports exercises performed are varied systematically;
- 3) The theoretical preparedness is increased using the study of special literature, observation and fixation of results, the observation and operative thinking are being developed.

Training and competition take place under different conditions and exclude standard solutions to practical problems, so it is necessary to quickly assess the specific situation and act according to the situation.

In our study, we used individual and group methods of work:

a) In the individual method the athlete receives an individual task and performs it under the control of the coach. The advantages of this method include the optimality of individual loads, fostering independence and creativity, saving time.

b) In the group method, athletes perform the same loads and tasks together. The advantages of this method include the creation of a competitive microclimate, mutual assistance in the performance of individual exercises. The disadvantages of this method include difficulty of individual control over the quality of performance of tasks and individualization of loads by volume, intensity and time.

Psychological training is a multi-year process of development and improvement of mental functions, abilities and qualities of the athlete necessary to achieve victory or a high sport-technical result. Psychological training is carried out in conjunction with physical, technical, tactical, and intellectual training. Each of these types of training will be effective for solving specific problems in sports tourism only in a unified holistic training process. In this process, psychological training has a special role, since the implementation of each of these types of training uses all models of manifestation of technique and personality of an athlete. The major tasks of psychological preparation include the improvement of moral and volitional qualities, special mental functions, ability to control mental state in training and competitive activity. Only a holistic, systematic approach will contribute to the effective realization of the set goal - preparation of a competitive athlete in sports tourism. General psychological training has a basic character, it includes the development and acquisition of an athlete's morality, will, diligence, emotions, collectivism, mutual assistance, intellect, etc. Psychological preparation for competition includes the impact on the personality of the athlete in the light of didactic principles (consciousness, activity, accessibility, consistency). At this stage, the athlete's readiness for competition is formed and it is mobilized. Methodology of training an athlete requires a systematic approach to the development and improvement of all types of training, taking into account the individual qualities of the athlete. Therefore, individualization in the manifestation of the psychological aspects of the personality is required throughout the athlete's training. The emotional state of an athlete is in inseparable connection with his or her functional state and performance, which ultimately affects the result of the competition.

Y. A. Karvunis and L.V. Kapilevich write: "The sports component in sports tourism is aimed at forming a system of knowledge about sports tourism, teaching the basics of tourism training, elements of technique and tactics, methods of overcoming natural obstacles in the field. The component provides an increase of level of special physical preparation, a system of preparation of students for performance of sports standards and reception of sports categories in tourism, sports and pedagogical ranks. It lays down the skills of competitive activity, sports ethics and discipline" [11].

During the training process, the coach uses pedagogical methods that include observations of the performance technique, control of the impact on the external signs of fatigue (hidden, obvious, irresistible) and the sufficiency of the duration of rest between repetitions. They also include observations of daily changes in the quality of performance of physical loads and technical elements by athletes. Self-control is also important and includes daily observation of one's own condition and recording this data and the training loads performed in a training diary. Different training methods selectively affect the physiological functions of the body, which makes it possible to purposefully regulate their use to achieve results.

I.V. Lazunina and M.V. Kosheleva note: "A variety of means and their repetition contribute to the formation of the necessary motor skills, the stability of which often drives the students' achievements. Increasing the level of physical condition, respectively, contributes to the level of health. Both general means of physical training and special means are used for the development of physical qualities" [12].

All types of training are combined in a single pedagogical process in which the education of a harmoniously developed personality is the most important task. During the pedagogical experiment we conducted competitions between the control and experimental groups in the distance-walking discipline (rope crossing with handrails, mounted crossing, climbing a slope, setting up a tent, etc.). The results of passing the obstacle course on flat terrain by the control and experimental groups are presented in Table 2.

Table 2. Results of the obstacle course

Distance	Control group	Experimental group	Reliability of results, P
Obstacle course on flat terrain (min)	43.43±3.32	39.29±3.45	≤ 0.05

Orienteering is a sport that combines physical training and mental exercise. Using a compass and a map, the participant must cover a certain distance over a variety of terrain (mountains, forests, water bodies, steppe, urban conditions), while personally selecting his own route with mandatory marks on the control points.

I.V. Astrakhtantseva et al. note: "The surrounding nature in its primordial form has a powerful healing effect not only on the biological, but also on the social sphere, creating the necessary conditions for spiritual, moral and aesthetic development of the individual. It positively influences the psycho-emotional state, promotes increase of efficiency of training and competitive activity, slows down the process of fatigue" [13].

Orienteering is running in the terrain, using a map and compass to find the control points. The classic type of orienteering is running. In winter, orienteering is carried out on skis. One of the varieties of orienteering is moving on bicycles along a certain route with a check-in at each control point.

D.M. Zagorodnikova and N. L. Guseva write: "The specificity of this sport consists in the fact that not only physical condition is important for an athlete at competitions, but also cognitive mental processes (memory, attention, thinking, perception, feeling, etc.). This is explained by the fact that an athlete, moving along the distance, must periodically refer to the map, compare it with the terrain, anticipate his further actions, allocate his attention to

important landmarks, memorize them between control points to analyze the map on the run. In addition, the athlete is influenced by additional factors, such as weather, opponents, spectators, terrain, the difficulty of the course, etc." [14].

An athlete needs to develop strategic thinking for the distant future (the tournament, or the whole sports season) to correctly allocate forces and determine the primary goal of the season and competition for himself and his opponent. Understanding the motivation that drives his opponent helps him to compete successfully. The decline in sports interest can be explained by the development of a stereotype of training loads, tasks and techniques of exercise, as well as a mental stereotype of monotonous teams, remarks, and venue. With the aggravation of sports competition, the proportion of the use of special training means for improving not only technical skill but also special physical qualities increases significantly.

It is often believed that participation in any official competition should be aimed at winning a victory or achieving a personal record. This is wrong, because the struggle for victory, for a record, requires an athlete to show all his strength and extreme tension of the nervous system both before and during the competition. High results and victories should not always be demanded from athletes, as it may slow down the accumulation of competitive experience, especially for young athletes. Each participation in a competition should have a definite goal, a predetermined predominant focus.

V.G. Nikitushkin et al. write: "The system of sports competitions is the main system-forming factor of sports activity. Sports competitions are mainly aimed at the maximum realization of physical capabilities, demonstration of the level of preparedness, achievement of high results or victory in a particular sport" [15].

Girls of the control and experimental group participated in orienteering competitions. The main goal of the participants was to find control points (CP) in nature or within the city using a compass and map, the competition results are presented in Table 3.

Table 3: Results of orienteering competitions

Distance	Control group	Experimental group	Reliability of results, P
Sport orienteering running 2200 m (min)	12.22±3.12	11.58±2.25	≤ 0.05

The competitive period can be divided into three stages: pre-competition, main and post-competition. The pre-competition stage is characterized by a significant increase in the volume of speed and power loads and the development of special endurance, improvement of technical and tactical skills and psychological preparedness. At the pre-competition stage, much attention should be paid to the current control of the functional state of the athlete's organism and means of recovery. At this stage, repetitive, interval, alternating, uniform, control and competitive methods are of predominant importance. After participation in competitions, it is planned to reduce the load for recovery and preparation for the next one. At the post-competition stage, some reduction of training loads is planned, athletes continue to take part in competitions, which are not the major ones.

4 Conclusions

Sports tourism activities contribute to the physical development of girls, the development of physical condition, which have a positive impact on their health. The results obtained showed that the experimental methodology and optimization of the training process in sports tourism for girls was effective and girls showed high results in competitions. The results of passing the obstacle course on flat terrain were 43.43±3.32 min for the control group and 39.29±3.45 min for the experimental group. The results of sport orienteering

competitions (running for 2200 m) were 12.22 ± 3.12 min for the control group, and 11.58 ± 2.25 min for the experimental group. It is important to note that sports competitions are the primary form of testing the athlete's preparedness, including the level of their functional capabilities, as well as physical, technical, tactical, and psychological preparation. Participation in competitions makes it possible to identify not only the characteristic deficiencies in the preparation of the athlete but also the focus of the training process at a particular stage of training. Competitive practice contributes to the development of integral training and enriches technical and tactical experience, which cannot be developed in a training session, so the competitive activity is the most important component of training in sports tourism.

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