

## EFFECTIVENESS OF HEALTH TOURISM APPLICATION AS THE BASIS OF HEALTH RELATED RECREATIONAL TECHNOLOGY IN PRIMARY SCHOOL PUPILS' PHYSICAL EDUCATION

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**Abstract.** *Purpose:* to search effective methods of health tourism application in physical education of primary school age pupils. *Матеріал:* in the research 40 children participated, who were divided into control (9 boys and 11 girls) and experimental (10 boys and 10 girls) groups. We registered physical fitness, physical health, adaptation-reserve potentials and psychological state of primary school pupils. *Results:* specificities of health tourism means' application as the basis of health-related recreational technology were determined. We found improvement of children's health by 10%. Besides, we observed prevailing improvement of organism's resistance to environmental unfavorable factors and indicators of psycho-emotional state. *Conclusions:* application of health tourism means increases organism's functional potentials, physical health and psycho-emotional state of schoolchildren.

**Key words:** health tourism, technology, physical condition, physical education, primary school pupils.

### Introduction

One of main tasks of National strategy of education development in Ukraine for the period up to 2021 is formation of harmonious, moral and physically healthy personality with responsible attitude to own health. Recent time still greater anxiety has been being caused by physical condition of school age children. Unfortunately, with every school year the quantity of healthy children reduces [9, 10]. It requires systemic physical culture- health related work, starting from primary school. Analysis and generalization of scientific works permitted to mark out the following directions in solution of problem of primary school pupils' physical condition improvement: working out of new educational and physical culture-health related technologies [8, 15, 20], implementation of pedagogic control system of children's physical condition components [5, 7], improvement of program-normative principles of physical education [1, 13].

In opinion of scientists [2, 3] the problem of children's health improvement can be solved just at the account of extracurricular activities. Such activities can be realized in the form of recreational-health related motor functioning – specially organized motor functioning of proper scope and optimal intensity in leisure time. The purpose of such trainings is recreation of workability, promotion of comprehensive personal development, weakening of chronic diseases' risk [6].

Tourism (hiking) has been acquiring rather great popularity to day, as far as it is one of most accessible kind of health improvement. Tourism has great potential of schoolchildren's recreational –health related activity. Tourism is realized as: health related mean [12]; as complex of students' physical education means [17]; as method of organism's functional potentials' strengthening [11, 18, and 19].

Researches of health tourism implementation in primary school children's physical education are rather fragmentary [14, 15]. Questions of organization and practicing of extracurricular classes with primary school pupils have been still open. All these do not permit to completely realize health tourism potential as universal method of physical health improvement of schoolchildren.

### Purpose, tasks of the work, material and methods

*The purpose of the research* is to determine effective methods of health tourism application in physical education of primary school age pupils.

*The tasks of the research:*

1. Analyze literature sources devoted to application of health tourism means in primary school pupils' physical education.
2. Work out recreational-health related technology on the base of health tourism, oriented on strengthening of primary school age children's physical condition.

3. Determine effectiveness of the worked out recreational-health related technology in primary school pupils' physical education.

*Material:* in pedagogic experiment 40 pupils of 3-4 forms participated: they were divided into control (CG – 9 boys and 11 girls) and experimental (EG – 10 boys and 10 girls) groups. Stating experiment was conducted with sample of 163 pupils of primary school (82 boys and 81 girls).

*The methods of the research:* theoretical analysis and generalization of scientific literature data, pedagogic methods of research, physiological methods (pulse metering, spirometry, functional tests), psychological methods (test “Self-feeling, activity, mood” and “School motivation” be methodic of N.G. Luskanova), method of express assessment of physical health level (PHL) by G.L. Apanasenko), assessment of children organism's resistance to environmental unfavorable factors (methodic of G.N. Serdiukovska), assessment of children's adaptation-reserves' potentials (methodic of S.V. Gozak and O.T. Yelizarova), methods of mathematical statistic.

#### **Results of the research**

Stating experiment resulted in the data, which witness about low level of physical condition components in primary school age children:

- Medical examination found 53.99% of pupils with health problems;
  - Analysis of children organism's adaptation-reserve potentials showed that in 85.89% of primary school pupils there is tension of adaptation mechanisms (corresponds to pre-nosological state);
  - Functioning of children's respiratory systems is characterized by lower values of lungs vital capacity in respect to age standards;
  - 73% of primary school pupils demonstrated low physical fitness;
  - Physical workability of 76.69% children was satisfactory;
  - 55.21% of examined children had low PHL;
  - Indicators of primary school pupils' psychological state witness about increasing of tiredness in most of children (that is conditioned by low psycho-emotional reaction to learning load);
- 34.36 % of primary school children had low level of school motivation.

Thus, practicing of physical culture-health related work in physical education of primary school pupils for improvement of their physical condition is an urgent demand.

It is known that health tourism is popular among primary school children and their parents. Questioning showed that 40% of children prefer tourism as a kind of physical culture-health related activity (first of all in the forms of hiking and active rest). With it 26.26% of parents offer to practice more walks and hiking with children. In the same way 24.24% of parents are sure that for improvement of quality of physical education in school children shall spend more time in the nature.

Main means of health tourism are walks, hiking, overcoming of natural local and long obstacles, orientation on the terrain, special tasks on techniques of bivouac works, outdoor games and relays; compete functioning with tourism elements.

On the base of scientific-methodic literature data and results of our own studies [4] we worked out and substantiated recreational-health related technology on the basis of health tourism means as well as the content of recreation-health related trainings. Besides, we determined effectiveness of this technology's application in physical education of primary school pupils.

The target of the offered recreation-health related technology is improvement of primary school age children's physical condition. Realization of recreation-health related technology was conducted in three stages: preparatory, main and finalizing. In the frames of recreation-health related technology on the base of health tourism means we developed program of extracurricular activities for 3-4 forms children with week load 6 hours (216 hour per academic year).

The structure of the program includes three components: informational, motivational and operative-active. Every of these components, in its turn consist of several blocks. Informational component consists of the following blocks:

- Block “Be healthy”, which includes questions of health, hygiene, significance of motor functioning for health, techniques of self-control;
- Block “Friend of Nature” – contains about nature and protection of environment.

Motivation component includes the following blocks:

- “Contest” – children’s participation in physical culture-sports festivals, in mass competitions;
- “Competition” – children’s participation in group or school tourism and orientation competitions.

Operative-active component consists of the following blocks:

- Block “Tourists”, which is composed of exercises and tasks on tourism technique; tactic and technique of movement in hiking group on slightly crossed terrain; topical plays, contest and special tasks, competition functioning;
- Block “Orientation”, which includes exercises and special tasks on orientation, games and contest tasks with elements of orientation on terrain in conditions of gym; competition functioning;
- Block “Physical culture”, including physical exercises and complexes of general character; breathing exercises; exercises for correct carriage, for prophylaxis of flat foot; exercises for culture of movements, travel and jumps; different outdoor games and relays;
- Block “Local historians”. It covers excursions and walks for familiarization with natural and historic objects of the terrain, lore games on terrain.

In forms of classes’ organization play and competition methods prevail (in elementary forms). During three classes in one week children are offered to realize four roles, according to the name of block of operative-active component: in one of them main role is tourist; in other – orienteer, in third – local historian. Accordingly, content of classes and exercises correspond to given role. Role of physical culturists is played by children at all classes (warming up, recreational exercises, exercises for endurance, breathing exercises and etc.).

Physical loads, offered in the frames of recreational-health related program are only in aerobic mode of organism’s energy supply. Low intensity of physical load (HBR - 110-120 b.p.m.<sup>-1</sup>) is used in walking. In warming up and exercises of finalizing part we used physical load of moderate intensity (HBR - 125-135 b.p.m.<sup>-1</sup>). Highly intensive physical load (HBR - 140-150 b.p.m.<sup>-1</sup>) was used in exercises of main part of classes. Considering children’s PHL physical loads were variable. Differentiation of physical load was realized with the help of simplification of conditions of exercise’s fulfillment, reduction of quantity of repetitions and duration of exercise; change of exercise’s temp, reduction of stage duration or distance (see table 1).

**Table 1.** Parameters of physical loads during fulfillment of special physical exercises by children with different PHL

Special physical exercises	Physical health level									
	Average and below average					Average and above average				
	I	II	III	IV	V	I	II	III	IV	V
Flying Fox	+	1-2	s	5-7	60	+	2-3	M	8-10	50
Crossing on log	-	1-2	s-m	2-3	40	-	2-4	m-f	4-5	30
Crossing on parallel ropes	-	1-2	s-m	5-7	40	-	2-3	m-f	8-10	30
Crossing on bumps	+	1-2	m	4-5	40	-	2-3	m-f	6-8	30
Crossing on bumps with poles	+	1	s-m	4-5		-	2	m	6-8	40
Under-climbing and over-climbing	+	1-2	s-m	3-4	40-50	-	2-3	m-f	5-6	30
Free climbing (horizontal)	+	1-2	S	4-8	60	-	2-3	m-f	8-15	50
Free climbing (vertical)	+	1	S	2-3		+	2	m-f	4-6	50

Special physical exercises	Physical health level									
	Average and below average					Average and above average				
	I	II	III	IV	V	I	II	III	IV	V
“Pendulum” crossing	+	1-2	s-m	2-3	40-60	-	3-4	m-f	2-3	30
Obstacle course	+	1	s-m	20-30		-	2	m-f	30-50	60

Notes : I – simplifications of exercise’s fulfillment conditions; II – quantity of repetitions (times); III – temp of exercise’s fulfillment (s – slow, M – moderate, f – fast); IV – distance (m); V – duration of rest intervals (sec.).

For determination of the worked out recreation-health related technology’s effectiveness we conducted formation stage, which was fulfilled in the form of model experiment.

EG children were trained as per the offered recreational-health related technology on the base of health tourism means. CG children were trained by program “Junior tourists-local historians”, developed by Ukrainian state tourism center, during one week trainings in both groups were conducted trice. The essence of these both programs was equal. The difference was that in content: in CG sports tourism and sport orientation, directed to achievement of sports results, were accentuated; in EG content of program envisaged application of health tourism means and was based on recreational components (outdoor games, entertainments, contest-competition functioning, walks, excursions, hiking).

As a result of formation pedagogic experiment EG children demonstrated mainly higher positive changes in physical condition and organism’s functional state, comparing with CG children: statistically confident ( $p < 0.05$ ) reduction of heart beats rate in rest (by 6.02%), increase of lungs’ vital capacity (by 12.71%). In EG by 20% of children exceeded level of adaptation-reserve potentials of organism and by 5% level of physical workability.

Analysis of pedagogic testing results in dynamic of formation experiment witnesses that:

- CG children, comparing with EG children, demonstrated more significant reduction of quickness indicators (boys – by 4.01%, and girls – by 1.15%), indicators of general endurance (boys – by 6.84%, and girls – by 3.19%) and increase of speed-power abilities (boys – by 0.25%, and girls – by 1.67%, that is connected with usage of sports tourism means;
- EG children showed more significant, comparing with CG children, reduction of coordination abilities (boys – by 2.47%, and girls – by 3.44%), increase of static balance indicators (boys – by 5.22%, and girls – by 14.05%), flexibility (boys – by 80.44%, girls – by 40.93%).

In the process of formation experiment in EG by 10% more children increased indicator PHL than in CG. Besides, we observed prevailing increasing of EG children organism’s resistance to unfavorable environmental factors, comparing with CG: the cases of diseases – by 10.18% less and by 16.73% less quantity of days of diseases. In EG quantity of children who were not ill at all during academic year was by 5% higher than in CG.

In dynamic of formation pedagogic experiment EG children demonstrated statistically confident ( $p < 0.05$ ) more significant improvement of psycho-emotional state (self-feeling – increment more than by 0.29 points, activity – by 0.72 points and mood – by 0.52 бала). In EG by 30 % quantity of children with strengthened school motivation increased, comparing with CG.

Thus we proved purposefulness of the worked out by us tested and scientifically substantiated recreational-health related technology on the base of health tourism means. The program can be used in process of primary school age children physical education for improvement of their physical condition.

### Discussion

Analysis of scientific literature confirmed that:

- Level of health components of primary school age children is low [9, 10, 16];
- More than half of children have diseases of non infectious character, among which disorders of skeletal motor apparatus prevail [1];
- Most of children have low PHL [16].

Optimization of primary school pupils' motor functioning in extracurricular time is one of ways of their physical condition's improvement [9, 16]. Application of health tourism's different means positively influences on PHL of primary school age children's physical workability and physical fitness [15, 19]. With it means of health tourism have great potential for creation of innovative physical culture-health related methodic [14, 15, and 18].

#### **Conclusions:**

1. Analysis of scientific-methodic literature showed that physical education system requires optimization at the account of recreational-health related technologies as extra-curricular activities. Health tourism has great potential of means and is a reserve of children's motor functioning in extracurricular time.

2. The offered by us recreational-health related technology on the base of health tourism means is oriented on improvement of primary school pupils' health condition. The program material is composed of informational, motivation and operative-active components and has block system.

3. We have proved effectiveness of worked out, tested and scientifically substantiated recreational-health related technology on the base of health tourism means: in comparison with CG children, EG children demonstrated prevailing more significant positive changes of physical conditions, organism's functional state, adaptation-reserve potentials and physical workability indicators; PHL, organism's resistance to environmental unfavorable factors, indicators of psycho-emotional state.

4. The fulfilled research creates foundation for further scientific works, connected with foundation of recreational-health related technologies for pupils and for people of other age categories.

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#### **Conflict of interests**

The authors declare that there is no conflict of interests.

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