

SUBSTANTIATION AND WORKING OUT OF RECREATION HEALTH RELATED TECHNOLOGY ON THE BASIS OF HEALTH RELATED HIKING AND ORIENTEERING FOR JUNIOR SCHOOL AGE CHILDREN

Goncharova N.N.¹, Butenko H.A.²

¹National University of Physical Education and Sport of Ukraine

²Hlukhiv National Pedagogical University named after Alexander Dovzhenko

Abstract. *Purpose:* to study role of health related hiking and orienteering in improvement of children's physical conditions. *Material:* 163 children of 7 – 10 years old age participated in the research (82 boys and 81 girls). Tests for assessment of physical condition, physical health, adaptation reserve potentials and motor functioning of junior schoolchildren were used. *Results:* It was found that 46,01% of pupils can be considered healthy. Accordingly more than half (53,99%) have not infectious diseases. Among them nosologies of musculoskeletal apparatus prevail. In academic day with physical culture lesson average and high levels of motor functioning prevail (61,36%). Recreation health related technology on the basis of health related hiking and orienteering has been theoretically substantiated and worked out. Its structural components and content have been described. Realization of recreation health related technology is envisaged to be in three stages. Most of classes shall be in the open air. *Conclusions:* low level of adaptation reserve potentials and physical health of children have been determined that points at demand in health related measures in junior schoolchildren's physical education.

Key words: physical condition, physical education, junior schoolchildren, technology, health related hiking, orienteering.

Introduction

One of main tasks of physical education is health improvement of child's organism. But recent scientific researches witness about low effectiveness of modern physical education. It is noted that health level of rising generation causes justified anxiety [6]. Ukrainian physical education system does not meet today's requirements and needs qualitative renewal [7, 14, 15]. Organization of meaningful and active leisure is a source of different population strata's health improvement [1, 16, 17, 22]. Reconstruction of physical education system is possible at the account of working out of recreation health related technologies and their implementation in physical education system. Such technologies facilitate optimization of schoolchildren's motor functioning, rising of their physical and health condition levels, formation of firm motivation for recreation health related trainings, embedding of solid basis for healthy life style [1, 14, 15, 24, 25].

Recent years, in scientists' researches there have been observed some progress in solution of physical education effectiveness problem, concerning children of different age groups [1, 4, 10, 13, 19, 21]. Special attention is paid by scientists to physical education of junior school age children [8, 9, 14, 15, 23]. Exactly in this period foundation of physical condition and health is embedded [2, 8, 13]. Specialists prove that implementation of recreation health related technologies on the base of different motor functioning kinds and sport elements in physical education system give positive results [8, 14, 20]. Junior forms pupils have natural strive for cognition of environment. In combination with natural motor functioning means (walks and run) [1, 2, 15] it creates favorable conditions for formation of children's motivation for health related classes. Such harmonious combination is characteristic for health related hiking and orienteering.

In opinion of physical education specialists [4, 11, 12, 18] health related hiking is a versatile method with great potential for successful teaching, education and health improvement of rising generation. Orienteering is becoming more and more interesting for scientists as effective health related and recreation method [3, 5].

Analysis and generalization of special literature data permits to affirm that great number of scientists studied introduction of health related hiking and orienteering in physical culture lessons for junior school age children [8, 13, 14]. As well as regarded them as a kind of extra curriculum activity [3, 4]. With it a lot of questions about organization and conduct of optional classes still remain unsolved. Methods of health related hiking and orienteering as versatile tool of junior pupils' physical condition's improvement made their foundation.

Purpose, tasks of the work, material and methods

The purpose of the research to theoretically substantiate and work out recreation health related technology on the base of hiking and orienteering means for improvement of junior school age children's physical condition.

The tasks of the research:

1. To analyze of literature sources devoted to physical condition of junior school age children.
2. To determine physical condition indicators of junior school age children.
3. To substantiate and work out recreation health related technology on the base of health related hiking and orienteering, directed on improvement of junior school age children's physical condition.

Material: in stating pedagogic experiment 2-4 forms' pupils of comprehensive school № 5 (Krolevets, Sumskaya region) participated (n=163).

The methods of the research: theoretical analysis and generalization of scientific-methodic literature, pedagogic observation, pedagogic experiment, anthropometry method, indices of Rorer, Robinson and Kerdo, express assessment of health condition by G.L. Apanasenko, methods of mathematical statistic.

Parents gave written consent for their children's participation in experiment. The research was approved by committee on ethic of university.

Results of the research

Analysis of scientific literature witnesses that most of researchers see way out from this problem situation in physical education at the account of modern technologies: health related physical culture, health protective, health related recreational.

Experiment permitted to detect that most of children demonstrated average level of physical condition: by indicators of body length – 72,39% (n=118), body mass– 71,17% (n=116), chest circumference– 78,53% (n=128). It corresponds to hygienic norms. Absolute compliance with hygienic norms was found in boys and girls. With it, it was determined that 74,23% (n=121) of children grow harmoniously, 21,47% (n=35) have disharmonious physical condition and 4,3% (n=7) of junior schoolchildren have acute disharmonious condition. Most of deviations from hygienic norm belongs to deficit of body mass that is a certain foundation of disharmonious physical growth (28,58% (n=12)).

Analysis of children's adaptation-reserve potentials on the basis of screening assessment showed that 85,89% (n=140) of junior forms pupils have moderate tension of regulatory mechanisms. It corresponds to pre-nosological state. Diagnostic of junior schoolchildren's health showed that 55,21% (n=90) of children have low physical health level (PHL), 34,97% (n=57) have PHL below average, 9,82% (n=16) have average PHL. With it there were no children with PHL above average and high. Analysis of presence of chronic diseases showed that 46,01% (n=75) of junior pupils were healthy. Accordingly more than half (53,99%, n=88) have not infectious diseases. Among them diseases of musculoskeletal apparatus prevail.

Thus, it was proved that great number of junior school age children was in group of risk, on the verge of nosology. That is why this age category of children requires more attention to their physical functioning. It was determined that without physical culture training in day off and academic day motion functioning is insufficient. In more than 50 – 56,82% it is at very low level. With it, in academic day with physical culture lesson average and high motor functioning levels prevail (61,36%).

Thus, problem of junior school age children's insufficient motor functioning can be solved at the account of creation and implementation of recreation health related technology in academic day, in which physical culture lesson is not stipulated as well as in day off as optional training. It can ensure optimal level of schoolchildren's motor functioning and become a solution of problem of physical condition's improvement.

Analysis of scientific-methodic literature, practical experience of specialists in field of physical culture, results of stating experiment permitted to work out recreation health related technology on the base of health related hiking and orienteering. Its purpose is improvement of junior school age children's physical condition. The offered recreation health related technology meets criteria of projecting of recreation activity system: scientific basis, systemic and structural character, controllability, economic, effectiveness and reproducibility [1].

Realization of recreation health related technology is envisaged in three stages:

Preparatory (setting a problem; determination of purpose and tasks, characterizing general conception of the technology; definition of technologies peculiarities);

Main stage (formation and choice of means, forms and methods as the basis of technology's model; creation of this model in the form of recreation health related program; assessment of children's physical condition and control over it);

Finalizing stage (analysis of expected results; determination of technology's effectiveness on the base of repeated assessment of schoolchildren's physical condition), (see fig.1).

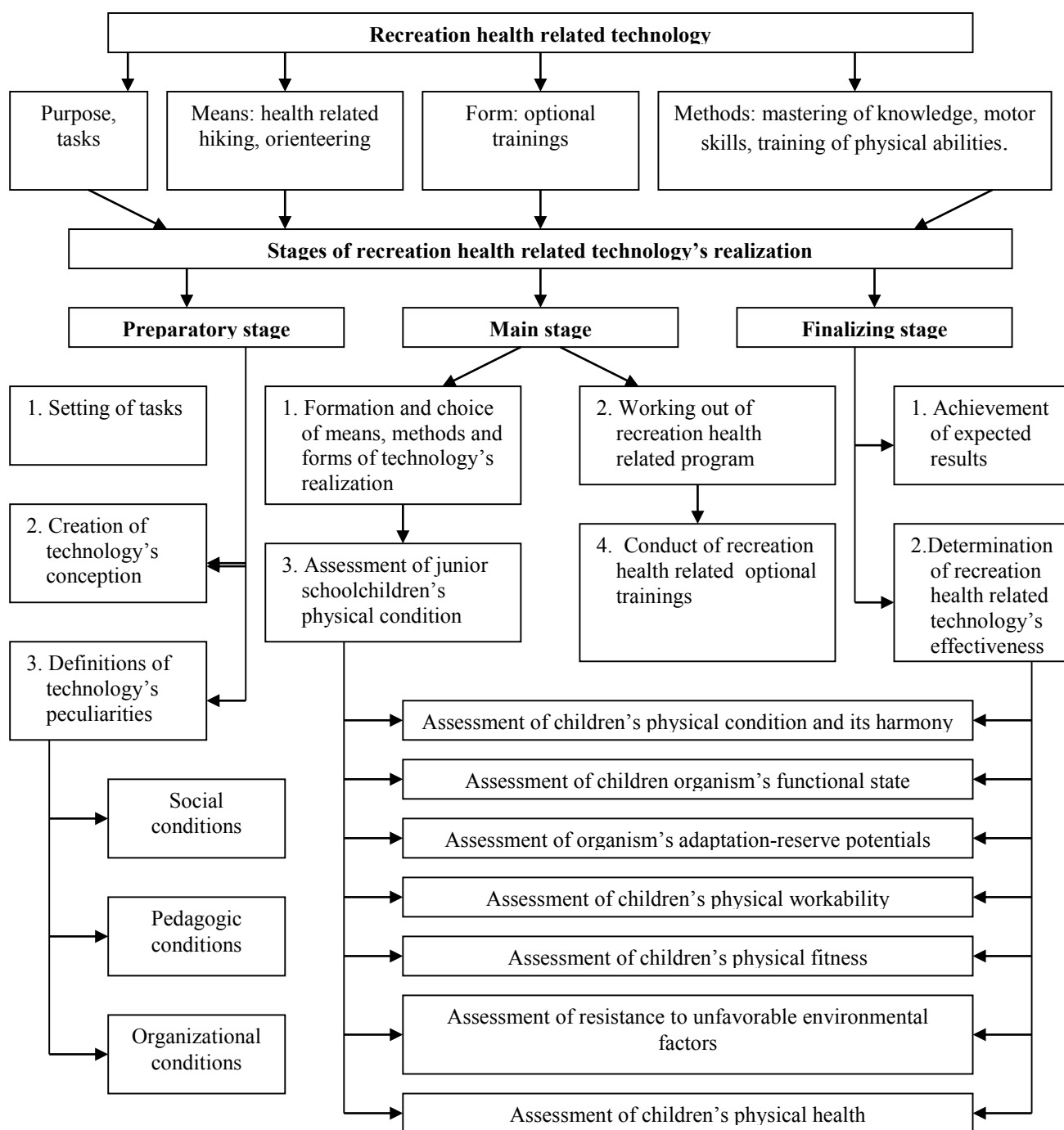


Fig.1. Block diagram, of structure of recreation health related technology's realization

At the main stage of technology's realization we worked out recreation health related program. The program is an optional course for pupils of 3rd and 4th forms. When working out the program we considered content and volume of "School of active rest (recreation)". This component of physical culture program for comprehensive educational establishments (1-4 forms) was created by authors collective under guidance of T.YU. Krutsevych [10]. Our technology also considered content of academic disciplines "Me and Ukraine", "Principles of health", and "Study of Nature".

Optional recreation health related trainings are usually of practical character. Theoretical information is delivered mainly as talks as structural component of practical training.

The structure of the worked out program meets requirements of physical culture program for 1-4 forms. It consists of three components: informational (general knowledge in field of physical culture; knowledge of health, its protection and strengthening; knowledge of Nature and its protection, behavior in nature; knowledge of safety regulations in natural conditions, excursions, walks, competitions); operational-active (motor functioning of low, average and high level children; its orientation; consideration of individual features of schoolchildren's physical condition and their creative activity); motivation (participation in socially significant measures, satisfaction of personal demand in communication, motor functioning and creative activity; formation of orientation for healthy life style).

Interconnection of program's components is realized through objective approach to their mastering. Assessment of final result is fulfilled with the help of control over successfulness of special individual and collective tasks and exercises' fulfillment. This assessment is of verbal character. Most of trainings shall be in the open air.

The structure of recreation health related program consists of three periods: preparatory (diagnostic of children's physical condition; organism's adaptation to physical loads), main (improvement of physical condition; acquiring of motor skills; training of physical abilities), supporting (maintaining and support of the achieved physical condition's level).

Discussion

Analysis of scientific literature confirmed that level of modern children's physical condition is unsatisfactory [4, 7, 11]. Morbidity indicators are constantly increasing [6]. With it, conditions and regiment of teaching influence significantly on their health [2, 9, 14]. Scientists think that the root of this problem is children's insufficient motor functioning [2, 18, 20]. Physical culture lessons satisfy children's demand in motor functioning only by 25 – 30% from hygienic norm [10]. That is why intensification of motor functioning of different age groups' children is an urgent problem of physical education.

Intensification of junior school age children's motor functioning is possible with the help of recreation health related technologies [1, 10, 15]. Means of health related hiking and orienteering positively influence on indicators of schoolchildren's physical condition [4, 5, 11, 18, 20], including junior school age pupils [8, 13, 14].

The fulfilled research confirmed results of other authors about low level of physical condition indicators of junior school age children [4, 14, 15]. With it, anthropometric indicators of most of children meet average level of physical condition [9, 11, 14, 15].

Besides, we expanded the data of domestic [4; 10; 14; 15] and foreign authors [2, 16, 17, 22, 23] about demand in optimization of junior schoolchildren's motor regiment. Optimization of motor functioning in extra curriculum time is one of ways to improvement of junior schoolchildren's physical condition [2, 4, 15]

Conclusions:

1. Analysis of scientific-methodic literature showed that physical education system is not effective and requires upgrading at the account of implementation of recreation health related technologies' implementation.

2. Health related hiking and orienteering have significant potential of health related means. It is a reserve of children's motor functioning in extra curriculum time.

3. Stating experiment showed low level of adaptation reserve potentials and physical health of junior school age children. This level corresponds to pre-nosological state that requires realization of health related measures.

4. The offered recreation health related technology on the basis of health related hiking and orienteering is directed at improvement of children's physical condition. It consists of purpose, tasks, means, forms and methods. The technology is realized in three stages: preparatory, main and finalizing.

The prospects of further researches imply analysis of the offered recreation health related technology's influence on physical condition components of junior forms pupils and testing of its effectiveness.

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Conflict of interests

The authors declare that there is no conflict of interests.

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Information about the authors:

Goncharova N.N.; <http://orcid.org/0000-0002-3000-9044>;
nata_infiz@mail.ru; National University of Physical Education
and Sport of Ukraine; Fizkulture str., 1, Kiev, 03680, Ukraine.

Butenko H.A.; <http://orcid.org/0000-0002-5479-3224>; shvm-
bg@yandex.ru; Hlukhiv National Pedagogical University
named after Alexander Dovzhenko; Kievo-Moskovskaya str.,
24, Hlukhov, Sumskaya region, 41400, Ukraine.

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