Formation culture of students’ health using fitness technologies in HEIs

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Abstract
The article examines physical education as the concept of culture of students’ health in the humanistic paradigm of higher education. It is mentioned that the process of modernization is touched of all sphere of students’ life. The reasons of necessity of reforming and moderation of students’ physical education in higher educational establishments are found out. The main aspects of modern fitness-technologies of health tendency as effective means of improvement students’ health state and physical development are determined. The necessity of focused implementation of new innovation fitness-technologies into the system of higher educational establishments of Ukraine is scientifically based. Decreasing physical activity of students youngsters due to the fact of rapid increase of informational technologies are elicited recently. This became the reason of bad health, decreasing physical level and resistance organism to the bad conditions of environment.

The only effective way of resistance to these is health related fitness activity that is able to strengthen and maintain proper health level, increasing activity and fitness level and improving morphofunctional parameters of students. In order to actualize these principles it is necessary to use new approaches, means and technologies and individual age peculiarities and needs of students.

The analyses of modern tendencies of improving the system of physical culture provides an opportunity to state that new objective conditions for solving this problem in the space of new social-culture phenomenon – health-culture of modern society are forming now. Specific meaning obtain the necessity of implementation of health related fitness as the field of forming cultural, general educational literacy skills of the youngsters within the understanding of health meaning of physical culture as a part of general culture of higher education.

Very powerful stimulus of implementation of health related fitness into the higher educational establishments of Ukraine is its positive influence on health state, adaptive and physical capabilities of modern youngsters that is the main and high-priority task of our state.

Keywords: health, culture of health, students, fitness, fitness technology, fitness culture, educational process, higher education institutions.

Огляд

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Анотація

Катерина Максимова. Формування культури здоров’я студентів за допомогою фітнес-технологій у ВНЗ. У статті розглядається фізичне виховання як поняття культури здоров’я студентів у гуманістичних парадигмах вищої школи. Зазначається, що процес модернізації торкається всіх сфер життя студентів. З’ясовується причина необхідності реформування та підвищення фізичного виховання студентів у вищих навчальних закладах. Визначено основні аспекти сучасних фітнес-технологій оздоровлення як ефективного засобу покращення стану здоров’я та фізичного розвитку студентів. Науково обґрунтовано необхідність цілеспрямованих впроваджень в систему вищих навчальних закладів України нових інноваційних фітнес-технологій. Останнім часом стосовно зниження фізичної активності студентської молоді через стрімке зростання інформаційних технологій. Це стало причиною погіршення самочуття, зниження фізичного рівня та стійкості організму до неблагоприємних умов середовища.

Едним ефективним способом протидії є оздоровча фітнес-діяльність, яка здатна зміцнювати і підтримувати напружений рівень здоров’я, підвищуючи активність і рівень тренованості та покращуючи морфофункціональні показники учнів. Для актуалізації цих принципів необхідно використовувати нові підходи, засоби та технології та індивідуальні вікові особливості та потреби учнів. Аналіз сучасних тенденцій удосконалення системи фізичної культури дає можливість стверджувати, що зараз формуються нові об’єктивні умови для вирішення цієї проблеми в просторі нового соціально-культурного явища – фітнес-культури сучасного суспільства. Спеціфічного змісту набуває необхідність впровадження оздоровчого фітнесу як сфери формування культурної, загальносоціальної грамотності молоді в рамках розуміння оздоровчого значення фізичної культури як частини загальної культури вищої школи. Дуже потужним стимулом впровадження оздоровчого фітнесу у вищих навчальних закладах України є його позитивний вплив на стан здоров’я,
Introduction

Currently, the system of higher education of Ukraine is at the stage of fundamental changes that are characterized by a new understanding of the goals and tasks of training, awareness of the need to modernize the system of some educational disciplines, in particular physical education, by new modern methods and techniques of effective educational and recreation of students using fitness technologies with the purpose of creating qualitative higher education and the formation of a healthy young generation often educated generality and high culture, namely culture of health [1].

Recently, there is a rapid deterioration of the health of the population of Ukraine, especially students youth due to the significant drawbacks in the health system, social and economic crisis, sharp decline in the level and quality of life against the background of poor environmental and political situation in the country in general [2].

Among the main reasons, the deterioration of the health of modern youth some scientists (G. Ivanova, 2000; E. Zaharin, 2008; S. Garkusha, 2013; T. Zhloba, 2019; V. Zhammrdiy, 2019) state in the ineffectiveness of the modern organization of physical education in multi-profile higher educational institutions [3].

Many scholars argue that now in front of pedagogical science was the problem of grafting skills of a healthy lifestyle of students youth, and for this prerequisite is the formation of such a socio-cultural phenomenon as a culture of students’ health (Y. Melnik 2003; M. Grynyova, 2005; Zh. Malakhova, 2013; M. Goncharenko, 2016) [4].

Some scholars (Y. Boychuk, 2008; D. Voronin, 2006; G. Gryban 2019; N. Grybok, 2013; G. Karkenko, 2011; M. Nosko 2016; O. Faichuk, 2013) claim that one of the reasons of the deterioration of all components of students’ health is the lack of established culture of health as a leading factor in its strengthening and preservation throughout life [5].

Foreign experience (S. Hespe-Biber, 2006; S. McKenzie, 2013; R. Sassatelli, 2010; K. Volkwein-Caplan, 2013) indicates that in many countries of the world it is important to provide the club forms of organizing physical education, which they are implemented on the basis of activity of educational and recreational complexes, as well as in aggregate with traditional academic classes that promote optimization of motor activity of students and allow to provide variability and at the same time high efficiency of the physical education of students youth [11; 12].

In this regard, at the present stage the development of Ukraine, the primary task is to strengthen the health of students youth by the formation of their culture of health.

The problem of culture of health of students youth and pedagogical aspects of its formation are highlighted in scientific papers of many scientists (V. Gorashchuk, 2003; I. Sorokina, 2004; G. Kapranova, 2010; E. Blasko, 2010; L. Lovk, 2013; N. Grybok, 2013; Yu. Yaschov, 2013; S. Ivanchikova, 2016; L. Izbash, 2017) [6]. However, the problem of the developing of students’ health with the use of fitness technologies from discipline in higher educational establishments (HEIs) is still substantiated and requires further scientific exploration [7].

The fact of deterioration of students youth has intensified the search for more effective methods of improving the younger generation, among which the honorable place of health fitness, which became the cultural emanation of the western lifestyle [8]. Recently, the role of physical education as a discipline needs modernization in accordance with the current requirements of the present. Therefore, it is necessary to introduce the latest innovative approaches to the educational activities of students in the system of higher professional education, namely the introduction of the phenomenon of fitness culture, as an effective means of forming a proper health and culture of students’ health, based on cultural and health principles, which aimed at forming students youth the foundation of the culture of health, as well as values, needs, knowledge, skills and skills to maintain and strengthen health with fitness technologies [9].

Thus, scientific substantiation of the need to form the culture of students’ health, the development of its software and methodological support, determining the role of fitness culture in the formation of proper physical, mental, social health, increase physical preparedness, adaptation and functionality of students from multi-profile HEIs using fitness technologies in the process of higher education is the importance, relevance and problem of scientific research. That is why the topic of the dissertation was devoted to the actual problem of the formation of students’ culture of health using fitness technologies, developing its software and methodological support, determining the role of fitness culture in the formation of a proper health and adaptive capacity, as well as improving the physical development of student youth using fitness technologies in the process of higher education [10].

The purpose of the research is theoretical substantiation, development and experimental verification of the effectiveness of the model of students’ culture of health from multi-profile HEIs by the use of fitness technologies.

The object of research is the process of physical education of students from multi-profile HEIs.

The subject of research – a model for the formation of students’ health from multi-profile HEIs by the use of fitness technologies.

Materials and methods of research

Theoretical, empirical research methods and methods of mathematical statistics were used to solve the tasks of the research, which contributed to the further conduct of the experiment.

Theoretical research methods were the method of conceptual and comparative analysis, which compared the existing theoretical approaches to solving the current state of the physical education system of students of higher education based on the generalization of philosophical and methodological, psychological and pedagogical and educational literature.

Analysis and generalization of pedagogical experience and practice of teaching physical education. The analysis of pedagogical experience allowed substantiating the attitude of higher education students to the educational process of physical education.

Methods of structural-system analysis and modeling. The use of structural-system analysis and modeling methods allowed developing a model of forming a health culture of students of various free economic zones with the use of fitness technologies. The group of empirical methods included were observation, questionnaires, testing, evaluation of the obtained data; paleo-pedagogical monitoring for the primary comprehensive examination of students in order to determine the parameters of physical, mental, social health, physical fitness, adaptive and functional capabilities of students of various HEIs; pedagogical experiment to test the effectiveness of the use of the
model of forming a culture of student health with the use of fitness technologies of various HEIs.

Results of the research

The study included 4 stages during 2014-2020. The first stage of the study (2014-2015) was to study modern pedagogical, methodological, scientific, philosophical and pedagogical, psychological and pedagogical, medical literature, reporting documents and scientific works, in order to identify the existing state of health and physical fitness of students from multi-profile HEIs; in the analysis of domestic and foreign experience, the use of various fitness programs and teaching discipline “Physical education” from multi-profile HEIs.

The second stage of the study (2015-2016) is devoted to the conduct of a staging experiment, which took part in among 256 applicants of higher educational institutions aged 17 to 19 years. The task of this stage of the study was to identify the most popular health fitness programs among students from multi-profile HEIs and diagnosing parameters of physical, mental, social health, physical fitness and functional capabilities of students.

The third stage of the study (2016-2018) is devoted to the formation of a pedagogical experiment. Stage envisaged the introduction of a created model for the formation of a students’ culture of health from multi-profile HEIs by the use of fitness technologies in the educational process of physical education. The experimental group involved in 182 applicants from multi-profile HEIs. Students are divided into the control (n=89) and the experimental (n=93) groups.

The experimental group studied according to an improved physical education program with the use of fitness technologies (in the amount of 50% of the total hours), as well as attended classes on a sample discipline “Foundations of Fitness Culture”. The control group studied according to the generally accepted physical education program.

The fourth stage of the study (2018-2020) was the statistical data processing, in the analysis and generalization of the results of the study, in the execution of the dissertation, in the introduction of the results in the educational process from multi-profile HEIs.

At the beginning of a pedagogical experiment, in order to determine the rating of students’ interest in engaging in various types of fitness programs, 256 students (126 girls and 130 guys) of the first year from multi-profile HEIs were conducted.

It has been found that the first place in the ranking of the most popular classes is the Fitness Mix (21.1% of the total respondents), which provides for the training system during which each occupation is carried out at different fitness directions (Dance Aerobics, Functional Training, Body Sculpt, Step Aerobics, Fitball, Pilates Workout, Crossfit Training), aimed at comprehensive development of all organism systems, improving the health and level of physical fitness. From the second to the fifth place in the ranked programs Step Aerobics (17.0%), Dance Aerobics (13.6%), Functional Training (10.6%), Tabata Training (8.4%).

The boy-students are advantageous to those fitness programs that are aimed at performing power loads. Thus, the CrossFit Training (18.1% of the total number of respondents) was the most popular, which is aimed at developing high-speed qualities using heavy and athletics, weight sports and gymnastics. This program develops flexibility, strength, coordination, agility, endurance of the body, improves all morpho-functional indicators of the body. From the second to the fifth place in the ranking, Kickboxing (17.0%), Tabata Training (16.2%), Body Sculpt (12.8%), Barbell Workout (10.3%).

Subsequently, the level of adaptation potential of students for morpho-functional indicators and the classification of levels of adaptive potential by R. Bayevsky’s method (1979) was determined. The calculations conducted by us allowed to identify the number of students with different levels of adaptive potential. Thus, to the 1st level with normal, moderate functional stresses of the body systems belongs 1.9% (5 people) of higher education, which may be able to engage in the main group and attend optional classes from various sports. It should be noted that the main number of students belongs to the 2nd level of 70.3% (180 students), which enables students in the main group for all physical exercises. A significant number of applicants (27%) by adaptive potential belongs to the third level, which significantly reduces their ability to work. With 4th adaptive level with unsatisfactory adaptation 0.8% which means the sharp decrease in the functional reserves of the organism, which indicates the breakthrough of regulatory mechanisms.

In order to increase the culture of students’ health, the model for the formation of a culture of students’ health from multi-profile HEIs by the use of fitness technologies, which includes such blocks: methodical-target, organizational-content, activity and productive blocks has been developed. The methodological and target block includes such components as: the goal, task to increase the culture of students’ health; the main scientific approaches and principles that have become fundamental to create the model. The organizational-content block contains such components as: experience in forming the culture of students’ health; in the generalization of organizational and pedagogical conditions for the formation of students’ health culture by means of fitness technologies. The activity block reflects the forms and methods used in the formation of students culture of health from multi-profile HEIs by the use of fitness technologies. The resulting block is represented by a comprehensive method of control over the formation of a phenomenon under investigation, criteria, indicators and levels of the culture of students’ health by means of fitness technologies. To characterize the quality of health development, criteria are chosen: cognitive (knowledgeable) – the possession of students with a set of knowledge necessary for the effective formation of their own culture of health by means of fitness technologies; motivational-valuable (valuable) – the formation of motivation to form its own health culture; activity (behavioral) – experience in forming its own health culture by means of fitness technologies. The levels of formation of students’ health from multi-profile HEIs are determined by the use of fitness technologies: low, medium, high and highlighted diagnostic tools.

The educational and methodical support of the process of forming the culture of students’ health, which is to modernize the content of the process of physical education and the introduction of modern fitness technologies as effective means of its implementation.

The effectiveness of the implementation of the created model is provided by organizational and pedagogical conditions in the system, namely: improvement of the educational process by modernizing the content of the curriculum on physical education by individual modules and the creation and implementation of a sample discipline “Foundations of fitness culture”; implementation of the most popular types of fitness programs for students from multi-profile HEIs during auditional and extraaudi- tory work on physical education; implementation of continuous monitoring of health components, physical and functional capabilities of students; effective management of the formation of students’ health by means of motivational-value attitude to its own health culture in the process of professional training.

In basic experiment took part 182 applicants from...
multi-profile HEIs. Students for which the created model was implemented, the modified study program on physical culture and a selective discipline “Foundations of fitness culture” were entered into the experimental group in the number of 93 students (47 girl-students and 46 boy-students). The control group consisted of 89 students (46 girl-students and 43 boy-students), which studied according to the approved work program on the discipline “Physical Culture” without using of fitness technologies.

At the beginning of the introduction of the model for the formation of culture of students’ health from multi-profile HEIs by the use of fitness technologies, testing the level of knowledge on fitness culture on a 1-point score of evaluation was conducted. At the end of the second academic year, a re-testing of knowledge was carried out.

According to the results of conducted testing after the introduction of a model for the formation of a culture of students’ health from multi-profile by the use of fitness technologies, it has been established that most modules have reliably higher scores. Thus, the greatest changes in the level of knowledge were obtained by the topic 4 “Phenomenon of culture of health in the context of fitness culture” (t=4.90; P<0.001) and on topics 5 “Cultural enaction of fitness culture as means of recovery by modern fitness technologies” (t=4.68; P<0.001). These topics were the practical basis for using fitness technologies in order to formulate students’ culture. Consequently, the introduction of theoretical material for the formation of culture of health led to a significantly increase the level of knowledge about the culture of students’ health.

In addition to improving the educational component of culture of health component during the conducted two-year experiment, medium-group indicators of adaptation potential in girl-students during classes under the Fitness Mix programs due to the introduction of a model for the formation of culture of students’ health. Thus, the indicators for the first year of classes increased by 0.18 c.u. (t=1.50; P>0.05), in the future (for the second year of classes), the indicators have improved by 0.46 c.u. (t=2.95; P<0.01), and during the study of the average group AP amounted to 2.56 which is significantly better by 0.64 c.u. (t=4.79; P<0.001) than output data. At the same time, the results of the control group did not have reliable shifts.

The CrossFit Training program, under which students of the experimental group studied also had positive changes. So, for the first year of the middle-group results of AP with 3.15 c.u. have improved by 0.26 c.u. (t=2.16; P<0.05), for the second year by 0.46 UM. (t=3.58; P<0.01), which in the final measurement reached 0.72 c.u. (t=5.63; P<0.001).

The use of the model of the culture of health culture with the use of the best fitness classes for 2 years of training has made it possible to increase all the health of girls-students and boys-students of the experimental group.

The defined influence of other programs on health components are less significant, and the results can be taken into account when choosing physical education and health exercises.

In order to identify the effectiveness of the administration of the author’s model in the educational process, an assessment of the quality of the life of students of control and experimental groups during a two-year pedagogical experiment, which included such indicators: “training”, “personal achievements”, “health”, “communication with friends”, “close-ups”), “support”, “optimism”, “tension”, “self-control”, “negative emotions”, “life quality index”.

Classes for the fitness programs have different influence on the level of satisfaction with the quality of life of guys-students, as evidenced by data on the use of the health of boys-students of programs of control and experimental groups.

Conclusion

Thus, the obtained data of a pedagogical experiment indicate the effectiveness of the implementation of an experimental model for the formation of culture of students’ health in multi-profile HEIs using the fitness technologies.

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