Health Formation as a Regulator of Strengthening Human Capital

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Keywords: Human Capital, Health, Educational Organization, Quality of Life, Social Management.

Abstract. The article considers the problem of educating a healthy, physically developed, spiritually rich young generation as a guarantee of the successful functioning of the social system as a whole. The formation, strengthening the health of students, ensuring their psychophysical readiness for future professional activities in the educational system is the task of the departments of physical education and sports. The article analyzes the activities of the Department of physical education and sports of Belgorod State Technological University named after V.G. Shukhov in social management of the health formation process from the position of high-quality human capital creation.

The assessment of the developed program for improvement of students in the following directions is presented: a condition of material and sports base, the decision of personnel issues, improvement of work forms on physical culture and sports.

Dynamics of students' physical health indicators, attendance of educational and training lessons is studied. The role of systematic work on promoting healthy lifestyles, antisocial behavior prevention, prevention of formation and development of bad habits is studied. The implementation of the educational process in the system of traditional values provides an opportunity for a positive, creative life of a person and society.

Strengthening the health of students, personnel, university lecturers and the city's population is seen as a promising investment in human capital to achieve social well-being.

1. Introduction

The upbringing of a healthy, physically developed, spiritually rich young generation is the key to the successful functioning of the social system as a whole and one of the system-forming factors of its stable development.

From the perspective of social well-being and economic growth, the most effective investments are in improving the level and quality of people life, education and health, which are components of human capital.

The return for society from investments in human capital is largely determined by the system of values on the basis of which relationships between people are built and state construction is carried out.

The formation of moral stability, rejection of deviant behavior and negative aspects of life contributes to the fulfillment of social expectations [1]. In this regard, the role of the educational process in the system of traditional values, which provide an opportunity for a positive, creative life of a person and society, is increasing.

For self-realization of a mature personality, it is important to be successful in the professional field. The desire to work, the well-being of a person, his mood, the ability to give joy to other people is mainly determined by the harmonious development, the presence of functional order and peace of mind. The happiness of a person, the achievement of goals in life, and the opportunity to take
advantage of the results of their work, to provide real help in the appropriate social environment, largely depends on the state of health.

To date, mankind has achieved significant results in the study of the material world. Technique and technology have greatly changed the working and living conditions. Morality and spirituality were in secondary roles. Man has knowledge of the external nature of things and is illiterate in regard to his inner being, which affects his health, because in regard to health he relies too much on the achievements of civilization. The decrease in the personal resource of life is reflected in the aggregate on the number of economic losses of the state. For the productive realization of human labor potential is relevant personality-oriented self-and mutual assistance, based on individual health forecasting. This allows for active and timely formation of health-saving behavior with all social, psychological and biological components [2].

2. Problem Statement

In a market economy, the potential for personal health assumes the role of a leading factor in a successful professional career. The social demand for specialists who are able to fulfill the tasks in the required volume and rhythm is growing. A healthy look is becoming an integral element of the image of successful, business people, quality characteristics of professionals. In society, attempts are made to form a fashion for a healthy lifestyle. There are new directions in the field of physical culture and sports activity [3,4], the food industry, environmental safety of the living environment, restrictions on the sale of tobacco products, alcohol and a number of other measures.

At the same time, a characteristic feature of the Russian reality is the consumer attitude to the health of members of society, the absence of a stereotype of self-preservation behavior. Recently, there is a certain trend in the dynamics of the development of pathological conditions: many people, fearing to lose their jobs, are much less likely to seek medical help, so the number of people with severe chronic diseases is increasing.

In General, the health indicators of the Russian population indicate a fairly high level of overall morbidity. At the same time, the proportion of young people with health problems has increased significantly. According to experts (doctors, psychologists, teachers), the state of physical health of young people in our country is a serious problem. More than 50% of boys and girls who have graduated from school already have 2-3 chronic diseases. Only 10-15% of graduates can be considered healthy. Against the background of improvement in some demographic indicators of the Russian population in recent years (birth rate, life expectancy), data on the incidence of young students characterize the strengthening of negative trends [5]. The state of human health is affected by increasing destructive trends: social stratification of the population, the decline in the standard of living of a significant part of it, the imposition of the cult of consumption, the primacy of material goods, entertainment, enjoyment, the spread of various kinds of pathological dependencies.

The loss of social significance in a number of spheres of activity, which act as a field of self-realization and self-expression of a particular person leads to the destruction of vital interests, loss of meaning in the application of their efforts in this direction. By attributing a social status to an individual, society provides him with certain opportunities and, in turn, expects certain achievements from him that activate the motivation for self-efficacy. The process of promoting health is laid down and modulated by the combined action of motivation of the individual and the social significance of his activities. This dictates the need to solve the problem of professional self-determination for the individual in accordance with the real demand for education in the labor market (table 1).
Table 1. Indicators of the Medical Care Quality of the Russian Population in the Central Black Earth Economic Region in the Context of the Life Quality Improving (2018), [12].

| Indicator* | Belgorod | Voronezh | Kursk | Lipetsk | Tambov |
|------------|----------|----------|-------|---------|--------|
| Final Index of quality of medical care (from 0 to 100) | 43       | 16       | 21    | 21      | 60     |
| Assessment of the sphere of life - healthcare | average  | unsatisfactory | average | average | average |
| Assessment of the sphere of life – physical education and sports | good     | below average | average | high    | good   |
| Proportion of people who are mostly satisfied with the quality of health care | 63%      | 67%      | 57%   | 65%     | 64%    |
| The proportion of people who believe that their city has enough medical facilities | 24%      | 23%      | 23%   | 20%     | 23%    |
| Proportion of people who believe that it is necessary to take measures to reduce alcohol consumption | 68%      | 60%      | 58%   | 69%     | 72%    |
| Proportion of people who believe that measures should be taken to reduce the number of smokers | 76%      | 69%      | 61%   | 71%     | 74%    |
| Final Index of life quality (0 to 100) | 55       | 50       | 41    | 50      | 51     |

Note: * compiled by the authors

In the context of socio-economic transformations in modern Russia, the tasks of strengthening the physical, spiritual and social health of a person, the formation of a healthy lifestyle and sporting lifestyle are of particular importance. The main instrument of cultural continuity of generations, economic, social and spiritual renewal of society is education. The humanistic purpose of education is to increase the role of the formation of physical culture of the individual as one of the ways to the health of the nation and an important component in the training of modern qualified specialists in demand in the labor market. After all, only a healthy graduate will be able to fully realize all the potential and all the knowledge in the future professional activity that the University has given him.

Currently, the regional approach to the study of the formation of student health, taking into account the conditions of a particular University, is becoming widespread. This is justified and necessary because of the objective differences in the behavior of young people due to socio-economic, historical, cultural and other factors, as well as the characteristics of the educational environment [6].

It should be noted that the problems associated with the social aspects of the organization of the departments of physical education and sports, which are directly entrusted with the task of forming, strengthening the health of students, ensuring their psychophysical readiness for future professional activity in theoretical terms are insufficiently developed. For this purpose, the authors conducted studies that allowed to develop and integrate health-saving technologies into the educational process.

An innovative program was developed to solve the problem of improving the health of students and teachers of the University [7]. The implementation of the health-forming program includes strengthening the material and sports base, the decision of personnel issues, improving of work forms on physical culture and sports. The main part of investments was directed on construction and reconstruction of sports base. Currently, the material and technical base of the sports complex of the University includes two game gyms, two indoor swimming pools, shooting range, three gyms, martial arts hall, athletics core, flat grounds for handball and mini-football, hockey box, tennis courts, grounds for beach sports and terrenkur. All sports facilities are included in the register of the Ministry of sports of Russia, which gives the right to hold sports events at the national level. The created sports base of
the University allows to carry out social work, attracting the population of the city and the region to regular physical culture and sports through the implementation of various programs and projects together with regional entities. Belgorod State Technological University named after V. G. Shukhov participates in the implementation of the regional program “Development of physical culture and sports in the Belgorod region for 2014-2020” and the Federal target program “Development of physical culture and sports in the Russian Federation for 2016-2020”, the project “Belgorod Region—the territory of sports and a healthy lifestyle”. Every year, the University sports complex hosts about 120 sports events.

The University provides an opportunity for various segments of the population to engage in swimming pools, sports halls, stadiums and sports grounds, in a number of areas-free of charge. All sports facilities are located within walking distance, which is an essential circumstance for the rational use of time resource. Systematic independent classes at the sports base of the University and participation in competitions contribute to the formation, strengthening of public health, improvement of physical conditions. In addition to material and technical support, one of the priorities for the successful implementation of the health-forming program is a competent personnel policy, effective social management. The task of improving the health of students, teachers at the University is solved by the Department of physical education and sports. The vector of the management decision was aimed at staffing experienced qualified personnel and promising young professionals. The main emphasis was on the love of his profession, responsibility and integrity in the work, the originality of his personality. Currently the Department employs 2 professors, 14 associate professors (including 7 PhDs), 2 “Honored master of sport of Russia”, “Master of sports of Russia of international class” and 4 “Masters of sports of Russia”, 2 “Honored coach of Russia”. The average age of the teaching staff of the Department of physical education and sports is 42 years. There is a steady trend of rejuvenation of the teaching staff. Change of social and pedagogical requirements in the modern higher educational institution transforms representation about the maintenance of activity of teachers of physical culture assuming use of new approaches to the organization of educational process and continuity of professional self-development, creative self-improvement. Teachers of the Department are constantly working at improving their professional level: attend open classes, take refresher courses (according to the plan of the University), coaching seminars. The exchange of pedagogical experience is facilitated by creative ties with related departments of universities of Belgorod, sports schools, sports federations, as well as cooperation within the Association of construction universities of Russia. Within the framework of international scientific cooperation, the Department has developed productive creative ties with colleagues from Serbia, Poland, Ukraine, Belarus, Uzbekistan, Moldova (participation in congresses and conferences, publication of materials in collections).

The basic component that contributes to the professional level of the teaching staff of the departments is the holding of scientific conferences in universities. Annually on the basis of the Department of Physical Education and Sports of BSTU. V.G. Shukhov with the participation of the teaching staff is an international scientific conference “Physical education and sport in higher education institutions”. In 2019, the fifteenth conference in this direction was held. As the experience of scientific conferences shows, the positive aspects of such events are: increasing motivation to engage in systematic research work, creating a corporate environment for scientific communication with colleagues, providing opportunities for testing the results of scientific research. Such scientific forums allow experts from different countries to share their experience, discuss the current problem situations, consider the latest health-saving methods of work with young people. Improving the scientific and methodological base of the Department of physical education and sports is one of the main points in solving the problem of implementation of the health program and rational organization of the educational process in the University, the introduction of scientific developments in practice. Specialists of the Department of physical education and sport solve complex problems: the formation of active life position, motivational-value attitude of students to physical culture and sports, healthy
lifestyle, culture of a wide range of sports activities, necessary professionally important skills, increasing the level of psychophysical qualities.

Department of Physical Education and Sports of BSTU. V.G. Shukhova has been working on the problem of students' health for more than 18 years. The main component in this direction is the development of specific technologies for the formation and preservation of the health potential of students. Analysis of the results of medical examination of first-year students of BSTU. V.G. Shukhov and their morbidity in the period 2000-2013, showed that an average of 32% of students have deviations in the state of physical health. The most common pathology were diseases and disorders of the musculoskeletal system (42.6%), visual organs (30.5%), cardiovascular pathology (24.2%). Among the most common diseases were scoliosis, neurocirculatory dystonia, myopia, flat feet, thyroid hyperplasia, chronic gastritis. Taking into account the state of health of students, we have developed topics and plans-abstracts of classes on therapeutic physical culture, author's work programs for students of a special group. For this category of students, it is provided to obtain specific theoretical knowledge and practical skills related to the existing deviations in health, taking into account medical indications and contraindications. Since it is the cardiorespiratory link that is limiting in the development of most pre-pathological and pathological conditions, the emphasis in the classes was placed on aerobic types of motor activity. Students systematically engaged in dosed walking, jogging, swimming, skiing, Nordic walking. In BSTU. V.G. Shukhov has the opportunity to conduct year-round classes with students in the fresh air, using the terrain of the stadium, the health trail in the Park alley. As shown by the observations, students with poor health well tolerated physical activity performed at an average pace (pulse mode 120-150 beats/min). Practical classes in a special group are aimed at strengthening health, hardening the body, increasing the level of physical performance, eliminating functional abnormalities and deficiencies in physical development, elimination of residual phenomena after diseases, the development of compensatory functions, increasing the body's resistance to adverse environmental factors. One of the results of the implementation of the developed program on health care in the last 5 years was a decrease in the number of students engaged in a special group by 10%.

Physical education of students is an integral part of a healthy lifestyle, is based on a wide relationship of educational and extracurricular forms of physical education and sports work [8].

The implementation of the health-forming program was to increase the physical activity of students and their gradual sportization, due to involvement in the competitive and training process in various sports. In BSTU. V.G. Shukhov created sports sections that take into account the interests of students and allow them to train after classes. Currently, more than 1,500 students train in 40 sports and recreation sections. Students are engaged in table tennis and skiing, kickboxing and chess, arm wrestling and athletics, shooting and swimming, tennis and aerobics, bast shoes, as well as other sports games: handball, Futsal, basketball, volleyball, water Polo. Over the past five years, the number of students engaged in sports sections has increased by 22%. The Department pays great attention to its University Sports Contest, in which teams of all universities participate in 16 types of programs. It is the most massive competition, with more than 1,200 students competing in each academic year.

Actively conducted research activities of students. Has become a traditional annual scientific conference “Physical culture, sport and health of students”, which represented the results of research in maintaining and promoting health, role of physical culture in the formation of the future specialist, the modern trends of promoting sports activities. Students formed value orientations on a regular systematic exercise. In modern conditions, the improvement of students is associated with the formation of General cultural competencies: the ability to use methods and means of physical culture to ensure full social and professional activities. From this point of view, physical culture and sport are necessary for all, not only for people of those professions in which special physical strength or special mental effort is needed. The Foundation of health laid at a young age and the conduct of a reasonable lifestyle can be compared with a solid savings contribution on a personal Bank account, and with very good interest.
Issues of youth health preservation should be considered in the context of general sociocultural problems [9]. Of course, a cultured, educated, reasonably engaged in sports student has certain advantages in maintaining their own health. He is able to think critically, evaluate his actions, calculate the consequences of actions and has a fairly high degree of responsibility for his own health. And most importantly, he consciously understands that health is one of the main factors that allow him to fully study, work, get joy from life. Therefore, in our opinion, the young man's awareness of the need for physical improvement can be opposed to deviant motives only if his personal importance in the system of his own philosophy of life. This circumstance requires the development of thinking, the ability to build a certain line of health-saving behavior [10]. Physical culture is the only academic discipline that teaches students to form, maintain and strengthen their health, improve physical fitness, develop and improve psychophysical abilities necessary in future professional activities. Long-term pedagogical practice confirms that University graduates who are actively engaged in physical culture and sports during their studies successfully work in difficult production conditions. Sports and physical culture contribute to the formation of students' understanding of the value of life and human health, prevention of deviant behavior. In this regard, the work of a sports teacher is important, which largely allows him to protect a young person from the negative influence of the street, to prepare physically strong and psychologically stable citizens. Teachers and coaches constantly teach students the rules of a healthy lifestyle, regularly hold talks about the dangers of smoking, alcoholism, drug addiction, sometimes struggle more than parents with the facts of violation of discipline and sports regime.

The preservation of human health in the process of social practice depends on the ability to adhere to a certain line of behavior, corresponding to the traditional system of values and useful for public work, and specifically for the people in his immediate environment. In this regard at the present stage in the educational system the role of the upbringing process is increasing [11]. Educational work in this direction involves the formation of high moral principles among students, the development of behavior norms, proper labor, physical and professional readiness to realize themselves in a certain field of activity.

3. Research Questions

In this study, the authors focus on the following problems:
1. Critical assessment of health-saving policy from the perspective of creating high-quality human capital and quality life improving.
2. Identify promising areas of health promotion that are seen as a promising investment in human capital to achieve social well-being.

4. Purpose of Study

The purpose of the work is to analyze the activities of the Department of physical education and sports of BSTU named after V. G. Shukhov in the field of social management of the process of health formation as a resource of strengthening human capital.

5. Research Methods

The evaluation of the developed model of the Department of physical education and sports of Belgorod State Technological University named after V.G. Shukhov was carried out on the basis of the analysis of literary sources, Department’s documents, pedagogical observations and expert evaluation. The effectiveness of the implementation of the program on health saving was carried out on the basis of the dynamics of student physical health indicators, the formation of motivational and value attitude to physical culture and sports. The attendance of educational and training sessions by students for the
period 2014-2019 was studied. The empirical base of the study was legislative instructive documents of departments of physical education, education and health.

6. Findings

Thus, implementation of the program on social management of the process of health formation by means of physical culture was carried out in the following directions: strengthening the material and sports base, the decision of personnel issues, improving of work forms on physical culture and sports.

Modern, meeting all the requirements of the sports infrastructure of BSTU named after V.G. Shukhov makes it possible to solve all the issues that are associated with increasing the level of physical fitness, strengthening and maintaining health, familiarization with sports lifestyle, prevention of antisocial behavior, prevention of the formation and development of bad habits.

A special place in the comprehensive student health program is occupied by the development of the activity model of the department of physical education and sports.

7. Conclusion

Analysis of the study results allows us to identify the following conclusions:

1. The Department carries out a competent personnel policy, which consists in completing the structural unit with experienced qualified specialists and young teachers who are constantly improving their professional skills.

2. Modern approaches to the formation of value systems for a healthy lifestyle among students is to build the educational process in a university through the paradigm of health conservation in the system of traditional values. A healthy lifestyle and behaviors are being popularized with minimizing the impact of destructive influences.

3. The use of technologies for the formation of students' health over the past five years (2014 – 2019) has led to a decrease in students of the special group by 12%, increased attendance of training sessions in the disciplines of physical culture and sports by 10%, increased the number of students engaged in sports sections of the University-by 22%.

4. Attracting talented teaching staff to the University, strengthening the health of students, staff, teachers and the population of the city is a promising investment in human capital to achieve social well-being.

Acknowledgement

The article was prepared with the financial support of the RFBR as part of a research project No. 19-29-07024

References

[1] M. D. Kudryavtsev, I. E. Kramida, A. Yu. Osipov, Influence of monitor harmful habits on healthy lifestyle of students. Theory and practice of physical culture, 2016, 6: 24-26.

[2] A.V. Leyfa, The social basis of the development of physical activity of students in terms of their quality of life. Physical education of students, 2-13, 17(3): 35-41.

[3] T.S. Iermakova, Development of the idea of forming health culture of a person in the world educational thought. Journal Pedagogics, psychology, medical-biological problems of physical training and sports, 2014, 4: 8-12.
[4] A.Yu. Osipov, M.D. Kudryavtsev, S.S. Ermakov, M.G. Yanova, T.V. Lepilina, I.I. Plotnikova, and O.S. Dorzhieva, Comparative analysis of the effectiveness of some methods of physical culture classes with students. Physical education of students, 2017, 4: 176-181.

[5] L.A. Bartnovskaya, M.D. Kudryavtsev, V.M. Kravchenko, S.S. Ermakov, A.Yu. Osipov, and I.E. Kramida, Health-improving and applied technology of physical development of students of special medical group. Physical education of students, 2017, 1: 4-10.

[6] S.F. Kudin, Formation of the culture of self-regulation of students at the faculty of physical education. Journal of Physical education of students, 2016, 1: 49-54.

[7] S.I Kramskoy, I.A Amelchenko, Of the implementation of health-improving program in conditions of technical university. The higher education in Russia, 2014, 3: 94 – 96.

[8] Yu.V. Gordienko, Theoretical training in the process of physical education of students of higher educational institutions. Journal Physical education of students, 2015, 4: 3-9.

[9] S.I. Kramskoy, I.A. Amelchenko and D.E Egorov, Interdisciplinary approach to health lifestyle model development in students. Proceedings of the International Conference “Topical Problems of Philology and Didactics: Interdisciplinary Approach in Humanities and Social Sciences”, in Advances in Social Science, Education and Humanities Research, 2018, 312: 22-25.

[10] A. Zaytsev, T.G. Kovalenko, B.V. Soroka, and D.A. Ulyanov, Content analysis of academic physical education programs. Journal Theory and Practice of Physical Culture, 2017, 2: 103-104.

[11] S.I Kramskoy, I.A Amelchenko, D.E Egorov, Moral and spiritual values formation in the system of physical education of students' personality Advances in Social Science, Education and Humanities Research. Proceedings of the 1st International Scientific Practical Conference “The Individual and Society in the Modern Geopolitical Environment”, 2019, 331: 375-377.

[12] The study of the medical care quality of the Russian population in the context of improving the quality of life.—Financial University under the Government of the Russian Federation. Moscow, 2018. http://www.fa.ru/science/index/SiteAssets/Pages/Zubets_Pubs/LQ_2018