Development of Health Saving Competence for University Students

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Abstract

The article reveals the author's approach to forming health-saving competence while studying at a university. The functions and principles of this competence formation are distinguished in the process of physical education, which will allow organizing the process of physical education at a higher level. Purpose of the study is to reveal features of forming health-saving competence of students in the process of physical education. The attainment of this goal is achieved with different theoretical and empirical method. Expanding functional connections and relations in educational work, we allocated functions of forming HSC for university students in the course of physical education. We have identified different principles and their use has allowed us to organize forming HSC on a higher level.

Keywords: Functions, Principles, Components, and Psychological and Pedagogical Characteristics of Students' Health-Saving Competence Formation.

Introduction

Problem Statement need to preserve the health of the nation in recent decades is the global problems and its solution is associated with the prospect of the existence of society. Moreover, keeping youth health has reached the level of national security, as the health of the nation is one of the indicators of the country's potential [1].

Creation of a health-saving educational environment, development of a regulatory framework for the cultivation and promotion of health in accordance with international standards, provision of material and social assistance and services to preserve and improve the psychophysical well-being of young people, and promotion of a healthy lifestyle are the main aspects of public health policy. The leading direction in preserving health of the younger generation has been and remains in the medical sphere.

However, in Russia, medicine is mainly aimed at treating patients, and disease prevention and early detection have a secondary role, which in turn leads to chronic pathology, increase in primary disability and mortality [2]. Every year indicators of physical and mental health of the population, especially young people have a steady tendency to deterioration [3]. As noted by N. M. Rimashevskaya, over the past 15 years the number of children aged 0-17 years has decreased by almost 12 million (by about 1/3), which "cuts" the number of young people (18-30 years) in the next time interval [4]. Thus, there is a negative trend: reproductive potential is reduced and reproductive behavior is deteriorating.

According to the data of Health Ministry of the Russian Federation, nearly 90% of students have problems with health, only about 10% of youth are considered to be healthy, growth of socially significant diseases continues, among which the most important place is occupied by infections and diseases transmitted through sexual intercourse. According to the statistics of the Ministry of Health, the number of people infected with HIV in Russia annually grows by in average 10% - this is primarily young people and people aged 20 to 50 [2, 5].

So today there is a public need for preventive measures to eliminate the negative impact of social health...
determinants, creating conditions for conservation and strengthening health of students, assertion of a healthy lifestyle, formation of a responsible attitude of each a young man to personal health. A successful prerequisite for implementing strategic tasks in the field of public health is formation of a comprehensive approach by involving specialists in the medical, legal, educational sphere [6]. Purpose of the study is to reveal features of forming health-saving competence of students in the process of physical education.

**Methods and Materials**

The attainment of this goal is achieved with the following theoretical and empirical methods: analysis and systematization of scientific literature on development of the student’s health-saving competence in the university; observation, conversation, questioning; methods of processing and analysis of research results; which allowed us to scientifically justify, develop recommendations to university managers on application of health-saving technologies in teaching and educational processes.

**Analysis of Recent Studies and Publications**

The history of knowledge about health goes back more than 2000 years. For a long time health was seen as absence of disease. According to H. Sigerist, a healthy person who is characterized by harmonious physical and mental development, well adapted to the environment, contributes to the well-being of society. This definition of health is fundamental to the World Health Organization (WHO).

Health is a state of complete physical mental and social well-being, and not just the absence of physical defects or illnesses. To date, there are more than 100 treatments of the concept of health [7]. According to WHO, human health is 50-55% determined by conditions and lifestyle, 25% by environmental conditions, by 15-20% due to genetic factors and only 10-15% by health system activity. V. Petrenko (Smakotina, 2012) cites the following

**Relationships of Factors That Determine Human Health**

- The human factor is 25% (physical health - 10, mental - 15);
- Ecological factor - 25% (external ecology - 10, internal -15)
- Socio-pedagogical factor - 40% (way of life, material working and living conditions- 20, behavior, mode of life, habits - 25);
- Medical factor - 10.

Health as a social phenomenon is what we are interested in. The most vulnerable group is the youth. This may be due to its contradictory nature: on the one hand, young people are aimed at a healthy lifestyle and taking care of their health, on the other hand - riskiness of behavior poses a threat to health.

This group is considered vulnerable to the spread of sexually transmitted infections, use of drugs, alcohol, etc. Young people do not consider health problems to be relevant because, as a rule, at a young age, problems do not arise and health is viewed as a kind of "unlimited resource". But implementation of measures to maintain health at a young age has a positive impact on health in the future (that is, in adulthood).

The problem of formation of a healthy lifestyle is largely related to the level of culture of students and teachers. It is established that students' need for physical self-improvement is formed the more successfully [2], the higher the educational level, the degree of development of other needs, that is, their personality is more formed. A direct relationship between formation of the need for physical self-improvement and professional orientation of the student's personality confirms dialectical unity of physical and intellectual activity [6].

The tendency of sharp deterioration in the state of health of students is associated with restriction of motor activity [8], significant disturbances in the nutrition system (inadequate, substandard, malnutrition, overeating, lack of regime, etc. [9], bad habits (smoking, alcohol abuse, drug use, etc. [9], mental overload and stress [10], pollution of environment and unsatisfactory sanitary and hygienic and living conditions [11], etc.

The fastest, affordable and easy way to solve this problem in Russia is, first of all, to change attitude of students towards a healthy lifestyle. Under a healthy lifestyle,
one should consider forms and methods of everyday life which contribute to improving the reserve capabilities of the body, successful implementation of social and professional functions, and prevention of the most common diseases [5]. There are various interpretations of the concept of "healthy lifestyle", but their essence lies in one thing - preservation and strengthening of health. E.N. Weiner [12] considers it as specific conditions of his life, aimed at formation, preservation and strengthening of health and full implementation of the person's socio-biological functions. A healthy lifestyle, according to the author, is the most effective means and method of ensuring health.

Demont-Heinrich [13] treats a healthy lifestyle as activities aimed at formation, preservation, strengthening and restoration of people's health, as conditions and preconditions for realization, development of all aspects of life. S. Bertram [11] defines a healthy lifestyle as a set of health-improving activities that promote health preservation. In this definition, a healthy lifestyle is revealed through the notion of "a set of health measures". Activities are selected depending on the components that make up a healthy lifestyle. To the most important elements that give a modern interpretation of a healthy lifestyle T. Puets refers:

- Rational individual mode of life, conducive to health (mental activity, healthy diet, proper spiritual regime, personal hygiene, denying smoking and alcohol abuse)
- Active participation in the formation of social relations that promote conservation and development of personality;
- Hygienic and rational behavior, taking into account requirements of the environment;
- Conscious participation in the organization of working conditions conducive to maintaining health and enhancement and ability to work;
- Reasonable attitude to the health protection measures [14].

Therefore, a healthy lifestyle can be interpreted as a person's behavior that reflects a certain vital position aimed at preserving and strengthening health, based on implementation of norms, rules and requirements of personal and public hygiene [15]. To factors that affect the healthy lifestyle G.A. Bray [16] refers obesity, A.L. Nachemson [16] - osteochondrosis, and T. Stephens [10] - depression. In connection with this, in the psychological-pedagogical and specialized literature, there is an active discussion on the definition and justification of the way of life that would give the opportunity to maximize the level of students' health. To the components of a healthy lifestyle R.S. Paffenbarger and E. Olsen (1999) include: regular meals, daily breakfast, a regular motor activity, sleep (7-8 hours), quitting smoking, maintaining optimal body weight, disuse or limited use of alcohol.

To these components, they add an additional use of vitamins A, C, E and beta-carotene, reducing stress and attracting to social activities. American specialists E.T. Howley, B.D. Franks believes that the goal of a healthy lifestyle is creation of a basis for positive health with a minimum risk of favorable hereditary indicators, normal levels of cholesterol in serum and arterial pressure, lack of excess body weight, cardiorespiratory system, mobility spine, strength and endurance of muscles, ability to overcome stresses.

To a Healthy Lifestyle These Authors Also Include Such Components

- Good heredity;
- Habits that are conducive to health;
- Habits that promote personal security; favorable environmental conditions for the health;
- Preventive actions;
- Good physical condition; regular motor activity;
- Proper nutrition.

Analysis of literary sources allows us to assert that the main factor of a health is, first of all, motor activity of a student. Statement of the main material. Students as a separate age and socio-psychological category are highlighted in science relatively recently, in the 1960s, by the Leningrad Psychological School under the direction of B.G. Ananyev in the study of the psychophysiological functions of adults. As an age category, students are related to the
stages of adult development, representing the “Transition phase from maturation to maturity” and are defined as late adolescence early adulthood (18-25 years). The allocation of students within the age of maturity/adulthood is based on a socio-psychological approach. Considering the students as “a special social category, community of people, organized by the Association of Higher Education Institute” I.A. Zimnaya singles out the main characteristics of the student age, which distinguishes it from other groups of the population by a high educational level, high cognitive motivation, the highest social activity and rather a harmonious combination of intellectual and social maturity [7].

In respect of general psychical development students’ age is a period of intensive socialization, development of higher mental functions and the whole person. If we consider only the biological age of students, it should be attributed to the period of adolescence as a transitional stage of human development between childhood and adulthood. Therefore in foreign psychology this period is associated with the process of growing up. The student's age is also characteristic of the fact that during this period optimum development of intellectual and physical strength is reached. But often there are contradictions between these opportunities and their actual implementation.

Continuously growing creative possibilities, development of intellectual and physical forces, which are accompanied by flowering of external attractiveness, bring the illusion that this growth will continue "forever", that all the better things in life are still ahead, that everything can be easily achieved."The time of study at the university coincides with the second period of adolescence or the first period of maturity, which is characterized by complexity forming personal characteristics (B.G. Ananiev, I. S. Cohn, V. T. Lisovsky, etc.), a characteristic feature of moral development at this age is strengthening of conscious behavior motives.

Significantly strengthened are those qualities that were lacking in full in the senior classes – purposefulness, determination, perseverance, independence, initiative, ability to control oneself. There is a growing interest in moral s problems (goals, lifestyle, duty, love, loyalty, etc.). Together with that, experts in the field of age psychology and physiology note that a person's ability to consciously regulate his behavior in the 17-19 years is developed not completely. There is often unmotivated risk, inability to provide for consequences of their actions, which may not always be based on good motives. Youth is the time of introspection and self-evaluation. Self-assessment is carried out by comparing the ideal "I" with reality. But the ideal "I" is not yet reconciled and may be accidental, but the real "I" has not yet been comprehensively evaluated by the person himself.

This objective contradiction can cause internal uncertainty in oneself and is sometimes accompanied by external aggressiveness, swagger or a sense of incomprehensibility. In our opinion, problems in formation of healthy lifestyle of university students in the process of physical education should be viewed not only as structural components, but also as functional relationships.

For the purpose of wider representation of the essence of the healthy lifestyle formation the analysis of the functions of its existence was used. One should note that the function of forming healthy lifestyle of students during physical exercise can be better understood when considering their specificity, diversity of relations and communication, the system of valuable orientations, possibilities for self-realization.

**Given These Features, We Allocated the Following Main Functions in Physical Education**

- educational,
- recreational and health-improving,
- communicative,
- Formative and informational.

The educational function of the formation of health-saving competence of students in the process of physical training is that the process of training a health culture is first of all directed on formation of knowledge, skills, enrichment experience of creative activity on education of careful attitude to preservation and improving health. Knowledge in pedagogy is defined as a predominantly
logical information about the environment and the inner world of man, locked in his mind [2].

This means that during the formation of HSC in the classroom of physical education students should get necessary fundamental information on basic health, which are presented in a certain logical sequence, recognize them and use in different situations. Under abilities in our research should be understood assimilation by student’s activities aimed at preservation and consolidation of personal health and the ability to apply them in practice. Recreational and wellness functions can be expressed using the sports activity in the sphere of healthy leisure activities or in the system of special recreational events. They are applied for satisfying emotional needs, active rest and recovery of temporarily lost functionality of the body.

Communicative function is aimed at developing students’ system of values, providing the possibility of expanding communication, stimulation of creative activity, the ability of students to spiritual growth as a means of prevention of stress in daily activities. Formative feature means that in the course of training the inner world of the student is formed, including sensory and motor, emotional and volitional and motivational-value areas. The information function is considered as a means of accumulation, distribution and transmission of information relating to the protection and preservation of personal health of young people.

Spiritual and material values created by humanity in the field of conservation and consolidation of health, are the carriers of significant information, especially on the means of improving its natural qualities and functional capabilities of the organism. Information function is interrelated with about all the features of HSC formation.

This association is due to the need to provide information to their normal functioning. Process of health-education goes in the direction of transmission experience of teachers to students, from the elementary practical skills to the systematic information, fixed by the mind in the form of knowledge, principles of behavior and activities aimed at preserving and strengthening personal health.

The implementation of the functions we have developed is reflected in the principles that are used in our research and educational work. In modern science, principles are the main assumptions of any theory, the basic rules of behavior, actions.

Principle (from the Latin. Rrincipium - "Basis", "beginning"): the basic, the initial position of any theory, teaching, science, philosophy, etc.; internal human belief determines its relation to reality, the norms of behavior and activity. The principles in this study display requirements for the organization of health-activities which help to creatively approach to the construction of the educational process on formation of health-saving competence of students in the course of physical training.

**Organization of Physical Training is based in Our Study on the Following Principles**

- humanization - attention to the personality of each student as the highest first social value - determines formation of personal traits contribute to development of public activity, health, sociability, orienting on aesthetic ideals;

- Accounting values, attitudes and needs of students - provides a record of changes in value system under the influence of the social life, attitudes and needs of students in the formation of HSC. This principle is aimed at developing a conscious selective, positive attitude to sports and recreational activities based on satisfaction of needs;

- Taking into account the student's individual characteristics. They can be modified depending on the conditions of professional and other kinds of activities. Therefore, formation of HSC of students will be of more quality when recorded individually;

- Activity approach - entices students to active performing individual programs of physical culture and sports activities, develops cognitive and creative abilities, includes students in the process of physical self-education and self-improvement;

- Integrity - the level of organization of the educational process in the university, during which active development as a whole is
simulated, orientation of students in the formation of the
- common health and physical culture in the unity of knowledge, skills, beliefs, creativity in matters of securing health takes place;
- Professional direction - one of the primary principles of HSC - prepares them for educational tasks. It gives priority to the development and improvement of the knowledge, skills and qualities of students with the most practical significance to exercising their functional duties;
- Health direction - the basic meaning of which is to achieve the greatest effect, in fixing health;
- Scientific principle - leading benchmark in forming HSC of university students. Our research in conducted in accordance with the level of development of science and technology, with the experience accumulated by world civilization on preservation and consolidation of students’ health;
- Integrity and interdisciplinary - is used for integrated management of formation of HSC, allowing better keeping health in the study of subjects and disciplines provided by university programs;
- Continuous formation of HSC allows consistently prepare the students for the next material, physical exercises and helps positive transfer of previously acquired knowledge and skills;
- Consistency of the university management requirements, lecturers and students, during which compliance is possible to implement the principles of exercising HSC.
- Studying the initial level of HSC manifestation, we have come to the conclusion that at the beginning of the first stage it is practically homogeneous among students of control and experimental groups. At the beginning of the study, we conducted a survey of students, with the aim of identifying their relationship to health.

The question was posed to them: “What are your 10 essential values”. The results of testing at the beginning of the pedagogical experiment in the control and experimental groups did not differ. The control group health took the 9th position: in the first place it was set by 5 students (11.1%), 28 students did not mention it at all (62, 2%). In the experimental group, only 4 students (8, 8%) put health on the 1st - 3rd place and 30 students (66, 7%) did not find a place for health in their life values .Exploring the motifs of health preservation, at the beginning of the first phase of the experimental work for the students of the control and experimental.

Groups They Were
- To improve physical fitness;
- Not to get ill;
- To extend youth ;
- To go on vacation;
- For professional development.

There were other motives, such as the ability to provide a better family, to feel healthier, to be no worse than others, etc. According to the answers it can be seen that students do not correctly understand the question. Analysis indicates that the first stage of our research verified that the difference between the control and experimental groups was not found (P> 0, 05) (Table 1, 2, 3).

Table 1: Dynamics student use body hardening procedures (%)  
<table>
<thead>
<tr>
<th>Groups</th>
<th>applicants</th>
<th>1st year</th>
<th>3rd year</th>
<th>5th year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>77.5</td>
<td>65.0</td>
<td>37.5</td>
<td>17.5</td>
</tr>
<tr>
<td>EG</td>
<td>85.0</td>
<td>80.0</td>
<td>77.5</td>
<td>70.0</td>
</tr>
</tbody>
</table>

Table 2: Dynamics of independent motor activity of students in the senior years (%)  
<table>
<thead>
<tr>
<th>Activities</th>
<th>3rd year</th>
<th>4th year</th>
<th>5th course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic fitness activities</td>
<td>KG 55</td>
<td>KG 35</td>
<td>KG 57.5</td>
</tr>
<tr>
<td></td>
<td>EG 60</td>
<td>EG 12.5</td>
<td>EG 52.5</td>
</tr>
<tr>
<td>Independent motor activities</td>
<td>KG 77.5</td>
<td>KG 77.5</td>
<td>KG 27.5</td>
</tr>
<tr>
<td></td>
<td>EG 80</td>
<td>EG 12.5</td>
<td>EG 75</td>
</tr>
<tr>
<td>Active forms of recreation</td>
<td>KG 55</td>
<td>KG 47.5</td>
<td>KG 32.5</td>
</tr>
<tr>
<td></td>
<td>EG 60</td>
<td>EG 62.5</td>
<td>EG 67.5</td>
</tr>
</tbody>
</table>

In the structural logic of HSC the information component occupies a high place. At all stages of development, it directs the student to choose an active life position in the
sports and recreation sector, preserving and strengthening personal health due to the increase of knowledge and skills in organization of independent motor activities. The information component allows students to engage in creative activity, based on the knowledge acquired. It directs students to the independent study of health conservation.

Information comes to students from a variety of sources: media, stories, stands, videos, interviews, etc. The conducted preliminary study led to the conclusion that at the initial stage there is no significant difference in the level of knowledge among students of the control and experimental groups (Table 3).

### Table 3: Dynamics of information component (%)

<table>
<thead>
<tr>
<th>Levels</th>
<th>Groups</th>
<th>Stages of formation of HSC in students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Stage 1</td>
</tr>
<tr>
<td>Low</td>
<td>CG</td>
<td>37.5</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>32.5</td>
</tr>
<tr>
<td>Average</td>
<td>CG</td>
<td>62.5</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>67.5</td>
</tr>
<tr>
<td>High</td>
<td>CG</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>-</td>
</tr>
</tbody>
</table>

So, considering the students' learning process, the main source of obtaining knowledge on conservation and fixing health can be given to physical education teachers.

### Conclusion

Expanding functional connections and relations in educational work, we allocated functions of forming HSC for university students in the course of physical education. They are: educational, recreational and communication, forming and information ones. Allocation of multiple functions provides for the use of various forms (training sessions, morning exercises, sports work, physical training in the course of educational activities and additional activities), resources (physical exercise, environmental factors, hygiene, auxiliary and additional factors) and methods (persuasion, examples, exercises, promotion to implement in practice sports and recreational activities. We have identified the following principles: the formation of HSC of students in the course of physical training: humanity, keeping the values, attitudes and needs of students; account of individual characteristics; improving orientation; precautionary development; scientific nature; integrity and interdisciplinary approach; forming continuity of HSC of students; consistency in management requirements. Their use has allowed us to organize forming HSC on a higher level.

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