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Institute of Metallurgy and Ore Beneficiation JSC, Satbayev University, Almaty, Kazakhstan

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**Natalia V. Yakovleva**

D. Banzarov Buryat State University, Department of Sports Disciplines, Ulan-Ude, Republic of Buryatia, Russian Federation; e-mail: yakovleva088@yandex.ru; <https://orcid.org/0009-0009-5516-4225>

**Soni Nopembri**

Faculty of Sport and Health Sciences  
Universitas Negeri Yogyakarta, Indonesia  
email: soni\_nopembri@uny.ac.id  
<https://orcid.org/0000-0002-9094-6451>

**Rita S. Lyzhenkova**

East Siberian Branch of the Russian State University of Justice, Department of Humanities and Socio-Economic Disciplines, Irkutsk Region, Irkutsk, Russian Federation; e-mail: tina051@yandex.ru  
<https://orcid.org/0000-0003-3993-2019>

**Mariam R. Arpentieva**

Financial University under the Government of the Russian Federation, Faculty of Social Sciences and Mass Communications, Institute of Humanitarian Technologies and Social Engineering, Faculty "High School of Management", Institute of Management Research and Consulting, Moscow, Russian Federation  
e-mail: mariam\_rav@mail.ru  
<https://orcid.org/0000-0003-3249-4941>

**Gulzhaina K. Kassymova**

Institute of Metallurgy and Ore Beneficiation JSC, Satbayev University  
050010, Shevchenko str., 29/133, Almaty, Kazakhstan  
email: g.kassymova@satbayev.university  
ORCID ID: <https://orcid.org/0000-0001-7004-3864>

## **Motivation for Independent Physical Education Classes in Students of Modern Universities**

**Abstract:** The relevance of the article lies in the need to develop an integrative approach and a model of motivation for the independence of physical education classes among students. The purpose of this article is to conduct a systematic analysis of the motivation for independent physical education classes among students from various professional training areas, and to develop and test recommendations and programs for promoting independent physical education classes among students. The authors formulated an integrative model of motivation for the independence of physical education classes among students and showed the types of motivation. The essence of motivation for independent physical education classes among students is revealed, which consists in the peculiarities of formation, functioning, development and destruction of needs and desires of students about physical education classes and, more broadly, health preservation. Approaches to the study of motivation for independent classes, motives are classified, recommendations are offered, and the most productive directions of research on the problem are highlighted. It is proven that modern students of different professional groups do not have a harmonious and sufficiently multi-level and multi-faceted motivation for independent physical education classes.

**Keywords:** motivation for independent classes, physical education, types of motives for independent physical education classes, competencies, needs of students, desires of students.

## **Introduction**

The problems of motivating modern schoolchildren and students to engage in independent physical education are among the most pressing in the context of the problems of prevention and correction of health disorders and health preservation. They are especially pressing in student age - the age associated with active self-education, the potential presence of necessary competencies in the field of health preservation, as well as numerous health disorders accumulated by many of them by this age. In the context of intensive transformations of general and professional education, the formation and development of a culture of health preservation and physical education as its most important component is

one of the most important tasks of the education system. Physical education is an important component of the professional training of students, which is formed and developed without fail as part of the general training program for any specialist throughout the entire period of study and education at the university. The importance of physical training is associated with the formation and development of physical culture in a person as a component of their general life (social, personal) and professional competencies. Despite the obviousness of the problem under consideration, the presence of a sufficiently large number of research and applied works in the studied area (for example, the studies of V.V. Sevast'yanova, E.A. Stebletsov and V.I. Voropaev, V.A. Koloshkina and N.A. Dvarak, I.S. Galich, V.D. Ivanova, I.V. Zhrebtsova, P.A. Istmatov, O.V. Ivakhina, E.Yu. Kozenko, N.V. Savkina, I.T. Khairullin, etc.), the problem of motivating students' independent physical education classes retains its significance and novelty: despite the existing efforts in this area, a systematic understanding of how motives for independent classes at student age arise, develop, improve, or, on the contrary, are blocked and destroyed, has not been formed. This can be seen even in the example of publications of the last ten years, included in such large library databases as RINTS, Cyberleninka, etc. In our study, we turned to the analysis of the most relevant publications to the topic of our study, posted in these Russian libraries. Their analysis shows that domestic and foreign models of the studied aspect of modern students' activity consider the problem of motivation for physical education and sports more about content than methods. M.A. Lozovaya and colleagues, S.A. Marchuk, and many other modern researchers emphasise the importance of systematisation and unification of formalised-educational and independent physical education, health and sports activities of students, the importance of forming and developing a systemic understanding of preserving and strengthening health (Lozovaya, Zotin, & Petrova, 2019; Marchuk, 2016). Another important point is to take into account the place of physical education as a system of competencies, as well as the independence of its classes by future specialists in the context of the peculiarities of educational and professional work. These studies (of a comparative type) were practically not carried out purposefully. Meanwhile, it is obvious that for specialists of different professional groups the relevance and significance, content and forms of physical education and sports classes are in many ways different: for example, for students studying in the profiles of "physical education", "medicine", as well as students undergoing training in the field of "socio-humanitarian" and "engineering and technical" professions).

The purpose of the study is a systematic analysis of the motivation for the independence of physical education classes among students of different areas of professional training, the development and testing of recommendations and programs for motivating the independence of physical education classes among students.

The objectives of the study include 1) theoretical tasks related to the theoretical analysis and synthesis of the problems of motivating the independence of physical education classes among students; 2) development and implementation of a program for the empirical study of the motivation for the independence of physical education classes among students of different areas of professional training, 3) creation and testing of the author's model and program for motivating the independence of physical education classes among students. In our study, we proceed from the assumption that the motivation for independent physical education classes among students should be aimed at harmonizing the processes of training and education of future specialists, ensuring the effectiveness and productivity of these processes in the context of (re)training specialists for independent health preservation during the university and subsequent periods of professional formation and development. The development of motivation for independent physical education classes is associated with the specifics of the programs for the training and education of students at the university: their substantive and structural features. Physical education classes can be an important means of optimizing and harmonising the preparation of future specialists for independent health preservation at different stages of their professional path.

### **Materials and methods**

The object of the study is the motivation for independent physical education classes among students.

The subject of the study is the processes and results, types and stages of motivation for independent physical education classes among students.

The methodological basis for studying the motivation for independent physical education classes among students was formed by several approaches: systemic (A.A. Verbitskiy, G.P. Shchedrovitskiy, etc.), health-preserving (L.B. Dykhan, O.M. Zheleznyakova, G.K. Zaitsev, M.M. Potashnik, N.K. Smirnov, etc.),

individually oriented (K. Rogers, V.V. Serikov, I.S. Yakimanskaya, etc.), competence-based (A.A. Verbitskiy, E.F. Zeer, I.A. Zimnyaya, A.V. Khutorskoy, etc.), and activity-based (A.N. Leontyev, L.S. Rubinstein, etc.). Based on these approaches, a competence-activity-based approach is formed, the essence of which in this study comes down to understanding that independence in physical education classes, like any other activity, is a necessary characteristic of the activity; independence of physical education classes of future specialists can be considered as a component of the systemic stage of development of health-preserving competence.

The central concept of the work within the framework of this understanding is the term "motivation of independence of physical education classes of students". The independence of physical education classes of students is considered by us as an important component of educational and professional independence, creating conditions for high-quality, optimal formation and development of a future specialist. Motivation, as is known, is a set of factors (motives) determining the behaviour of an individual and aimed at satisfying their needs, including in the field of physical education and sports. This includes motives-desires (indirectly related to human needs) and motives-needs (true needs), the consequence of which is a stable interest in physical education classes as a component of health preservation in professional and other types of activities.

### **Research methods**

The work implements the author's model for studying the motivation for independent physical education classes, the basis of which is the survey method and the qualitative-quantitative method of analysis (content analysis) of the data obtained during the survey (Mayring, 2021). Mathematical methods for processing the latter included primary and secondary statistical processing of the research data using the Excel Online program.

The work was carried out during 2020-2025 based on one of the largest universities in Irkutsk and Russia (Irkutsk State Transport University).

The reliability and validity of the results obtained were ensured by:

- compliance of the basic methodological principles of studying the motivation of students' independent physical education classes with the purpose and subject of the study;
- representativeness of the sample size and significance of the experimental data in the study of students' motivation for independent physical education classes;
- Use of research methods adequate to the objectives of studying the motivation of students' independent physical education classes;
- statistical analysis of data obtained from the responses of participants in the study of motivation for independent physical education classes of students;
- an integrated approach and systemic analysis of the motivation for independent physical education classes of students.

### **Main results and their discussion**

Health preservation is considered by almost all scientists and practitioners in the field of pedagogy as a means of increasing the effectiveness and productivity of teaching and upbringing students, their academic performance and ability to learn, the effectiveness of mastering general cultural, professional ("hard") and "soft" competencies (Mayring, 2021; Golovnykh and Naumova, 1980), as well as the overall success of a person as an individual, partner and professional in the modern world (Katany, 2018; Golubchikova et al., 2021). However, although health and successful mastering of the educational program of the university are interdependent, many students subjectively ignore this connection until they have significant health problems and do not face intense distress, for example, academic failure, etc. due to illness or other problems leading to the emergence of borderline or pathological disorders in the area of physical and mental well-being. Their competencies in this area are often fragmented and passive. Therefore, it is not surprising that researchers have repeatedly noted the importance of developing systemic, multi-component educational programs and manuals, designing educational results for students in the area of independent physical education as a component of health preservation based on competency-activity and other integrative and activating approaches (Golubchikova et al., 2021), their inclusion/consideration in education standards (Gun & Zotov, 2018; Ilmaliyev et al., 2022). Potentially, the range of methods, techniques, models and approaches to the formation and development of motivation for

physical education as a component of health preservation is very large, some of the formats and combinations will be more optimal and effective than others, including in the context of the substantive content of health preservation programs. Turning to physical education in the process of university training of a specialist is the most important channel for the formation and development of motivation for the independence of health-preserving activities of a student as a whole, the formation and development of a holistic culture of health preservation, which he will be able to transfer to everyday professional life. The key issue here is the relationship and structure of fundamental and practical competencies transferred and formed / improved in the course of various approaches, models, techniques and methods of teaching students. In order to competently and effectively solve the issues of selection, implementation and improvement of education in this area, a significant part of the activity of the university teacher and other specialists supporting the educational process, working with health-preserving tasks should be devoted to meta-educational activity: organizing and stimulating the motivation of future specialists to form and improve relevant and related competencies.

The most appropriate strategy can be considered an adaptive-developmental strategy of health preservation and motivation for independence in physical education (Arpentyeva, 2015). In contrast to the adaptive or corrective strategy, it not only does not limit the development and life of the student with fears and risks of losing health and the need to compensate for losses and defects in functioning and development, but, on the contrary, focuses on achievements, inclusion in activities, self-actualization and self-realization, which helps to rebuild the psychophysiological functions of a person as a whole, not only compensate for possible existing defects and developmental delays, prevent a decrease in functional capabilities, but bring a person to a new level of "health development". The central focus of the problems of motivation for physical education and health preservation of future specialists in their professional training is, therefore, the problem of its independence, conditions and means of its stimulation and development, forms of education, methods and techniques that must be used to encourage and strengthen students in independent formation (health building), maintenance / preservation (health saving) and improvement of a healthy lifestyle (HLS) (Emelyanova, Lukyanceva & Berezovskaya, 2016; Lycheva, 2022; Pyastolova, 2020). However, the existing practice of caring for the health of students in the country's universities today is such that students act more as consumers, recipients of health-preserving services, and not subjects of health preservation. Health achieved as a result of external management, therefore, does not seem to be an individual, intrinsic value, and, therefore, is easily devalued and "forgotten" as soon as this or that health-preserving program, event or form of externally controlled health activity is completed. The overall effect of such "health preservation" is therefore often not great. Teachers and researchers see the solution to this problem in supporting the motivation for independent health preservation beyond the educational situation and educational activity of students as fully functioning, holistic individuals from birth to the end of a person's life (Litovchenko et al., 2021).

Educational programs for health preservation that stimulate the motivation for independent activities are especially important in the context of the integration of general and additional education, in the context of a decline in the interest of young people and the population as a whole in health, in a healthy lifestyle, and the replacement of the desire for development with the desire to consume goods, etc. Modern researchers believe that it is necessary to create and strengthen such an educational process in a university, as a result of which independent and university-organized physical education classes acquire personal meaning, a persistent individual interest in them and in the acquisition of competencies in the field of physical education and health preservation in general arises, and external given motives for activity are transformed into internal needs of the individual (Litovchenko et al., 2021; Galich et al., 2014). It is important to note that if at the early stages of education and upbringing of children, adolescents, young men and women, attention is paid mainly to the acquisition of general cultural competencies within the framework of certain standards and norms of training, then at the level of professional education, at the university, the processes and phenomena of managing the educational activity of future specialists by teachers and other mentors and the students themselves, reflection and transformation of the processes and results of training in the context of students' independent acquisition of certain competencies and groups of competencies to varying degrees, taking into account the specifics of these competencies and their acquisition during professional (re)training come to the forefront organized by the university and independent studies of students. It is especially important to take into account that modern education requires the development of not only subject-object, but also subject-subject relations between the

teacher and the student. One of the most important aspects of the formation and development of motivation for independence in physical education as a component of health preservation is associated with. Therefore, with the problem of self-government in education: student self-government, readiness and ability to preserve health in the educational process of the university are an important factor in health preservation. The teacher should act as an assistant to the student. It is necessary to help students learn to reflect on their successes, processes and results of (self)education in the field of physical education and other areas, including through the use of various resources of educational environments available to them (Galich et al., 2014; Allen, 2020; Rohde et al., 2023). A necessary condition for this is independence as an active role of the student in the educational process, the readiness and ability of students of a modern university to independently organize and implement training in basic competencies in the context of various conceptual models (Weindorf-Sysoeva, Gryaznova, Shitova, 2020; etc.). For example,

1) M.A. Lozovaya and colleagues, many other researchers emphasize the importance of an integrative model for the formation of a conscious, reflexive attitude of students to their health and the health of those around them, including:

- acquisition of knowledge and skills in the field of health preservation and specific physical education;
- use by students of effective technologies for teaching students and the application of methods of sportization and individualization of the physical education process at the university as a whole;
- the need for personal participation of each student in health and preventive measures of the university and other organizations;
- the formation of a motivational and value-based attitude to their health and a healthy lifestyle in students;
- development of motivation of students for independent preservation and strengthening of their own and public health throughout their lives, self-improvement is the target task of university education (Kapalygina et al., 2017; Zimnyaya & Mukhina, 2016);

2) a model for the formation and development of health-preserving competence of university students, based on the structure of this competence, including its value-semantic, behavioral, emotional-volitional and cognitive components.

Competence as awareness and activity as motivation of students on health-preserving issues are considered as factors of professional success of a university graduate. It is noted that the formation and development of motivation and health-preserving competences in students occurs, first of all, in the context of realizing the recreational and developmental potential of physical education (Kostarev, 2017; etc.).

Both of these models are equally important for us: integration is the main condition for the effective formation and development of motivation for independent physical education as a component of a student's care for his or her health. In general, relying on the integrating modern approaches and concepts, practices and technologies of the model of pedagogical and psychological support for physical education and sports, we can note the following points:

1) the formation and development of students' motivation and competencies in the field of independent physical education as a component of health preservation should be aimed at understanding the essence and functions of numerous modes of health care: preventive and developmental, recreational / restorative and corrective, adaptive and competitive, labor / educational and play / leisure;

2) the training of specialists should include both practice and theory, fundamental knowledge and skills in the field of independent physical education as a component of health preservation. The theory and practice of physical health and physical education should serve the task of forming and strengthening the motivation for independent physical education.

Considering this problem, in addition to numerous factors and conditions for the formation, functioning, development, destruction of the motivation for independent physical education, an important point is the distinction between different types of motivation. Researchers distinguish: external/extrinsic and internal/intrinsic motivation, positive/stimulating, constructive and negative/destructive, anti-motivation, stable and unstable motivation. External motivation, according to experts, is associated with an orientation toward external stimuli (rewards, punishments, etc.). Internal motivation is associated with the individual himself, his concern for his health and physical culture and sports as a means and process of

increasing the effectiveness of his own life. However, any motivation is conditioned internally, although it depends on external factors and stimuli (current or from the past or future of a person).

The study of motives that determine the characteristics (intensity and regularity, (goal) orientation, etc.) of independent physical education and sports activities among students and the identification of factors that facilitate and limit them shows that the leading motives for independent physical exercise and sports are:

A) individual:

1) psychological, aimed at strengthening self-acceptance, self-respect and self-understanding, etc.;

2) motives for achieving goals and striving for self-improvement, including within the framework of physical education and sports;

B) health:

3) health motives aimed at strengthening and maintaining one's health, disease prevention;

4) close to them are professional and activity motives aimed at ensuring and improving performance, preventing and overcoming (dis)stress in educational and work activities;

B) broad social:

5) image/aesthetic, associated with the desire to change/improve appearance, improve the impression made on other people;

6) close to them are cultural motives - motives of "fashion", generally accepted standards, for example, a healthy lifestyle, etc.;

D) narrow social:

7) interactive motives associated with the need for communication and interaction, classes in groups/clubs "by interests";

8) motives of winning, competition, and competition, especially characteristic of students keen on sports (Fassakhova & Dobrynin, 2020; etc.).

The main idea of the study is that the motivation for independent physical education classes among students is a systemic phenomenon in nature and an important component of professional training. It requires the use of a combination of different approaches to its effective and productive formation and strengthening, ensuring successful functioning. Effective motivation can be implemented using a holistic model that combines various, to varying degrees, specialized methods and techniques, conditions and forms of education that stimulate the formation and development of students' scientific-theoretical, methodological-applied and value-semantic competencies in the field of physical education as a component of health preservation.

Hypothesis. In our study, we proceed from the hypothesis that students of different professional groups rely on different motives for independent physical education classes and have different levels of formation of motivation for independence and the health-preservation competencies that ensure them:

1) Unformed motivation for independence in physical education classes is associated with the level of formation of basic competencies and general methodological literacy, in which students have partially formed motives for independence and carry out relatively disordered physical activity. The leading motives for this group of students are narrowly social and broad social motives for independent physical education classes; 2) the formed motivation for independent physical education classes is associated with the level of development of health preservation and its directed reflection, in which students have a formed system of motives for physical education classes and are consistent and regular in implementing health preservation programs. The leading ones for this group of students are narrowly social and health-improving motives for independent physical education classes.

3) a highly formed motivation for independent physical education classes is associated with the level of health preservation management, with which the independence of physical education classes as a component of health preservation is associated, the desire to include physical education classes in the context of practices of caring for other, in addition to physical, components of health (spiritual, psychological). The leading ones for this group of students are psychological and health-improving motives for independent physical education classes. An empirical study of the motivation for independent physical education classes. For this study, 145 people were selected in the pilot and 120 people in the main part of the study. The main study involved 4 groups of different specialties, 30 respondents each (the classic number of respondents/document texts or document sets for content analysis is 30 people/texts/document sets), a total of 120 students of the Irkutsk State Transport University:

Group I – students of the departments of computer technology (bachelor's degree), information security (bachelor's degree), train traffic control system (specialist's degree);

Group II – students of the departments of economics at the enterprise (bachelor's degree), economic security (bachelor's degree), customs affairs/economic policy of the state (specialist's degree);

Group III – students of the departments of management at the enterprise (bachelor's degree), personnel management (bachelor's degree), quality management (bachelor's degree);

Group IV – students of the departments of railway operation (bachelor's degree), railway rolling stock (specialist's degree), railway construction (specialist's degree).

The age and gender composition of the students was largely homogeneous (bachelor's and specialist's degree students of the 2nd and 3rd years, more than 90% of respondents were girls). Physical education classes were held in all groups according to similar programs, specific contents and procedures (methods), as well as goals and formats of teaching for each of the groups of programs were not created.

As can be seen from this list, specialists with special competencies in the field of health preservation (trainers / physical education and sports teachers, medical workers/doctors, clinical psychologists and psychiatrists, social workers / social and medical workers) did not participate in the study, which somewhat limited its context and the completeness of the comparative analysis. However, this problem can be solved in the future, based on the study we conducted.

In the process of qualitative analysis of the research data, several subgroups of respondents were identified according to the criterion of motivation for independent physical education and sports (the presence and regularity of independent physical education and sports and health preservation):

1) demotivated, passive respondents who do not practice regular independent physical education and sports and health preservation in general (16.7%, 20 people);

2) motivated, active respondents who practice regular physical education and sports and health preservation in general (76.7%, 92 people);

3) value-motivated, competent respondents who practice regular physical education and sports and have long-term health preservation programs (6.7%, 8 people).

The distribution of respondents by groups and subgroups is as follows (Table 1):

**Table 1.** The ratio of the distribution of respondents by groups and subgroups at the beginning of the study

	Group I - "IT specialists"	Group II "economists"	Group III - "managers"	Group IV - "transport workers"
Passive	5	5	4	6
Active	21	23	25	23
Competent	4	2	1	1
Total	30	30	30	30

*Note: compiled by the authors based on the results of the study*

The study groups of respondents we surveyed, identified by an external criterion ("speciality", professional affiliation), differ from each other insignificantly. The greatest differences were demonstrated by the group "managers" and "IT specialists": among "managers" more students are demonstrating an active position about health preservation and health management (highly motivated), among "IT specialists" there are more "competent" (motivated), "transport workers" showed slightly greater passivity and demotivation compared to other groups (differences are insignificant at the 0.05 level). Among economists, the most noticeable differences are associated with a greater representation of "competent", motivated students. The semantic structure of ideas about the independence of physical education classes in these groups looks as follows:

1) Although modern education, containing independent learning as one of the three main components, is naturally intended and capable of stimulating independence and developing the desire for it and the ability of students to be independent, the forced nature of such "independence" (deprivation of the opportunity to receive support, advice, etc.) from teachers and other students, the general limited development of a person placed in conditions of more or less complete loneliness, prompt some students

to ask the question of how independence and isolation differ, many students record moments of isolation and "abandonment", "being of no use to anyone" (8.3%, 10 people);

2) Demotivated, passive students, solving in addition to health problems, a host of other, more subjectively significant problems, note problems of employment/overload, lack of time, space and other external resources (equipment, etc.). This group of students systematically underestimates and considers internal resources of health-preservation, including the formation/development of the quality of independence, in an extremely local way.

The procedure of the empirical study included work with the author's methods:

development, testing and improvement of the "Big Questionnaire of Health-Preservation" - the author's modification of the projective method of "Unfinished Sentences", collection of primary data using the questionnaire, its completion by 120 respondents;

qualitative and quantitative analysis of responses, content analysis, primary and secondary statistical data processing (counting the occurrence of subcategories in different groups and subgroups of respondents, comparative study of frequencies of occurrence in different groups and subgroups, assessment of the reliability of differences),

interpretation of the obtained data, identification of levels of independence in health preservation and typical ways of responding / understanding/attitudes towards phenomena, methods, conditions, functions, resources and anti-resources of students' health preservation, development and testing of recommendations for improving the programs and improved programs "Fundamentals of Physical Fitness".

During the development, testing and improvement of the questionnaire, the following were assessed (Zarochentsev K. D., Khudyakov A. I., 2005, p. 68, etc.): ecological validity, external validity, internal validity, operational validity, including construct validity. Construct validity of the developed content analysis methodology was ensured by the correspondence of the system of groups of categories, categories, subcategories and their referents to 1) theoretical postulates of research and data from existing studies of health preservation in the educational process; 2) compliance with the research hypotheses formulated based on theoretical assumptions; 3) empirically identified and correlated with theoretical models of health preservation scales (subcategories) of the study of the phenomenon under study.

"The Large Questionnaire of Health Preservation" was also included in the multi-stage training procedure, which assumed detailed work on individual (home) completion of the questionnaire, group (classroom) reflection of the process and results of filling, as well as subsequent independent (home) work aimed at clarifying the answers to the questions. The texts of the answers were analysed using the content analysis method, compared with each other as a whole and for individual groups and subgroups of respondents. It was assumed that many students do not have significant motivation for health preservation and reflection on health preservation, as well as motivation for learning in general, and do not have many of the competencies (knowledge and skills) necessary for correct understanding of the questions of the methodology, in particular, reflexive and metacognitive competencies.

The Large Questionnaire of Health Preservation (R.S. Lyzhenkova, 2022) is an original methodology; it is part of the curriculum for training specialists for independent physical education and health preservation. It is based on the structuring theoretical model of motivation for the independence of health-preserving activities of university students in the process of blended learning, substantiated by us in the course of a theoretical analysis of the problem, which includes a number of components and questions clarifying the formation and development of a particular component. The text of the questionnaire was largely traditional: open questions were offered devoted to various aspects of motivation for independence in physical education and health preservation of students at 3 levels (a) the level of individual exercises, b) the level of exercise cycles and other accompanying methods, c) the level of health preservation programs):

- Competence/content component of motivation for independence in physical education:

What do you need to know and be able to do to independently select, implement and evaluate the results of applying a particular health preservation method, to form, implement and evaluate the results of a program or individual health preservation route?

- process-activity component of motivation for independence in physical education:

Can you independently select, apply and evaluate the implementation of a particular method, health preservation program, for example, exercises for training a particular functional system of the body; build, implement and evaluate a health preservation program, including a training session or a program of classes?



- value-semantic component of motivation for independent physical education classes:

List the main values and goals of health preservation, including physical education and sports that guide your choice, implementation and evaluation of the effectiveness of health-preserving exercises and programs?

- The organisational and methodological component of motivation for independent physical education classes:

What organisational and other external resources do you need to have to independently choose, implement and evaluate the result of using a particular health-preserving technique or program?

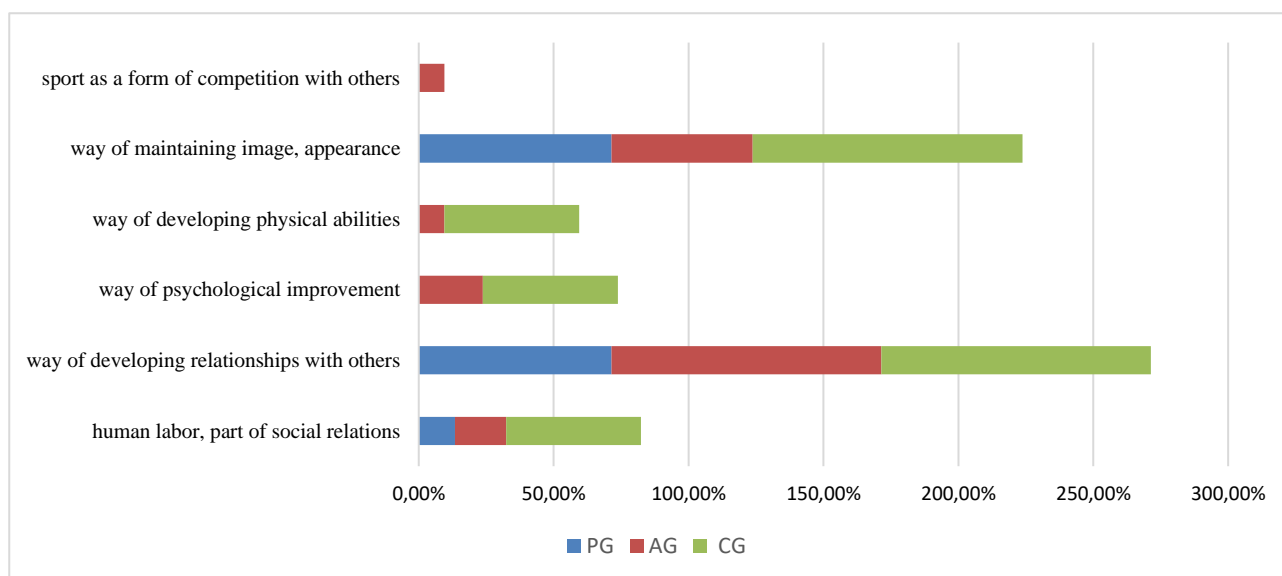
- criteria-evaluation component of motivation for independent physical education classes:

What are the criteria for evaluating the effectiveness of using a particular technique, group of techniques or an entire health-preserving program?

Respondents could answer questions from a particular group directly, in the course of answering a question devoted to a specific topic, or as part of answers to other questions, "incidentally". The presence or absence of indications of a particular subcategory was recorded (0 - no, 1 - yes). The total result for the sample could thus range from 0 to 120 units, for individual groups, from 0 to 30 units, for subgroups, and from 0 to a number equal to the number of respondents belonging to a specific subgroup.

The study was implemented as part of the program for the formation and development of independence in the health-preserving activity of university students.

The differences between the 4 studied educational and professional groups of respondents were insignificant; the differences are in the insignificance zone for all 5 components of motivation for independence in health-preserving,  $t_{Emp} = 1.3 \div 1.7$  for  $p \leq 0.05$  ( $t_{Crit.} = 1.97$ ). The differences between the subgroups of respondents, differing in the level of motivation for independent health-preserving in general and in different components,  $t_{Emp} = 3.9 \div t_{Emp} = 2.7$  ( $p \leq 0.01$ ), that is, they are significant, especially for value-semantic and competence-content indicators. Therefore, the results will be described according to the second criterion. Before describing the main results obtained, we will introduce the following symbols: PG is a subgroup of demotivated students with a passive attitude towards health preservation, AG is a subgroup of motivated students with an active attitude towards health preservation; KG is a subgroup of highly motivated students with a competent attitude towards health preservation. Tables 2–5 below summarise the frequencies of subcategories in different subgroups and the sample.



**Figure 1.** The content component of motivation for independent physical education classes  
(Developed by the authors based on empirical research)

The diagram in Figure 1 shows that the ideas of different groups of respondents about physical education and sports are significantly different.

The greatest contribution to the concept of "physical culture and sport" as a whole in the sample is made by the subcategories/scales of "area of social activity" and "development of relationships with

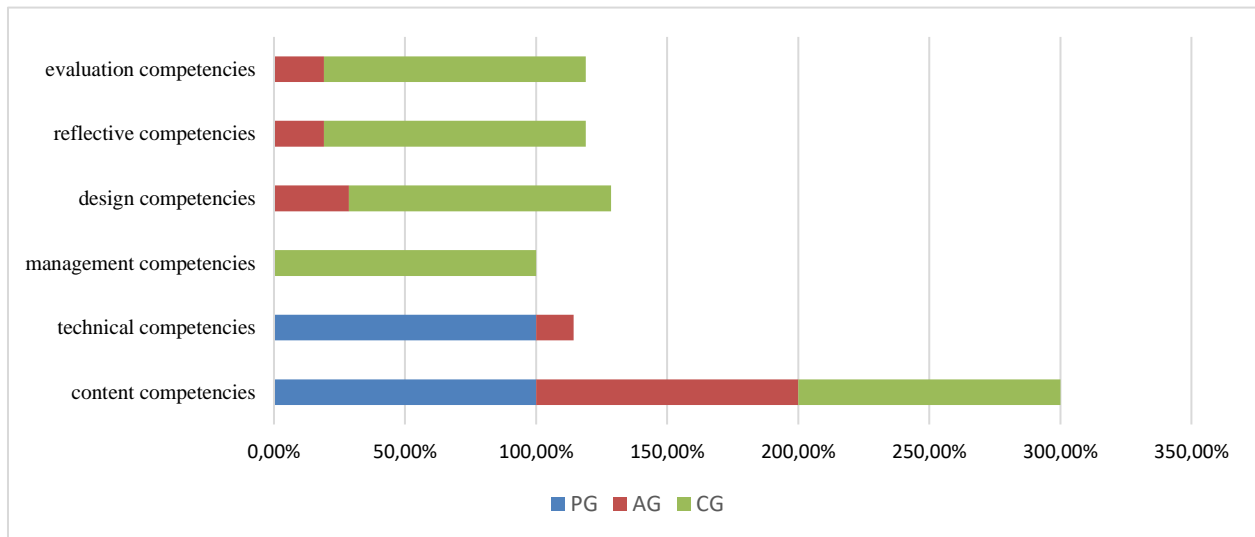
others" and "maintaining appearance", less - "work, an important part of life" and "a way of psychological improvement" and, to a lesser extent, "development of physical abilities": the respondents perceive physical culture and sport in general in a rather utilitarian, limited way, their life prospects (development tasks) are little connected with physical culture and sport, broad and narrow social motives dominate.

For the subgroup of respondents with a passive attitude to health-preserving activity, it is typical to turn to the scales (subcategories) of maintaining appearance and statements of the existence of physical culture and sport as a type of social activity (external, formal aspects - extrinsic motivation).

For the subgroup with an active attitude to health-preserving activity, it is also typical to have an idea of the psychological functions of physical culture and sport (internal, more subjective aspects appear). There is also an attempt to separate sports and physical education based on the criterion of help/harm to health and cooperation/competition.

For the subgroup of competent respondents, it is also typical to understand physical education and sports as ways of development, improvement (physical and psychological), and intrinsic motivation.

In general, this suggests that the most independent, active and competent respondents have a more holistic, systemic understanding of physical education and sports as a practice of preserving and developing their internal and external physical and psychological resources.



**Figure 2.** The procedural component of motivating independence in physical education classes  
(Developed by the authors based on empirical research)

The diagram in Figure 2 shows that the ideas of different groups of respondents about the procedural aspects of the components of motivation for independence in physical education classes are significantly different.

The subgroup of respondents with a passive attitude to health-preserving activity is characterized by an appeal to scales (subcategories) of substantive and technical competencies (external, executive aspects of health-preserving), which suggests that this subgroup of respondents is at the initial stage of competence development: they need to know "what and how to do" (including each exercise/method separately), including in the context of receiving help from a trainer/teacher, Internet resources and classmates. This is the "emerging motivation for independence in health-preserving". The subgroup with an active attitude to health-preserving activity is also characterized by attention to the competencies of reflection, assessment and design, which suggests that they are at a more advanced stage of independent health-preserving, when they try not only to understand what and how to do, but also how to evaluate and how to build a set/system of exercises, and also to reflect on the activities to be able to improve the results obtained. This is the "developing motivation for independence in health-preserving".

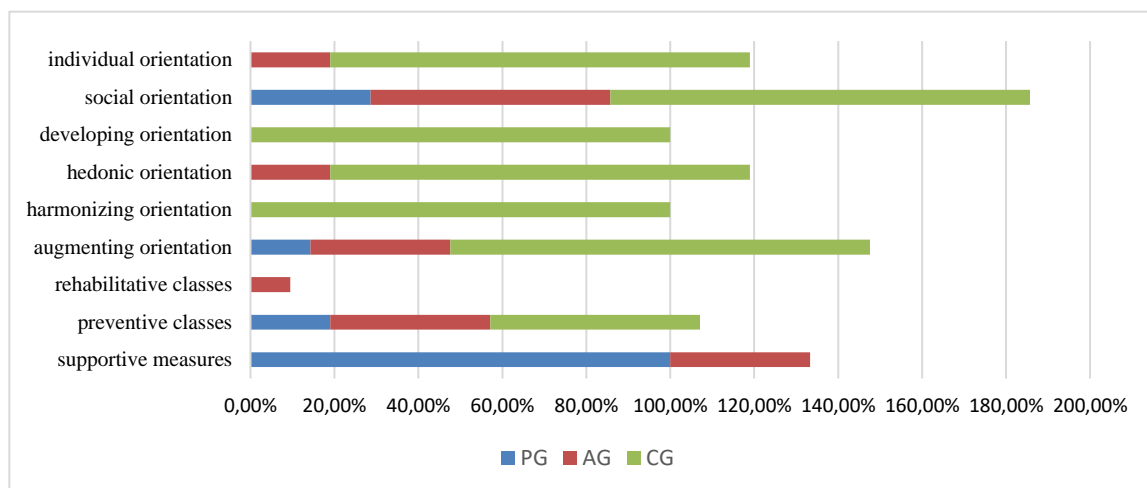
For the subgroup of competent respondents, attention is also paid to the competencies of reflection, assessment and design, as well as management, this suggests that they are at the next stage of independent health-saving, "management (independent) health-saving", when they not only understand

and can build systems of health-saving actions, but are also able to reflect, design and manage health-saving. This is "controlled motivation for independence of health-saving".

In general, this suggests that the most independent, active and competent respondents have a more complete set of competencies of health-saving, that three levels of health-saving can be distinguished, at each of which their types of competencies are formed and developed: "forming motivation for independence of health-saving", competencies of a substantive and technical type are formed (understanding of what and how can and should be done, including to "not harm" the body). 2) the intermediate level - "developing motivation for independence in health preservation" - to the understanding of what and how can and should be done (including to achieve the set goals), is added the understanding of how it is possible and necessary to evaluate the implementation of methods / exercises and their sets, how to develop and reflect on the implementation of such sets of methods, the leading competencies here are the competencies of assessment and design;

1) the final level - the level of "controlled motivation for independence in health preservation", associated with the formation of competencies of reflection and management.

Naturally, some respondents record the existence of other levels, including those associated with professional competencies in this area, but, as a rule, at this structure of levels / stages, for all respondents, the matter ends: realizing the presence of other, significantly greater opportunities, they, nevertheless, do not associate their development with independent activity, including educational and professional. This suggests that further development of motivation and independence itself is difficult, the educational system of a modern Russian university is not capable of supporting students' motivation and activity in this area in other classroom and extracurricular activities/events.

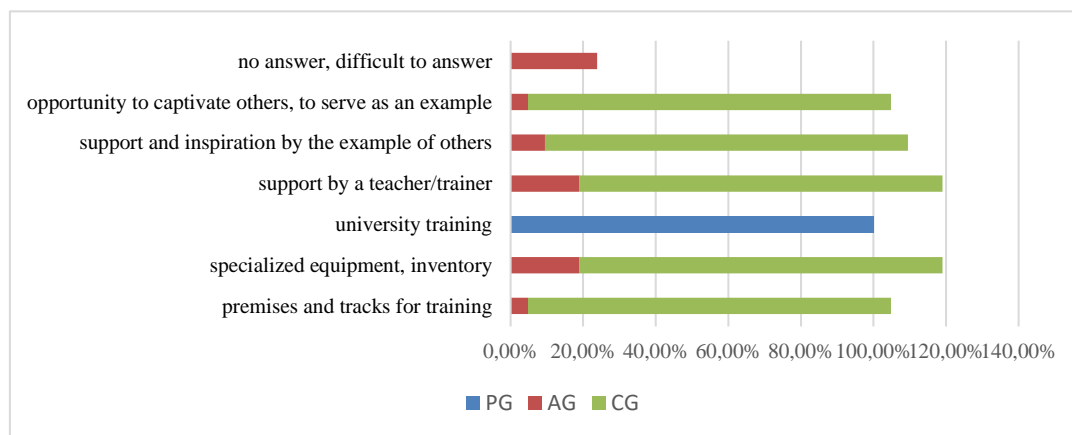


**Figure 3.** Value-semantic component of motivation for independence in physical education  
(Developed by the authors based on an empirical study)

The diagram in Figure 3 shows that for the sample as a whole, preventive and supportive selection orientations, social and augmenting (improving) orientations are significant at the beginning. Harmonising, rehabilitating, developing, and individual orientations are the least significant.

For subgroups of respondents with a passive and active attitude towards health-preserving activity, supportive and social orientations, as well as augmenting and preventive ones, are typical. For the subgroup of competent respondents and respondents with a negative, critical attitude towards blended learning, the developmental and harmonising, hedonistic, preventive and augmenting, individual and social orientations are important. All this suggests that the orientation towards development and individualisation of selection is characteristic of active, competent and striving to receive a quality education. Students who are less interested in it and more passive are satisfied with supportive and preventive selection criteria and/or do not take selection seriously at all, since they have not developed and do not comply with either a health-preservation regime, a route or a program. For competent respondents, the values of serving by example and independence, discipline and education of responsibility, passion and efficiency, development and adaptation are important. Here, an understanding of the social significance of

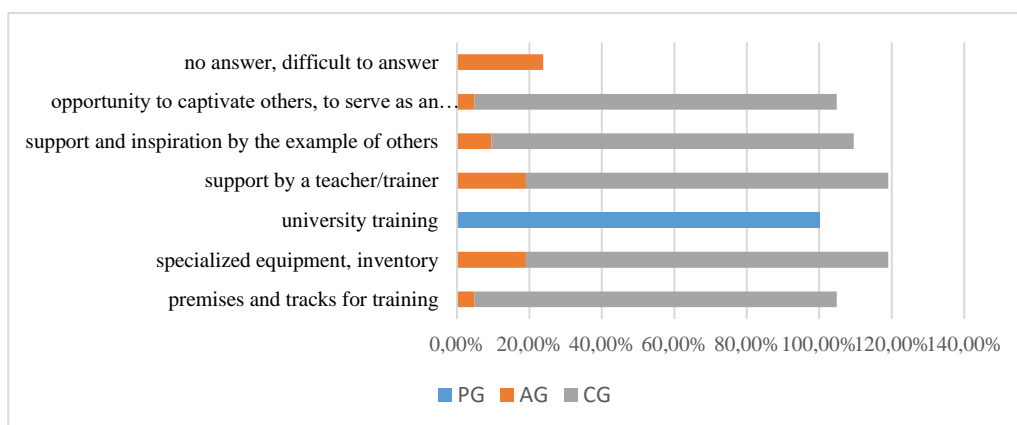
health, the importance of spreading a healthy lifestyle, self-improvement and the pleasure of health preservation is formed. In our opinion, it is especially important to highlight the values of serving by example, unlocking, and transcending the egoistic motives of health preservation in competent respondents. This is one of the ways to solve the dilemma of confronting social norms of life-affirmation / levelling the value of health and life, which modern people face in the consumerist community in general and in the commercialised education system in particular.



**Figure 4.** Organisational and methodological component of motivating independence in physical education classes  
(Developed by the authors based on an empirical study)

The diagram in Figure 4 shows that motivation is largely related to external conditions, educational features. This is fertile ground for activating health preservation and developing independence in health preservation.

Among respondents with a passive attitude towards health-preserving activity, 100% of the subgroup notes university training as a "panacea", and preferably in the classroom, strengthening exercises and fitness, relaxation exercises and strength training are most often mentioned - the most common stereotypical types of physical activity. For active respondents, support, availability of equipment and inspiration by example are also important: a traditional educational situation that develops the functional capabilities of the body and ensures relaxation. For competent respondents and respondents who have a negative, critical attitude towards blended learning, premises/tracks, equipment, teacher support, as well as "exchange of inspirations" are important: support and provision of support and serving as an example for those involved in each other. The most significant for them are complex types of exercises, including within the framework of holistic health-preserving programs, classes with special equipment, strength exercises and relaxation.



**Figure 5.** Evaluation component of motivating independence in physical education classes  
(Developed by the authors based on the empirical study)

The diagram in Figure 5 shows that among respondents with a passive attitude to health-preserving activity, the most frequently mentioned are the absence of losses and expenses, development of mobility, improvement of the body condition and the emergence of a healthy lifestyle, as well as satisfaction with classes and the effectiveness of training.

For active respondents, self-satisfaction, improvement of the body condition and development of flexibility and mobility, the effectiveness of training and the absence of excessive costs and wear, and the development of reflection are also important. For competent respondents, the absence of losses and expenses, development of mobility, as well as satisfaction with classes and the support of the trainer, self-satisfaction, and the quality of training, and its effectiveness are important.

Thus, respondents demonstrate two types of attitudes to classes:

1) a passive-consumer attitude to classes that should not be burdensome, but, at the same time, allow you to achieve health. This group of respondents can be related to those who believe in the "magic of pills" and quick, easy ways to solve health problems, without trying to make their efforts; these are dependent students.

2) an active and creative attitude to classes, a comprehensive assessment of the process and results of classes, distributed responsibility as an understanding that the result of each person's efforts depends on them and their environment: internal and external resources.

As conditions for the latter, as the survey results show, systematicity, persistence, experience and orientation in one's potential, methodological competence, and self-control competencies are important. However, the ratio of the frequency of mentioning the importance of competence and openness of information (more often) and purposefulness and systematicity of classes (much, 3 times in the sample) indicates crisis trends: disorientation in choosing the direction of further development. Respondents strive to be open, know and can do a lot, do a lot, but strive for little.

In general, it is clear that the "growth points" to which the work of teachers and educational process support services of the university should be addressed are different:

- advertise a healthy lifestyle, health care, stimulate the transition to a healthy lifestyle, to health preservation;
- support reflection, comprehension and rethinking of one's own experience and the choice from the palette of available methods and directions of the most "developing", correction of the desire to limit development to the "suitable" and "easy", joint research work that allows comparing the "pros" and "cons" of adaptive and non-adaptive (supradaptive) strategies of health-preserving activity;
- Informing and researching the paths (prospects) of development within the non-adaptive (supradaptive) strategy of health preservation, as well as the explicit and implicit consequences of abandoning them.

## **Conclusion**

Having analysed the hypothesis of the study, we can conclude that it was confirmed. The current format of university education in the area of motivation for independent physical education classes is not effective. The main condition for success is targeted work in the area of formation and development of motivation (readiness) and ability (competencies) for independent health preservation. In addition to teachers, academic health preservation services can and should take part in such work. Based on the obtained results, we developed a model for the formation and development of motivation for independent physical education classes and health-preserving activity of university students, various points of which act as principles and recommendations for optimising the educational process of the university. Within the framework of the model, conditions, levels, types of motives and several motivation components are integrated:

1. Competence/content component of motivation for independence in health preservation: motivations and competencies in health preservation, physical education, individual route of health preservation, level of independence and own resources of activity;
2. Process-activity component of motivation for independence in health preservation: functions/significance and difficulties of activity in the field of physical education and health; features of selection and integration of methods and implementation of health preservation programs;

3. Value-semantic component of motivation for independence in health preservation: significance, values and conditions of health preservation; motives for independence in different conditions of education;

4. Organisational-methodological component of motivation for independence in health preservation: organisational and external resources of health preservation; functions and methods of university training in the field of health preservation;

5. criteria-evaluation component of motivation for independence in health preservation: criteria for the effectiveness of methods/training/health preservation programs/health preservation classes and programs; conditions for independence in health preservation.

The prospects of the study are related to a comparative study of 1) different training options; 2) students of different specializations, career and professional orientations at different stages of training; 3) the creation, testing, improvement and implementation of model programs to support the motivation for independence in health preservation of future specialists at the university in the context of different conditions, the implementation of academic health preservation services.

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