

## Developing the motivational component in the structure of attitudes toward valeological activities among students

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### Abstract:

The preservation and enhancement of human health depend significantly on an individual's attitude toward valeological activities. This attitude comprises cognitive, procedural, and motivational competencies, with motivation being crucial for health-preserving behaviors. *The purpose* of this study was to examine the longitudinal dynamics of motivational development in valeological activities among students enrolled in the Department of Physical Culture and Sports. *Materials and methods.* The research involved 115 students from three universities in the Ural and Siberian Federal Districts of Russia. All students pursued studies in physical education and underwent purposeful formation of attitudes toward valeological activities over the course of their studies, spanning from the first to the third year. A comprehensive methodology was used to assess the level of the students' attitude for valeological activity motivational component. It included the determination of two indicators – the level of an individual valeological position formation using a questionnaire and the index of attitude to health using a special test. *Results.* It was found that at the beginning of the research project, the students registered mainly a reproductive type of attitude for health-saving activities according to the level of an individual valeological position formation. It refers to a low level of attitude and corresponds to the previous state of knowledge, skills and abilities that students had at school. Students' personal attitude to valeological activity manifests itself without positive motivation to promote health, including through the use of physical activity. During the second year of study, it increases to 36.5% for students with a reproductive and creative (average) level, and 5.0% have a creative (highest) level of attitude for health preservation. Students begin having a positive motivation for valeological activity. In the 3<sup>rd</sup> year of study, students register even more positive changes towards an increase to 38.9% in the number of students with a creative (higher) level of valeological personal position. The motives of self-improvement and self-realization are noted. The analysis of the values of the indicator for assessing the level of formation of the valeological individual position confirmed its identity with the results of the study "index of attitude to individual health". *Conclusions.* The obtained results of motivation for valeological activity formation among students during their studies at the Department of Physical Culture should be taken into account when planning the content of this discipline for all university students, regardless of the directions of their professional training.

**Key Words:** health, physical activity, physical education, attitude, valeological activity, motivation

### Introduction

The basis for human health preservation is one's personal valeological (health-saving) activity. Health care should be carried out throughout life. Currently, a person's attitude to perform health-saving activities is considered as a process of recruiting mental and physiological systems of the body. It allows performing certain psychomotor actions effectively in a short time; these actions are aimed at improving health. An important role in

this process is assigned to the formation of appropriate knowledge, skills and abilities in a person, supported by a program of actions and volitional efforts to perform them (Fedorov & Tretyakova, 2023).

According to N. Tretyakova & V. Fedorov (2014), it was found that the main components of a person's attitude for valeological activity are:

– a motivational component, which indicates the priority value of individual health in the general system of human life values. This component indicates the need and desire to preserve and strengthen health and characterizes its level of development. It describes the key internal motivations to increase the potential of one's health and the health of those around him;

– the cognitive component characterizes a person's level of knowledge about health, factors of a healthy lifestyle, ways and methods of preserving and improving the reserve capabilities of the body and ways to increase the potential of their health using means and methods of physical education;

– the technological component gives an idea of the skills of mastering ways to increase one's health level, regular use of individual experience in maintaining health in everyday life.

Only the combination of these components and an equal degree of their development allow a person to successfully realize him/herself in valeological activity and ensure an adequate level of health.

At the same time, the motivational component acts as the leading one that encourages a person to gain knowledge, form practical experience and change his/her behavior in accordance with acquired knowledge and skills (Xie et al., 2022; Chen, 2024). Most theories of motivation converge on the idea that setting behavioral tasks is a key volitional act that contributes to achieving a goal (Ajzen, 1991). An important role in valeological activity is played by the creative component, which in modern pedagogy plays a role as one of the key educational skills (Leggett, 2024).

Therefore, the question of what personal motivation level young people have to preserve their health, provides them with the necessary health-preserving and health-forming behavior, is of scientific interest. The study of modern scientific publications allows establishing the fact that scientists mainly pay attention to such vectors of human attitude for valeological activity as cognitive and procedural components. It is their formation among young people that becomes the basis for the work of coaches, teachers, educators and medical workers. Starting from the period of study and at all its stages, students form knowledge about health and the basics of its preservation and they are taught practical actions. The extent to which they are then ready to implement their knowledge in everyday life can be traced from the available scientific research. Thus, L. Delente and colleagues (2022) provide a grounding for the fact that physical activity is a determining factor of health in a person's daily life. At the same time, medical professionals should prescribe physical activity to sick people in the treatment of diseases. But in their research, they show that the medical professionals themselves (medical students and nurses) do not have in-depth knowledge on this issue and cannot disseminate the correct information. Therefore, targeted training on topical issues of using physical activity to maintain a good level of health is necessary for these specialists (Delente et al., 2022). A comprehensive review of mental health knowledge gaps in nurses and identification of their training needs was investigated by S. McInnes and colleagues (McInnes et al., 2022). Scientists state that knowledge of ways to support mental health plays a key role for all nurses. However, out of 652 nurses, only 13 of them met the criteria for sufficient knowledge. Researchers E. Brogan et al. (2020) have established another pattern. According to their research, qualified nurses have a high level of medical literacy, but they know little about healthy eating and physical activity. By offering a special training program, they showed how the nurses' behavior changes as they increase their literacy in matters of protecting their health. The research work shows that after the training, it is impossible to guarantee that nurses will change their habits and remain healthy throughout their careers. That is, knowledge and practical skills alone are not enough. A person should have a strong motivation. A particularly important role in valeological activity should be given to regular human physical activity (Sailauova et al., 2023). Currently, physical activity is considered by numerous researchers as a necessary means of maintaining, strengthening and improving human health (Yapıcı-Öksüzöğlü, 2020; Grajek & Sobczyk, 2021). It is known that the involvement of young people in physical culture and sports activities increases and improves the motivational component of physical activity (Zhang et al., 2019; Zurita-Ortega et al., 2019). Therefore, the involvement of various groups of the population in physical activity has a focus on improving valeological activity. It is especially true for students, among whom there is pronounced hypokinesia with the development of abnormalities of hypodynamic genesis in the health (Syamsudin et al., 2021; Mazin et al., 2021). Thus, it is the motivation manifested in persistent beliefs to maintain health that acts as the main driving force of a person's valeological position. The issues of motivation for physical culture and sports activities and observance of a healthy lifestyle basics among young people are sufficiently fully and comprehensively covered (Kuśnierz et al., 2020; Van De Pol, 2023; Popovych et al., 2024). At the same time, the data from the analysis of scientific literature indicates a low coverage of the issues of developing motivation among young students for health-saving and health-forming activities. Insufficient information on the study of this issue reduces the effectiveness of valeological education among students, which leads to a deterioration in modern youth's health, as reported by numerous authors (Tortella et al., 2021; Tomás Reyes-Amigo et al., 2021; Korobeinikova et al., 2024).

**Purpose:** to study the longitudinal dynamics of motivation for valeological activity formation among students during their studies at the Department of Physical Culture and Sports.

## Material & methods

The research project was carried out during three academic years at the departments of physical culture and sports: at Ural Federal University named after the first President B.N. Yeltsin (Ural 1 group), Russian State Vocal Pedagogical University (Ural 2 group, Irkutsk National Research Technical University (Baikal Group), Russia. 115 students participated in the project, who were monitored from the first to the fourth year of study. All students were assigned to functional groups I (basic) and II (preparatory) according to the state of somatic and physical health, without limiting the volume and intensity of physical activity during PE classes. At the beginning of each studying year, the state of the motivational component of students' attitude for health-saving activities was assessed using a comprehensive methodology for determining the individual level of valeological position formation and the index of attitude to personal health (Fedorov & Tretyakova, 2023). When studying the academic disciplines "Physical Culture" and «Elective courses in physical culture", we carried out purposeful work on the formation of a valeological activity motivational component among students. The first indicator the level of the valeological individual position formation» represents an integrative characteristic of the student's valeological activity. It implies a level of knowledge and a meaningful understanding of a healthy lifestyle basics. It also includes a value attitude towards health and the health of other people in the structure of basic life priorities, the desire to improve one's health, the use of healthy lifestyle rules, including regular physical activity. The quantitative assessment was carried out using a questionnaire (Madzhuga & Sinitsina, 2014). The respondents gave a point for each position, where the highest level corresponds to a score of 4, and the lowest – to 1. The questionnaire includes 7 blocks – the motivational component of personal health culture, attitude to health from a position of vital value, personal physical activity in health conservation, the quality and level of valeological knowledge, the qualitative level of valeological skills, the nature of health-saving activities and regularity of physical activity. The calculation of the value of the average score of answers for all 7 blocks determines the level of the student's valeological personal position formation. The second indicator, «the index of attitude to individual health», is calculated according to the test methodology using the principle of alternative poles of responses (Deryabo, 2010). This test combines four additional tests. They describe four levels of intensity of a person's attitude to their health. It includes the scales: emotional, cognitive, practical, daily and general scale. The latter combines the values of all previous scales and indicates how well the student's attitude to health has been formed and its severity. High scores in the test indicate that the student has a highly positive attitude towards his/her health and a healthy lifestyle. Such a person attends sports clubs and participates in mass sports events, performs complexes of special physical exercises. Low score values indicate that the subject's attitude to health is not fully formed and he/she is in the so-called «risk zone». It indicates that this student will not follow a healthy lifestyle in the future, which can lead to the development of the person's disease. The following levels were distinguished: reproductive (reproducing), reproductive-creative, creative (combining) and adaptive. The obtained digital material was processed by parametric methods using licensed programs STATISTICA 10.0, MS Excel 2010. The reliability of the differences in the indicators was assessed by the value of the Student's t criterion. At  $p < 0.05$ , the difference in indicators was considered significant. At the beginning of the research project, all students gave their written consent to participate in the examination and observation. The completed project does not contradict the ethical standards that apply to biomedical scientific research with the participation of people and does not contradict the principles of the Helsinki Declaration of 2008.

## Results

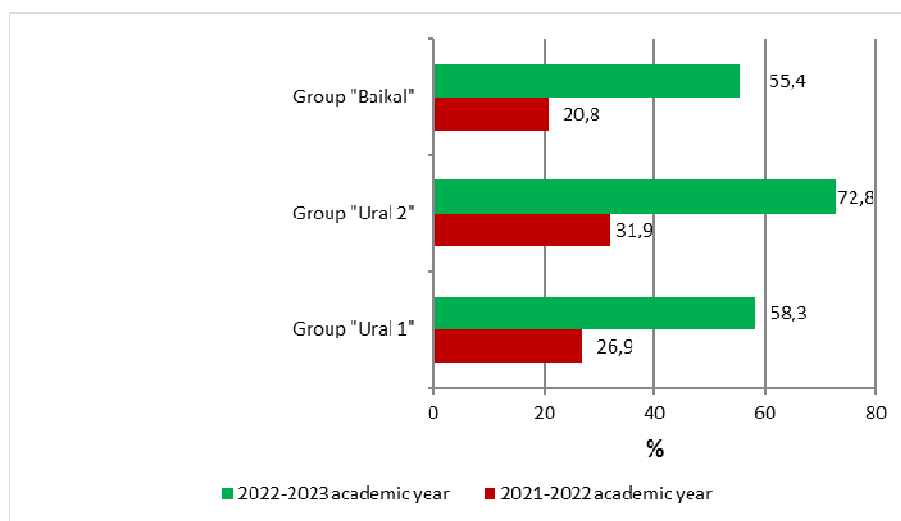
Table 1 shows the quantitative dynamics of the indicator value of the valeological personal position formation level among students from 1 to 3 years of study at the university.

**Table 1. Characteristics of the dynamics of the valeological personal position level formation among students in different years of study at the university (points,  $M \pm m$ )**

Groups of students	The value of the indicator (points, $M \pm m$ )
2020-2021 academic year	
"Ural 1", (n=46)	12.34±0.13
"Ural 2", (n=38)	13.10±0.14
"Baikal", (n=31)	15.12±0.16
$M \pm m$ , (n=115)	13.75±0.11
2021-2022 academic year	
"Ural 1", (n=46)	15.66±0.17
"Ural 2", (n=38)	17.28±0.24
"Baikal", (n=31)	18.27±0.19
$M \pm m$ , (n=115)	16.69±0.12*
2022-2023 academic year	
"Ural 1", (n=46)	19.53±0.19
"Ural 2", (n=38)	22.64±0.22
"Baikal", (n=31)	23.50±0.24
$M \pm m$ , (n=115)	21.82±0.13*#
$M \pm m$ growth	8.37±0.04

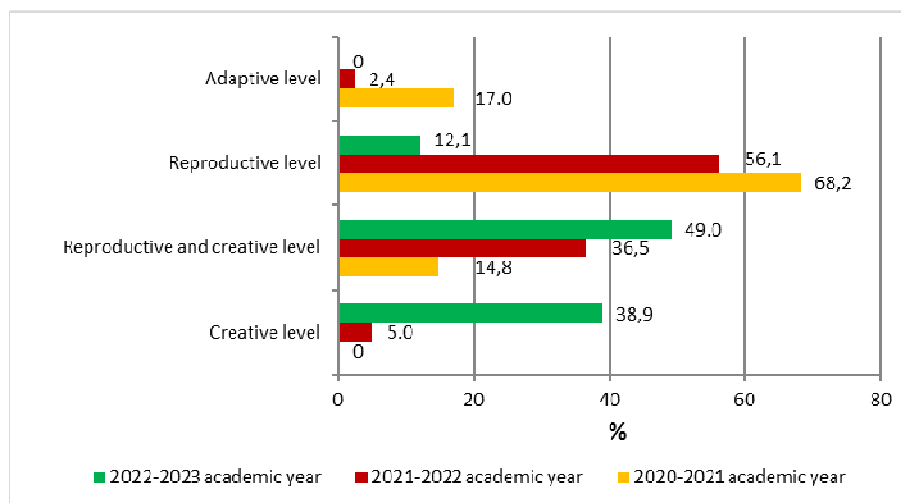
Note: *M* – arithmetic mean; *m* – the error of the arithmetic mean; \* – the significance of the difference between the values of the arithmetic mean compared to the 2020-2021 academic year; # – the significance of the difference between the values of the arithmetic mean compared to the 2021-2022 academic year,  $p < 0.05$

The results of the assessment of the students', studying at the three universities attitude for valeological activities indicate an annual increase in the value of this indicator of the score. In the second year of the research project, the average value of the students' attitude for valeological activity increased by 21.4%, in the third year it increased by 8.37 points or 58.7% compared to the beginning of the research project. The dynamics of the increase in the score of students' attitude for valeological activity in the second and third years of study at the university compared with the first year is shown in Figure 1.



**Fig. 1. The increase in the value of the indicator of students' attitude for valeological activity in the 2<sup>nd</sup> and 3<sup>rd</sup> years of study compared with the value of this indicator at the beginning of the project**

It was found that in the second year of study at the university, students' level of attitude for valeological activity increased from 20.8% (Baikal group) to 31.9% (Ural 2 group) compared with this indicator in the 1<sup>st</sup> year. In the third year of study, the percentage increase turned out to be even greater and ranged from 55.4 to 72.8% for different universities. It is important to study the qualitative assessment of the indicator of students' attitude for valeological activity in different years of their studies, Figure 2.



**Fig. 2. Qualitative assessment of the students' attitude for valeological activity indicator during different years of study**

Of the 115 students surveyed, 68.2% had a reproductive character of a personal valeological position in the first year of study. It indicates that such students' valeological activities are carried out at the same level that they had before the start of the research project. It means that they have a shallow understanding of health and a healthy lifestyle, which corresponds to the level of a high school graduate. Among these students, the attitude to health manifests itself mainly on an emotional and sensual level, in which an adequate perception of actions is not possible. Reflexive awareness of valeological activity, which is associated with physical activity, occurs irregularly and is carried out only in PE classes. There is no positive motivation to strengthen one's health, participate in mass physical culture and sports events, attend sports sections, and perform special physical exercises. 17.0% of first-year students have an adaptive type of valeological personal position. These students are characterized by elementary fragmentary knowledge about health and methods of its preservation. Among this group of students, passive and pragmatic formal motivation for the implementation of the healthy lifestyle principles prevail.

The mastering the theoretical discipline «Physical culture» and the practical discipline "Elective courses in physical culture" by students lead to a redistribution of rank places at the level of valeological personal position.

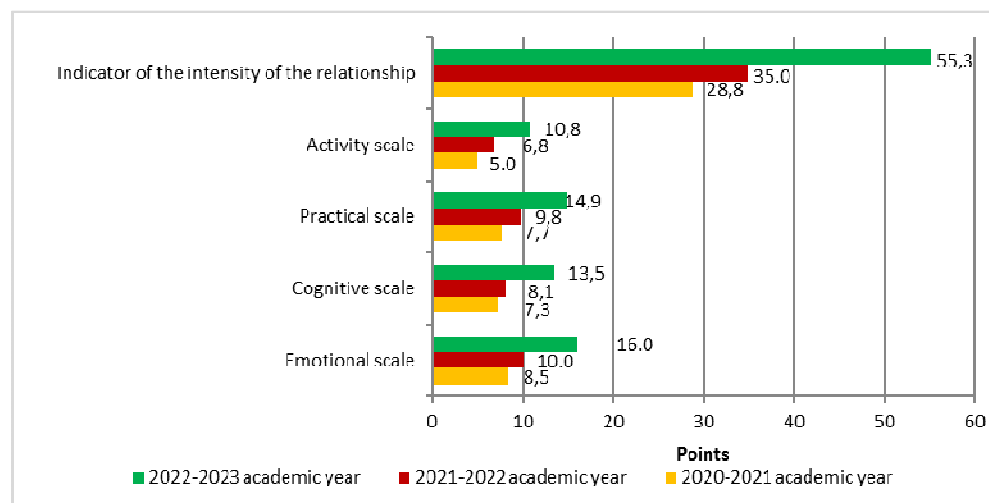
In the second year of study, 56.1% of students have a reproductive level of attitude for valeological activity. However, there was a 2.5-fold increase in the number of students with a reproductive and creative level (36.6%) compared to the first year of study. The creative level of valeological personal position began to be registered for the first time in 5.0% of students, Figure 2.

The reproductive and creative level of valeological activity is characterized by the appearance of poorly developed motivation among students to promote health, using physical activity for this purpose and observing a healthy lifestyle.

In the third year of study, even more pronounced positive changes in the level of valeological personal position are registered among these same students. The largest number of students (49.0%) have a reproductive and creative level. At the same time, the number of students with a reproductive level decreased by 4.6 times and the number of students with a creative level (38.9%) with a valeological personal position increased by 7.8 times compared to the second year of study. The creative level is characterized by the creation of new knowledge among the surveyed students and the formation of sustainable values for health, physical activity and a healthy lifestyle. For students with this level, the motives of individual improvement and self-realization in society become relevant, they register positive vectors for health preservation and health improvement. The creative level indicates the highest level of human attitude for valeological activity.

The purposeful activity organized at the departments of physical culture at three universities to form students' attitude for health care for 3 years allowed students to form their attitude for valeological activity. It is evidenced by the positive results of changes in the levels of students' attitude to their health and the health of others, physical activity and adherence to the basics of a healthy lifestyle and improvement of personal development.

The results of the indicators' analysis that were obtained using the methodology for determining the «index of attitude to health» indicate a pronounced maturity of the psychological development of the students we examined and the characteristics of their attitude to the preservation and promotion of health, Figure 3.



**Fig. 3. The values of the psychological health assessment scale indicators for students in 1-3 years of study at the university**

The results of the analysis of the indicator's values «index of attitude to individual health» indicate an increase in students' psychological attitude for health-saving activities in subsequent courses of study. In the 3<sup>rd</sup> year of study, the value of students' scores on the emotional scale increased by 88.2%, cognitive by 84.9%, practical by 93.5%, and the progressive scale by 116.0% compared to the 1<sup>st</sup> year of study. According to the general scale, there was an increase in the value of students' scores by 92.0%. The positive dynamics of increasing students' attitude for valeological activity may indicate a decrease in their risk of developing various diseases, including those of hypodynamic genesis.

## **Dicussion**

There is a negative demographic situation all over the world, associated with a decrease in the number and deterioration of human well-being. The statistics provided by the World Health Organization, in relation to the number of adults in Europe and Asia (represented in the WHO study), show a negative trend in the decline in the total number of children and adolescents. Also, according to numerous researchers, an increase in morbidity is recorded among various population groups, including children and adolescents (Tortella et al., 2021; Tomás Reyes-Amigo et al., 2021; Korobeinikova et al., 2024).

It indicates the urgent need to conduct research on issues related to improving students' health as they are the future labor potential of the state. The most effective work on the valeological competence formation among students can be carried out in educational institutions with different educational status.

The long time spent teaching young people in educational institutions allows paying a lot of attention to their valeological education and the formation of persistent motivation for health care. The leading role is assigned to departments, physical education centers and sports clubs of universities that carry out physical education and recreation activities among students. We believe that at the same time it is important to expand the activities of these structures, involving them in work related to the formation of students' attitude for valeological activity. To do this, students need to develop a motivational component for health care (Xie et al., 2022; Chen, 2024). The scientific grounding for the expediency of this work is the theory of planned behavior used in the field of social psychology (Ajzen, 1991).

This theory is widely used to explain the psychological mechanisms behind certain human behavior. The theory has been successfully applied in many areas of behavioral research, and has been used as a theoretical basis for the development of human health behavioral interventions, including encouraging regular physical activity, maintaining a healthy diet, etc. (Xie et al., 2022; Mandal et al., 2023; Bélanger M. et al., 2023).

Modern scientific researchers are doing similar work to our research. Thus, Y. Zhang and R. Cooke, investigating the effect of a combination of motivational and volitional intervention based on action planning among UK students, showed how these effects changed the eating behavior of the subjects and increased their motor activity (Zhang & Cooke, 2012). Scientists have proved that influencing students' attitudes is effective for changing cognitive processes, behavior change requires intervention based on motivation and expression of will, thereby confirming the results of our research.

Meanwhile, such researchers as P.M. Gollwitzer and P. Sheeran (2006) clarify that having a strong intention to achieve a goal does not guarantee that the goal will be achieved, so people may not be able to effectively cope with problems of self-regulation during the achievement of the goal. Hence, a special role in providing support for students' health-making activities is assigned to the PE teacher. Therefore, in our research, compulsory physical education disciplines were selected, during which students received the necessary help and increased their confidence in creating new models of their valeological behavior and correcting them.

The choice in favor of physical culture is quite grounded, since, firstly, motor activity is the main component and condition for maintaining human health (Kuśnierz et al., 2020; Kolokoltsev et al., 2020; Van De Pol, 2023; Popovych et al., 2024), and secondly, this subject is studied by students weekly throughout the entire period of study at the university – this requirement is enshrined in the state standards of higher education in many countries. The results of the first-year student's attitude level for valeological activity study in comparison with the results obtained from them in the third year eloquently confirmed the growth of this personal quality, which encourages a person to change his behavior towards its preservation.

The first year was dominated by students with a reproductive type, which according to the classification of N.Tretyakova, V. Fedorov (2014) is attributed to a low level of valeological activity. In the 3<sup>rd</sup> year of study, 49.0% of students have a reproductive and creative level (medium level) and 38.9% have a creative type (high level) of valeological activity.

The creative level is characterized by the most pronounced value attitude towards health, physical activity and a healthy lifestyle. A positive change in the indicator of students' attitude for valeological activity indicates a decrease in the risk of developing various diseases, including those associated with physical inactivity. The conducted research has shown the important role of a PE teacher in accompanying the process of students' attitude for valeological activity formation.

## Conclusions

The negative dynamics of the increase in morbidity among children, adolescents and youth explains the need to study issues related to the health of this category of the population and connect other social services, primarily education, to health care.

Using the example of students, we have shown how it is possible to change young people's motivation and form such a personal quality as attitude for valeological activity. Our research shows that 1<sup>st</sup> year students come to university with superficial, non-systemic knowledge about health and healthy behavior and physical activity. Their lifestyle does not meet the principles of a healthy lifestyle. Only systematic and purposeful work makes it possible to change this state by the end of the third year of study and achieve their psychological attitude for valeological activity and the replacement of health-saving behavior with health-preserving one.

It is advisable to organize such purposeful work within the framework of academic disciplines on physical culture. These disciplines, firstly, are meaningfully related to the main aspects of human health protection, secondly, they are mandatory for all students to study, and thirdly, they take place in all years of study, ensuring the regular and systematic nature of activities to form young people's attitude for valeological activities.

The results of the research project can be used in the planning of educational materials and the organization of classes in the courses «Physical culture» and "Elective courses in physical culture" for all university students, regardless of the areas of their professional training.

**Conflicts of interest.** The authors declare no conflict of interest.

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