

# Analysis of the cadets' attitude to the body cultural values, physical training and sports

SVETLANA VIKTOROVNA ANNENKOVA, VALERY DMITRIEVICH PANACHEV ✉, ANATOLY ALEKSANDROVICH OPLETIN, LEONID ALEKSANDROVICH ZELENIN, ANDRY ALEKSANDROVICH SMIRNOV, ALEKSANDR NIKOLAEVICH LEGOTKIN, RAFILY FAIZRAHMANOVNA KUSYKOVA, NIKOLY LEONIDOVICH PONOMAREV

Perm National Exploratory Polytechnic University (PNIPU), Perm Military Institute of the Troops to National Guard RF (PVIVNGRF), Perm State Institute of the Culture (PGIK), Russian Federation

## ABSTRACT

The recent political situation did not bring any positive changes for the Russian Federation and our potential partners. Unfortunately, these negative aspects bear a negative impact on the decision-making of the anti-doping control agency WADA, which banned Russian athletes from participating in the 2020 and 2022 Olympics. Changes that take place in all areas of Russian society have a significant impact on attitudes to physical training and sports. New socio-economic, economic and other conditions as a result of scientific and technological progress have their impact on the value attitude to physical training and sports. It depends on the cycle and phase of development of a person's life. Young people is the most mobile category of society. The level of physical culture and sports activity of modern youth largely determines the demand for physical training and sports and the effectiveness of their development in society. Therefore, it is so important to analyse the motivating forces that significantly affect both the process of engaging young people in physical culture and sports activities, and the development of the physical culture and sports movement as a whole. It is known that if people are interested in physical culture and sports activities, then it becomes for them a source of psychosomatic comfort, the state of which many researchers call "an uplifting sense of pleasure". Only if participation in physical culture and sports activities is caused by internal motives based on positive emotions and interest, one can talk about the positive impact of physical exercise on personal development. In addition, the main goal of the development of Russian society in the coming years is to increase the average life expectancy of Russians to 80 years. And to do this, it is necessary to master a healthy lifestyle and motor activity for everyone at any age. Relying on these theoretical assumptions, the authors of this article sought to find out the role of motivating factors that boost the sports activity of cadets, to determine what drives them: a sense of duty or a deep interest, a vital need or a need to fulfil the standard of the curriculum and get a credit.

**Keywords:** Social study; Analysis; Cadets; Body cultural values; Physical training; Sports.

### Cite this article as:

Annenkova, S.V., Panachev, V.D., Opletin, A.A., Zelenin, L.A., Smirnov, A.A., Legotkin, A.N., Kussykova, R.F., & Ponomarev, N.L. (2021). Analysis of the cadets' attitude to the body cultural values, physical training and sports. *Journal of Human Sport and Exercise*, 16(4proc), S1857-S1870. <https://doi.org/10.14198/jhse.2021.16.Proc4.32>

✉ **Corresponding author.** Perm National Exploratory Polytechnic University (PNIPU), Perm Military Institute of the Troops to National Guard RF (PVIVNGRF), Perm State Institute of the Culture (PGIK), Russian Federation.

E-mail: [litoov.ev@yahoo.com](mailto:litoov.ev@yahoo.com)

Abstract submitted to: Spring Conferences of Sports Science. [Costa Blanca Sports Science Events](#), 21-22 June 2021. Alicante, Spain.

JOURNAL OF HUMAN SPORT & EXERCISE ISSN 1988-5202.

© Faculty of Education. University of Alicante.

doi:10.14198/jhse.2021.16.Proc4.32

## INTRODUCTION

The conducted questionnaires, interviews, observations, analysis of the state of educational and mass physical culture and sports activities in Perm higher educational institutions allowed the authors to present an objective situation that reflects the level of engagement of cadets in various forms of physical exercise, the range of their physical culture and sports interests, needs and motives in this field of activity. An important role in the sociological research is attached to the assessment of the significance of the influence of various objective and subjective factors on the level of physical activity of cadets. The most noteworthy is the interaction of factors such as gender and age of cadets, the course of study and the field of the educational institution. Physical culture and sports activity are the improvement of the biosocial nature of a person by means of physical culture. At the same time, its quantitative and qualitative characteristics can be represented by indicators of time spent, regularity of classes, motivation of students in the field of physical culture and sports activities. The cadets who took part in this research, depending on their attitude to physical culture and the level of physical activity, were divided into three typological groups:

- Cadets with low physical activity: time spent does not exceed 3 hours per week (48 %);
- Cadets with optimal physical and sports activity: time spent amounts to 6 hours per week (35 %);
- Cadets who do not show interest in physical activity and do not spend free time on physical exercises and sports (17 %).

## MATERIALS AND METHODS

To analyse the questions raised, a series of questionnaires were conducted among the cadets of military institutes. The questionnaires were handouts with open and closed questions. Then the results were processed and analysed. Cadets of both genders aged 17 to 22 years participated in this research. The experimental program of physical training and sports for cadets of the military institute, its implementation technologies were developed on the basis of the research. The goal of the experimental program is to improve the effectiveness of the educational function to create the innovative organizational forms of physical education both during instruction hours and during extracurricular activities of cadets. This is the purpose of the experimental work organized to achieve a positive result.

The experimental group (45 cadets) consisted of first-year students who studied according to the traditional form of education. The control group consisted of 45 cadets who studied according to the experimental program. The experiment was conducted during the training year. At the end of the year, control tests were made. Analysis of global social, cultural and educational trends shows that in recent years various aspects of human behaviour, especially in terms of their impact on human health, have become the object of much public attention and the subject of interdisciplinary research in many Western countries. Many systems of healthy lifestyle relate directly to the educational system (Vilensky & Pots, 2014; Bondin, 2014; Aghajanian, 2014; Iseman, 2014; Kazin & Kasatkin, 2014; Vasilyeva, 2014; Malyareko, 2014; Apanasenko, 2014; Valiulina, 2014; Ovchinnikov, 2014; Salov, 2014; Aronson, 2013; Zelenin, 2014a,b,c,d; Spigel, 2012; Zhou, Tang, Newlands & King, 2014; Karnath & Dieterich, 2014; Blume, 2013; Rosenbaum, 2014; Dubrovskiy, 2014; Vaynbaum, 2014; Waskiewicz, Juras & Raczek, 2014; Starosta & Fostiak, 2014; Hirtz, 2014; Young, 2014; Pozzo, Levik & Berthoz, 2015; Weinert, 2013). As a rule, researchers in their publications allow different opinions about specialists in the field of physical culture, which consists in the need for physical training for young people, innovative approaches to a healthy lifestyle based on a scientific system reformation, which is based on the principles of humanistic pedagogy, ethics and psychology, aimed at self-development and training of each young person individually. Analysis of the system of physical culture of cadets allows establishing a small number of basic contradictions, which are characterized by: the use of progressive

programs of physical training and sports to develop the required technologies for their implementation; the need to improve the quality and effectiveness of physical training and sports classes for cadets and the methodological literacy of trainers-teachers who implement innovative technologies in the educational process, to test these technologies in experimental work, to eliminate the identified shortcomings and improve the readiness of teachers to implement their own developments; improve the independence of cadets in self-development and self-improvement in defending a subjective position in the educational process of physical training and sports using modern pedagogical technologies that develop innovative approaches in modern military education to achieve high sports results and physical fitness of cadets for future service. During the analysis of the organization of physical training and sports in military institutions in general, as well as examining the attitude of cadets according to the research, it is necessary to highlight the following trends and shortcomings: low interest of cadets in physical training and sports during training, especially those conducted in traditional form; low level of needs, motives and orientation of some cadets in the transformation of their physical form; insufficient readiness of cadets, especially first-year students, to show independent forms of physical training for strengthening their health and increasing their creative performance for many years; the need to eliminate the lack of correlation between the level of competence of a trainer-teacher of physical training and sports to modern requirements; this discrepancy appears in the lack of professional readiness to master new forms of knowledge of physical exercises, modern technologies that require a masterful individual approach to each cadet, knowledge of the latest systems, tools, methods and forms of organizing physical training and sports in cadet units; lack of technology for teaching and publishing methodological literature for the development of cadets' personality, especially in terms of self-development through physical training and sports. The conducted review of scientific publications has prompted us to develop a sociological analysis of physical training and sports of cadets to improve their performance and physical fitness in future professional activities.

## RESULTS

In the new millennium, the cadets' life has changed significantly compared to the one that was in the previous generations of cadets and youth. Now modern cadets have more time to improve the effectiveness and quality of their self-studies in science and sports, since there is no urgent need to take care of food and accommodation. These problems are taken over by the military institute itself, the command, which is common practice in all the best higher military institutions in the world.

Cadet life is very diverse and rich. After the end of lectures, practical classes and seminars, each cadet has free time, which must be effectively used to improve intellectual and physical abilities (Vilensky & Pots, 2014; Bondin, 2014; Zhitnickaya, Berkowitz et al., 2014; Aghajanian, 2014; Iseman, 2014; Kazin & Kasatkin, 2014; Aleshina, 2014; Bezrykhih, 2014; Vasilyeva, 2014; Malyareko, 2014; Apanasenko, 2014; Valiulina, 2014; Ovchinnikov, 2014; Salov, 2014; Aronson, 2013; Zelenin, 2014a,b,c,d; Spigel, 2012; Zhou, Tang, Newlands & King, 2014; Karnath & Dieterich, 2014; Blume, 2013; Rosenbaum, 2014; Dubrovskiy, 2014; Vaynbaum, 2014; Waskiewicz, Juras & Raczek, 2014; Starosta & Fostiak, 2014; Hirtz, 2014). Cadet of the modern generation follows the example of previous generations of graduates. To celebrate anniversaries of their favourite institute, former graduates, who became heads of departments and organizations, come to the present-day cadets. They tell the cadets about their generation, in what conditions their fellow students were engaged in physical training and sports, they themselves built the entire sports base of the institute. Some institutes did not have any sports facilities. Over the years, they built a swimming pool, shooting range, shooting range, sports and recreational complex, sports halls for sports games, hand-to-hand combat, various types of wrestling, an obstacle course and much more. The department of physical training and sports performs a large amount of mass sports and recreational activities in various sports in the educational

institution. In addition, the department conducts extensive research work together with cadets of all faculties. Thus, during 2018-2019, the attitude of cadets to a healthy lifestyle, physical training and sports was monitored using a special questionnaire. The questionnaire was developed for both cadets and teachers of the institute. Such a sociological study included two parts: interviews and responses of respondents to the questionnaire questions. 189 cadets from various military institutes were interviewed. The results of the study showed that the majority (85 %) of cadets were engaged or are currently engaged in sports in their leisure time (87 % of male cadets and 82 % of female cadets). A positive attitude to active physical training and sports reported 95 % of respondents (96 % of male cadets and 93 % of female cadets). More than a third (35 %) would like to do swimming (27 % of male cadets and 48 % of female cadets). The popularity of swimming is explained by the increased interest of the majority of cadets in this sport, since the region has many rivers, lakes and ponds, and in the Perm region – the region of thousands of rivers and lakes – there are very few pools, especially in schools. The popularity of sports such as shooting, sports games, and hand-to-hand combat is very high. After finishing secondary school, young people usually stop doing active sports activities due to the lack of spare time in order to successfully study in the higher educational institution. Only 16 % of respondents (20 % of male cadets and 11 % of female cadets) continue to practice their favourite sports in order to achieve maximum results in international, local and city-level competitions. Now, to improve their health, cadets, especially those who have poor physical fitness, are engaged in physical training and sports, and they also actively attend extracurricular classes. Negative attitude to drugs reported 88 % of respondents, and to smoking – 83 %, according to the study. Occasionally, 18 % of cadets drink alcohol. Probably, it is necessary at this age in higher education institutions to strengthen a positive attitude to physical training and sports and healthy lifestyle. During this comprehensive study, based on the results of respondents' responses and their analysis, it was found that the majority of cadets 46 % (49 % of male and 41 % of female) positively assess the quality of classes of physical education. They are generally satisfied with the form of conducting classes, content and methodology based on the modern requirements for them at the institute. The financial situation of cadets depends almost entirely on parents and relatives – 87 %. The majority of cadets associate their future professional activity after graduation with a very high-paid job – 65 %. Only 6 % (7 % and 4 %, respectively) of respondents would like to be trainers and continue playing sports professionally. In the future, after graduation, most cadets consider for their profession other indicators: high earnings, pleasure from work, the ability to travel, high prestige and status, the ability to visit other regions – 45 %. Sociological analysis has shown that students lead mainly a healthy lifestyle, are fond of various sports, try to improve their health through these activities in order to live without medication, have enough time for rest and use their leisure time rationally. The department of physical training and sports performed a comprehensive sociological study during 2018-2019.

Analysis of the results of this study shows that more than 98 % of cadets of all faculties are engaged in the main group of physical training and sports. The rest of the cadets have temporary health restrictions and are engaged in a special medical group. According to a sociological study, cadets actively engaged in various sports before entering the institute; 85 % now also would like to do sports in modern sports facilities; 35 % - swimming, sports games. To increase the motivation of cadets to regular physical training and sports, the department of physical training and sports has developed a pedagogical methodological complex for the discipline "Physical culture". We have developed a modern educational work program for all medical groups, which provides an individual program for each group of diseases, taking into account the health of students. Special tests on special physical fitness for each group of diseases have been developed. They allow developing the right recommendations for cadets in correcting their functional state, developing professionally important qualities during the educational process and independent sporting activities to form a healthy lifestyle. These measures allowed to increase the motivation of cadets to regular physical training, mass sports, which is objectively confirmed by the data of sociological research. Based on the data of annual

medical examinations, research and analysis of the personal development factor of the cadet's personality associated with psychological stability, we put into the foundation for their professional competencies and motor skills modern methods of improving their physical fitness and motor activity for future professional lives, which leads to the process of modern competence-based education and health improvement throughout the life. In various situations in the workplace, in everyday life, there are increased requirements for physical fitness and coordination of movements (Vilensky & Pots, 2014; Bondin, 2014; Zhitnickaya, Berkowitz et al., 2014; Aghajanian, 2014; Iseman, 2014; Kazin & Kasatkin, 2014; Aleshina, 2014; Bezrykhih, 2014; Vasilyeva, 2014; Malyareko, 2014; Apanasenko, 2014; Valiulina, 2014; Ovchinnikov, 2014; Salov, 2014; Aronson, 2013; Zelenin, 2014a,b,c,d; Spigel, 2012; Zhou, Tang, Newlands & King, 2014; Karnath & Dieterich, 2014; Blume, 2013; Rosenbaum, 2014; Dubrovskiy, 2014; Vaynbaum, 2014; Waskiewicz, Juras & Raczek, 2014; Starosta & Fostiak, 2014; Hirtz, 2014). With help of the main exercises for passing control standards it was possible to identify and justify the most efficient and affordable way to create effective physical fitness and coordination of movements in physical training and sports classes. The process of forming physical fitness for improving students' health in physical training and sports classes at the military institute was carried out on the following conditions: determining the essence of the development of physical fitness of cadets in physical training and sports classes as a harmonious combination of physical qualities, maintaining balance in static poses, controlling movement in three-dimensional space (spatial coordination), rapid and timely motor reaction while performing a motor act (reflexometry); the use of special tools for the development of physical fitness and coordination of movements of cadets in physical training and sports; the effectiveness of the development of physical qualities and coordination abilities to control the body in space in the five active points of the anthropological structure of the body; the combination of theoretical knowledge and means of physical training and sports in the training sessions of students to solve various motor tasks.

In accordance with this, the following tasks were solved:

1. Definition of the essence, structure and content of preparatory exercises for passing the standards for physical training and sport for the development of coordination abilities of cadets during classes.
2. Study of pedagogical possibilities of preparatory exercises for passing the standards for physical training and sport in the formation of coordination abilities of cadets in physical training and sport classes, comparing the motor readiness and functional state of cadets in the control and experimental groups.
3. Substantiation of experimental methods for implementing pedagogical capabilities of preparatory exercises for passing standards for physical training in the formation of coordination abilities of cadets in physical training and sports.
4. The effects of preparatory exercises to pass the standards for physical fitness and sports on the coordination abilities of cadets.

The study is drawn upon theoretical studies of researchers and practitioners (Vilensky & Pots, 2014; Bondin, 2014; Zhitnickaya, Berkowitz et al., 2014; Aghajanian, 2014; Iseman, 2014; Kazin & Kasatkin, 2014; Aleshina, 2014; Bezrykhih, 2014; Vasilyeva, 2014; Malyareko, 2014; Apanasenko, 2014; Valiulina, 2014; Ovchinnikov, 2014; Salov, 2014; Aronson, 2013; Zelenin, 2014a,b,c,d; Spigel, 2012; Zhou, Tang, Newlands & King, 2014; Karnath & Dieterich, 2014; Blume, 2013; Rosenbaum, 2014; Dubrovskiy, 2014; Vaynbaum, 2014; Waskiewicz, Juras & Raczek, 2014; Starosta & Fostiak, 2014; Hirtz, 2014) of physical culture in education and sport, as well as empirical methods: observations, questionnaires, interviews, testing, individual and group conversations on the technique of movement control in the future profession and life, individual interests of cadets in sports, performing research training tasks and exercises during the educational and experimental process with an assessment of their qualitative achievements in the formation of motor functions and in individual work on the principle of feedback (teacher-cadet). The study helped to develop a system of

preparatory exercises to pass the standards for physical training, with focus on coordination and development, and technique of training sessions ensuring effective formation of physical fitness and coordination abilities during the physical education of students. In physical education of cadets were introduced preparatory exercises performed with open and closed eyes, which provides a high level of formation of coordination and physical abilities in physical training and sports. The pedagogical possibilities of preparatory exercises for passing the standards for physical training and sports in the formation of coordination abilities of the cadet were determined. In the educational and training process, a typical connection is revealed: the effective positive influence of preparatory exercises for passing the standards for physical fitness on the formation of coordination abilities of cadets in the pedagogical experiment, which is the basis for including these exercises in the process of physical education for the implementation of tasks for the formation of coordination abilities of cadets in physical training and sports.

The practical significance of the research is as follows:

1. Tools and methods for the formation of coordination abilities of cadets were developed;
2. Analysis of the research results allows recommending the developed tools and methods as effective ones in physical education of cadets in physical training and sports, including them in the content of the curriculum and sports and recreation activities.
3. The results obtained can also be used in secondary vocational institutions for the development of professional skills, special physical qualities aimed at improving applied physical fitness.

In order to get a reliable idea of the level of physical culture and sports activity of cadets, it is necessary to analyse the indicators of systematic training. The analysis of data characterizes the level of stability of physical and sports activity (Table 1): 21.8 % of the surveyed cadets regularly do physical exercise, 50.1 % - from time to time, 28.1 % - do not exercise in their spare time. Overall, only 15.1 % of students have the duration and regularity of classes that meet the requirements of a rational motor regime.

Table 1. The attitude of cadets of both gender to physical culture and sports activities, %.

Attitude to physical culture and sports activities	Gender		All cadets
	Male	Female	
Do sports systematically	36.9	12.6	21.8
Do sports from time to time	44.5	53.5	50.1
Don't do sports in their spare time	18.6	33.9	28.1

Analysis of data from sociological case study shows that the attitude of cadets to physical culture and sports activities is largely determined by the nature of interests and motivations. Moreover, in our opinion, the level of formation of interests and motives acts as one of the leading indicators of personal physical culture of cadets. The expression of interest causes the desire to act, forms the motives of behaviour and the need to implement them in practice.

Table 2. Attitude of cadets to social significance of physical training and sports, %.

Physical fitness and sports are a necessary element of the overall culture of a cadet	Gender		All cadets
	Male	Female	
Yes	73.3	72.9	73.2
No	12.5	6.6	8.8
Not sure	10.1	18.5	15.3
No answer	4.1	2.0	1.7

The results of this study show that 73.2 % of the surveyed cadets highly appreciate the social significance of physical training and sports, considering it an important element of the overall human culture (Table 2).

As shown in Table 2, more than 18 % of the surveyed cadets found it difficult to assess the social role of physical training and sports in the formation of a personality. In our opinion, this situation primarily characterizes the lack of awareness of cadets about the social essence of physical training and sports. Interest in physical training and sports is a dynamic social category that is formed throughout a person's life. So, while studying at the educational institution, 15.7 % of respondents indicated increased interest in physical-sports activities, in 62.1 % this interest remained the same, and 18.9 % of cadets reported the decline of interest in physical culture (Table 3).

The concerning fact is that in the higher educational institution of a mixed field more than a third of the cadets reported the decline of interest in sports activities during the period of study. This primarily characterizes the state of physical education in this particular educational institution as unsatisfactory, shows poor consideration of the physical interests of cadets.

Table 3. Dynamics of interest to physical training and sports of cadets from educational institutions of various field during their studies.

Interest to the physical training and sports	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Increased	19.8	18.9	6.6	15.7
Remained the same	66.3	59.0	60.5	62.1
Decreased	12.8	14.3	32.2	18.9
No answer	1.1	2.9	0.7	3.3

Table 4. The influence of external factors on the growth of interest in physical culture and sports of cadets of various fields, %.

Factors that increase the interest in physical culture and sports	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Better quality of classes	38.0	35.8	50.8	40.9
Possibility to choose the sport	37.7	36.7	32.2	35.6
Modern-equipped material base	20.1	18.6	14.3	17.9
Promotion of classes	2.7	2.6	1.9	2.5
No answer	1.5	6.6	0.8	3.1

The formation of interest in physical culture and sports activities is influenced by numerous external factors (Table 4).

The analysis of the conducted research indicates the need to improve the quality of physical exercises: 40.9 % of the surveyed cadets believe that this factor significantly affects the increase in interest in physical culture and sports, especially for cadets of humanitarian and technical profile, 50.8 % of which confirm the need to improve the quality of physical training. Increasing the level of professional training of teachers, improving the material and sports base, using non-traditional methods of training will contribute to the realization of physical opportunities for those who want to engage in sports. One more important factor contributing to the increase of cadets' interest in physical exercise is the ability to choose a sport or a type of physical activity that is most acceptable for the student: 35.6 % of the cadets confirm the need to develop a wide range of types and forms of physical exercise in educational institutions. The ability to do sports with modern

equipment is another quite important factor for cadets (16.9 %). The data obtained show that the interviewed cadets do not attach much importance to agitation activities and promotion of physical exercises: only 2.5 % of respondents believe that good promotion contributes to increasing interest in physical culture and sports activities. Apparently, in this case, the main effect produces the lack of attention to sports advertising, which is generally present in our society. The poor quality of existing promotion does not allow cadets to understand and realize its true value and positive effect of the development of physical training and sports. As the research shows, the level of formation of students' interest in physical culture and sports activities is largely determined by the choice of sports and other forms of physical activities. To improve the effectiveness of the organization of physical culture and sports activities, it is necessary to consider the priority of choosing forms of physical exercises in higher educational institution (Table 5).

The data obtained indicate a significant interest of cadets in extracurricular sport sections: 32.1 % of respondents would choose this form of training if conditions were created for physical culture and sports activities. Most of all, the sport sections attract interest of cadets from technical educational institutions: 37.8 % of respondents would choose sections for sports. This distribution of research results is due to the fact that in technical higher education institutions there are mainly male students (74 % of respondents), who usually prefer sports activities. Cadets of humanitarian and mixed-field educational institutions, who are mostly female students (up to 82 % of respondents), are more likely to engage in recreational activities: more than 31 % of respondents are interested only in walking, games organized in leisure time, swimming, 18.2 % of cadets would like to engage in club forms of physical culture and sports. A significant number of cadets would like to use an independent form of training in their free time: 20.9 % of respondents consider this form of training the most acceptable.

Table 5. Choice of physical activity forms by cadets from different educational institutions, %.

Forms of physical activities	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Sport clubs	17.6	16.6	18.2	17.4
Independent sport activities	21.3	23.1	17.8	20.9
Sport sections	27.7	37.8	31.0	32.1
Active leisure time: going for a walk, games, swimming	30.4	16.3	31.4	25.8
Mass sports and recreational activities	1.2		0.8	0.7
No answer	1.8	6.2	0.8	3.1

Table 6. Variety of paid services for organization of cadets' active leisure time, %.

Type of paid services	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Massage	48.4	30.6	48.4	42.5
Sauna	23.4	21.5	18.2	21.3
Swimming pool	19.5	30.0	23.6	24.3
Tennis court	4.6	4.2	2.7	3.9
Sports equipment rental	0.6	1.3	2.7	1.5
Specialist consultations	0.9	2.6	2.3	1.9
Fitness equipment	1.5	7.8	1.2	3.6

It is necessary to emphasize the weak interest of cadets in mass sports and recreational events held in educational institutions. Organizers of mass sports and recreational activities, and sports clubs of higher

education institutions, should, probably, reorganize their work, abandon outdated clichéd events like sports competitions. Practice shows that they often involve poorly prepared cadets for competitive activities, competitions are held in sports that are unpopular among cadets, take a lot of time and significantly reduce their interest in physical culture and sports activities. Most of the interviewed cadets are ready to use paid services for organizing recreation and active leisure time (Table 6).

In view of the transformed economic situation in the country, this fact is particularly important. It requires specialists to search for new forms of physical culture and recreational activities in the educational institutions. The most popular types of recreational activities among cadets of all educational institutions are considered to be sauna, swimming pool, massage. These types of paid services have been used by the population for a long time; they favourably affect the well-being and health of people, and, of course, the development of such services requires special financial support. Therefore, the majority of respondents (88.1 %) are willing to pay for these services and regularly use them as recreational and active leisure activities. Sociological studies of recent years have repeatedly proved that social activity (including physical culture and sports) is largely determined by the structure of personal interests and needs of the individual, his/her motives and value orientations, preferences and attitudes (Vilensky & Pots, 2014; Bondin, 2014; Zhitnickaya, Berkowitz et al., 2014; Aghajanian, 2014; Iseman, 2014; Kazin & Kasatkin, 2014; Aleshina, 2014; Bezrykhih, 2014; Vasilyeva, 2014; Malyareko, 2014; Apanasenko, 2014; Valiulina, 2014; Ovchinnikov, 2014; Salov, 2014; Aronson, 2013; Zelenin, 2014a,b,c,d; Spigel, 2012; Zhou, Tang, Newlands & King, 2014; Karnath & Dieterich, 2014; Blume, 2013; Rosenbaum, 2014; Dubrovskiy, 2014; Vaynbaum, 2014; Waskiewicz, Juras & Raczek, 2014; Starosta & Fostiak, 2014; Hirtz, 2014). Data analysis revealed a complex of objective (external) conditions and subjective (internal) factors that characterize the attitude and motivation of cadets to physical culture and sports activities. According to cadets, their needs, interests and motives for engagement in physical culture and sports activities are determined by the state of the material sports base, the orientation of the content of the educational process and the organization of mass physical culture and recreational activities, the availability of physical culture knowledge for organizing independent classes (Table 7).

Table 7. Barriers to engagement in physical culture and sports activities by cadets of various educational institutions.

Barriers to engagement in physical culture and sports activities	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Lack of time	41.9	55.8	47.6	48.3
Lack of physical-culture knowledge on organization of independent activities	11.6	6.5	13.2	10.2
Lack of sports equipment and uniform	7.0	8.8	7.8	7.8
Inability to choose the sports	5.5	6.6	9.3	7.0
Poor organization of mass physical culture and recreational activities in the educational institution	7.3	3.9	3.5	5.0
Did not think about the reasons	26.7	13.0	18.2	19.6
No answer		5.2	0.4	2.1

The Table 7 indicates noticeable differences in the assessment of factors that, in the opinion of cadets, hinder the formation of motivation and active positive attitude to physical culture and sports activities. The most significant factor, according to cadets, is the lack of free time: 48.3 % of respondents indicate this factor as the main barrier of their physical activity. At the same time, most sociologists who have studied the budget of cadets' free time state that there is a significant amount of time that cadets devote to leisure activities: from 1.5 to 3.5 hours per academic day.

According to our research, the cadets' free time budget is 4 hours and 46 minutes. Analysing the obtained data and comparing it with other, one can conclude that the reason for the low physical activity is not a quantitative lack of time but the inability to rationally utilize it, and most importantly – the low value of sports activity in the structure of free time of cadets. This conclusion is consistent with the responses of 19.8 % of the surveyed cadets, who confirm that they have never thought about the reasons for their low physical activity. Moreover, this fact is confirmed by about 27 % of respondents in higher humanitarian educational institutions. It is worthwhile to note the lack of physical-culture knowledge for organizing independent sports activities: 10.2 % of the surveyed cadets consider it the main reason for their low physical culture and sports activity. Therefore, it is important to strengthen the educational orientation of the educational process in the educational institution. About 15 % of the surveyed cadets from educational institutions of various fields report that there is no choice of sport, lack of sports equipment and uniforms for physical exercises. Moreover, during the analysis it becomes obvious that this situation is typical for all educational institutions, regardless of the specialty of cadets. Thus, the weak development of the physical culture and sports industry and the material basis of the physical culture movement that does not meet objective requirements significantly reduce the physical activity of cadets (Young, 2014; Pozzo, Levik & Berthoz, 2015; Weinert, 2013; Luca, 2013; Loosch, 2010; Malina, Beunen, Claessens, Lefevre, Vanden Eunde, Renson, Vanreusel & Simon, 2011; Martin & Carl, 2013; Martin, 2010; Kruger & Zimmerman, 2013). Having considered the complex of objective (external) and subjective (internal) barriers to implementation of sports activities, to meeting the needs of the cadets, it can be stated that the timely elimination of objective reasons and strengthening of the educational aspects depends largely on the level of physical and sports activity of cadets. The analysis of the factors that determine the process of forming needs, interests and motives would be incomplete without considering the subjective motives of the individual (Table 8).

The Table 8 shows that a high priority of two factors significantly affects the level of physical activity: the desire of cadets to improve their physical fitness (33.5 % of respondents) and the need to optimize the body weight and get in shape (42.8 % of respondents). Consequently, 76.3 % of cadets believe that their physical activity is determined by one of these factors.

Table 8. The influence of internal factors that motivate cadets of various educational institutions to engage in physical culture and sports activities, %.

Factors	Field of the educational institution			All cadets
	Humanitarian	Technical	Mixed	
Desire to improve the physical fitness	28.9	48.5	21.3	33.5
The need to optimize the body weight, get in shape	48.6	28.3	52.7	42.8
Possibility to relieve fatigue and enhance the workability efficacy	7.3	11.4	11.2	9.8
To shape the good manner and culture of movements	3.6	1.6	6.2	3.5
To succeed in sports		1.0	0.7	0.6
To train the willpower, character, perseverance	1.0		0.6	0.5
To rationally utilize the free time	1.1	0.8		0.6
Desire to get credit in physical culture	7.0	3.0	7.3	5.7
Did not think about it	3.3	6.0		3.0

For cadets of a technical educational institution, the most important motivating factor is an improvement of physical fitness: 48.5 % of respondents consider it the most important motivator of their physical culture and

sports activities. For cadets of humanitarian and mixed fields, the most important motive that encourages them to engage in physical activities is the need to optimize weight and get in shape: respectively, 48.6 % and 52.7 % of respondents note the importance of this factor that motivates them for physical activity. In our opinion, this is due to the fact that in these educational institutions study mostly female students. For female cadets, the motivation associated with optimizing the body weight and improving the figure through active physical exercises are highly significant. At the same time, for young cadets, it is important to have a motive for improving their physical fitness (Table 9).

Table 9. Influence of subjective factors encouraging cadets of both genders to engage in physical culture and sports activities, %.

Factors	Gender		All cadets
	Male	Female	
Desire to improve physical fitness	20	55.5	33.5
Need to optimize the body weight, get in shape	56.2	20.8	42.8
Possibility to relieve fatigue and enhance the workability	9.9	9.8	9.8
To shape the good manner and culture of movements	4.5	1.8	3.5
To succeed in sports	0.2	1.2	0.6
To train the willpower, character, perseverance	0.3	0.6	0.5
To rationally utilize the free time	0.5	0.9	0.7
Desire to get credit in physical culture	6.3	4.7	5.7
Did not think about it	2.0	4.7	2.3

## DISCUSSION AND CONCLUSIONS

The conducted research has shown that cadets of various educational institutions do not consider a factor of achieving high sports results as important: only 0.5 % of respondents assess its impact as that forming their motivational attitudes in the field of physical training and sports. Apparently, this circumstance explains the lack of cadets' desire to participate in major sports competitions and mass events. Thus, in the organization of mass sports and recreational activities in the educational institutions it is important to be guided mainly by sports orientation: to conduct sports festivals, "health days", to organize sports clubs and other extracurricular networks to promote the development of self-government, creative activity in the field of physical training and sports.

An alarming conclusion of this study is the underestimation by cadets of such subjective motivating factors as understanding the importance of sports classes for shaping beautiful manners and culture of movements, developing willpower, and the rational use of free time: only 4.6 % of surveyed cadets note the special influence of sports activities on the formation of value-motivational attitudes. We associate the current situation with the low educational potential of military training classes and mass sports events, and with the focus on the normative indicators of physical culture and sports activities of cadets. The opinion of 6.3 % of female cadets and 4.7 % of male cadets can be considered as confirmation. Positive motivation for them is to get credit for physical training and sports. The uncertainty of the motivational element suggests that it is important to systematically and purposefully conduct educational work that encourages cadets to take an active part in the development of the values of physical training and sports. Summing up the results of a concrete sociological study, it should be emphasized that an indispensable condition for the education of physical culture of a cadet is to involve him/her in physical culture and sports activities. The results prove that the involvement of cadets in systematic physical culture and sports activities leads to the increase in their vitality, self-confidence, and optimism. These students are more energetic, spiritual people who are able to

lead the team and effectively manage their subordinates. Physical training and sports contribute to the rational utilization of free time, allow the cadet to actively engage in other activities and realize their essential powers. The holistic nature of physical culture and sports activities and their accessibility can become a powerful means of increasing the social activity of cadet youth. The task of teachers is to form an active attitude of cadets to this field of activity.

The data obtained in the sociological study laid the basis for the following conclusions: physical culture and sports activities, along with other activities, are actively included in the lifestyle of cadets. Most of them (more than 73 % of respondents) highly appreciate the social significance of physical training and sports in the life of society. However, only 21.8 % of the cadets surveyed regularly use physical training and sports facilities outside of academic hours; considering the interest in physical training and sports as a dynamic social category, it is logically to say that it stabilizes at a young age (62.1 % of respondents noted this fact). A decrease in interest in physical exercise among one fifth of the surveyed cadets indicates a low effectiveness of the educational process and poor organization of physical culture and recreational activities in higher education institutions; the level of interest is influenced the most by such objective factors as improving the quality of physical culture classes (40.9 % of respondents) and the ability to choose preferred forms of activities and sports (35.7 %). At the same time, the poor quality of the existing promotion of physical culture and sports does not allow cadets to realize its true value and influence on the formation of interest in physical culture and sports activities; the most interesting and engaging forms of classes for male cadets are extracurricular sports sections (32.1 %), female cadets are interested more in the classes that have a strong recreational orientation, in sports clubs, and other informal associations; to organize active leisure time and recreational activities, cadets are ready to use paid services, among which most attractive are: swimming pool, massage and sauna; cadets' physical culture and sports activity can be enhanced by removing the objective reasons that prevent them to engage in sports and recreational activities, paying particular attention to the inability of students to manage their free time, poor development of sports infrastructure and the materials basis of the educational institution that generally do not meet modern requirements of sports movement; conscious attitude to physical training and sports is formed under the influence of various subjective factors, so it is often associated with the desire of cadets to improve their physical fitness (33.5 % of respondents), the possibility to optimize body weight and get in shape, the need to relieve fatigue and improve performance. At the same time, the students' underestimation of such subjective motivational factors as the understanding of the spiritual value of classes, the development of cognitive capabilities in the process of physical culture and sports activities is associated with a low educational level and the dominant influence of the normative approach to the organization of the educational process in the educational institution. The created critical situation requires a deep analysis of the level of physical education of cadets and adopting active measures to improve the information and educational orientation of educational and extracurricular forms of sports activities for cadets.

## REFERENCES

- Aghajanian, N. A. (2014). Health of students. Moscow: Izd Rund.
- Aleshina, L. I. (2014). Building Motivation healthy lifestyle of the future teachers in the process of professional under-cooking [Doctoral dissertation]. Volgograd.
- Apanasenko, G. L. (2014). Valueology: First Results and Future Prospects. The Theory and Practice of Physical Culture, 6.
- Aronson, L. (2013). Conduction of labyrinthine impulses to the cortex. J. nerv. ment. dis., 78, pp. 250-259. <https://doi.org/10.1097/00005053-193309000-00003>

- Bezrykhih, N. A. (2014). Formation of setting students on a healthy lifestyle in the educational process of professional schools [Doctoral dissertation]. Saratov.
- Blume, D. D. (2013). Kennzeichnung Koordinativer Fertigkeiten und Möglichkeiten ihrer Herausbildung im Trainingsports. Wissenschaftliche Zeitschrift der DH/K, 3, pp. 17-41.
- Bondin, V. I. (2014). School health teacher in higher education. Theory and Practice of Physical Culture, 10.
- Dubrovskiy, V. I. (2014). Valeology, healthy lifestyle (ZOZh). Moscow: Flinta.
- Hirtz, P. (2014). Struktur und Entwicklung koordinativer Leistungen voraussetzungen bei Schulkindern. Theorie und Praxis der Körperkultur, 7, pp. 503-510.
- Iseman, R. I. (2014). Russia's health crisis: medical, social, psychological and pedagogical principles for its formation. Novosibirsk: Izd NGPU.
- Karnath, H., & Dieterich, M. (2014). Spatial neglect - a vestibular disorder? Brain, 229, pp. 293-305. <https://doi.org/10.1093/brain/awh698>
- Kazin, T. M., & Kasatkin, N. E. (2014). Scientific-methodical and organizational approaches to the creation of a regional program of "education and health. Valeology, 4.
- Krüger, H., & Zimmerman, K. (2013). Koordinative Fähigkeitsentwicklung und Technikschiulung bei jungen Sportler. Theorie und Praxis der Körperkultur, 11, pp. 852-854.
- Loosch, E. (2010). Ganzheitsprinzip und Variabilität in der Motorik. Psychomotorik in Forschung und Lehre. Kassel.
- Luca, A. (2013). Gymnastic in school. Universitatea "Al. I. Cuza".
- Malina, R. R., Beunen, G. H., Claessens, A. L., Lefevre, J., Vanden Eunde, B., Renson, R., Vanreusel, B., & Simon, G. (2011). Fatness and physical fitness of girls 7 to 17 years. Obesity Research, 3, pp. 221-231. <https://doi.org/10.1002/j.1550-8528.1995.tb00142.x>
- Malyarenko, T. N. (2014). Valeological aspects of higher education. Valeology, 2.
- Martin, D. (2010). Training im Kindes und Jugendalter. Schorndorf.
- Martin, D., & Carl, K. (2013). Lehnertz. Handbuch Trainingslehre. Schorndorf.
- Ovchinnikov, S. A. (2014). Physical culture identity as a leading factor in the formation of a healthy lifestyle Student [Doctoral dissertation]. N. Novgorod.
- Pozzo, T., Levik, Y., & Berthoz, A. (2015). Head and trunk movements in the frontal plane during complex dynamic equilibrium tasks in humans. Exp Brain Res., 106(2), pp. 327-328. <https://doi.org/10.1007/BF00241128>
- Rosenbaum, D. A. (2014). Human Motor Control. San Diego.
- Salov, V. Y. (2014). Theoretical and methodological foundations of a healthy lifestyle for students by means of Physical Education [Doctoral dissertation]. St. Petersburg.
- Spigel, E. A. (2012). Rindenerregung (Auslösung epileptiformer Anfale) durch Labyrinthreizung. Versuch einer Lokalisation der corticalen Labyrinthzentren. Z. ges. Neurol. Psychiat., 138, pp.178-196. <https://doi.org/10.1007/BF02870573>
- Starosta, W., & Fostiak, D. (2014). Level of selected element of coordination in wrestlers during different training stages. In Jerzy Sadowki & Wlodzimierz Sarosta (eds.), Movement coordination in team sport games and martial arts (pp. 185-191). Biala Podlaska.
- Valiulina, O. (2014). A healthy lifestyle of students in the learning process by means of adaptive physical education [Doctoral dissertation]. Ufa.
- Vasilyeva, O. (2014). Psychology of human health: standards of presentation of the students. Moscow: Academia.
- Vaynbaum, Ya. S. (2014). Hygiene of physical education. Moscow: Prosveshchenie.
- Vilensky, M. Y., & Pots A. G. (2014). Physical education and healthy lifestyles of student. Moscow: Garuariki.

- Waskiewicz, Z., Juras, G., & Raczek, J. (2014). Zbadac nad dostosowaniem motorycznym. *Antropomotoryka*, 17, pp. 124-152.
- Weinert, F. E. (2013). Fehigkeitsunterschiede, Fertigkeitstraining und Leistungsnivean. In Dauge R. & Hofmann Verlag Schorndorf (eds.), *Sportmotorisches Lernen und Techniktraining*, pp. 33-52.
- Young, L. R. (2014). Vestibular reactions to spaceflight: human factors. *Aviat Space Environ Med.*, 71 (9), pp. 100-104.
- Zelenin, L. A. (2014a). Balance improvement for the kids with Cerebral Palsy is the basis for normalization their movement without aids. *Modern problem of science and education*, 3.
- Zelenin, L. A. (2014b). Scientific and applied results of increase readiness of canoeists beginners. *Scientific records of university the name P.F. Lesgaft*, 3(85), pp. 94-103.
- Zelenin, L. A. (2014c). Increase of balance by canoeists beginners with use of special physical exercises and the exercise machine [Doctoral dissertation].
- Zelenin, L. A. (2014d). System of the stimulated development for the specific equilibrium in the initial positions. *Perm's University News Bulletin*, 6(11), pp. 204-210.
- Zhitnickaya, E. A., Berkowitz, A. V. et al. (2014). Education priority attention to health as a basis for promoting the formation of healthy-lifestyle of students. *Irkutsk*.
- Zhou, W., Tang, B. F., Newlands, S. D., & King, W. M. (2014). Responses of monkey vestibular-only neurons to translation and angular rotation. *J. Neurophysiol*, 106 (16), pp. 2915-2930. <https://doi.org/10.1152/jn.00013.2006>

