

# Formation and correction of self-esteem of students in a special medical group in the process of physical education in a technical University

I. Sokolova

*Department of physical education  
Vologda State University  
Vologda, Russia*

V. Fil

*Department of physical education  
Vologda State University  
Vologda, Russia*

L. Mukhametova

*Institute of Economics and Information  
technologies  
Kazan State Power Engineering  
University  
Kazan, Russia*

**Abstract**—In the article we consider the educational process of physical culture in high School, which in certain pedagogical conditions has an impact on the formation and correction of adequate self-esteem of students, as its positive impact on the comprehensive development of all physical qualities and correction of minor disorders of the musculoskeletal system.

**Keywords**—*self-esteem correction, physical culture, special medical group, exercises*

## I. INTRODUCTION

Current society is undergoing significant changes in all spheres of life. That is why in modern pedagogical science the feature of formation of a person's personality, which can dynamically and adequately communicate with the outside world, is of increasing interest. It is worth noting that in the current state in which the higher school is located, there are some contradictions between the processes of personal development and the traditional system of higher education.

In our country, one of the main means of education of human personality has become physical culture, because it combines both internal wealth and moral purity and physical perfection. This discipline for University students is included in the basic (mandatory) part and is the final stage of a continuous and organized process of formation of physical culture of the individual. According to E. G. Lebedeva and M. G. Kulikova: "Formation of necessity for physical and mental health is the main task in the physical education of students. For this process of forming needs it must be conscious to be effective" [9, pp. 63-66]. The state of physical culture and sports in modern higher education requires an increase in efficiency, as well as the search for new forms, methods, tools, non-standard approach to the organization of the educational process, depending on the physical condition of students. The new requirements are due to a number of reasons, and first of all it is a significant weakening of the health of the younger generation.

## II. METHODS

The study was conducted at the Vologda state University. It was attended by 184 students of institutions with a technical area. Further two groups of the trained on discipline "physical culture and sport" and "Elective disciplines on physical culture and sport" on a state of health relating to special medical group (SMG) were organized. Initially, the groups differed in uniformity of results and with

approximately the same diseases (associated with minor violations of the ODE) and similar anthropometric data.

Groups are formed from students of different academic groups suffering from minor deviations in health and psychologically unprepared for physical training in the main group.

The control group (CG) took part in the program of the state educational standard of higher professional education of the second generation. In the experimental group (EG) directly trained, took an active part in the process of developing experiment, as well as in the evaluation of intermediate results.

The program of classes, created by us, was based on the implementation of specific pedagogical conditions in the educational process and was to determine the effectiveness of the disparate impact on the physical condition of students of SMG in the structure of training in the disciplines of "physical culture and sport" and "elective discipline of physical culture and sports".

Various exercises from the directions of pilates, yoga, stretching and Zumba dance were applied. Classes included exercises at the Swedish wall, with gymnastic sticks, with stuffed balls of different weights, soft dumbbells, fit balls, stretching exercises; training on simulators - for the formation and strengthening of the muscular corset (in the initial position - lying on the back, as well as in the position of reclining on the back, to prevent the slightest negative impact on the spine; and after the end of classes - necessarily stretching exercises on the Swedish wall). A large number of exercises are carried out in the starting position - lying, sitting, on all fours. Breathing exercises were carried out, which were performed at each lesson. Exercises with weights in the initial standing position, jumps and various jumps were completely excluded. The lesson included elements of sports games (or outdoor games), breathing and developmental exercises, walking, squatting, Nordic walking.

In addition to educational and recreational tasks in the classroom and educational tasks are solved. By means of physical culture insistence and courage, discipline and skills of cultural behavior, feeling of friendship, partnership and mutual aid are brought up.

Students, regardless of the teacher, controlled and evaluated their motor actions, as well as argued for what

exactly they put themselves this or that mark. Constantly kept a diary of self-control, which allowed to further more accurately processing the data. All the information provided by students and the results were analyzed by the teacher. Systematic analysis of the occupations and the regular report directly before the teacher [5, 10,11] were carried out.

To check the correct distribution of the load during the training session, students independently measure the heart rate, by measuring the pulse, the signal of the teacher is calculated for 15 seconds. This kind of counting is usually done 4 times: before the lesson (at rest), in the middle – after the most tedious exercise of the main part (in the first 15 seconds.), immediately after the end of the lesson and after 5 minutes of the recovery period.

#### A. Experimental part

During the planning of the training load, it is necessary to start from the fact that the training exercises carried out, do not lead to significant morphological and functional changes, since the body partially adapts and subsequently fully adapts to the proposed physical loads. Therefore, we built our classes with a systematically gradual increase in physical activity. Since the progressive increase at certain stages is in disagreement with the course of adaptive changes, it was based on the wave-ascending principle. This gradual change in physical activity in the educational process makes it possible to avoid differences between the types of work of different orientation, intensity and volume, as well as the processes of fatigue and recovery. Quite an effective form of organization of the educational process has always been considered a complex form. It simultaneously allows solving a number of problems. One of these tasks is the variability of the use of load, methods and tools, which provides a comprehensive development of the qualities that determine the level of achievement, as well as improving performance when performing individual movements. This form of training allows much faster involving the student in the learning process. These factors determined the choice of a complex form of classes with SMG students [1, 3].

Of great importance for students is the formation of an adequate self-esteem of personality and health in the process of physical education at the University. The ability to objectively and adequately assess their physical abilities during making of specific physical activity, as well as to correlate the results with the requirements that they must meet. This condition is necessary for the full assimilation of students of the content of the working curriculum in the disciplines of "physical culture and sport" and "elective discipline of physical culture and sports." However, self-esteem is a factor that manifests itself in the development of self-consciousness, and can largely depend on various objective conditions [5].

As it turned out during the experiment, in the conditions of normal physical training, SMG students cannot analyze their various motor actions and identify clear criteria for their assessment. They basically reduce the analysis of the results of their motor actions to a quantitative indicator of training tests.

The originality of the self-assessment of SMG students was to find a mismatch between the self-assessment of the individual and the assessment of their capabilities in various

activities. This fact was explained by the fact that different aspects of self-assessment of students are at different stages of formation and are characterized by different degrees of realism.

For full development of the program on discipline "physical culture and sport", and "Elective disciplines on physical culture and sport", trained, at performance of various exercises, it is necessary to estimate independently and objectively the motive abilities and skills which they acquire during educational process. In addition, they must correctly correlate the results achieved with the requirements that they must meet.

It is known that under the influence of physical activity and the use of the same tools and methods of functional changes that have a positive effect on the body, formed about a month after the start of classes.

Recommendations on the content, volume and organization of training sessions were built by us in accordance with the data of scientific and methodological literature and our own research conducted previously independently and in a team with colleagues [2, 4, 6-8].

### III. RESULTS

Control of the process of physical education in the University included not only the data of registration and evaluation of indicators of the General physical condition of students, but also their self-esteem. All data were recorded in the diary of self-control. As shown by our research after the experiment, the results of EG Students in many respects have significantly higher levels compared to their peers from the CG.

The data of somatoscopy at the experimental stage indicate that the surveyed students of SMG during the examination noted full-face location of the upper arms at the same horizontal level, the left triangle of the waist slightly inferior to the right.

The distance from the 7 cervical vertebrae to the lower angle of the shoulder blades on both sides in the EGR Has become almost the same and averages 14.12 cm, in the Rag on the right 14.49 and 13.68 on the left. These results indicate the presence of positive dynamics in the posture of the EGs, which is close to physiologically correct and has significant differences ( $P < 0.05$ ). Analysis of the dynamics of the growth rate within each group showed that the result of EG and CG Students significantly improved ( $P < 0.05$ ).

In the block of functional capabilities of the body significant differences were recorded five indicators between students of EG and CG, such as pulse recovery time after exercise, spinal mobility to the left, right, forward and back muscle strength ( $P < 0.05$ ).

There were also significant differences in the health self-assessment block. There were recorded changes in the indicator– the General physical condition of students of SMG, which were characterized by the absence of frequent pain and other unpleasant sensations, restrictions in movement and movement. Within both groups, significant differences are noted for one very significant indicator, such as overall physical condition.

In the block of self-assessment of personality in students of EG and CG during the experiment, significant differences were also recorded ( $P < 0.05$ ) in three tests: reactive and personal anxiety, self-esteem. Within EG, significant differences ( $P < 0.01$ ) were observed in two indicators - reactive and personal anxiety. No significant changes were found in the KGR Of students after the experiment.

The analysis of the results of testing of students SMG allowed us to identify three groups with a certain level (low, adequate and overestimated) of development of self-esteem in the process of physical education at the University.

After the experiment in the health self-assessment unit and the study of the levels of each test showed the following results (table 1).

TABLE I. HEALTH SELF-ESTEEM

	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low level	39.6%	33.9%	39.7%	15.4%,
Adequate level	48.01%	50.9%,	48.4%	63.6%
High level	12.39%	15.2%	11.9%	21.0%

As you can see, before the experiment, less than half of the subjects in both groups have an adequate level, and 39 % have an underestimated, and 12 – overestimated levels. But the situation changes after the experiment. If in the control group the situation does not change much sharply (an increase in adequate and inflated levels of 2-3 %), then in the experimental group there are significant changes. The increase in the adequate level is 15 %, overestimated – 9.9 %, and the share of students with an understated level is reduced by more than 2 times and is 15.4 %.

The results obtained by the indicator of self-assessment of health, affecting the achievement of well-being in the family, study, in communication with friends are presented in table 2.

TABLE II. THE INDICATOR OF SELF-ASSESSMENT OF HEALTH, AFFECTING THE ACHIEVEMENT OF WELL-BEING IN THE FAMILY, STUDY IN COMMUNICATION WITH FRIENDS ARE PRESENTED

	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low level	26.14%	24.02%	26.9%	14.9%,
Adequate level	57.94%	56.48%,	54.58%	67.89%
High level	15.92%	19.5%	18.52%	17.21%

As in the previous case, the initial data is almost equal. Prior to the experiment, a little more than half of the subjects in both groups have an adequate level, and 26 % have an underestimated, and 15 and 18 % – overestimated levels. If there are no significant changes in the control group, the situation is completely different in the experimental group. Sharply increases the number of students with an adequate level and is 2/3 of all subjects, it is worth noting a decrease in the number of students with an understated level in 2 times,

but 1.3 % decreased the number of students with an inflated level.

The study of the levels of self-assessment of anxiety in the classroom is presented in table 3.

TABLE III. LEVEL OF SELF-ESTEEM ANXIETY IN THE CLASSROOM

	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low level	12.3%	9.4%	16.0%	7.0%,
Adequate level	62.9%	64.7%,	58.1%	83.1%
High level	24.8%	25.9%	25.9%	9.9%

In contrast to the previous cases, here before the experiment the situation is somewhat different in different groups. The control group as a whole looks more balanced, showing only 12.3 % of students with an understated level. At the same time, in the experimental group, an understated level was revealed in 16 % of students, adequate – 58.1% (in the control group – 62.9%), overstatement has an almost equal number of students. After the end of the experiment, the data in the control group differ slightly, although an increase in the adequate and overestimated level and a decrease in the underestimated level are expected. The situation in the experimental group is quite different. After the experiment, only 7 % of students showed an understated level, the vast majority (83.1 %) – an adequate level. It is worth noting a sharp decline in students with an inflated level. The level of personal anxiety in students is presented in

TABLE IV. LEVEL OF PERSONAL ANXIETY IN STUDENTS

	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low level	26.2%	21.3%	22.2%	20.1%,
Adequate level	50.8%	60.8%,	60.9%	72.0%
High level	23.0%	17.9%	16.9%	7.9%

table 4.

Significant deviations from the level of adequate anxiety require special attention. High anxiety involves a tendency to the emergence of anxiety among students of SMG in situations of competence evaluation. In this case, it is necessary to reduce the importance of the situation and tasks and to shift the emphasis on understanding the activities and to form a sense of confidence in success. A low anxiety, on the contrary, requires increased attention to activities and

TABLE V. PERSONALITY SELF-ESTEEM

	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low level	51.0%	42.8%	51.9%	17.3%,
Adequate level	36.8%	49.0%,	35.1%	70.8%
High level	12.2%	8.2%	13%	11.9%

feelings of responsibility and confidence. The results of personality self-assessment testing are presented in table 5.

An overestimated, as well as an underestimated level of self-esteem can be the result of a variety of reasons and should not frighten a person. It is not that people who overestimate or underestimate themselves, need special psychological help, they live in a family, learn in a team and it cannot leave an imprint. Experience shows that for the team, its socio-psychological climate, equally bad the presence of people in it inadequately assess themselves.

#### IV. DISCUSSION

As a result of the work on the study of self-esteem of students of SMG in the process of physical education at the University clarified that the use of the program, where the content and organization of the educational process of physical education are aimed at the formation of adequate self-esteem, comprehensive development of all physical qualities and preventive actions to eliminate minor deviations of the ODE, as well as the adaptation of the body to gradually increasing physical activity, improved the results on many indicators at a reliable level.

Increasing the total number of students with an adequate level of self-esteem and reducing their number with an understated level is due to the fact that the ability to objectively assess their ability to properly perform specific motor actions along with the ability to compare the results achieved with the requirements are an essential condition for the full and qualitative assimilation of the program the nature of changes in the control group can be called probabilistic, because it contains both positive and negative trends.

Provided pedagogical conditions of influence on the formation and correction of self-esteem of students of SMG in the process of training in the disciplines of "Physical culture and sport" and "Elective disciplines in physical culture and sport", undoubtedly, have a positive impact on improving not only adequate self-esteem, but also the overall physical fitness of students of SMG.

#### REFERENCES

- [1] S. G. Akhmerova, Healthy lifestyle and its formation in the process of education, disease Prevention and health promotion, 2 (37-40, 2001)
- [2] V. A. Baronenko, L. A. Rapoport, student's Health and physical culture, Alfa, Moscow (2003)
- [3] P. S. Bragg, S. P. Maheshwarananda, R. Nordemar, the spine is the key to health, OOO "Diamond", Saint-Petersburg (2001)
- [4] V. P. Golomolzina, S. P. Levushkin, the Influence of loads of different directions on the physical condition and morbidity of students of a special medical group, Scientific notes of the University. P. F. Lesgaft, 6 (40) (24-28, 2008)
- [5] T. V. Zabalueva, Prevention and correction of posture disorders of schoolchildren in various sports, Scientific notes of the University. P. F. Lesgaft, 9 (31) (41-45, 2007)
- [6] A. V. Zakharova, the Genesis of self-esteem, publishing House of Tula state. PED. UN-TA im. L. N. Tolstoy, Tula (1998)
- [7] R. T. McKenzie, Physical exercise in education and medicine: extracurricular activities. Scoliosis and their treatment, exercise therapy and massage. Sports medicine, 8 (39-50, 2007)
- [8] I. V. Milyukova, T. A. Evdokimova, Physical therapy. Latest reference book, Sova, St. Petersburg; publishing House "Exmo", Moscow (2003)
- [9] Reviewed scientific journal "Trends in the development of science and education". February 2019. No. 47, Part 1 Ed. SIC "L-Journal", 2019. – 88C.
- [10] I. N. Timoshina, Indications and contraindications for the content of physical training in a special medical group, Physical education, 4 (65-68, 2007)
- [11] G. A. Khomutov, Adaptive physical culture in professional training of students of higher educational institution, St. Petersburg state technical University (1999)