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Research Article

**COMPARATIVE CHARACTERISTIC OF LIFE QUALITY
AMONG THE STUDENTS REFERRED TO A SPECIAL
MEDICAL GROUP ACCORDING TO THEIR HEALTH STATE****Irina N. Gernet^{1*}, Valentina N. Pushkina², Svetlana Yu. Razmakhova³, Elena A. Milashechkina⁴, Roman P. Sergeev⁵, Andrey G. Morozov⁶**

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Abstract:

The paper presents the results of life quality study among first year students assigned to a special medical group. They revealed gender differences in the psychological sphere of life quality, the level of independence, social relationships and environmental relations. Most of the indicators under study are at good and very good levels among girls, as compared to young men, whose majority of indicators are at an average level.

Key words: *life quality, students, special medical group, gender differences.*

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INTRODUCTION:

Youth as a social group differs from other population groups, by their activity, an accelerated adaptation process, a greater geographical mobility, more relevant knowledge and skills, and greater material needs [7]. The socialization of girls and boys at the age of 17-20 is associated with professional and personal self-determination [4, 9], the reassessment of values, the development of new social roles, the overcoming of family authority crisis [1], loneliness and sexual problem solution [4]. A particular importance is given to student youth as the future intelligentsia, who determine the development of the most important social spheres: education, culture, management, economy, politics, etc. Thus, the future of our country depends on young people life quality.

This problematic situation creates the contradiction between an objective need to improve student life quality during the learning process and the lack of knowledge among students to assess their life quality. The necessity of meaning provision to a healthy lifestyle and physical training in order to improve life quality determines the search for new knowledge about student life quality. Thus, the following problem arises: what criteria of life quality have the greatest importance among the students at the age of 17-19; whether the priorities of life quality criteria depend on gender and health status [11]. The published data suggest that student LQ is reduced, especially the LQ of freshmen [8].

Quality of life (LQ) is the category by which the circumstances of population life are described, which determine the degree of dignity and freedom of each person, the degree of a person's comfort both within himself and within society [2]. LQ is a very broad and an ambiguously interpreted concept. In modern medicine, the term "life quality" associated with health is used widely. It is determined by the satisfaction of various aspects of a man's life, which are significantly affected by chronic and acute diseases, the need for treatment, resulting from an unsatisfactory physical and psychological-emotional state [10].

The quality of life is, first of all, the evaluation of satisfaction degree with various aspects of his life by a person, the perceived quality of life, the subjective feelings of an individual, developed on the basis of specific life conditions, emotional state, etc. [6]. Due to these regularities, we consider it is extremely

important to study the quality of life among student youth, which is a special social group united by specific age boundaries, an intensive mental work - the process of vocational training, the way of life and mentality.

The purpose of the study was to compare the quality of life among first-year students, classified into a special medical group by health state, on the basis of gender differences.

Study material and methods:

We examined first-year students of Peoples' Friendship University of Russia (Moscow), classified as a special medical group for physical training due to health reasons. 60 students at the age from 17 to 19 years participated in the survey, of which two gender-based comparison groups were formed: first group (n = 30) was represented by girls (mean age 17.5 ± 0.3 years), 2nd group (n = 30) - boys (17.9 ± 0.4 years).

The study used the Russian version of World Health Organization questionnaire WHO-100 (100 questions), used to assess the LQ of an adult Russian-speaking population of Russia and other countries (WHOQOL Group, 1993) [3]. Using the questionnaire, six major LQ areas were assessed: physical functions, psychological functions, independence level, social relations, environment and spiritual sphere, as well as the respondents' perception of their life and health quality in general.

Mathematical-statistical processing of the survey results was carried out using Microsoft Excel 2010 and SPSS software (version 19.0 for Windows). The level of studied indicator difference reliability was determined using the Student's criterion. The results were considered statistically significant at $p \leq 0.05$.

STUDY RESULTS:

Life quality is considered as a multidimensional, complex structure that includes an individual's perception of his physical and psychological state, the level of independence, the relationships with other people and personal beliefs, and his attitude to the significant characteristics of his environment [3]. Analyzing the general assessment of LQ in the study groups, we observe that this indicator is at a good level among the students of the 1st course, although this indicator is 12% higher among girls than among young men ($p < 0.001$) (Table 1), which agrees with the data from other literary sources [7].

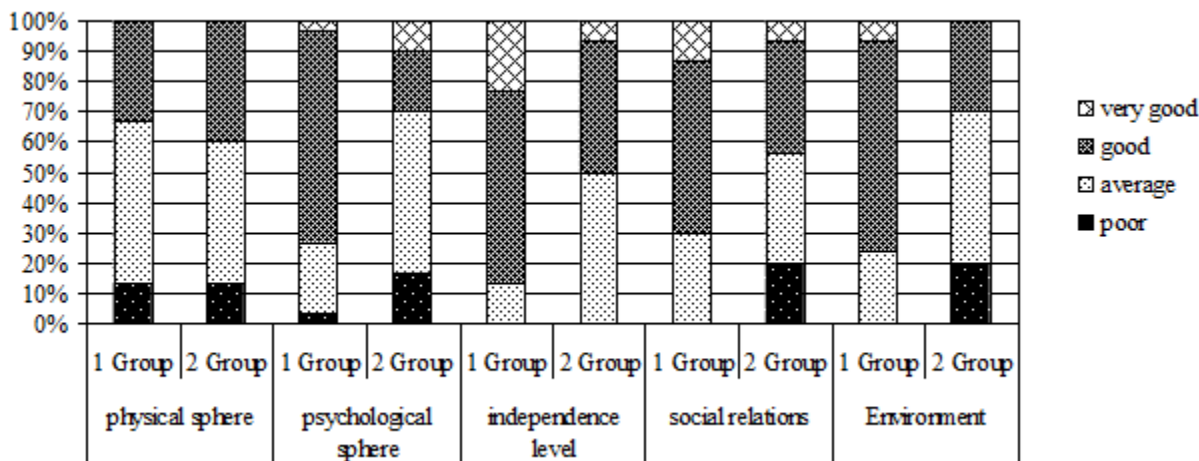
Table 1: Indicators of life quality spheres among the students of a special medical group, depending on their sex

Indicators	1 group, girls (n=30)	2 group, young men (n=30)
Physical sphere	13,3±0,4	13,2±0,3
Psychological sphere	14,7±0,4	13,1±0,4**
Independence level	16,2±0,4	14,5±0,4**
Social relationships	15,9±0,6	13,5±0,5**
Environment	15,2±0,3	12,9±0,4***
Spiritual sphere	16,6±0,5	12,8±0,7***
Overall life quality assessment	91,9±1,3	80,9±2,4***

Note: here and then * $p < 0,05$, ** $p < 0,01$, *** $p < 0,001$

The evaluation of LQ indicators in certain areas revealed the feature related to the physical sphere. This is the only sphere of LQ, the index of which does not have significant differences between groups ($p > 0,05$). In both study groups, its values are at an average level, and the absence of significant differences can indicate the fact that students have health problems.

The analysis of internal distribution according to the physical sphere of LQ indicates that the majority of respondents have an average level of this indicator (53.3% for girls, 46.7% for boys). The group, which included the students with a good level of LQ in the physical sphere, the ratio was the following one - girls - 33.3%, boys - 40% (Figure 1).

**Fig. 1: Life quality distribution among girls and boys, %**

Within the framework of physical functioning, if it is considered in its entirety, an individual life can be deteriorated due to problems caused by physical pain, physical discomfort, fatigue and the lack of energy and strength, as well as the inability to recover and rest by sleeping [3]. In order to analyze the physical sphere of LQ, we analyzed the sub-spheres, and the fact of life quality features revealed in the study groups. Most of the subspheres within LQ physical sphere among the students of both groups correspond to the average level. Nevertheless, the sub-sphere F3

"Sleep" is at a good level among girls, whereas there is a more pronounced lack of sleep among young men as compared to the girls (Table 2). The average level of life quality in the sub-spheres indicates that first-year students, classified as a special medical group by health state, need the correction of existing disease physical manifestations at the initial level of training, the creation of special conditions for body vital forces restoration and regular adequate physical exercises.

Table 2:
Indicators of life quality physical sphere sub-spheres among students, depending on their gender

Indicators	1 group, girls (n=30)	2 group, Young men (n=30)
Physical sphere	13,3±0,4	13,2±0,3
F1 Physical pain and discomfort	13,2±0,5	13,6±0,5
F2 Vital activity, energy, fatigue	12,6±0,5	12,2±0,5
F3 Sleep	14,1±0,8	13,5±0,5

The indicator of life quality psychological sphere is at a good level among girls and at average level among young men - its value is higher by 11% among girls ($p < 0.01$) than among young men (Table 1). A good level of LQ psychological sphere is among 70% of the interviewed girls, 53.3% of the boys have an average level of LQ psychological sphere (Figure 1).

Analyzing the indicators of the LQ psychological sphere subspheres, one can observe a number of gender features. The indices of the subsphere F4 "Positive emotions" and the subsphere F6 "Self-esteem" are higher by 19.6% and 17.2%, respectively ($p < 0.001$ and $p < 0.01$) than among young men, which corresponds to a good level, whereas these sub-spheres correspond to an average level among young men (Table 3). The subsphere F5 "Cognitive

functions" and the subsphere F7 "The image of body and appearance" corresponds to a good level among girls, and to the average level of LQ among men. Thus, in order to improve the psychological sphere of life quality, young men need to help them improve their self-esteem, stimulate the development of positive emotions. An effective correction of LQ psychological sphere needs to apply regular individually selected physical activities, as they will help students to develop a beautiful body, increase self-esteem and will be the source of positive emotions. It is also necessary to have enough time to teach students psychological self-regulation methods, to recommend to be outdoors and engage in aerobic physical activities (walking, running, riding a bicycle, skiing, skating, roller) more often, which helps to reduce psychological-emotional stress.

Table 3:
Sub-sphere indicators of life quality psychological sphere for students, depending on their sex

Indicators	1 group, girls (n=30)	2 group, young men (n=30)
Psychological sphere	14,7±0,5	13,1±0,4**
F4 Positive emotions	15,8±0,5	12,7±0,6***
F5 Cognitive functions	14,9±0,5	13,9±0,6
F6 Self-esteem	15,1±0,6	12,5±0,8**
F7 Body image and appearance	14,5±0,6	13,3±0,5
F8 Negative emotions	13,3±0,6	12,5±0,7

The indicator of independence level in both groups is a good one, but it is 10% higher ($p < 0.01$) among girls than among young men (Table 1). 63.4% of girls have a good level of independence, half of the respondents have an average level of independence among young men (Figure 1).

Girls have significantly higher indices of independence level sub-spheres F9 Mobility, F10 Ability to perform everyday activities and F11 Dependence on drugs and treatment as compared to boys - 12.4%, 9.9% and 11.3%, respectively ($p < 0,05$) (Table 4). The ability to work F12 is also higher by 7.5% among girls, although there are no significant differences between groups ($p > 0.05$). These results indicate a more pronounced decrease of

student independence level, possibly related to health status changes, and are manifested more among young men. The indicator of social relationship sphere is at a good level among girls, and it is on average level among young men, the indicator is 15% higher among girls than among young men ($p < 0.01$) (Table 1). 56.7% of the interviewed girls have a good level of social relationships, 13.3% - very good. There are no girls with a bad level of social relationships. There are 36.7% of respondents in the groups with medium and good levels of social relationships among young men, 20% have a poor level of social relationships (Figure 1). Perhaps this fact indicates a higher ability for social adaptation among girls.

Table 4:
Life quality sub-sphere indicators of independence level among students depending on their gender

Indicators	1 group, Girls (n=30)	2 group, Young men (n=30)
Independence level	16,2±0,4	14,5±0,4**
F9 Mobility	16,9±0,5	14,8±0,6*
F10 Ability to perform everyday activities	15,1±0,5	13,6±0,4*
F11 Dependence on drugs and treatment	16,8±0,7	14,9±0,6*
F12 Ability to work	15,9±0,5	14,7±0,6

Analyzing the indicators of social relationship sub-spheres, we observe a number of gender features. The sub-sphere "Personal relationships" explores the extent to which people feel friendly attitude, love and support, as compared to the things they would like for close (friendly and love) relationships in their life [3]. The index of the sub-sphere F13 "Personal relationships" is higher by 27.6% ($p < 0.01$) among girls than among young men, which corresponds to a very good level, whereas this sub-sphere corresponds to the average level among young men (Table 5). The sub-sphere "Practical social support" studies support feeling extent by an individual, the relief and the opportunity to receive practical help from family and friends to solve family and personal problems [3]. The index of the sub-sphere F14 "Practical social support" is higher by 21.8% ($p < 0.001$) among than

among young men, and corresponds to a good level, whereas this sub-sphere corresponds to the average level among young men (Table 5). The sub-spheres F15 "Sexual activity" among the students of both groups corresponds to the average level of life quality, and although this indicator is 12% higher among young men there are no significant differences between groups ($p > 0.05$). The indicator of the sphere "Environment" is at a good level among girls, and at average level among young men, the indicator is 15% higher among girls ($p < 0.01$) than among young men (Table 1). 70% of the interviewed girls have a good level of "Environment" sphere and 30% have an average level, half of the interviewed young men have an average level of the sphere "Environment", 30% - a good level and 20% - a bad LQ level (Figure 1).

Table 5.

Social relationship life quality sub-sphere indicators among students, depending on their sex

Indicators	1 group, girls (n=30)	2 group, young men (n=30)
Social relationships	15,9±0,6	13,5±0,5**
F13 Personal relations	18,5±1,5	13,4±0,6**
F14 Practical social support	17,4±0,4	13,6±0,6***
F15 Sexual activity	11,9 ±0,8	13,5±0,7

Girls have significantly higher levels of "Environment" subspheres: F16 "Physical security and protection", F17 "Home environment", F18 "Financial resources", F20 "Possibility of new information and skill acquiring", F21 "Recreation and entertainment opportunities and their use" and F23 "Transport" than boys by 9.9%, 13.7%, 16.8%, 20.4%, 20.2% and 15.8%, respectively ($p < 0.05$, $p < 0.01$, $p < 0.001$) (Table. 6). All abovementioned sub-spheres correspond to the average level among young

men, and to a good level of LQ among girls. In both groups, the subsphere indicators F19 "Medical and social care" and F22 "The environment" correspond to the average level and there are no significant differences between the groups ($p > 0.05$). The results show that it is more difficult to adjust to new living conditions for young men when they study at a university, such as living in a hostel, a lack of financial resources, a large volume of training load, a lack of an adequate rest, etc.

Table 6:
Environment life quality sub-sphere indicators among students, depending on their sex

Indicators	1 group, girls (n=30)	2 group, Young men (n=30)
Environment	15,2±0,3	12,9±0,4***
F16 Physical safety and protection	14,2±0,4	12,79±0,5*
F17 Home environment	16,1±0,6	13,9±0,6*
F18 Financial resources	14,9±0,7	12,4±0,8*
F19 Medical and social support	13,8±0,7	12,7±0,6
F20 The ability to acquire new information and skills	17,2±0,3	13,7±0,7***
F21 The ability for rest and entertainment and their use	16,3±0,3	13,0±0,7***
F22 Environment (pollution, noise, etc.)	13,8±0,7	12,4±0,6
F23 Transport	15,2±0,5	12,8±0,6**

Thus, our studies have confirmed the fact that the quality of life is a multidimensional, complex structure that includes an individual's perception of his physical, psychological, economic and social-cultural state, as well as the "spatiality" of freedom and independence in the relationships with people within personal convictions [5]. Having carried out a detailed analysis of life quality spheres and sub-spheres among freshmen who are classified as a special medical group by health status, the following conclusions can be drawn: 1. There are reliable gender differences in life quality: a significant part of life quality indicators among girls is significantly higher than among boys, which is consistent with the results of earlier studies [7]. 2. Most of the indicators under study are at good and very good levels among girls, while they correspond to an average level among young men. 3. Gender differences were not observed in the physical sphere of life quality, which may be due to the fact that both girls and young men have health abnormalities.

The obtained results indicate that in order to improve the student life quality it is necessary to introduce on the basis adaptation programs for freshmen at universities, which include individual psychological assistance, the promotion of a healthy lifestyle, the motivation of young people to engage in physical culture and sports, the attraction of young people to active outdoor activities and public events with the possibility to expand the circle of communication among young people.

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