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**EVALUATION OF LIFE QUALITY AMONG
THE STUDENTS OF 4-6 SEMESTERS OF BELARUSIAN STATE
MEDICAL UNIVERSITY USING SF-36 HEALTH STATUS SURVEY**

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Abstract. Nowadays the study of the quality of life (QOL hereinafter) in medicine is taken into greater consideration than ever before. This furnished an opportunity to conduct a research work of the person's attitude to his/her health. In provided work in order to find patterns of deviation from normal value, the level of QOL of students at BSMU and normative parameters were compared.

Keywords: social sciences, humanities, public health, value of life

The relevance of the work. Currently, a great number of studies related to the level of QOL in different population groups are being carried out. However, at the moment there is no reliable information concerning the QOL of students of higher medical educational institutions of Belarus (including BSMU).

Purpose. To explore the level of life quality of students, comparing the obtained and normative data.

Methods. In 1999 the World Health Organization suggested considering the term "quality of life" as an optimal condition, the degree of satisfaction in the system of human values (physical, emotional, social, etc.) and relationship of provision with objectives and capabilities of both individual and the population in general to achieve well-being and self-realization. In the broad sense, according to the UN definition the concept of QOL is a sociological category, which covers 12 aspects of living conditions, such as health, upbringing livelihoods, working conditions, social confidence, psycho-emotional state, and others. It is considered that the interpretation of the term QOL in the medical context was first used in the journal "Annals of Internal Medicine" in 1966 [1]. Since that time, especially in the last decade, the interest in exploring the medical aspects of QOL has dramatically increased. According to the WHO definition, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Despite the vast amount of different surveys to assess the level of QOL, the 36-Item Short-Form Health Survey (SF-36) is considered to be one of the most commonly used questionnaire methods based on physical, mental, social aspects of human activity and the level of quality of life in general [3, 4, 5]. It has normative parameters, which are based on studies of representative populations in various countries (USA, Canada, Norway, Sweden, and Russia) [2]. The study was conducted at the University during the period from 14 to 18 December 2015. 36 test items of paper versions of "SF-36 Health Status Survey" questionnaire were grouped in eight scales: physical functioning, role-playing activities, bodily pain, general health, vitality, social functioning, emotional state and mental health. Indicators of each scale were ranged between «0» and «100» (where «100» represents an ideal health). All scales form two indicators: mental and physical health. The results were presented in the form of estimates in a certain order where a higher score

indicated a higher level of quality of life. The following parameters were the subjects for quantitative evaluation:

1. Physical Functioning (in tables and graphs - PF), which illustrates the respondent's extent of limitation of physical activity caused by the state of his/her health.

2. Role functioning caused by physical state (Role Physical Functioning – RP), which refers to the degree of influence of physical health on daily activities (work, performing daily activities).

3. Pain intensity (Bodily Pain – BP), which describes the extent of pain and the impact on physical ability to perform daily chores (household work, study, etc.).

4. General health (GH) – patient's assessment of his/ her state of health at the present moment and prospects of the treatment.

5. Vitality (VT), which involves the feelings of being full of strength and energy, or, on the contrary, being exhausted.

6. Social Functioning (SF), which is determined by the degree of limitation of social activity (communication) based on physical or emotional conditions.

7. Role functioning, which is caused by emotional state (Role-Emotional - RE) involving assessment of the extent to which emotional state obstructs the work or other daily activities.

8. Mental Health (MH) - a state of well-being, which is characterized by realization of the abilities of an individual, coping with the usual stresses of life, working productively and fruitfully and making a contribution to his/her community.

Scales were grouped into two measures “General physical health” and “General mental health”:

1. General Physical Health (GPH) is presented by such scales as physical functioning, role functioning caused by physical condition, the intensity of pain, general health.

2. General Mental Health (GMH) is made up of the scales “mental health”, “role functioning caused by emotional state”, “social functioning” and “vital activity”.

Results and discussion. The survey results are presented in Tables 1-3 and in Figures 1, 2.

Table 1. QOL of females

	GPH	GMH	PF	RP	BP	GH	VT	SF	RE	MH
Mean (M)	49.6	40.1	90.5	60.10	67.8	63.1	53.3	70.5	46.2	59.1
Mode	54.9	41.4	95	100	100	62	50	75	33	60
Median	48.9	41	95	75	72	65	50	75	33	60
Standart Deviation	5.8	8.1	8.2	29.9	23.6	17	14.9	19.2	29.40	14.7
Margin of Error (E)	0.80	1.1	1.1	4.2	3.8	2.4	2.1	2.7	4.1	2.0
M ± E	49.60 ± 0.80	40.00 ± 1.13	90.50 ± 1.14	60.10 ± 4.15	67.90 ± 3.27	63.10 ± 2.36	53.30 ± 2.06	70.50 ± 2.66	46.20 ± 4.08	59.10 ± 2.04

Table 2. QOL of males

	GPH	GMH	PF	RP	BP	GH	VT	SF	RE	MH
Mean (M)	49.30	37.8	90.8	57.3	64.2	67.6	45.5	68.6	45.1	53.9
Mode	62.5	45.6	100	50	62	77	55	75	33	64
Median	47.8	41.1	95	50	62	72	45	75	33	56
Standart Deviation	5.6	7.9	9.2	27.8	15.2	15.6	13.7	18.1	29	16.3
Margin of Error (E)	1.1	1.5	1.7	5.2	2.8	2.90	2.6	3.4	5.4	3
M ± E	49.30 ± 1.05	37.40 ± 1.47	90.80 ± 1.71	57.30 ± 5.16	64.20 ± 2.83	67.60 ± 2.90	45.50 ± 2.55	68.60 ± 3.35	45.10 ± 5.38	53.90 ± 3.03

Table 3. The average level of QOL

	GPH	GMH	PF	RP	BP	GH	VT	SF	RE	MH
Mean (M)	49,5	39,3	90,7	59,0	66,0	65,0	49,0	70,0	46,0	57,0
Mode	62,5	45,6	95	100	100	77	50	75	33	60
Median	48,6	41,0	95	50	62	67	50	75	33	60
Standart Deviation	5,9	8,0	8,6	29,6	20,9	16,8	14,3	18,7	29,40	15,40
Margin of Error (E)	1	1	1	3,20	2,30	1,80	1,6	2,1	3,2	1,7
M ± E	49,50 ± 0,64	39,3 ± 0,87	90,60 ± 0,95	59,3 ± 3,24	66,5 ± 2,30	64,20 ± 1,84	50,5 ± 1,57	69,9 ± 2,05	46,2 ± 3,23	57,2 ± 1,69

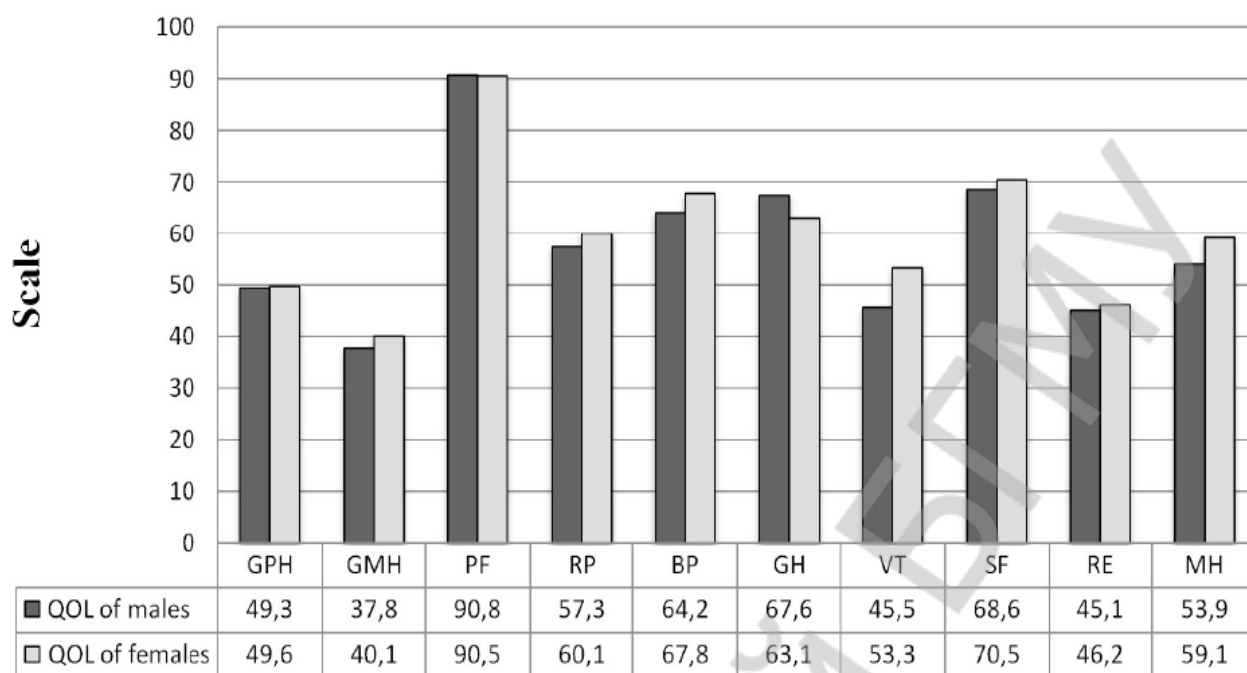


Figure 1 – QOL of males and females

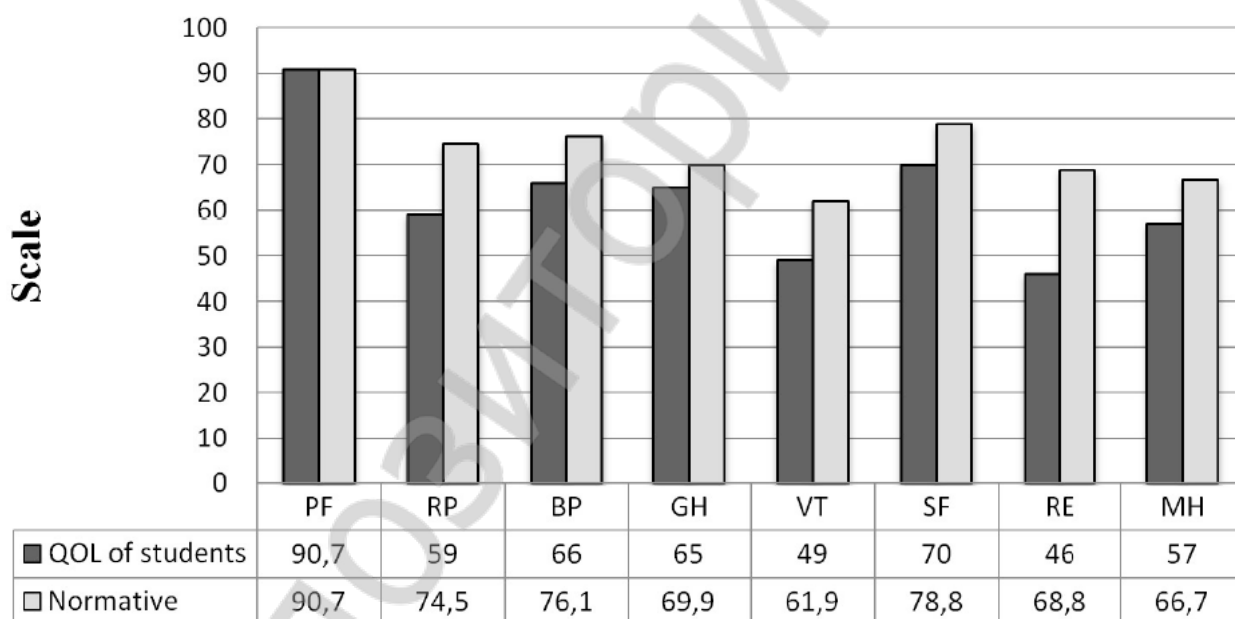


Figure 2 – Comparing the level of the QOL of students and the QOL of normal values

The findings of our study show that the level of quality of life of males and females studying at BSMU is practically identical. However, it should be noted that the indicators of girls on such scales as a vitality and mental health are higher than those of boys. Figure 1 shows that the mental health component of the females is a little higher. We compared the QOL of students of BSMU and normative values for the people of this age group and showed a significant reduction in the level of life quality in all aspects, except physical functioning, which corresponds to the average statistical data. (Fig. 2) Thus, compared with the norm, role functioning caused by emotional state decreased by 33%;

role functioning caused by physical condition reduced by 21%; vitality was less than normal life activity by 21%; mental health reduced by 15%; “Body pain” scale reduced by 10%; social functioning was below normal by 11%, and the general health decreased by 7%.

Conclusions. Thus, after an anonymous survey the results were accurately analyzed and compared with normal data. It may be concluded that the level of life quality among students of Belarusian State Medical University is slightly below the normal values. It was found that the role functioning caused by mental and physical condition is below normal (by 33% and 21%, respectively) which is due to a high educational load for students and shortage of time for rest and social verbal contact. As the survey was conducted just before the second peak period of the academic year, some students underestimated the vitality (below the norm by 21%) and mental health (less than normal value by 15%), that could be a reflection of the physical and psycho-emotional state of students before the academic session. Indicators of females on such scales as a vital activity and mental health were slightly higher than those of males (by 15% and 9%, respectively), that showed a higher psycho-emotional stability of females.

References

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