



THE LIFE QUALITY OF THE NORTH-EASTERN FEDERAL UNIVERSITY STUDENTS

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ABSTRACT

The aim of the study was to investigate the life quality of North-Eastern Federal University (NEFU) students during the 1st year.

Generic questionnaire SF-36 was used as a special questionnaire to assess the life quality in patients with chronic obstructive pulmonary disease.

649 1st year students at the age from 15 to 30 of the NEFU from a representative group were involved in study.

Indicator scales of the student questionnaire ranged widely both boys and girls. Subjective evaluation of their daily PF was significantly higher in boys than in girls ($p < 0,000$). RP and BP were evaluated by young people was significantly worse than girls ($p < 0,000$). VT and MH subjectively assessed by men were better than in female students ($p < 0,000$). RE were worse in young people than in young women ($p < 0,000$).

Statistical difference was not found on the scale of GH and SF of SF-36 questionnaire. The population of the Republic of Sakha (Yakutia) showed better results in a "Role Physical" scale than the 1st year students of the NEFU ($p < 0,000$). Indicators of a "General Health" scale were better in the NEFU students ($p < 0,01$). Statistical differences were found in other scales of the questionnaire.

Boys of NEFU rated their physical activity and mental health higher ($p < 0,01$) than men, but the role of physical ($p < 0,000$) and emotional limitations ($p < 0,02$) in the life of young people played a larger role than in men. Statistical differences were found in the other SF-36 scales. The influence of the physical constraint in women's life were less appreciated than in freshman girls ($p < 0,000$). Statistical differences were found in the other scales of the SF-36 questionnaire.

Thus, the subjective opinion of a man effects on the QOL of students, his perception of the world, which vary in terms of hypokinesia, information overload, lack of time, mental stress.

Keywords: quality of life, students, SF-36.

Introduction

The concept of "quality of life" (QOL) has entered into medicine only 40 years ago. Initially, the concept of QOL applied to sociology. Despite of a sufficient number of works of QOL in the literature, there isn't any uniform definition. For example, some researchers define QOL as satisfaction of living conditions, the external state, work, school, home furnishings and many other social components [11], the second – a person's ability to function in society according to their situation and get the satisfaction of life [3, 10], others – the difference between the expected and the existing way of life [8], the fourth – the comfort of a person within yourself and within their society [6]. WHO recommends to define QOL as an individual ratio of their position in society in the context of the culture and value systems of this society with the goals of the individual, his plans, capabilities, and the degree of general disorder [12].

QOL combines several different areas: physical, functional, emotional, social, determined through the prism of their needs and standard of living. The subject of the study of QOL is an individual, his physical, psycho-emotional and social status [2, 5]. The age, sex, socio-economic status, the nature of work, level of culture and the environment influence on the assessment of QOL [13]. These indicators can characterize the homogeneous group, and the student youth refers to the same.

The aim of the study was to investigate the quality of life of 1-st year students of NEFU.

Materials and methods

The work was carried out in the Research Institute of Health of the M.K. AMMOSOV NORTH-EASTERN FEDERAL UNIVERSITY (NEFU). All clinical and functional studies were

carried out in the Department of propaedeutic and faculty therapy with endocrinology and physical therapy department of MI and preventive health center number 5 of the Research Institute of Health of NEFU. The study was approved by the Ethics Committee of the Federal State budget Institution "Yakutsk Scientific Centre of Complex Medical Problem" of Siberian Group of Russian Academy of Medical Sciences.

The informed consent was received before entering of participants in the study.

Inclusion criteria: a representative sampling of the 1st year students of NEFU.

Representative sampling was made up of the total number of the 1st year students (3400 people) using random number method in Excel program, it consisted of 800 people. 649 1st year students aged 15 to 30 of the NEFU from a representative group took part in investigation. 151 people aged 16 to 20 dropped out of the study for various reasons. There were 292 young people (45%) aged 15-26, Female – 357 (55%) aged 16 to 30 years of the 649 participants of the study. The ratio of girls and young people spread out evenly, which corresponds to a general population.

Overall, the general questionnaires are tools to assess the most QOL relationship with social status, mental health and general well-being of the individual [9]. The 36-item MOS Short-Form Health Survey (SF-36) questionnaire was used as a general questionnaire of QOL assessment. QOL was assessed in scores (from 0 to 100) of the "Physical Functioning" (PF), "Role Physical" (RP), "Bodily Pain" (BP) "General Health" (GH), "Vitality" (VT), "Social Functioning" (SF), "Role Emotional" (RE), and "Mental health" (MH) scales.

"PF", "GH", "VT", "SF" and "MH" scales of assessment criteria are direct, i.e. the higher the score, the better QOL, and "RF", "BP", "RE" scales are reverse [4, 9]. 5 scales (PF, RF, BP, GH, VT) characterize the physical status of the respondent, the psychosocial status is measured by 5 scales too (RE, SF, MH, GH, VT). The last two indicators are defined as physical as mental status of the person [4].

Statistical analysis was performed using «Excel Microsoft», «Statistic 6.0» software packages. Check of the normality of the distribution of quantitative indicators was performed using the Kolmogorov-Smirnov test. Following characteristics were calculated for each sample: M – the sample mean, σ – standard deviation. To determine the significance of differences between independent groups the parametric Student's t-test was used. The difference between the studied parameters was recognized as significant at $p < 0,05$.

Results and Discussion

General characteristics of students is presented in Table 1.

Table 1

General characteristics of 1st year students of NEFU ($M \pm \sigma$)

Характеристика	Students	Boys	Girls	p
Age, years	18,8 \pm 1,5	18,9 \pm 1,5	18,8 \pm 1,5	>0,05
Height, sm	165,3 \pm 9,0	172,2 \pm 7,0	159,5 \pm 6,0	<0,00
Weight, kg	58,9 \pm 10,5	64,1 \pm 10,5	54,4 \pm 8,2	<0,000
BMI	21,5 \pm 3,0	21,6 \pm 3,1	21,4 \pm 3,0	>0,05

Growth ranged from 153,9 to 195 sm: young people – 162-195 sm, the girls – 153,9-186 sm. Body weight varied over a wide range too (from 25,1 to 110,2 kg): the young men – 44-110,2 kg, girls – 25,1-88,3 kg. Body mass index (BMI) was 14,6-36,8: young people – from 14,7 to 36,8, and the girls – 15,3-32,5. BMI is considered to be insufficient for values below 18,5, normal – 18,5-25, redundant – 25-30, obese – 30-40, obese – higher than 40. BMI was insufficient in 58 people, normal – in 539 participants, overweight – 44, obesity – in 8 students, severe obesity – 0. There were statistical differences during comparing height and weight between boys and girls ($p < 0,000$). The statistical differences were between the students having insufficient, normal, overweight and obesity by body weight and BMI too ($p < 0,00$).

The opinion of the person is most important in assessing of QOL, which reflects and relates

to the objective and subjective factors [1]. Subjective assessment of the QOL parameters characterizing the emotional state of a person's character is predetermined by the influence of the type of neural activity and social circumstances [3].

Average data scales of the questionnaire SF-36 are shown in Table 2.

Table 2

Indicators Questionnaire SF-36 ($M \pm \sigma$)

Scales	Students n=649	Boys n=292	Girls n=357	p
PF	50,0±9,9	52,6±8,1	47,8±10,9	<0,000
RF	50,0±9,9	51,6±8,8	48,6±10,7	<0,000
BP	50,01±9,9	51,4±9,8	48,8±9,9	<0,000
GH	50,03±9,9	50,3±10,1	49,8±9,8	>0,05
VT	49,9±9,9	52,0±9,7	48,3±9,9	<0,000
SF	50,5±8,2	50,7±8,1	49,4±8,3	>0,05
RE	50,0±9,9	51,5±8,9	48,7±10,6	<0,000
MH	50,03±9,9	51,8±9,4	48,5±10,2	<0,000

The physical functioning of 1st year students of NEFU (PF) varied from -3,9 to 57,4, and the role of physical problems in the Disability (RF) – 23,7-57,5; pain (BP) – from 23,0 to 60,4; the general health (GH) – 18,3-75,1; vitality (VT) – from 18,8 to 70,4; social functioning (SF) – 17,8-58,9; role emotional problems in limiting life (RE) – from 31,2 to 58,2; mental health (MH) – 15,3-68,8. Scores of questionnaire scales varied within the following limits: young men PF – from 3,9 to 57,4; RF – 23,7-57,5; BP – 23,0-60,4; GH – 24,2-69,2; VT – 18,8-70,4; SF – 17,8-58,9; RE – 31,2-58,2; MH – from 15,3 to 68,8, girls – from -3,9 to 57,4, 23,7-57,5, 23,9-60,4, 18,3-75,1, 21,6-70,4, 22,9-58,9, 31,2-58,2, 17,6-68,8 respectively.

The analysis of scales of the SF-36 questionnaire showed the following. Subjective evaluation by the respondent of their daily PF was significantly higher in boys than in girls ($p < 0,000$). This fact can be explained by a higher fitness and familiarity to hard physical labor of young people as more than half of young people have come from rural areas. RF and BP evaluated by young people were significantly worse than in girls ($p < 0,000$), which may depend on a more careful attention to their well-being. Statistical difference was not found on the scale of GH and SF of SF-36. VT and MH subjectively assessed boys were better than in female students ($p < 0,000$). This fact indicates the sensitivity of respondents to personal characteristics, such as anxiety, pessimism, increased attention to their health, to external influences. RE was worse in young people than in young women ($p < 0,000$) indicating the effect of individual personality characteristics of people on a subjective assessment of this parameter. Women are more harmonious, prone to self-control, there is a balance required to better adaptation to the new conditions of life. Our results do not agree with the literature [1] that indicates the effect of certain national, ethnic culture, the traditions and customs [7].

Comparison of QOL of students and population of the Sakha (Yakutia) Republic revealed the following. The population of the RS (Y) showed better results than the 1st year students of NEFU on a scale of "Role Physical" ($p < 0,000$). There were better indicators of students NEFU ($p < 0,01$, Fig. 1) on a scale of "General Health". Statistical differences were found on the other scales of the questionnaire. Boys of NEFU rated their physical activity and mental health higher ($p < 0,01$, Fig. 2) than men of Sakha (Yakutia), but the role of physical ($p < 0,000$) and emotional limitations ($p < 0,02$, Fig. 2) in the life of young people played a larger role than in men of the country. Statistical differences were found on the other scales of SF-36. The influence of the physical limitations of women in his life of Sakha (Yakutia) estimated less than the freshman girls ($p < 0,000$, Fig. 3). Statistical differences were found on the other scales of the questionnaire SF-36. These results show the impact of individual personality characteristics of an individual on a

subjective assessment of their QOL.

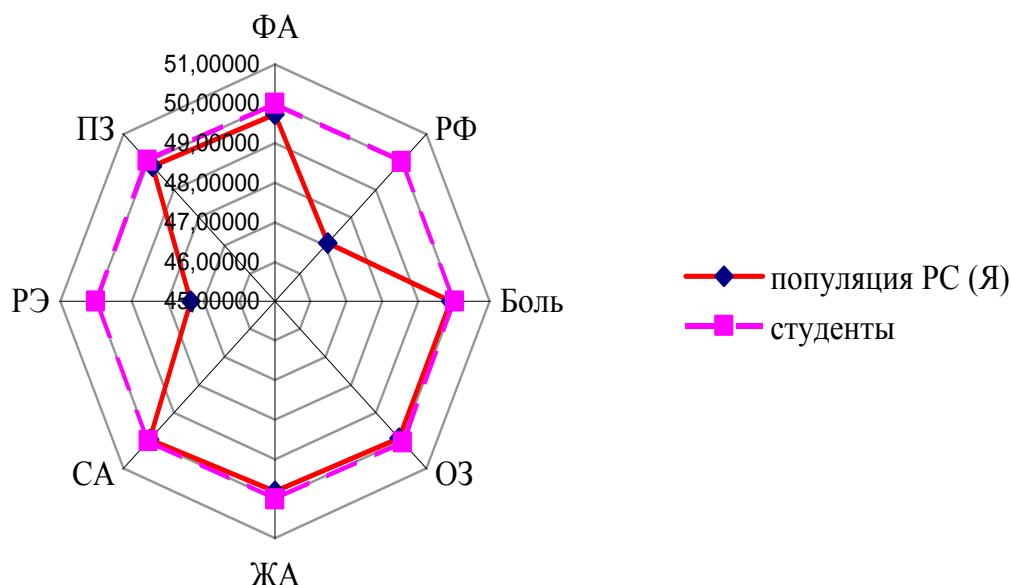


Figure 1. Comparison of quality of life of students NEFU and populations Sakha (Yakutia) Republic

In addition, situational and personal anxiety, nervous and emotional stress due to changes in the environment takes place in 1st year students.

Thus, the subjective opinion of a man, his perception of the world affects on the QOL of students, which vary in terms of hypokinesia, information overload, lack of time, mental stress.

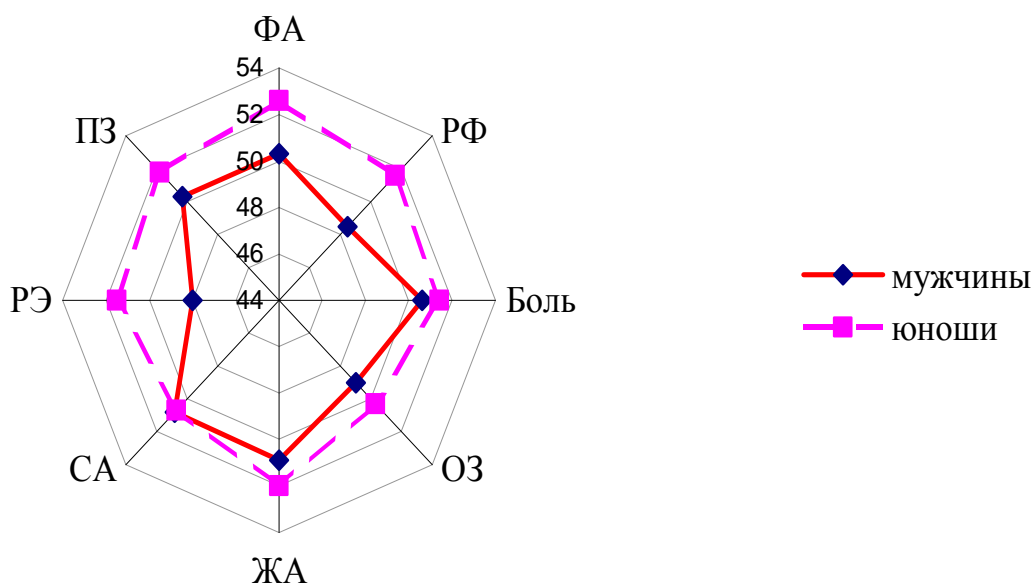


Figure 2. Comparison of quality of life of boys NEFU and men Sakha (Yakutia) Republic

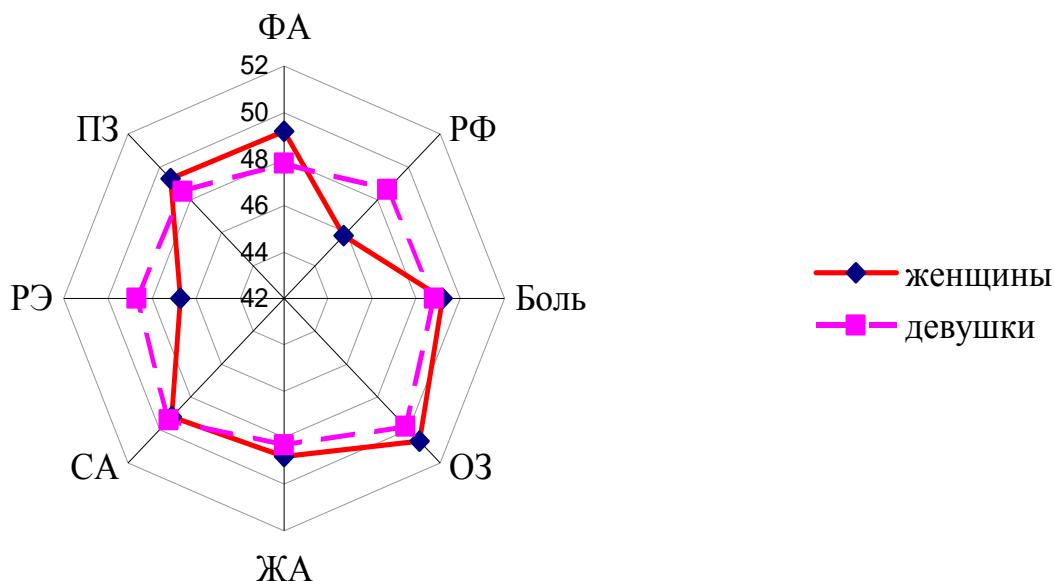


Figure 3. Comparison of quality of life of girls NEFU and women Sakha (Yakutia) Republic

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