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THE GENDER FEATURES OF MANIFESTATIONS OF FRAILTY, EMOTIONAL CONDITION AND LIFE QUALITY OF LONG-LIVERS IN YAKUTSK

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The article analyzes the severity of frailty, anxiety and depression, parameters of quality of life depending on gender, and evaluates the effect of asthenia and anxiety-depressive states on the quality of life of long-livers in Yakutsk. The data of 70 long-livers are analyzed, whose average age was 92 ± 2.21 years. By gender distribution, the number of people was the same, with 35 respondents in each group. According to the ethnic composition of the sample was represented mainly by indigenous people. The study used the methods "Age is not a hindrance" (national validated questionnaire), the hospital scale of anxiety and depression (HADS) and the questionnaire for assessing the quality of life (SF-36). According to the results of the study, frailty was diagnosed in 64.3%, prevalence in 35.7% of the examined, no significant differences were found by gender. Indicators of frailty correlated with the level of anxiety, depression, and low rates across all scales of quality of life. Clinically significant anxiety was diagnosed in 5.8%, and depression in 2.9% of subjects. Subclinical anxiety and depression were noted in 42.8% and 35.7% of subjects, respectively. Anxiety and depression rates were significantly higher among females. The positive correlation of anxiety and depression was also noted. The results of assessing the quality of life of long-livers were within the age norm, except for indicators of role physical, role emotional and social functioning, which were higher among our respondents. Depending on the gender, values on the scales "bodily pain, "social functioning", "role emotional" and on the general indicator of physical health were obtained significantly lower among women. The assessment of the quality of life, depending on the degree of asthenia, showed significant differences in all scales of quality of life, except for role physical condition. And the presence of anxiety and depression was associated with pain and a decrease in general health.

Keywords: frailty, anxiety, depression, quality of life, long-livers, gender.

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Introduction. WHO experts noted the problem of population "aging". This problem includes not only the increase in elderly population but also the population of people living 90 years and more. This category of people is the most vulnerable and their share is growing faster than the share of people 60 years and older. Thus, over the past 25 years, the longevity index in Russia has increased by 1.7 times (from 9.0 to 15.4%) [8].

It is also well known that the incidence of senile asthenia syndrome (SAS) increases with age. Clinical manifestations of SAS include reduced strength, endurance, and physiological functioning, which increases the risk of dependence and death. According to some researchers, the prevalence of SAS among people aged 80 to 84 years old reaches 16% and at among the people elder than 85 years - 26% [4, 12].

Some authors note that the main factors determining the quality of life in later ages are somatic vulnerabilities, affective disorders and personal traits [17].

Therefore, it is obvious that issues related to the preservation of the life quality of long-livers in the future will be even more relevant.

Research objective: study gender differences in indicators of frailty, emotional state and life quality of long livers in Yakutsk.

Materials and Methods: In the period from February to March 2019 in the Republican Hospital No. 3 and with home visits, we conducted a socio-psychological and medical examination of 82 people at the age of 89 to 100 years. 70 people (92 ± 2.21) were able to undergo the psychodiagnostic examination. The criteria for exclusion from the study are severe dementia, complete deafness, and blindness. Gender distribution is equal: 35 women (92 ± 2.48) and men (92 ± 1.92). The ethnic composition of the sample was represented mainly by indigenous people - Yakuts (75.7%), small peoples of the North (2.8%) and Russians (21.5%).

A screening questionnaire "Age is not a hindrance," which includes 7 questions with two answers (yes or no) [2] had been used to identify the SAS. If there are 3 or more affirmative answers we diagnose SAS, at 1-2 points - preasthenia. The Hospital Anxiety and Depression Scale (HADS) and the Quality of Life Evaluation Questionnaire (SF-36) were also used.

Statistical processing of the research results was carried out using the IBM SPSS Statistics 23 software package with the calculation of the Spearman correlation coefficient and the significance of differences for independent samples — the Mann-Whitney test. The significance of the statistical significance of differences was taken at a value of $p < 0.05$.

Results and Discussion: According to the results of the "Age is not a hindrance" questionnaire, senile asthenia was diagnosed in 64.3%, preasthenia in 35.7% of the patients. The absence of asthenia had been not detected. The maximum number of affirmative answers was 6 and was noted in 4.3% of the subjects.

The average rate for the SAS index for the group was 2.96 ± 1.12 (M ± m), which corresponds to the index between the preasthenia and asthenia. The SAS index correlated with the level of anxiety ($p = 0.000$), depression ($p = 0.000$) and with a low index of life quality ($p \leq 0.01$).

In terms of gender distribution, the SAS index was slightly higher among women (3.09 ± 1.01) but has not reached the level of statistical significance (Fig. 1). In other studies, it is also noted that the prevalence of SAS among women is higher than among men, which is also seen in our study [16].

This is known that depending on the method of determining the prevalence of senile asthenia among persons over 65 ranges from 4.0% to 59.1% [7]. It reaches 32-45% among persons older than 90 [16]. The data we obtained are higher than the presented and close to the results of a study conducted by Soselia N.N. among seniors and long-livers with acute coronary syndrome: there is the prevalence of SAS equal to 66.1% [1]. It should be noted that the screening questionnaire "Age is not a hindrance" was also used in this study. Also, cardiovascular disease in a patient is accompanied by a threefold increase in the frequency of senile asthenia [10]. Thus, it is possible that the results we obtained may be related to the greater sensitivity of the questionnaire we used, or with the severity of chronic diseases and their comorbidity.

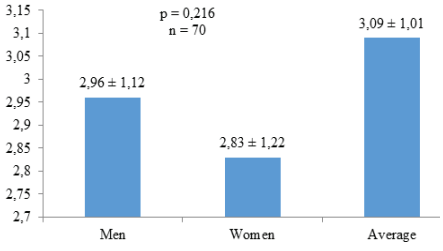

Fig.1. "Age is not a hindrance" questionnaire results.

Analysis of the items on the questionnaire showed that the overwhelming majority, regardless of gender, noted a decrease in hearing and vision (85.7% of men and 82.8% of women) (Table 1). Women more often complained of emotional depression, anxiety, falls and traumatization, and difficulties in moving around the house and on the street. Men more often answered affirmatively to the question of a decrease in memory and orientation in the locality. Both groups rarely complained about weight loss and urinary incontinence.

The last two points with the lowest rates - weight loss and incontinence should be discussed. The prevalence of primary sarcopenia (a syndrome characterized by progressive and generalized loss of muscle mass and strength) among people over 80 years of age reaches 50% [4]. Our results are much lower than indicated. However, it should be noted that the body mass index among all the respondents in the normal range, but they did not have objective data about their weight and indicated that they do not monitor their weight. In earlier studies, it was stated that the incidence of symptoms of urinary incontinence in Russian women over 65 reaches 41.4%, and among men from 15 to 50% depending on living conditions [13], but in S.Maggi studies among people over 80 years, urinary incontinence was detected in 22.9% of men and 29.3% of women [15], which is consistent with our results. Also, literature data often indicates that symptoms associated with dysfunction of the urinary tract, and especially urinary incontinence, are not always easy to express patients' complaints due to patient embarrassment [14], which can also affect the accuracy.

According to the results of the Hospital anxiety and depression rating scale (HADS), the results of more than half of the subjects were within the normal range in terms of anxiety and depression (Fig. 2). Clinically significant anxiety was diagnosed in 5.8%, and depression in 2.9% of subjects. Subclinical anxiety and depression were noted in 42.8% and 35.7% of subjects, respectively.

Indicators of anxiety and depression depending on sex are presented in Table 2. It was noted that indicators of either anxiety and depression are significantly higher among females. A positive correlation between anxiety and depression was also noted ($p = 0.000$).

According to the literature, the symp-

Table 1

Distribution of the affirmative answers in the "Age is not a hindrance" questionnaire, (%)

Question	Men	Women
Have you lost 5 kg or more in the last 6 months?	5.7	8.6
Do you experience any restrictions in everyday life due to decreased vision or hearing?	85.7	82.8
During the past year, have you got a fall injury?	25.7	37.1
Do you feel depressed, sad, or anxious in recent weeks?	34.3	51.4
Do you have problems with memory, understanding, orientation, or the ability to planning?	62.8	54.3
Do you have urinary incontinence?	22.8	22.8
Do you have difficulties in moving around the house or outdoor?	48.6	68.6

Table 2

Anxiety and depression assessment results (HADS) (M±m)

	Total	Men	Women	p-value
Anxiety	6.91 ± 2.23	5.74 ± 1.75	8.09 ± 2.04	p=0.000
Depression	6.54 ± 2.47	5.83 ± 2.14	7.26 ± 2.60	p=0.020

toms of anxiety and depression are observed in 25-30% of people over 65 and with concomitant somatic diseases, this reaches 50% [5]. 10-14% of inpatients and residents of nursing homes have major depression, even more, have components of depressive disorders [3]. According to the results of our study, the rate of clinically expressed depression was lower which could be explained by the fact that almost all our subjects lived with their relatives, which is an alleviating factor to depression. It should also be noted the prevalence of depression was significantly lower among people over 90 years [9]. Regarding the gender distribution of depression, it was found that in old age (75–90 years), the difference in the frequency of depression in men and women decreases, and at an over-elderly age (after 90 years) it almost disappears. In our study, these data were not confirmed: we had obtained significant differences between men and women in terms of anxiety and depression.

We also analyzed the severity of anxiety and depression depending on the presence of preasthenia and SAS and obtained a significant difference in anxiety and depression between preasthenia and SAS (indicators prevail in the group with SAS) (p = 0.001 for these indicators)

According to the results of assessing life quality, the average values ranged from 33.50 to 80.47. The lowest values were noted for the general indicator of physical health and “physical functioning” (Table 3). The values of these scales correlate with age (p = 0.001), which indicates that the age of each age negatively affects physical well-being. The following scales are "intensity of pain" and "general health". The highest rates (role functioning based on physical and emotional condition) indicates that the daily activities of long-livers are not limited to a physical or emotional state. At the same time, the indicators of the mental component of health are reduced less than the physical component.

Depending on the sex, reliable low values were obtained on the scale “pain intensity” (p = 0.002), “social functioning” (p = 0.015), “role functioning based on the emotional state” (p = 0.037) and on overall indication of physical health (p = 0.015).

Deterioration of physical functioning is considered one of the key characteristics of the deterioration in the quality of life, and even minor negative changes in functional status are associated with an increase in mortality, an increase in the need for additional care and health-related expenses. Nevertheless, the low data we obtained are normal for this age group, as in the study conducted in Belarus, the average value of the physical functioning scale among the long-livers was 32.1, and the physical component of health was 33.1, which corresponds to our results. Focusing on the data of a multicenter MIRAGE study of the quality of life [11] among persons over 75 years old, it can be noted that the indicators on the scales are mostly within the average values of the population, except for role functioning based on physical and emotional state. In another study conducted in Yakutsk among the elder, high values on the scales of emotional and social functioning were found [6]. Regarding gender differences, many authors noted that the parameters of quality of life are higher among men of longevity than women [18]. In general, the obtained data are consistent with data from comparative studies of the quality of life in men and women.

The assessment of the life quality depending on the degree of asthenia, showed significant differences in all scales of quality of life, except for role functioning based on physical condition. It is logical to expect a decrease in daily activity due to SAS, which was not reflected in our study and requires further consideration. Considering the severity of cognitive deficit overestimated rates of activity may be noted, although this should have affected other indicators. In general, during the survey, there was satisfactory independence of respondents in daily life - the majority served themselves independently and showed sufficient physical activity. Many were engaged in everyday exercise, Nordic walking. For example, one respondent noted that she was doing a set of exercises every day, consisting of one hundred different options.

We also evaluated the effect of anxiety and depression on quality of life: subjects were divided into 2 groups, where the first group is individuals without detected anxiety and depression, the second is respondents with subclinical and clinically significant anxiety and depression. The results of statistical processing showed significant differences in the group of individuals with anxiety and depressive states for all scales of psychological health and some scales of physical health. The relationship of these indicators with the psychological components of health is clear, so we are focusing on physical indicators. Thus, the presence of anxiety was associated with pain syndrome (p = 0.038) and with a decrease in general health (p = 0.024). The presence of depression was also associated with a worse general health assessment (p = 0.002).

Conclusion:

1. Manifestations of senile asthenia syndrome were diagnosed in 64.3% of subjects. The SAS indicators correlated with the level of anxiety, depression, and low rates across all scales of quality of life.

2. Anxiety and depression rates were significantly higher among females. Values were positively correlated with each other and reflect comorbidity. High rates of anxiety and depression were associated with low rates of quality of life.

3. In general, indicators of the quality

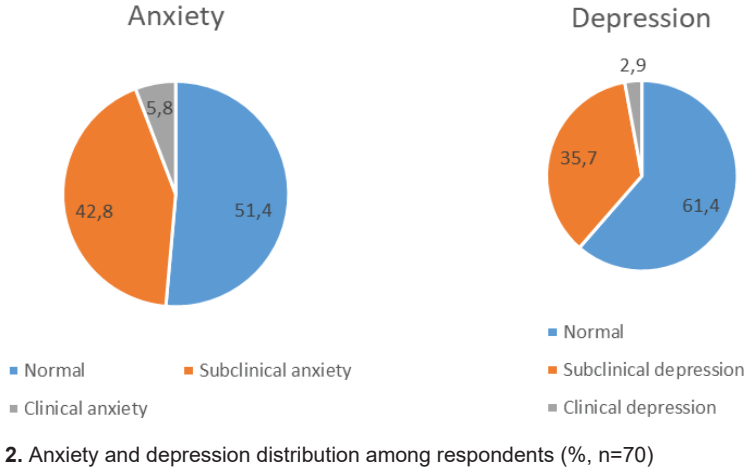

Fig. 2. Anxiety and depression distribution among respondents (%, n=70)

Table 3

Life quality assessment results (SF-36) (M±m)

	Total	Men	Women	p-value
Physical component of health	33.57 ± 6.87	35.57 ± 7.36	31.56 ± 5.77	p= 0.015
Physical functioning	33.50 ± 17.96	37 ± 17.49	30 ± 17.98	p= 0.163
PRole-Physical Functioning	78.57 ± 24.55	84.29 ± 21.07	72.86 ± 26.68	p= 0.064
Bodily pain	45.89 ± 17.14	52.14 ± 19.82	39.63 ± 11.07	p= 0.002
General Health	46.84 ± 12.79	49.17 ± 13.22	44.51 ± 12.09	p= 0.20
Psychological component of health	52.51 ± 6.91	53.47 ± 6.60	51.54 ± 7.16	p= 0.30
Vitality	50 ± 11.97	51.43 ± 12.40	48.57 ± 11.54	p= 0.28
Social Functioning	69.28 ± 21.14	76.07 ± 22.14	62.50 ± 17.93	p= 0.015
Role-Emotional	80.47 ± 23.74	85.71 ± 21.82	75.23 ± 24.72	p= 0.037
Mental Health	70.91 ± 12.10	71.43 ± 10.93	70.40 ± 13.30	p= 0.57

of life among long-livers corresponded to average values, except for the scales on "role functioning associated with the physical and emotional state" and "social functioning", which indicates sufficient independence in daily life and intact daily activity of long-livers.

4. Quality of life scales such as the physical component, pain intensity, social functioning, and role functioning due to the emotional state was significantly lower among women.

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