Subjective Assessment of the Quality of Life of Specialists working in the Arctic Economic Zone in Yakutia

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Abstract The article describes the main aspects of the subjective assessment of the quality of life of highly qualified specialists living in the Arctic economic zone of Yakutia, some differences were revealed in the assessments of the quality of life and factors affecting the subjective satisfaction and psychological well-being of people in the Western and Eastern economic zones. In general, among representatives of the AEZ, the overall assessment of the quality of life corresponds to the average level. The subjective assessment of the quality of life of specialists working in the Arctic depends on the relationship with people and colleagues around them, on the nature and content of the work performed, and on the degree of readiness to work in the Arctic.

Keywords: Arctic, quality of life, subjective assessment, Yakutia.

I. INTRODUCTION

The Republic of Sakha (Yakutia) is the largest region in the Russian Federation, with the population fewer than 1 million people, accordingly, it has one of the lowest population density in the country. The administrative-territorial structure is represented by 34 municipal districts, 2 urban districts, 48 urban settlements and 361 rural settlements. In spatial terms, the territorial structure of the republic’s economy is formed by districts (uluses), united into economic zones, large territorial entities that are distinguished by their administrative-territorial community, geographical proximity, similarity of climatic conditions, stability of borders, common transport and energy infrastructure, and a distinct specialization of the economy. The Republic of Sakha (Yakutia) is the largest republic in Russia with an extensive geographical area, including the Arctic and the Far East. The Arctic Economic Zone (AEZ) is a region in the Russian Federation, with the population fewer than 1 million people, accordingly, it has one of the lowest population density in the country. The AEZ is characterized by extreme climatic conditions, inaccessibility of settlements, insufficient development of the energy and transport system.

II. METHODOLOGY AND RESEARCH METHODS

Quality of life is understood as an individual’s assessment of the totality of the conditions of his physical, mental, social well-being and as the category, which is characterizing the parameters of life potential and living conditions, which includes objective (living standard of a particular person) and subjective parameters (degree of satisfaction of his needs and value structures). There are demographic, social, psychological, physical, and spiritual-related parameters [1]. The category of "quality of life" in psychological research is associated with such intangible, subjective aspects of human life as happiness, satisfaction with life, subjective well-being. T.N. Savchenko and G.M. Golovina understand the subjective components of quality of life as the degree of satisfaction of the needs of an individual and value structures of different levels. [2]

The quality of life was assessed according to the following scales: “work and professional career” (10 points); “Love, family and children”; “Material and housing condition” (5 points); “Physical comfort, sleep, health and nutrition” (6 points); “Assessment of the environment, climatic conditions, environmental situation” (4 points) and “overall satisfaction with the quality of life”.

To study the self-assessment of the quality of life of highly qualified specialists, was used a modified scale based on questionnaires assessing the quality of life by Z.F. Dudchenko and “Assessment of the level of satisfaction with the quality of life” by N.E. Vodopyanova, a questionnaire to identify the motivation and factors affecting job readiness in the Arctic.

Statistical data processing was carried out using the non-parametric criterion "angular Fisher transformation" and correlation analysis[3] [4].

The object of the research is specialists working in the Arctic, Central and Western zones of the republic. The sample size in the Arctic was 208 people.

Each economic zone differs significantly by the main socio-economic indicators and social conditions, uneven distribution of the population, income level,
accessibility of transport and infrastructure development: low population density, remoteness and transport accessibility of AEZ and EEZ, narrow specialization dominated by extractive industries, insufficiently developed production WEZ and SEZ, agricultural orientation CEZ and high concentration of the population in the capital. The population between economic zones is unequal in composition, there is an imbalance in the distribution of labor resources, its oversupply in the WEZ and CEZ and its lack in EEZ and AEZ. If the representatives of the ethnic majority - Yakuts and Russians - are in a relatively favorable position, then the level and quality of life of representatives of indigenous peoples differs significantly. [5] [6].

The features of the Republic of Sakha (Yakutia) economic zones

<table>
<thead>
<tr>
<th>Centra 1 (CEZ)</th>
<th>Southern (SEZ)</th>
<th>Western (WEZ)</th>
<th>Eastern (EEZ)</th>
<th>Arctic (AEZ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of the population</td>
<td>50.8% (30.8% in Yakuts)</td>
<td>13.1%</td>
<td>23%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Ethnic composition</td>
<td>Russians (78.4%), Ukrainians (5.32%), Yakuts (2.9%)</td>
<td>Yakuts (47.1%), Russians (39.3%), Ukrainians (25.82%)</td>
<td>Russian (49.9%), Yakuts (27.7%), Indigenous peoples (11.1%)</td>
<td>Yakuts (47.93%), Russians (19.4%), Indigenous peoples (27.5%)</td>
</tr>
<tr>
<td>Agricultal specialization</td>
<td>Industry and building materials, service business, agro-industrial production and agriculture.</td>
<td>Development of gold and coal deposits, energy industry.</td>
<td>Mining of mineral deposits: gold, silver, tungsten</td>
<td>Selective development of minerals, mining of diamonds, gold, coal, focal distribution of industrial production, traditional forms of nature management (reindeer herding, hunting and fishing)</td>
</tr>
<tr>
<td>Competitive advantages</td>
<td>The share of industry in the economy reaches 85%. The key role in economic development is played by the accessibility of the railway, transport infrastructure.</td>
<td>High performance of industrial organizations for financial results. The high proportion of large industrial enterprises is played by the availability of transport infrastructure.</td>
<td>High proportion of large mineral deposits: gold, antimony, silver-polymetallic, copper-tungsten deposits.</td>
<td>High proportion of the resident population, the representation of all five indigenous peoples.</td>
</tr>
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</table>

| | Socio-economic problem | High concentration of population in the capital | High unemployment rate | Socio-economic indicators are lower than in other zones. There is no complexity of the economy, there is no transport connectivity between the districts. Low population density, lack of cities, lack of labor resources (highly qualified specialists). |

| | Centra 1 (CEZ) | Southern (SEZ) | Western (WEZ) | Eastern (EEZ) | Arctic (AEZ) |
|----------------|--------------|---------------|---------------|--------------|
| Proportion of the population | 50.8% (30.8% in Yakuts) | 13.1% | 23% | 3.4% | 7.7% |

The ethnic composition and cultural diversity of the region has been shaped over many centuries. The main trend of inter-ethnic relations is the gradual increase in the foreign ethnic component, which affects the processes of intercultural assimilation and integration, and the growth of ethnocentrism among the local population. From more than 130 ethnic groups, the predominant in quantitative terms are...
Yakuts 48.7%, Russians second, 36.9%, Ukrainians third, 2.12%, Tatars - 0.84%, Buryats 0.73%, Kyrgyz 0.52%, the share of all indigenous peoples is 4.16%, most of them are represented in the AEZ (27.5%) and EEZ (11.1%). Yakuts predominate in almost all zones except the SEZ (less than 3%) and EEZ (27.74%), Russians predominate in the SEZ (about 80%) and EEZ (49.9%), Ukrainians in the SEZ and EEZ (4% and 5%, respectively) [7].

Compared to 2002, the number of Yakuts increased by 7.9%, the Evenks - by 15.2%, the Evens - by 29.3%, the Dolgans - by 49.8%, the Yukagirs - by 16.8%, the Chukchi - by 11.3%, and the number of Russians decreased by 9.5% [6].

III. RESEARCH RESULTS AND DISCUSSION

Negative demographic processes, the outflow of highly qualified specialists, a shortage of engineering professions, doctors, teachers, and a reduced quality of life for the indigenous peoples of the North are characteristic for the Arctic zone of Yakutia. One of the main tasks in the field of socio-economic development of the country is to increase the attractiveness of the region for young and highly qualified specialists in various fields and to form a positive image of the northern regions.

121 people were interviewed in the Anabarsky district and in the village of Saksylakh, 87 in the Oymyakonsky area and in the village of Ust-Nera out of the total sample of 208 people in the Arctic zone. 124 men and 84 women were examined. The sample of the study was divided into 4 age groups: 20-30 years old, 31-40 years old, 41-50 years old, 51-60 years old. In general, the sample consisted of three age categories from 20-50 years old, approximately 22-28% of the total sample. According to the ethnic composition, among the subjects from Ust-Nera, Russians are dominant - 53 people, Yakuts - 15, 1 Evenk, representatives of other nationalities - 16 (Bulgarian, Khakas, Koreans, Kyrgyz, Ukrainians, Bashkirs, Kalmyks). In Saksylalah, among the subjects, Yakuts prevail - 71 people, representatives of small peoples - 26, Russians - 15. Thus, 41.3% of all respondents were Yakuts, 32.7% - Russians.

According to the results of the study, it was found that the overall satisfaction with the quality of life among specialists working in the Anabarsky district is average (211 b.), Whereas among the specialists working in the Oymyakonsky district the assessment of the quality of life is low (199 b.).

In general, the sample of highly qualified specialists working in the arctic regions of the Republic of Sakha (Yakutia) is dominated by an average level of satisfaction with quality of life (66.5%), 28.2% have high level of satisfaction and 5.3% of respondents have a low level.

82.6% of respondents in Anabarsky Ulus, located off the coast of the Laptev Sea, are satisfied with their financial condition, living conditions, conditions of temporary residence, 17.3% of those tested rated their material, financial and housing condition as unsatisfactory, unstable, and pessimistic about their material prospects.

According to the results of assessing the quality of life and satisfaction with its aspects, 48% of respondents from Ust-Nera, Oymyakonsky District, have a high level of satisfaction with such a parameter of life as “love, family, children”; The low level of satisfaction is caused by “environment, climatic conditions and ecological situation”, “material and housing conditions”. As it is known, the Oymyakon ulus in the republic is considered the “cold pole”, the village is surrounded by high mountains and since November the sunlight does not penetrate through clouds, fog and mountain tops.

If we consider the differences in the selected areas, between the high assessment of the quality of life among specialists working in the Anabarsky and Oymyakonsky districts, in general we found them statistically significant ($\varphi_r = 1.758$, with $p \leq 0.05$). Differences were found in assessing the quality of family relations ($\varphi_r = 2.129$, with $p \leq 0.05$), in assessing material and housing living conditions ($\varphi_r = 2.556$, with $p \leq 0.01$), in assessing overall physical well-being, satisfaction with nutrition, sleep ($\varphi_r = 1.713$, with $p \leq 0.05$), as well as assessment of the environment, climate, ecology ($\varphi_r = 4.145$, with $p \leq 0.01$). In general, indicators on the level of “high” scores are higher for specialists working in the Anabarsky district.

The results of the assessment of satisfaction with the quality of life of respondents from the Arctic regions indicate that satisfaction with their families and relationships with close people is an important factor influencing the subjective satisfaction and psychological well-being of people.

Satisfaction with the people around you ($r_0 = 0.230$, with $p \leq 0.05$), the level of labor activity ($r_0 = 0.270$, with $p \leq 0.01$) and the overall readiness to work in the Arctic ($r_0 = 0.255$, with $p \leq 0.05$) have an affect on the assessment of satisfaction with the quality of family relationships among specialists working in the North. [9]

In the Western economic zone, the lowest level of satisfaction among respondents of both groups is their material and financial condition. 45% of respondents from rural areas and 38% of respondents from Viluyusk rate their level of satisfaction as low. City residents of WEZ are more satisfied with their family life, in this respect they have no serious worries or anxieties, they value their partners and their families. Rural residents more highly appreciate their professional activities, relations with managers, colleagues, professional growth. And in general, they are more satisfied with their life, work, family, living conditions, the opportunity to rest, than the urban residents of the WES.

For representatives of the Yakut group, engaged in industry, the possibility of professional growth and career advancement is more important ($U = 389$ $p \leq 0.03$ and $U = 404$ $p \leq 0.04$). Whereas for the Russian sample, more favorable labor conditions are more important ($U = 420$ $p \leq 0.07$). Since this group is represented mainly by specialists from the central regions of Russia, who arrived with the aim of working under a contract, the demands on working conditions seem natural. The same circumstance explains the higher desire in the search for additional sources of income in comparison with the Yakut sample ($U = 414$ $p \leq 0.03$). Representatives of the Russian ethnicos are characterized by higher activity and a subjective feeling of energy and strength ($U = 416$ $p \leq 0.07$). [10]
The satisfaction of respondents from the Central Economic Zone, including residents of Yakutsk, nearby areas and suburbs, with their quality of life corresponds to the average level.

The results of the average ratings of respondents from rural and urban areas of the CEZ have differences. 55.3% of the subjects expressed high satisfaction with their work and professional career, 52.1% with their physical condition and health. Among rural residents, high levels of satisfaction were marked by such parameters as: 53.2% family life, 52.4% environment, climatic conditions and ecological situation, 47.7% had a job and professional career. Statistically significant differences between urban and rural residents were identified in such a parameter of life as “love, family, children” ($\phi_p =2.218$ with $p\leq0.05$). Respondents living in rural areas have a higher level of satisfaction with family life than citizens.

According to the results of average values, differences in satisfaction with the quality of life were revealed between ethnic groups: Russians, Sakha. Russian respondents highly appreciate “work and professional career”, their physical condition, health, sleep and nutrition. The overall assessment of their quality of life corresponds to a high level. Sakha respondents rated all the parameters of their lives as corresponding to the average level. Among the Sakha respondents there were more unemployed and rural residents, the respondents of the Russian ethnus are mainly residents of Yakutsk, where there is a wider choice of employment opportunities, finding high-paying jobs, doing fitness and sports.

IV. CONCLUSION

Thus, the subjective assessment of the quality of life of specialists working in the Arctic depends on the relationship with people and colleagues around them, on the nature and content of the work performed, and on the degree of readiness to work in the Arctic. In general, among representatives of the AEZs, the overall assessment of the quality of life corresponds to the average level; they highly appreciated this parameter of their life as a family. In the WEZ specialists, who highly appreciate the quality of their life, employed in production, these are gas industry workers, entrepreneurs, and public sector workers. According to the CEZ, the overall assessment of the quality of life of the respondents corresponds to the average level, however, among representatives of the Russian ethnic group, it is higher than among representatives of the Sakha ethnic group.

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