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QUALITY OF LIFE, REPRODUCTIVE HEALTH AND SOCIAL SECURITY: MEDICAL AND SOCIAL ENVIRONMENT AT THE RUSSIAN FAR EAST

ABSTRACT. Medical and social environment is discussed for the southern part of the Russian Far East, in system "Quality of life and reproductive health" at different hierarchical levels; that are at the meso-level – Khabarovsk Krai and the Jewish Autonomous Region (JAR); at the micro-level – Smidovichsky District in JAR and Nanai District in Khabarovsk Krai; at the local level – municipal settlements in urban and rural areas. The aim of the research is to identify the features of the social and medical environment affecting the quality of life, with an emphasis on the health of indigenous and non-indigenous population of reproductive age as the main criterion of quality of life. For subjective estimation of their health, well-being and quality of life, sociological surveys of women of reproductive age and pregnant women was conducted using a special questionnaire "Medical and social passport of future parents". The region is characterized by low indicators of health and reproduction of the population, weak social infrastructure. The analysis of the quality of life in the region requires the establishment of priority groups of risk factors to improve the efficiency of medical and social control to minimize their impact.

KEY WORDS: quality of life, reproductive health, medical and social environment, indigenous people, Russian Far East

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INTRODUCTION

Increasing the birth rate and life expectancy of the population, reducing mortality, preserving the reproductive health of women and reducing perinatal losses of the population and, consequently, improving the quality of life (QOL) are the main requirements for the consolidation of the population, as a part of the High priority National Programs in Russia. The transformation processes affecting all spheres of life in the Russian society have had a significant impact on public well-being, the level of public health and the quality of life. The material, social, demographic, political and religious environment of different social groups, including pregnant women and women in reproductive age, their needs in various spheres of life and the possibility of their satisfaction, have changed in all regions of the country, including Russian Far East, particularly in Khabarovsk Krai and the Jewish Autonomous Region (JAR). Social well-being of these groups of women, their subjective perception and assessment of living conditions are modifying, indicating changes in quality of life.

The consequences of a prolonged series of crises in Russia have increasingly affected the financial situation of pregnant women as a poorly protected social category. In this atmosphere a worthwhile QOL of women in reproductive age in general, and expectant mothers in particular, is an important criterion for increasing fertility in the region, and an assessment of the social efficiency of health care and management systems.

The problems related to the quality of life have long been at the forefront of state social policy in the most developed countries of the world. QOL of society as a whole and its various social groups can serve as an integral assessment of the governance effectiveness. In Russia, where state and municipal authorities were primarily concerned about the standard of living of individual social groups or territorial societies, the scientific study of the quality of life of pregnant women and women of reproductive age is of great importance for the understanding of social and managerial practices. At the same time, the sociological survey of factors affecting the quality of life of women of reproductive age and expectant mothers, as well as their adaptation strategies that change the level, image and quality of their life to ensure the implementation of their life plans, well-being, is of particular importance.

Sociological study of the transforming needs of these groups of women, aimed at changing their lives and their perception, allows providing modern municipal management practices with the necessary scientific knowledge, and making municipal management socially effective to further improve the QOL. At the same time, the change in the quality of life is a problem solved not only at the state or municipal levels, but also at the individual (personal) level, where the quality of life directly depends on the ability to form new models of social–economic behavior. Adaptation strategies that help to adapt to rapid changes in personal life situations and socio-economic transformations in the country can serve as a basis for these models.

Quality of Life

Quality of life (QOL) is one of the most important indicators of social well-being and health status; it is widespread in the Western world and is becoming increasingly used in Russia in recent years. This term was used first in the late 1950-ies in the works of J. Galbraith (1973) and D. Risman et al. (1961).

Literature review shows three approaches to the concept of "quality of life". In the 50-60-ies in the United States it was developed as a parallel to the American way of life in terms of social and cultural spheres of living. The meaning of the concept was revealed as the possibility of consumption of

goods and services that characterize social reality through economic indicators (working conditions, housing and other material goods). Afterwards it was realized that spiritual goods and needs should also be included in the system of indicators of QOL.

Another interpretation of the quality of life was proposed by the American sociologist A. Toffler (1970), who interpreted QOL in three aspects: environmental, economic and social as a transition from the satisfaction with basic material needs to the stage of satisfaction of refined, modified personal needs of the consumer.

The attempts of Western sociologists to limit themselves only to subjective criteria (the degree of life satisfaction), and biologists – only to objective ones (the biopsychological status of a person) were not successful. Since the 1960s, there have been more and more studies in the West, where QOL was considered as an interdisciplinary category, with its main feature – the presence of objective conditions of formation and subjective perception of the population (Lydick and Epstein 1993, Peters 2019). It became obvious that this category should be both subjective and objective, matching the assessment of the quality of the environment as a whole. It should include living environment directly (structure of individual environment), personal biopsychic and social (individual potential) and the degree of satisfaction with life (Peters 2019). These issues were considered from different positions in the studies by A. Campbell, V. Roger, A. Sen, J. Galbraith, A. Toffler, M. Newell, J. Forrester, R. Bauer, G. Kahn, J. Fourastie, etc. Despite the fact that there were no clear formulations of the QOL, the concept was discussed as economic, and later – sociological, socio-geographical, environmental category.

In domestic research of the Soviet Union period, the increased interest to the problem of QOL appeared due to other reasons than in the Western countries, and was associated with the beginning of political and socio-economic reforms of the 1980-1990-ies, where QOL was considered from critical positions as the ideology of the capitalist way of life, and QOL differences were determined by the living conditions. S.I. Popov (1977) argued that the concept of "quality of life" must be put on a par with the "standard of living", "way of life". His idea is in a partial contradiction with discussion of the similarities and differences among the concepts of "quality of life", "well-being" and "comfort", by Pinto and co-authors (2017). They argued that QOL is mainly related to individual perception of satisfaction with life, while well-being reflects the psycho-spiritual dimensions (Pinto et al. 2017).

In modern Russian studies, the development of ideas about the QOL concept has a universal scientific character, and is used by a wide range of natural and human sciences, including mathematics and medicine, each of which offers its own interpretation of the concept, giving it specific features. Today, the problems of living standards, employment, and poor health have come to the fore in QOL studies, and the existing level of income in the region is becoming the most polarizing element affecting other QOL characteristics. Questions of theory and practice of the study of QOL and related categories, such as standard of living, lifestyle, living conditions, medical, demographic and social development were considered by many well-known Russian scientists: A.I. Alekseev, E.G. Animits, T.I. Zaslavskaya, N.I. Zubarevich, G.M. Lappo, V.V. Pokshishevsky, B.B. Prokhorov, N.M. Rimashevskaya, S.V. Ryashchenko, N.A. Shchietova, S.A. Aivazyan, etc. The QOL concept is multifactorial, i.e. it includes many components, a set of indicators suitable for any comparison. Its characteristics reflect in different proportions living conditions and quality of the population. The theoretical basis of modern studies of QOL is a systematic approach that considers objective and subjective indicators as equivalent.

Thus, literature review resumes three main approaches to the concept of "quality of life":

1. Assessment of social reality through economic indicators;

2. Synthesis of environmental, economic and social aspects of QOL to characterize both ecological and economic societal needs, and social particular citizen's needs;

3. Integral subjective-objective assessment of the environment quality as a whole, the immediate living environment (individual environment structure), the biopsychic and social condition of the individual (individual capacity) and life satisfaction.

The following main criteria necessary for the integrated assessment of QOL can be summarized: income, poverty and inequality, labor use and unemployment, demographic processes, education and training, health, food and nutrition, urban infrastructure and communication, security (social and political), culture and social relations, natural environment, political and civil institutions. Fig. 1. presents the list of criteria of for integrated assessment of QOL including quantitative and qualitative estimations.

The system approach includes both quantitative (specific values, digital data) and qualitative indicators, the last one representing subjective estimates of a personal well-being. The specificity and complexity of the use of these criteria in one goal is based on heterogeneous character of indicators (demographic, social, environmental, medical), which must be expressed in one measurement system.

The most well-known integral indicator in "quantitative" approach is the human development index (HDI), used by UN experts, including estimates of life expectancy, income and education (Anand and Sen 1994; Qiu et al. 2018; Permanyer and Smits 2019; etc.). The "objective" block includes indicators characterizing the conditions for subjective state of a person or social group – natural and geographical, environmental, socio-economic, medical and hygienic, etc. "Qualitative" approach studies QOL through the subjective assessment of a personal well-being, satisfaction with life as a whole or its individual aspects (demands, values, etc.). The number of indicators in this block varies depending on the scale and depth of the study, and can be supplemented by estimates of satisfaction with health and medical care, level of education, family relations, financial situation, assessment of mental state, labor, life and leisure conditions, etc. Most researchers consider the associated analysis of quantitative and qualitative indicators as a necessary requirement for the implementation of an integrated approach in assessment of QOL.

Health and quality of life

There are different ways of dealing with the characteristics of health in terms of the quality of life (Fallowfield 1990). According to the UN, among other 12 parameters, health status should be the first in the social category of QOL. The UN Economic Commission for Europe has systematized eight groups of QOL indicators, with health status also being at the first place. Human health, including its reproductive component, as a complex criterion of quality of life, is considered as the most important prerequisite for the reproduction of the quality of labor and human potential as a whole. In this regard, studies focused on the development of medical, social, environmental and climatic indicators and criteria for assessing the health status of the population as the main indicator of QOL are of fundamental importance (Malkhazova et al. 2015; Tikunov and Chereshnya 2016; Malkhazova et al. 2018; etc.)

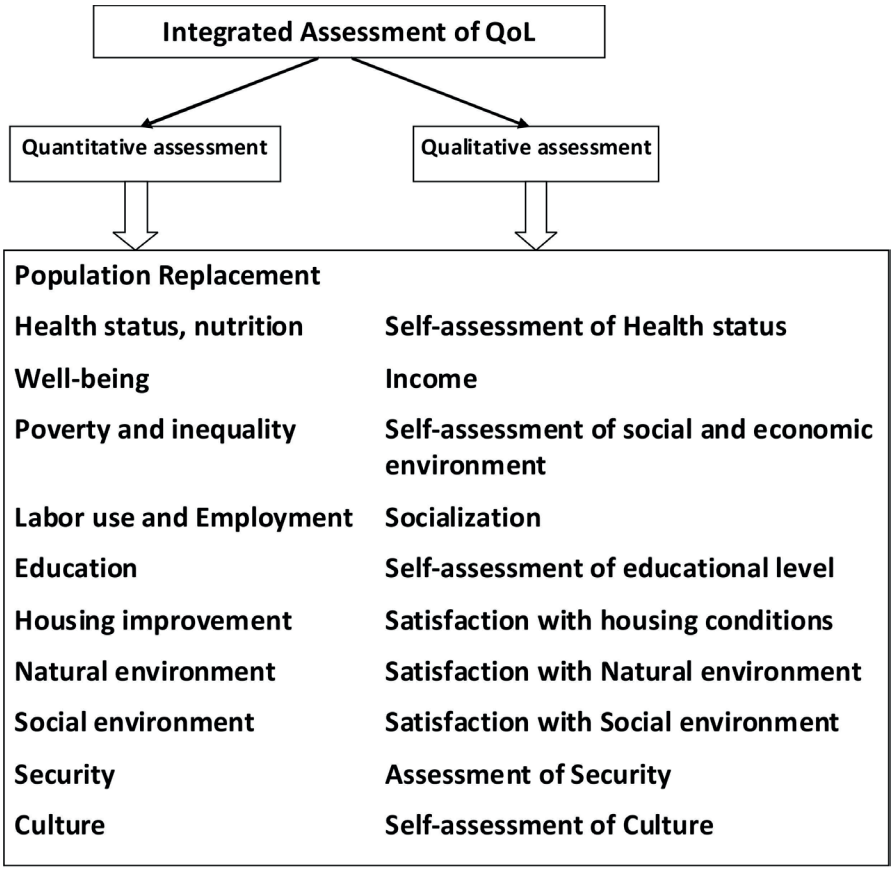

Fig. 1. The system of criteria for assessing the quality of life

This can be both an objective reflection of the features of natural-environmental and medical-social differentiation of living conditions, and subjective perception, showing the importance and individual characteristics of adaptation of a particular person (healthy or sick) through satisfaction with living conditions, external condition, the degree of personal and societal comfort.

Medicine offers a more complex, modern interpretation of QOL, calling it "health-related quality of life" and at the same time realizing that a good state of human health and well-being reflects not the absence of disease, but the satisfaction of demands and adaptation in the physical, psychological and social spheres (Guyatt et al. 1993). Thus, the quality of life associated with health is an integral characteristic of the physical, mental and social functioning of a healthy and sick person, based on his subjective perception. The quality of life associated with health, as a new methodology in medicine of the XXI century, makes it possible to assess the effectiveness of the health system through a subjective assessment by a human being of his physical, mental, social health and his role in the context of the impact on the overall quality of life (WHOQOL Group 1995).

Survey as a method for study of health status as an integral part of QOL

The profiles (the assessment of each component of QOL separately) and questionnaires (integrated evaluation) are the main instruments for QOL study in medical sector worldwide (Lin et al. 2013). Questionnaires are used as a research method to assess the level of individual health status to determine the prognosis of the disease and the effectiveness of treatment. Today, more than 50 questionnaires are used, which help to identify the subjective perception of health status and well-being in patients of different age groups, which cannot be achieved by using only traditional diagnostic procedures. Since 1995, the international non- profit organization for the study of QOL – MAPI Research Institute has been working in France (Mear and Giroudet 2012), coordinating the design of questionnaires and their cultural adaptation in different linguistic and economic environment.

In medicine, the assessment of patient's quality of life related to health is carried out in two ways: by another person, mostly by the doctor (objective approach); self-assessment (subjective approach). Development of subjective approaches was motivated by the results of studies that showed a lack of understanding by the doctor of adaptive or rehabilitation needs of the person (patient), when doctor's opinion may not correspond to the patient's settings. The most expedient is a combination of an objective approach, which reflects socially acceptable standards of life, and a subjective approach, that allows evaluating norms and preferences of a person (patient).

Next methods are widely used to measure various aspects of QOL related to health in medicine: Karnofsky scale (KPS) (Karnofsky and Burchenal 1949; Slevin et al. 1988); the index of well being by Campbell – Campbell's Index of Well-Being (Campbell et al. 1976), Nottingham health profile (NHP) (Hunt et al. 1981, 1985).

In Russia the most popular approach was proposed for the comprehensive integrated assessment of QOL by the questionnaire WHO-QOL-100 (The WHOQOL group 1998), and questionnaire Short Form – 36 (MOS-SF-36) (http://www.sf-36.com), both developed in accordance with the principles of evidence-based medicine and the requirements of Good Clinical Practice (GCP) which helped to expand the idea of the doctor on the condition of the person (patient) as a whole.

WHO-QOL-100 is a self-completion questionnaire. Its questions relate to the individual's perception of various aspects of his life with an assessment of the six major areas of QOL: physical functions, psychological functions, level of independence, social relations, environment and spiritual sphere, as well as directly measured by the respondent's

perception of his QOL and health status as whole. The most popular is the Short Form – 36 questionnaire, which allows to cover persons in age categories from 14 years and older, consists of 36 questions grouped into eight scales, and involves a differentiated approach to the assessment of QOL depending on gender and age (Jenkinson et al. 1993).

The QOL in the Amur River basin in the southern part of the Russian Far East (RFE), hereinafter referred to as Priamurye is determined largely by the natural (geographical) environment, the history of population, economic and geographical development of the territory, which largely determined the types of economic activity, working and living culture of labor skills (Grigorieva and Sukhoveeva 2019).

The aim of this work is to identify the patterns of the social and medical environment affecting the quality of life at the RFE, with an emphasis on the health of indigenous and non-indigenous population of reproductive age as the main criterion of quality of life. The social and medical environment is considered as a factor in the formation of quality of life and evaluated in terms of its optimality for a healthy, harmonious, socially satisfied life of the population in region. Assessment of the quality of the environment provides a description of all components that form it and at the same time act as prerequisites for the implementation of the life of the indigenous and non-indigenous population.

MATERIALS AND METHODS

Methodologically, the QOL assessment of the quality of life is based on the synthesis of the system analysis of quantitative and qualitative indicators, taking into account the relationships in local social systems with environment at different spatial levels.

The research was carried out for rural and urban areas of Priamurye on different hierarchical levels, from April to October, 2018: Khabarovsk Krai and the Jewish Autonomous Region (JAR) at meso-level; Smidovichsky District in JAR and Nanai District in Khabarovsk Krai at the micro-level; municipal settlements of Khabarovsk Krai (Khabarovsk, Troitskoe,) and the JAR (Smidovich, Nikolaevka, Volochaevka, Danilovka, Aur, Peschanoe) at the local level. 92 pregnant women, 16 of them indigenous Nanai women in Troitskoe, Khabarovsk Krai, and 246 women of reproductive age, including 27 Nanai women in Troitskoe, Khabarovsk Krai, were surveyed.

The assessment of medical and demographic factors at the meso- and micro-levels is based on the analysis of statistical reports (Demographic Yearbook 2017; Khabarovsk Krai 2017). Qualitative assessment of QOL at the local level is based on the analysis of information obtained in a sociological survey using "Medical and social passport of future parents"; two categories of the population were interviewed. First, women of reproductive age were surveyed on satisfaction with their QOL and its components (health, medical care, housing, reproductive behavior, etc.). This subjective assessment was supplemented by the self-assessment by pregnant women (regardless of age and period of pregnancy) of their "health-related quality of life" with a description of the subjective perception of their health status and well-being, readiness for motherhood.

Questionnaire "Medical and social passport of future parents" was developed for an assessment and self-assessment of health status, well-being, quality of life, taking into account domestic and foreign social and medical experience. The questionnaire for pregnant women was developed taking into account the questionnaire of the international program Medical Outcomes Study Short Form (SF-36), which includes closed, open, semi-closed and personal questions. Additionally, respondents were asked some questions concerning specific problems of their health (the presence of symptoms of depression, bad habits, etc.).

RESULTS AND DISCUSSION

Medical and demographic situation

Representatives of 17 indigenous small-numbered peoples of the North, Siberia and the Far East live in the national villages of Khabarovsk Krai with total population of about 23 thousand people (1.7% of the total population); most of them (about 11 thousand) are Nanai people. Nanai villages are located on both banks of the Amur River. The number of various indigenous small-numbered peoples in Nanai District was 4752 in 2016, or 23% of the total population, of which 94% were Nanai. The population of Nanai District is rural, living in 42 national communities. During 2012-2016 the number of the permanent population decreased by 1.1 times (885 people), mainly due to migration. Nanai population is characterized by a positive rate of natural increase (0.3 to 1.4‰).

It's worth to mention, that today almost all indigenous peoples at the Russian Far East live in rural area, which is consistent with the Aborigines in the Arctic regions of Russia (Popova 2019). Let say, in contrast, 50% of native peoples in Canada live in urban areas (Wilson and Young, 2008).

The patterns of morbidity and mortality of indigenous minorities have their own characteristics. Mental disorders, diseases of the nervous system (including alcoholism and drug addiction) and infectious (tuberculosis) diseases dominate in the structure of morbidity. Alcoholism is 1.5 times higher than for the whole population of the region, and tuberculosis is twice higher. Higher levels of morbidity and mortality in indigenous compared to non-indigenous populations is noted, that is known worldwide (Rix et al. 2018). Injuries and poisoning, circulatory diseases and respiratory diseases prevail in the structure of mortality. We may suppose the reasons for this situation are the destruction of the traditional way of life and family relations; low standard of living; professional activities, not peculiar to the peoples of the North; the influence of the non-indigenous population. Attachment to traditional cultures and lifestyles cannot hamper achieving of economic goals. These findings are in consistence with the view of those such as Dockery (2010) in his research for Australian aboriginals that "continuity of traditional indigenous culture provides a degree of protection against those underlying causal factors", such as relationship between stronger cultural attachment and improved socio-economic outcomes (Dockery 2010, p. 330).

4686 people (11% of them are Nanai) lived in Troitskoe village of Nanai District in 2016 (13% in 2010). Rate of natural increase was 3.7‰ in 2016 (7‰ in 2010), birth rate was 19.4‰ (17.8‰ in 2010); mortality rate was 15.7 deaths per 1000 (14.6‰ in 2010).

In 01.01.2016, the population of the Jewish Autonomous Region (JAR) was 164.2 thousand (urban population – 68.6%). The entire population of the JAR is non-indigenous, unlike other regions of the Russian Far East, where the indigenous small-numbered peoples live.

The rate of natural increase (decline) of the population in the Jewish Autonomous Region is negative since 1992. It was –1.8‰ in 2016 due to the constant significant excess of the mortality rate over the birth rate. The mortality rate in JAR was 15.2 per 1000, exceeding indicator for the whole Far Eastern Federal District by 1.2 times (12.6 per 1000). The birth rate was 13.4‰. Predominance of the elderly population and the early mortality of men are the main reasons for the

increase in mortality, resulting in high indicator of "sexual dimorphism of mortality" (1.4–1.6 times): a value showing how the mortality rate of men exceeds the mortality rate of women. Respiratory system, circulatory system and digestive system diseases are the main in the structure of morbidity, making 28.1, 12.7 and 7.0%, consequently.

The permanent population of Smidovichsky District in JAR reached 24 thousand people in 2018, decreasing by 4 thousand people during 2010-2018. For the period 2010-2015, mortality rate was 15.3–17.0‰; birth rate was 11.5 to 12.6‰; natural population decline was –2.6... –5.0 per 1,000. 65.84% of the population lives urban areas (Volochaevka, Nikolaevka, Priamursky and Smidovich).

In Smidovich the population was 4.3 thousand people in 2018, decreasing by 17% during 2010-2018. The main reasons are depopulation and migration, mainly interregional movements. During the period 2010-2018, the rate of natural increase was consistently negative –6.4 ... –8.0‰, with 11.7–13.3‰ for birth rate. The mortality rate 18.2–20.3 per 1000 indicates a high level of mortality compared to other municipalities of JAR and Khabarovsk Krai.

Population in Nikolaevka was 6.5 thousand people in 2018, 18% lower than in 2010. Rate of natural increase was –3.8+0.4 per 1,000 live births in 2012–2016, the mortality rate was 12.2–16.0‰, the birth rate was 11.4–14.1‰.

The results of the survey

The majority of women have specialized secondary education (37% of indigenous women and 49% of non-indigenous women). Two-thirds of all respondents (65%) are employed. The ratio of non-working women (housewives, women on maternity leave, students and the unemployed) is 31% and 21% for Nanai and non-indigenous people respectively. As for our opinion, the main reason for the high unemployment of Nanai women is the traditional way of life and the current unfavorable economic climate in the rural area. The survey results show that more than a half of the respondents (62%) are satisfied with their health status, of which 47% are pregnant women, and 53% are women of reproductive age. Every fifth respondent rated his health as "good and very good" (27% and 13%, respectively) (Fig. 2). At the same time, the proportion of indigenous women in both categories rating their health as "bad and very bad" was 21.5% and 19.0%, respectively. The higher satisfaction of indigenous women with their health status compared to non-indigenous residents of Priamurye is in a good agreement with results by Popova (2019) in her research on self-assessment of health by aboriginal people and migrants in rural areas of Yamal at the Russian North. Social uncertainty indicates a decrease in perceived control over various aspects of women's lives and can indirectly provoke reduction of a health risk, for example, through unemployment and, as a consequence, poor nutrition. Thus, the impact of unemployment on health is related not only to its psychological consequences, but also to the financial problems it causes.

The problem of limited financial resources for a decent standard of living and maintenance of their health is less acute for Nanai women of reproductive age – 39.0% against 40.6% of non-indigenous women. The following reasons were mentioned as "other" additional factors: psychological problems (stress); lack of own housing (forced hiring of an apartment or poor housing conditions); lack of qualified medical care, remoteness of specialized medical centers and other social facilities, inability to get higher education or retrain for a change of profession.

The results of the survey show that the main reasons for the restriction of opportunities for the preservation and restoration of health in women of reproductive age and pregnant women is the decline in the level of well-being, the growth of stressful situations, lack of employment, dissatisfaction with the social and living conditions of the rural areas. Our findings are in a good agreement with the results from rural areas at the Midwestern United States, where growing poverty and income disparities are reported over the past 20 years, which leads to sizable population losses (Peters 2019).

The survey data revealed that 69% of pregnant indigenous women have income less than 10 thousand rubles (i.e. below the subsistence minimum), 42% of them are women with two or three children in the family (Fig. 3). 38% of indigenous women in reproductive age have income below the subsistence minimum, compared to 32% of non-

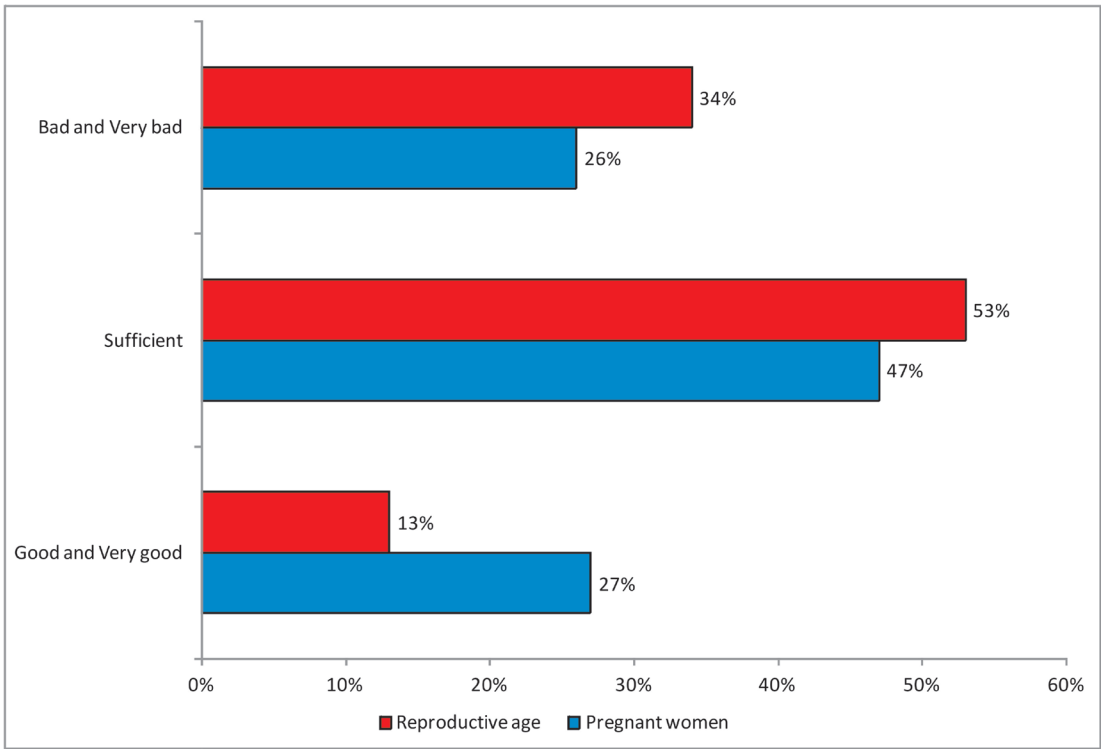

Fig. 2. Self-assessment of health status by women in Priamurye, %

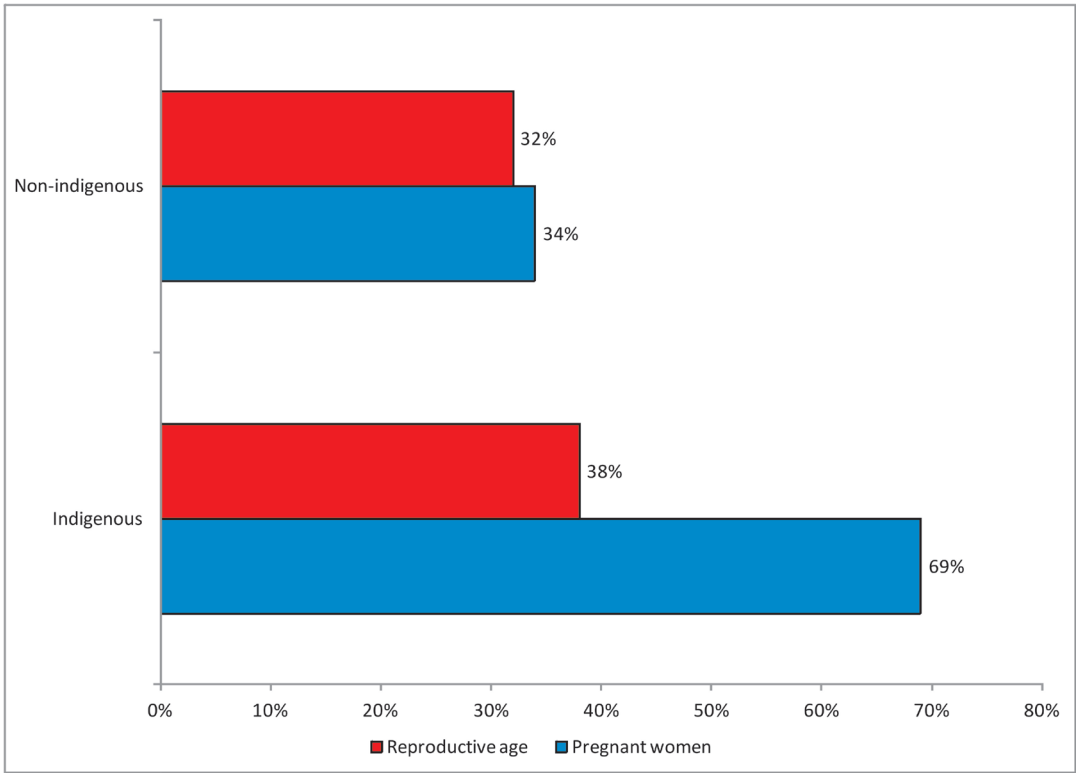

Fig. 3. Rate of women in Priamurye with income lower than 10000 Rub., %

indigenous women. The current average monthly income per family member (13,755 rubles) is insufficient to ensure a "decent" quality of life, to preserve and maintain health. It makes only 45.8% of the minimum limit (20 to 30 thousand rubles), which 72% of pregnant women and 37.5% of women of reproductive age consider necessary for a "wholesome" life.

To overcome demographic conditions unfavorable for women in reproductive age, particularly severe in rural areas, special social program, independent of outside socioeconomic or political forces, should be developed to reduce poverty and income inequality. Another proposal can be aimed at investments to economy development, which can lead to growing employment in industries. As Peters (2019) is pointing, its limitations are connected with requirement of sizable financing and long-term planning, when rural areas are powerless to make these major economic changes.

CONCLUSIONS

The differences and peculiarities in the structures of morbidity and mortality in the indigenous population (Nanai people) of Nanai District of the Khabarovsk Krai and non-indigenous population of Smidovichsky District, Jewish Autonomous Region; the features of the medical-demographic situation (processes of reproduction, mortality, health indicators), are identified. Nanai population is characterized by a positive rate of natural growth (0.3–1.4‰), in contrast to the non-indigenous population of the JAR. The structure of morbidity is dominated by mental disorders, diseases of the nervous system; injuries and poisoning dominate in the structure of mortality. The reasons are the destruction of the traditional way of life and family relations among the Nanai people, low standard of living, professional activities, not peculiar to the indigenous small-numbered peoples of the North, Siberia and the Far East; the influence of the non-indigenous population.

More than half of the respondents (62%) are satisfied with their health status (71% of pregnant women and 53% of women of reproductive age); every fifth respondent rates his health as "good" and "very good" (40% and 23%, respectively). About 40% of women, regardless of nationality, argue that high incomes, while not automatically guarantee of a good health, can provide a range of benefits and services necessary to maintain and strengthen their health potential. The social policy of the region and Russia as a whole, needs measures and actions to improve the reproductive health of women and increase the birth rate, to provide individual opportunities for women, such as guaranteed income, availability of employment, availability of comfortable housing and qualified medical care, investment in education, etc.

The decrease in the level of individual components and the overall assessment of QOL during pregnancy suggests that the pregnant woman is among the most vulnerable group of the population in terms of the impact of adverse factors and health conditions. Therefore, special focus is required to women in reproductive age, especially in unfavorable demographic environment at the Russian Far East.

As a result, important areas for future research can be pointed out. First, more attention needs to be directed towards subjective measures of improvements in medical staff or upgrading medical facilities. Second, future work should incorporate both objective and subjective measures of health status and income disparities in integral assessments of QOL. More research is needed to determine whether findings of the QOL measures from survey data are consistent across various economic and cultural contexts in both urban and rural areas.

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